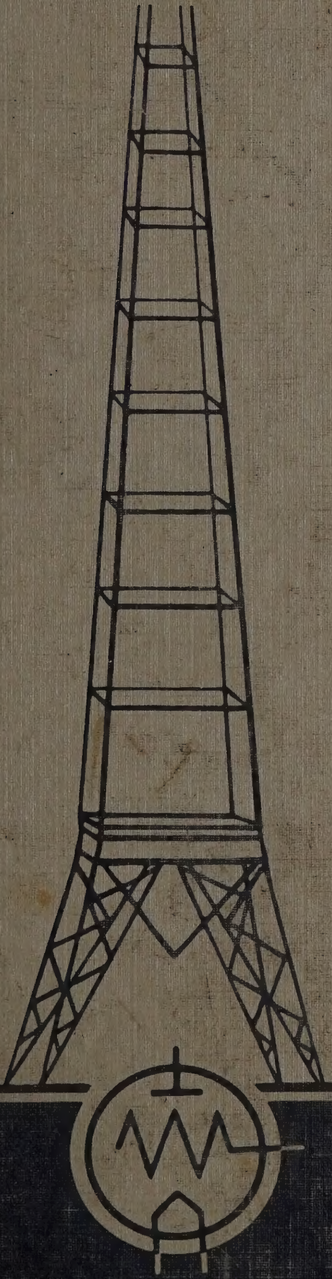
Radio's **MASTER**

SEVENTEENTH EDITION

1953

Thompson RADIO SUPPLIES



WHOLESALE DISTRIBUTORS

- RADIOS
- TELEVISION
- PARTS AND TUBES
- ELECTRONIC EQUIPMENT

Thompson **RADIO SUPPLIES**

Wholesale Electronics Distributors

182 East Long Street • Columbus 15, Ohio
135 South 6th Street • Zanesville, Ohio

PRICES

Prices in this *MASTER* should not be considered as final. *Inquire about latest prices and delivery*

●

DISCOUNTS

Trade discounts apply in most cases where *list prices* are shown

●

ORDERING

Since old copies of RADIO'S MASTER are seldom discarded, it is important when *ordering* or *quoting* to mention specifically the edition and page number, also the catalog, code or stock number of each item. This will avoid possible confusion and delay

RADIO'S MASTER

SEVENTEENTH EDITION

OFFICIAL

PARTS and EQUIPMENT MANUAL

of the

RADIO, TELEVISION & ELECTRONIC INDUSTRY

What to Buy and Where to Buy It

●

ILLUSTRATIONS

●

DESCRIPTIONS

●

SPECIFICATIONS

●

PRICES

Published by
UNITED CATALOG PUBLISHERS, INC.

106-110 Lafayette Street
New York 13, N. Y.

SEVENTEENTH EDITION

FOREWORD

RADIO'S MASTER is compiled with the approval of and in cooperation with the ASSOCIATION of ELECTRONIC PARTS & EQUIPMENT MANUFACTURERS and the SALES MANAGERS CLUB, EASTERN DIVISION. It is the official buying guide and reference book of radio parts and electronic equipment for the industry. The distribution of this buying guide is not a representation by the person or firm distributing the same that all of the lines and all of the products contained herein are necessarily carried by such person or firm.

●

Every precaution is taken to insure accuracy in the preparation of display pages and indexes, but the publishers cannot guarantee against the possibility of error or omission, nor can they be held responsible for price changes or withdrawal of items during or after publication.

●

Enrolled manufacturers reserve the right to make mechanical changes in specifications necessitated by emergencies over which they have no control, and to change prices or withdraw items without notice.

●

Prices are furnished only for information—they are not offered as quotations.

●

WHERE LIST PRICES ARE SHOWN, TRADE DISCOUNTS APPLY IN MOST CASES. . . . . PHONE OR WRITE FOR PRICES AND DELIVERY.

IMPORTANT

When ordering from this book please mention RADIO'S MASTER, 17th EDITION, also page number on which the item appears and specific catalog or code number, if any. This will help to expedite the filling of your order and lessen the chance of error.

Copyright 1952

United Catalog Publishers, Inc.

No part of this book may be reproduced
without express permission of the publishers.

Printed in U.S.A.

RADIO'S MASTER

SEVENTEENTH EDITION

INDEX OF MANUFACTURERS' DISPLAY PAGES (By Name)

— A —

	Section	Page
Advance Electric & Relay Co.	L	21 to 23
Aerovox Corporation		
Capacitors	P	116 to 132
Resistors	R	47 to 49
Alliance Manufacturing Co.		
Antenna Rotator	S	74
Phono and Small Motors	E	26
Allied Electric Products, Inc.		
Sheldon Electric Co. Division	A	38
Alpha Metals, Inc.	U	16
Alpha Wire Corporation	S	1 to 13
Alprodco, Inc.	K	32
Altec Lansing Corporation		
Amplifiers	B	1
Microphones	D	1
Speakers	C	3
Peerless Transformers	N	60 to 62
American Electrical Heater Co.		
(American Beauty)	U	1
American Microphone Company	D	24 to 27
American Phenolic Corp. (Amphenol)	T	1 to 11
American Radio Relay League, Inc. (ARRL)	H	9
American Television & Radio Co.	M	30 to 37
Amperex Electronic Corporation	A	24
Amperite Company, Inc.		
Ballasts (Resistor Tubes)	R	50
Microphones	D	28, 29
Relays	L	30
Amphenol (American Phenolic Corp.)	T	1 to 11
Arco Electronics, Inc. (El-Menco)	P	62 to 69
Argos Products Co.	K	7
Astatic Corporation	D	2 to 9
Astron Corporation	P	86 to 89
Atlas Sound Corporation		
Microphone Stands	D	30, 31
Speakers	C	24, 25
Audak Company, Inc. (Audax)	E	20, 21
Audio Devices, Inc.	E	40, 41
Audio Engineering (Radio Magazines)	H	21
Aurora Equipt. Co., Equipto Div.	U	28

— B —

	Section	Page
Baker Mfg. Co. (Monitor)	S	72
Barker & Williamson	J	56 to 59
Beam Instruments Corp.		
Best Products, Thermocouples	F	109
Cossor Oscillographs	F	108
Sterling Cables	S	44
Tannoy Loudspeaker System	C	38
Belden Manufacturing Co.	S	15 to 21
Bell Sound Systems, Inc.	B	2 to 5
Berlant Associates (Concertone)	E	11
Best Products (Beam Instruments Corp.)	F	109
Birnbach Radio Co., Inc.	S	24 to 43
Bliley Electric Company	K	36, 37
Blonder-Tongue Labs., Inc.	K	34
Blum Co., Inc., Julius	S	54
Bogen Company, Inc., David	B	14 to 16
Boonton Radio Corp.	F	75 to 79
Brach Mfg. Corp. Div. General Bronze	K	14
Bradley Laboratories, Inc.	G	24
British Industries Corp.		
Audio Tube KT66	A	35
Leak Amplifiers	B	17
Wharfedale Speakers	C	34, 35
Browning Laboratories, Inc.	F	101 to 105
Brush Development Co.	D	32, 33
Bud Radio, Inc.	J	36 to 44
Burgess Battery Company	M	2 to 5
Burlington Instrument Co.	F	51 to 54
Bussmann Mfg. Co. (Buss Fuses)	G	12, 13

— C —

	Section	Page
Cannon Company, C. F.	D	37
Cannon Electric Co.	T	16 to 21
Cardwell Mfg. Corp., Allen D.	J	51 to 55
Carling Electric, Inc.	L	15
Carter Motor Company	M	42 to 45
Carter Parts Company	L	16, 17
Centralab Div. of Globe Union, Inc.		
Capacitors	P	78 to 81
Printed Circuits	P	80, 81
Steatite Insulators	P	81
Switches	L	6, 7
Volume Controls	R	28, 29
Cetron (Continental Electric Co.)	A	22, 23
Challenger Amplifier Co.	B	16
Chatham Electronics Corp.	A	25
Chicago Industrial Instrument Co.	F	1
Chicago Transformer Div. Essex Wire Corp.	N	76 to 81
Chisholm-Ryder Co., Inc., Premax Div.	S	63 to 65
Cinaudagraph Company	C	42, 43
Cinch Manufacturing Co.		
Cinch-Jones Sales Div.	T	32 to 37
Howard B. Jones Div.	T	22 to 31
Clarkstan (Pacific Transducer Corp.)	E	22, 23
Clarostat Mfg. Co., Inc.	R	4 to 9
Clifton Conduit Co., Inc., Pierceway Div.	S	51
Columbia Broadcasting System, Inc.		
Hytron Radio & Electronics Co. Div.	A	20
Columbia Products Div. of The Shakespeare Co.	S	103
Conant Laboratories	G	26
Concertone (Berlant Associates)	E	11
Condenser Products Co.	P	82 to 85
Consolidated Radio Products Co.	C	44
Consolidated Wire & Associated Cos.	S	45 to 49
Continental Carbon, Inc.	R	31 to 33
Continental Electric Co. (Cetron)	A	22, 23
Copperweld Steel Co.	S	50
Cornell-Dubilier Electric Corp.		
Antennas	S	97 to 99
Capacitors	P	12 to 32
Vibrators and Converters	M	24 to 26
Cornish Wire Company, Inc.	S	22, 23
Cossor Oscillographs (Beam Instruments)	F	108
Coyne Technical Books (Howard W. Sams)	H	10, 11
Crest Transformer Corp. (Crestran)	N	54, 55
Croname (Waldom Electronics, Inc.)	U	62

(FOR DETAILED GENERAL INDEX OF SPECIFIC ITEMS AND THEIR PAGE NUMBERS, REFER TO BACK OF BOOK)

— D —

	Section	Page
Davies Molding Co., Harry	U	34
Decimeter, Inc.	J	62
De-Tec-Tronic Laboratories, Inc.	L	33
Dial Light Co. of America, Inc. (Dialco)	G	1 to 10
Drake Electric Works, Inc.	U	2, 3
Drake Mfg. Company	G	11
DuMont Laboratories, Inc., Allen B.	A	36
Duotone Company, Inc.	E	49 to 51

— E —

	Section	Page
Eby Sales Company	T	38 to 40
Wirt Products	R	1 to 3
Editors & Engineers, Ltd. (Books)	H	16
Eico (Electronic Instrument Co.)	F	116 to 119
Eitel-McCullough, Inc. (Eimac Tubes)	A	26, 27
Eldico of N. Y., Inc.	J	64 to 66
Electric Soldering Iron Co., Inc. (Esico)	U	8
Electro-Mechanical Instrument Co. (Emico)	F	55
Electronic Instrument Co., Inc. (Eico)	F	116 to 119
Electronic Measurements Corp.	F	87 to 89
Electronic Transformer Co., Inc.	N	34
Electrons, Inc.	A	33
Electro Products Laboratories, Inc.	M	27
Electro-Voice, Inc.		
Microphones, Cartridges	D	16 to 18
Speakers	C	30, 31
TV Boosters, Distribution Systems	K	15
Electrovox Co. (Walco Products Co., Inc.)	E	43 to 45
Electrox (See Schauer Mfg. Corp.)		
Elmenco Products Co.	U	63
El-Tronics, Inc.	F	66, 67
Emico (Electro Mechanical Instrument Co.)	F	55
Equipto Div. Aurora Equipment Co.	U	28
Erie Resistor Corp.	P	74 to 77
Ersin Multicore (Multicore Sales Corp.)	U	14, 15
Esico (Electric Soldering Iron Co.)	U	8
Espey Mfg. Co., Inc.	K	2, 3
Essex Wire Corp., Chicago Transformer Div.	N	76 to 81
Eveready Batteries (National Carbon Co.)	M	6 to 9

— F —

	Section	Page
Fairchild Recording Equipment Corp.	E	1
Federal Telephone & Radio Corp.		
Rectifiers	G	20, 21
TV Lead-in Cables	S	14
Freed Transformer Co., Inc.		
Laboratory Test Equipment	F	82 to 86
Transformers	N	98 to 116

— G —

	Section	Page
Garrard Sales Corporation	E	33 to 36
General Bronze Corp., Brach Mfg. Div.	K	14
General Cement Mfg. Co.	U	94 to 115
General Control Company	L	12, 13
General Dry Batteries, Inc.	M	10, 11
General Electric Company		
Capacitors	P	33 to 35
Pickups, Cartridges, Preamplifiers	E	18
Soldering Irons	U	4, 5
Speakers	C	2
Switches and Relays	L	31
Test Equipment, Commercial	F	16, 17
Transformers and Reactors	N	97
Tubes, Receiving & TV	A	2, 3
Tubes, Transmitting and Industrial	A	4, 5
General Industries Co.	E	29 to 32
Ghirardi (Rinehart Books)	H	12, 13
Globe-Union, Inc. (See Centralab Div.)		
Gothard Manufacturing Co.	M	53
Gramer Transformer Corp.	N	33
Grayburne Corporation	K	22, 23
Gray Research & Development Co., Inc.	E	37
Greenlee Tool Company	U	30, 31
Guardian Electric Mfg. Co.	L	24, 25

— H —

	Section	Page
Halldorson Transformer Company	N	66 to 75
Hallicrafters Company	J	14 to 21
Hammarlund Mfg. Co., Inc.	J	45 to 47
Harvey Hubbell, Inc.	T	14, 15
Harvey-Wells Electronics, Inc.	J	24
Hexacon Electric Co.	U	6, 7
Hickok Electrical Instrument Co.	F	90 to 100
Hi-Lo TV Antenna Corporation	S	96
Hytron Radio & Electronic Co.—A Div. of Columbia Broadcasting System, Inc.	**A**	**20**

— I —

	Section	Page
I.D.E.A., Inc.—Regency Division	K	17
Industrial Condenser Corp.	P	70 to 73
Industrial Hardware Mfg. Co., Inc. (See Eby Sales Co.)		
Industrial Instruments, Inc.	F	110, 111
Insuline Corporation of America		
Antennas	S	90, 91
Cabinets, Racks, Panels	J	83 to 87
Hardware, Tools, Service & Amateur Aids	U	74 to 93
International Rectifier Corp.	G	25
International Resistance Co.	R	15 to 27

— J —

	Section	Page
Jackson Electrical Instrument Co.	F	72 to 74
James Vibrapowr Co.	M	18
J-B-T Instruments, Inc.		
Switches	L	18 to 20
Test Equipment	F	60 to 64
Jennings Radio Mfg. Co.	J	33 to 35
Jensen Industries, Inc. (Needles)	E	62
Jensen Manufacturing Co. (Speakers)	C	8 to 13
J.F.D. Mfg. Co., Inc.	S	80, 81
Johnson Company, E. F.	J	67 to 82
Jones, Howard B. (Div. Cinch Mfg. Co.)	T	22 to 31

— K —

	Section	Page
Kay Electric Company	F	15
Kenyon Transformer Co., Inc.	N	82, 83
Kester Solder Co.	U	13
Keystone Electronics Corporation	U	37
Knights Co., James	K	38
Kraeuter & Co., Inc.	U	22 to 25
Kwikheat Mfg. Co.	U	9

(FOR DETAILED GENERAL INDEX OF SPECIFIC ITEMS AND THEIR PAGE NUMBERS, REFER TO BACK OF BOOK)

INDEX OF MANUFACTURERS' DISPLAY PAGES By Name *(Con.)*

— L —

	Section	*Page*
Lansing Sound, Inc., James B.	C	17
LaPointe Plascomold Corp. (Vee-D-X)	S	75 to 79
Leak Amplifiers (British Industries Corp.)	B	17
Lectrohm, Inc.		
Resistors	R	44, 45
Soldering Pot	U	116
Lewis & Kaufman, Inc.	A	32
Littelfuse, Inc.	G	14 to 17
Lowell Mfg. Co.	C	26, 27
Lysco Mfg. Co., Inc.	J	25

— M —

	Section	*Page*
MacMillan Co.	H	18
Magnecord, Inc.	E	12, 13
Maguire Industries, Inc.		
Thordarson-Meissner Mfg. Div.		
Meissner Div. Products	J	60, 61
Thordarson Div. Products	N	30 to 32
Mallory & Co., Inc., P. R.		
Capacitors	P	1 to 11
Controls, Rheostats, Resistors	R	10 to 14
Switches, Jacks, Plugs	L	2 to 5
Vibrators, Rectifiers, Battery Chargers	M	20 to 23
UHF Converter, Tuning Unit, Grid Bias Cells	K	8, 9
Marion Electrical Instrument Co.	F	68 to 71
Masco Electronic Sales Corp.	B	18 to 27
Master Mobile Mounts, Inc.	S	104, 105
McGohan, Inc., Don	B	32 to 34
Measurements Corporation	F	7 to 14
Meissner Products, Div. Thordarson-Meissner	J	60, 61
Merit Transformer Corp.	N	84 to 96
Middletown Mfg. Co., Inc.	J	92, 93
Millen Mfg. Co., Inc., James	J	26 to 32
Miller Co., J. W.	J	48 to 50
Miller Mfg. Co., M. A.	E	46 to 48
Minnesota Mining & Mfg. Co.	E	64
Minute Man Products, Inc.	J	94, 95
Mitchell Industries, Inc. (Vasco Div.)	U	12
Monitor (Baker Mfg. Co.)	S	72
Moody Machine Products Co., Inc.	U	29
Mosley Electronics	K	19 to 21
Mueller Electric Co.	M	16, 17
Multicore Sales Corp.	U	14, 15

— N —

	Section	*Page*
National Carbon Company (Eveready)	M	6 to 9
National Company, Inc.	J	1 to 13
National Electronics, Inc.	A	34
National Union Radio Corp.	A	12, 13
Newcomb Audio Products Co.	B	8 to 13

— O —

	Section	*Page*
Oak Electronics Company	K	18
Oelrich Publications	H	20
Ohmite Manufacturing Co.	R	40 to 43
Orradio Industries, Inc.	E	63
Oxford Electric Corp.	C	32, 33

— P —

	Section	*Page*
Pacific Transducer Corp. (formerly Clarkstan)	E	22, 23
Park Metalware (See XceLite, Inc.)		
Par-Metal Products Corp.	J	88 to 91
Peerless Electrical Products Div. Altec Lansing Corp.	N	60 to 62
Peerless Products Industries	S	85
Penn Television Products Co.	K	12, 13
Pentron Corporation	E	14
Perma-Power Company	M	19
Permo, Inc.	E	52 to 59
Permoflux Corporation		
Headphones	D	38
Speakers	C	36, 37
Petersen Radio Co., Inc.	K	39 to 41
Philmore Mfg. Co., Inc.	K	6
Pickering & Co., Inc.	E	15 to 17
Pierceway Div. Clifton Conduit Co., Inc.	S	51
Potter & Brumfield	L	26 to 29
Precise Development Corp.	F	114, 115
Precise Measurements Co.	F	120
Precision Apparatus Co., Inc.	F	40 to 47
Premax Products Div. Chisholm-Ryder Co., Inc.	S	63 to 65
Premier Metal Products Co.	J	96 to 98
Presto Recording Corp.	E	2 to 5
Pyramid Electric Co.	P	90 to 115

— Q —

	Section	*Page*
Quam-Nichols Company	C	4 to 6

— R —

	Section	*Page*
Racon Electric Co., Inc.	C	14 to 16
Radcraft Publications, Inc.	H	19
Radelco Manufacturing Co.	S	82, 83
Radiart Corporation		
Antennas	S	60 to 62
Vibrators, Converters	M	38 to 41
Radio Apparatus Corp.	J	63
Radio City Products Co., Inc.	F	80, 81
Radio Corporation of America		
Antennas & Accessories	S	73
Batteries	M	1
Crystal Pickups, Speakers	C	1
Television Components	K	10, 11
Test and Measurement Equipment	F	2 to 5
Tube Manuals, Technical Literature	H	14, 15
Tubes	A	6 to 9
Radio Craftsmen, Inc.	K	1
Radio Magazines, Inc. (See Audio Engineering)		
Radio Manufacturing Engineers, Inc.	J	22, 23
Radio Merchandise Sales, Inc.	K	28 to 31
Radio Receptor Co., Inc.	G	22
Ram Electronics Sales Co.	K	16
Rauland Corporation, The	A	40
Ray-O-Vac (Specialty Battery Co. Div.)	M	12 to 14
Raytheon Mfg. Co., Equipt. Sales Div.	M	52
Raytheon Mfg. Co., Tube Division	A	14 to 17
Recordisc Corporation	E	42
Recoton Corporation	E	38, 39
Reeves Soundcraft Corp.	E	60, 61
Regency Division I.D.E.A., Inc.	K	17
Rek-O-Kut Company	E	6 to 9
Rex Corporation	S	52, 53
Rider Publisher, Inc., John F.	H	1 to 8
Rinehart Books, Inc.	H	12, 13
Rogan Brothers	U	32, 33

(FOR DETAILED GENERAL INDEX OF SPECIFIC ITEMS AND THEIR PAGE NUMBERS, REFER TO BACK OF BOOK)

INDEX OF MANUFACTURERS' DISPLAY PAGES By Name (Con.)

— S —

	Section	*Page*
Sams & Co., Inc., Howard W.	H	10, 11
Sangamo Electric Co.	P	36 to 46
Sarkes Tarzian, Inc.		
Rectifier Division	G	18, 19
Tube Division	A	39
Schauer Manufacturing Corp. (Electrox)		
Battery Chargers & Eliminators	M	15
Rectifier Units	G	23
Schott Co., Walter L. (Walsco)		
Antennas	S	66 to 71
Service Aids, Tools, Hardware	U	40 to 61
Scott, Inc., Hermon Hosmer	B	6, 7
Shallcross Manufacturing Co.	R	36 to 39
Sheldon Electric Co.,		
Div. Allied Electric Products, Inc.	A	38
Shure Brothers, Inc.	D	10 to 15
Shurite Meters	F	56, 57
Signal Indicator Corp. (Dialco)	G	1 to 10
Simpson Electric Company	F	26 to 39
Simpson Mfg. Co., Inc., Mark (Masco)	B	18 to 27
Smith, Inc., Herman H.	U	64 to 73
Smith-Baldwin		
(Consolidated Radio Products Co.)	C	44
Snap-on-Drawer Company	U	35
SNC Manufacturing Co., Inc.	N	56 to 59
Sola Electric Co.	M	49 to 51
Sorensen & Company	M	28, 29
South River Metal Products Co., Inc.	K	24 to 27
Specialties Manufacturing Co.	L	14
Specialty Battery Co. Div. Ray-O-Vac	M	12 to 14
Spirling Products Co., Inc.	S	84
Sprague Products Co.		
Capacitors	P	47 to 61
Resistors	R	30
Standard Electrical Products Co. (Staco)		
Relays	L	32
Transformers	N	63 to 65
Standard Transformer Corp. (Stancor)	N	1 to 16
Standard Wood Products Co.	K	35
Stephens Manufacturing Corp. (Tru-Sonic)	C	28, 29
Sterling Cables (Beam Instruments Corp.)	S	44
Sterling Manufacturing Co.	F	58, 59
Superior Electric Co. (Seco)	M	46 to 48
Superior Instruments Co.	F	112, 113
Supreme, Inc.	F	6
Switchcraft, Inc.	L	8, 9
Sylvania Electric Products, Inc.		
Tubes, Crystal Diodes, Rectifiers	A	1
Test Equipment	F	65

— T —

	Section	*Page*
Talk-A-Phone Co.	B	30, 31
Tannoy Audio Equipt.		
(Beam Instruments Corp.)	C	38
Taylor Tubes, Inc.	A	21
Tech Laboratories, Inc.	L	10, 11
Tech-Master Products Co.	K	4, 5
Technical Appliance Corp. (Taco)	S	92 to 95
Tel-A-Ray Enterprises, Inc.	S	100 to 102
Telex, Inc.	D	36
Tel-O-Tube Corp. of America	A	37
Telrex, Inc.	S	86 to 89
Thordarson-Meissner Mfg. Div.		
Thordarson Div. Products	N	30 to 32
Triad Transformer Mfg. Co.	N	17 to 29
Tricraft Products	S	106
Trimm, Inc.	D	34, 35
Triplett Electrical Instrument Co.	F	18 to 25
Tung-Sol Electric, Inc.	A	10, 11
Turner Company	D	19 to 23
T.V. Development Corp.	K	33

— U —

	Section	*Page*
Ungar Electric Tool Co., Inc.	U	10
Union Carbide & Carbon Corp.,		
National Carbon Div. (Eveready)	M	6 to 9
United Technical Laboratories	U	38, 39
United Transformer Co.	N	35 to 53
University Loudspeakers, Inc.	C	18 to 23
U. S. Engineering Co.	U	36
Utah Radio Products, Inc.	C	39 to 41
Utica Drop Forge & Tool Corp.	U	26, 27

— V —

	Section	*Page*
Vaco Products Co.	U	17
Van Nostrand Co., Inc., D.	H	17
Vasco Div. Mitchell Industries, Inc.	U	12
Vector Electronic Company	T	12, 13
Vee-D-X (La Pointe Plascomold Corp.)	S	75 to 79
Vibroplex Company, Inc.	L	36
Viking Loudspeakers	C	9
V-M Corporation	E	27

— W —

	Section	*Page*
Walco Products, Inc. (Electrovox Co.)	E	43 to 45
Waldom Electronics, Inc. (Croname)	U	62
Walsco (See Walter L. Schott Co.)		
Waltham Horological Corp.	T	41
Ward Leonard Electric Co.	R	34, 35
Ward Products Corporation	S	55 to 59
Waterman Products Co., Inc.	F	106, 107
Webster-Chicago Corporation (Webcor)	E	28
Webster Electric Co.		
Amplifiers	B	29
Cartridges	E	19
Weller Electric Co.	U	11
Westinghouse Electric Corporation	A	28 to 31
Weston Electrical Instrument Corp.	F	48 to 50
Wharfedale Speakers (British Industries Corp.)	C	34, 35
Wirt Products Div. of Eby Sales Co.	R	1 to 3
Worner Electronic Devices	L	34, 35
Wright, Inc.	C	7

— X —

	Section	*Page*
XceLite, Inc. (formerly Park Metalware Co.)	U	18 to 21

(FOR DETAILED GENERAL INDEX OF SPECIFIC ITEMS AND THEIR PAGE NUMBERS, REFER TO BACK OF BOOK)

RADIO'S MASTER

SEVENTEENTH EDITION

NUMERICAL INDEX OF MANUFACTURERS' DISPLAY PAGES

By Section and Folio

NOTE: This is a bare outline of the eighteen sections of RADIO'S MASTER. It will serve for speedy reference and for the purpose of familiarizing yourself quickly with its general contents. Regular use of the Master will reveal many additional items too numerous to list here—you may also discover an item in a section to which it does not directly relate. For more complete and precise information, consult the exhaustive detailed General Index at the back of book.

SECTION A

RECEIVING AND TELEVISION TUBES—TRANSMITTING, INDUSTRIAL, SPECIAL PURPOSE TUBES—CRYSTAL DIODES, TRANSISTORS—DIAL AND PANEL LAMPS

Section & Page	*Name of Manufacturer*
A-1	Sylvania Electric Products, Inc.
A-2 to 5	General Electric Co.
A-6 to 9	Radio Corporation of America
A-10, 11	Tung-Sol Electric, Inc.
A-12, 13	National Union Radio Corp.
A-14 to 17	Raytheon Manufacturing Co.
A-20	Hytron Radio & Electronic Co.
A-21	Taylor Tubes, Inc.
A-22, 23	Continental Electric Co.
A-24	Amperex Electronic Corp.
A-25	Chatham Electronics Corp.
A-26, 27	Eitel-McCullough, Inc.
A-28 to 31	Westinghouse Electric Corp.
A-32	Lewis & Kaufman, Inc.
A-33	Electrons, Inc.
A-34	National Electronics, Inc.
A-35	British Industries Corp.
A-36	Allen B. DuMont Labs., Inc.
A-37	Tel-O-Tube Corp. of America
A-38	Sheldon Electric Co.
A-39	Sarkes Tarzian, Inc.
A-40	Rauland Corporation

SECTION B

PUBLIC ADDRESS:
AMPLIFIERS, PHONO P.A. EQUIPMENT, SOUND SYSTEMS—INTERCOMMUNICATION SYSTEMS

B-1	Altec Lansing Corporation
B-2 to 5	Bell Sound Systems, Inc.
B-6, 7	Hermon Hosmer Scott, Inc.
B-8 to 13	Newcomb Audio Products Co.
B-14 to 16	David Bogen Co., Inc.
B-16	Challenger Amplifier Co.
B-17	British Industries Corp.
B-18 to 27	Masco Electronic Sales Corp.
B-29	Webster Electric Co.
B-30, 31	Talk-A-Phone Company
B-32 to 34	Don McGohan, Inc.

SECTION C

SPEAKERS, PROJECTORS, HORNS, TRUMPETS

Section & Page	*Name of Manufacturer*
C-1	Radio Corporation of America
C-2	General Electric Company
C-3	Altec Lansing Corporation
C-4 to 6	Quam-Nichols Company
C-7	Wright, Inc.
C-8 to 13	Jensen Manufacturing Co.
C-14 to 16	Racon Electric Company
C-17	James B. Lansing Sound, Inc.
C-18 to 23	University Loudspeakers, Inc.
C-24, 25	Atlas Sound Corporation
C-26, 27	Lowell Manufacturing Co.
C-28, 29	Stephens Manufacturing Corp.
C-30, 31	Electro-Voice, Inc.
C-32, 33	Oxford Electric Corp.
C-34, 35	British Industries Corp.
C-36, 37	Permoflux Corporation
C-38	Beam Instruments Corp.
C-39 to 41	Utah Radio Products, Inc.
C-42, 43	Cinaudagraph Company
C-44	Consolidated Radio Products Co.

SECTION D

MICROPHONES—MICROPHONE STANDS—PICKUPS—CARTRIDGES

(See Section E for additional Pickups and Cartridges)

D-1	Altec Lansing Corp.
D-2 to 9	Astatic Corporation
D-10 to 15	Shure Brothers, Inc.
D-16 to 18	Electro-Voice, Inc.
D-19 to 23	Turner Company
D-24 to 27	American Microphone Co.
D-28, 29	Amperite Company, Inc.
D-30, 31	Atlas Sound Corp.
D-32	Brush Development Co.

HEADPHONES

D-33	Brush Development Company
D-34, 35	Trimm, Inc.
D-36	Telex, Inc.
D-37	C. F. Cannon Co.
D-38	Permoflux Corporation

(FOR DETAILED GENERAL INDEX OF SPECIFIC ITEMS AND THEIR PAGE NUMBERS, REFER TO BACK OF BOOK)

NUMERICAL INDEX OF MANUFACTURERS' DISPLAY PAGES *(Con.)*

SECTION E

RECORDERS AND RECORDING EQUIPMENT—PICKUPS AND CARTRIDGES—PHONO MOTORS—TURNTABLES—RECORD CHANGERS—TRANSCRIPTION UNITS—DISCS—NEEDLES—TAPE

Section & Page	*Name of Manufacturer*
E-1	Fairchild Recording Equipt. Corp.
E-2 to 5	Presto Recording Corporation
E-6 to 9	Rek-O-Kut Company
E-11	Berlant Associates
E-12, 13	Magnecord, Inc.
E-14	Pentron Corporation
E-15 to 17	Pickering, Inc.
E-18	General Electric Co.
E-19	Webster Electric Company
E-20, 21	Audak Company, Inc.
E-22, 23	Pacific Transducer Corp.
E-26	Alliance Manufacturing Co.
E-27	V-M Corporation
E-28	Webster-Chicago Corporation
E-29 to 32	General Industries Co.
E-33 to 36	Garrard Sales Corporation
E-37	Gray Research & Development Co.
E-38, 39	Recoton Corporation
E-40, 41	Audio Devices, Inc.
E-42	Recordisc Corporation
E-43 to 45	Walco Products, Inc.
E-46 to 48	M. A. Miller Mfg. Co.
E-49 to 51	Duotone Company, Inc.
E-52 to 59	Permo, Inc.
E-60, 61	Reeves Soundcraft Corp.
E-62	Jensen Industries, Inc.
E-63	Orradio Industries, Inc.
E-64	Minnesota Mining & Mfg. Co.

SECTION F

TESTING, MEASURING, INDICATING INSTRUMENTS—ANALYZERS—PANEL METERS—TEST EQUIPMENT

F-1	Chicago Industrial Instrument Co.
F-2 to 5	Radio Corporation of America
F-6	Supreme, Inc.
F-7 to 14	Measurements Corporation
F-15	Kay Electric Company
F-16, 17	General Electric Co.
F-18 to 25	Triplett Electrical Instrument Co.
F-26 to 39	Simpson Electric Company
F-40 to 47	Precision Apparatus Co., Inc.
F-48 to 50	Weston Electrical Instrument Co.
F-51 to 54	Burlington Instrument Co.
F-55	Electro-Mechanical Instrument Co.
F-56, 57	Shurite Meters
F-58, 59	Sterling Manufacturing Co.
F-60 to 64	J-B-T Instruments, Inc.
F-65	Sylvania Electric Products, Inc.
F-66, 67	El-Tronics, Inc.
F-68 to 71	Marion Electrical Instrument Co.
F-72 to 74	Jackson Electrical Instrument Co.
F-75 to 79	Boonton Radio Corporation
F-80, 81	Radio City Products Co., Inc.
F-82 to 86	Freed Transformer Co., Inc.
F-87 to 89	Electronic Measurements Corp.
F-90 to 100	Hickok Electrical Instrument Co.
F-101 to 105	Browning Laboratories, Inc.
F-106, 107	Waterman Products Co., Inc.
F-108, 109	Beam Instruments Corp.
F-110, 111	Industrial Instruments, Inc.
F-112, 113	Superior Instruments Co.
F-114, 115	Precise Development Co.
F-116 to 119	Electronic Instrument Co., Inc.
F-120	Precise Measurements Corp.

SECTION G

PILOT, DIAL LIGHTS AND ASSEMBLIES

Section & Page	*Name of Manufacturer*
G-1 to 10	Dial Light Co. of America
G-11	Drake Manufacturing Co.

INSTRUMENT FUSES

G-12, 13	Bussmann Manufacturing Co.
G-14 to 17	Littlefuse, Inc.

DRY DISC, SELENIUM, INSTRUMENT RECTIFIERS

G-18, 19	Sarkes Tarzian, Inc.
G-20, 21	Federal Telephone & Radio Corp.
G-22	Radio Receptor Co., Inc.
G-23	Schauer Mfg. Corp.
G-24	Bradley Laboratories, Inc.
G-25	International Rectifier Corp.
G-26	Conant Laboratories

SECTION H

BOOKS—MANUALS—RADIO DATA SERVICES

H-1 to 8	John F. Rider Publisher, Inc.
H-9	American Radio Relay League
H-10, 11	Howard W. Sams & Co., Inc.
H-12, 13	Rinehart Books, Inc.
H-14, 15	Radio Corporation of America
H-16	Editors & Engineers, Ltd.
H-17	D. Van Nostrand Co., Inc.
H-18	MacMillan Company
H-19	Radcraft Publications
H-20	Oelrich Publications
H-21	Audio Engineering

SECTION J

COMMUNICATION RECEIVERS—TRANSMITTERS—AMATEUR EQUIPMENT AND ACCESSORIES—VARIABLE CAPACITORS—COILS—INSULATORS—METAL RACKS, CABINETS, PANELS, ETC

J-1 to 13	National Company, Inc.
J-14 to 21	The Hallicrafters Company
J-22, 23	Radio Mfg. Engineers, Inc.
J-24	Harvey-Wells Electronics, Inc.
J-25	Lysco Mfg. Co., Inc.
J-26 to 32	James Millen Mfg. Co., Inc.
J-33 to 35	Jennings Radio Mfg. Co.
J-36 to 44	Bud Radio, Inc.
J-45 to 47	Hammarlund Mfg. Co., Inc.
J-48 to 50	J. W. Miller Company
J-51 to 55	Allen D. Cardwell Mfg. Corp.
J-56 to 59	Barker & Williamson, Inc.
J-60, 61	Meissner Div. Maguire Industries
J-62	Decimeter, Inc.
J-63	Radio Apparatus Corp.
J-64 to 66	Eldico of N. Y., Inc.
J-67 to 82	E. F. Johnson Company
J-83 to 87	Insuline Corporation of America
J-88 to 91	Par-Metal Products Corp.
J-92, 93	Middletown Mfg. Co., Inc.
J-94, 95	Minute Man Products, Inc.
J-96 to 98	Premier Metal Products Co.

(FOR DETAILED GENERAL INDEX OF SPECIFIC ITEMS AND THEIR PAGE NUMBERS, REFER TO BACK OF BOOK)

NUMERICAL INDEX OF MANUFACTURERS' DISPLAY PAGES *(Con.)*

SECTION K

RECEIVER KITS—TELEVISION KITS—TELEVISION ACCESSORIES

Section & Page	*Name of Manufacturer*
K-1	Radio Craftsmen, Inc.
K-2, 3	Espey Mfg. Co., Inc.
K-4, 5	Tech-Master Products Co.
K-6	Philmore Mfg. Co., Inc.
K-7	Argos Products Co.
K-8, 9	P. R. Mallory & Co., Inc.
K-10, 11	Radio Corporation of America
K-12, 13	Penn Television Products Co.
K-14	Brach Mfg. Corp.
K-15	Electro-Voice, Inc.
K-16	Ram Electronic Sales Co.
K-17	Regency Div. I.D.E.A., Inc.
K-18	Oak Electronics Co.
K-19 to 21	Mosley Electronics
K-22, 23	Grayburne Corporation
K-24 to 27	South River Metal Products Co.
K-28 to 31	Radio Merchandise Sales, Inc.
K-32	Alprodco, Inc.
K-33	T.V. Development Corp.
K-34	Blonder-Tongue Labs., Inc.
K-35	Standard Wood Products Co.

CRYSTALS

K-36, 37	Bliley Electric Company
K-38	James Knights Co.
K-39 to 41	Petersen Radio Co., Inc.

SECTION L

SWITCHES—JACKS—PLUGS—RELAYS

L-2 to 5	P. R. Mallory & Co., Inc.
L-6, 7	Centralab Div. Globe-Union, Inc.
L-8, 9	Switchcraft, Inc.
L-10, 11	Tech Laboratories, Inc.
L-12, 13	General Control Company
L-14	Specialties Mfg. Co.
L-15	Carling Electric, Inc.
L-16, 17	Carter Parts Co.
L-18 to 20	J-B-T Instruments, Inc.
L-21 to 23	Advance Electric & Relay Co.
L-24, 25	Guardian Electric Mfg. Co.
L-26 to 29	Potter & Brumfield
L-30	Amperite Company, Inc.
L-31	General Electric Company
L-32	Standard Electrical Products Co.

PHOTO ELECTRIC UNITS

L-33	De-Tec-Tronic Labs., Inc.
L-34, 35	Worner Electronic Devices

TELEGRAPH KEYS & PRACTICE SETS

L-36	Vibroplex Co., Inc.

SECTION M

DRY BATTERIES

Section & Page	*Name of Manufacturer*
M-1	Radio Corporation of America
M-2 to 5	Burgess Battery Company
M-6 to 9	National Carbon Company
M-10, 11	General Dry Batteries, Inc.
M-12 to 14	Specialty Battery Co.

BATTERY ELIMINATORS & CHARGERS—POWER CONVERSION EQUIPMENT—GENERATORS, CONVERTERS, VIBRATORS, PACKS—VOLTAGE TRANSFORMERS & CONTROLS

M-15	Schauer Mfg. Corp.
M-16, 17	Mueller Electric Co.
M-18	James Vibrapowr Co.
M-19	Perma-Power Company
M-20 to 23	P. R. Mallory & Co., Inc.
M-24 to 26	Cornell-Dubilier Electric Corp.
M-27	Electro Products Labs., Inc.
M-28, 29	Sorensen & Company
M-30 to 37	American Television & Radio Co.
M-38 to 41	Radiart Corporation
M-42 to 45	Carter Motor Company
M-46 to 48	Superior Electric Co.
M-49 to 51	Sola Electric Company
M-52	Raytheon Mfg. Co.
M-53	Gothard Manufacturing Co.

SECTION N

TRANSFORMERS, ALL TYPES—REACTORS—CHOKES—COILS—INDUCTORS

(See Section J for additional Coils)

N-1 to 16	Standard Transformer Corp.
N-17 to 29	Triad Transformer Mfg. Co.
N-30 to 32	Thordarson Div. Maguire Industries
N-33	Gramer Transformers Corp.
N-34	Electronic Transformer Co., Inc.
N-35 to 53	United Transformer Co.
N-54, 55	Crest Transformer Corp.
N-56 to 59	SNC Manufacturing Company
N-60 to 62	Altec Lansing Corp., Peerless Div.
N-63 to 65	Standard Electrical Products Co.
N-66 to 75	Halldorson Company
N-76 to 81	Chicago Transformer Div. Essex Wire
N-82, 83	Kenyon Transformer Co., Inc.
N-84 to 96	Merit Transformer Corp.
N-97	General Electric Company
N-98 to 116	Freed Transformer Co., Inc.

SECTION P

FIXED CAPACITORS, ALL TYPES—NOISE & INTERFERENCE FILTERS—CAPACITOR TEST INSTRUMENTS

(See Section J for Variable Capacitors)

P-1 to 11	P. R. Mallory & Co., Inc.
P-12 to 32	Cornell-Dubilier Electric Corp.
P-33 to 35	General Electric Company
P-36 to 46	Sangamo Electric Company
P-47 to 61	Sprague Products Company
P-62 to 69	Arco Electronics, Inc.
P-70 to 73	Industrial Condenser Corp.
P-74 to 77	Erie Resistor Corporation
P-78 to 81	Centralab Div. Globe-Union, Inc.
P-82 to 85	Condenser Products Co., Inc.
P-86 to 89	Astron Corporation
P-90 to 115	Pyramid Electric Co.
P-116 to 132	Aerovox Corporation

(FOR DETAILED GENERAL INDEX OF SPECIFIC ITEMS AND THEIR PAGE NUMBERS, REFER TO BACK OF BOOK)

SECTION R

RESISTORS—VOLUME CONTROLS—BALLASTS—DECADES, BRIDGES—NOISE FILTERS & SUPPRESSORS—RHEOSTATS. POTENTIOMETERS, ATTENUATORS

Section & Page *Name of Manufacturer*

R-1 to 3 .... Wirt Products Div. Eby Sales Co.
R-4 to 9 .... Clarostat Mfg. Co., Inc.
R-10 to 14 .... P. R. Mallory & Co., Inc.
R-15 to 27 .... International Resistance Co.
R-28, 29 .... Centralab Div. Globe-Union, Inc.
R-30 .... Sprague Products Co.
R-31 to 33 .... Continental Carbon, Inc.
R--34, 35 .... Ward Leonard Electric Co.
R-36 to 39 .... Shallcross Manufacturing Co.
R-40 to 43 .... Ohmite Manufacturing Co.
R-44, 45 .... Lectrohm, Inc.
R-47 to 49 .... Aerovox Corporation
R-50 .... Amperite Company, Inc.

SECTION S

WIRE AND CABLE, ALL TYPES

S-1 to 13 .... Alpha Wire Corporation
S-14 .... Federal Telephone & Radio Corp.
S-15 to 21 .... Belden Manufacturing Co.
S-22, 23 .... Cornish Wire Co., Inc.
S-24 to 43 .... Birnbach Radio Co., Inc.
S-44 .... Beam Instruments Corp.
S-45 to 49 .... Consolidated Wire & Associated Cos.
S-50 .... Copperweld Steel Co.
S-51 .... Pierceway Div. Clifton Conduit Co.
S-52, 53 .... Rex Corporation

ANTENNAS & SYSTEMS FOR TV-FM-AM-AUTO—ANTENNA ACCESSORIES

S-54 .... Julius Blum Co., Inc.
S-55 to 59 .... Ward Products Corporation
S-60 to 62 .... Radiart Corporation
S-63 to 65 .... Premax Products
S-66 to 71 .... Walter L. Schott Co.
S-72 .... Baker Manufacturing Co.
S-73 .... Radio Corporation of America
S-74 .... Alliance Manufacturing Co.
S-75 to 79 .... LaPointe Plascomold Corp.
S-80, 81 .... J.F.D. Mfg. Co., Inc.
S-82, 83 .... Radelco Mfg. Co.
S-84 .... Spirling Products Co, Inc.
S-85 .... Peerless Products Industries
S-86 to 89 .... Telrex, Inc.
S-90, 91 .... Insuline Corporation of America
S-92 to 95 .... Technical Appliance Corp.
S-96 .... Hi-Lo TV Antenna Corp.
S-97 to 99 .... Cornell-Dubilier Electric Corp.
S-100 to 102 .... Tel-A-Ray Enterprises, Inc.
S-103 .... Columbia Products Co.
S-104, 105 .... Master Mobile Mounts, Inc.
S-106 .... Tricraft Products

SECTION T

CABLE CONNECTORS, RECEPTACLES, FITTINGS—MICROPHONE CONNECTORS, PLUGS—SOCKETS AND PLUGS—TERMINAL STRIPS

Section & Page *Name of Manufacturer*

T-1 to 11 .... American Phenolic Corporation
T-12, 13 .... Vector Electronic Company
T-14, 15 .... Harvey Hubbell, Inc.
T-16 to 21 .... Cannon Electric Co.
T-22 to 31 .... Howard B. Jones Div. Cinch Mfg. Co.
T-32 to 37 .... Cinch-Jones Sales Div. Cinch Mfg.
T-38 to 40 .... Eby Sales Company
T-41 .... Waltham Horological Corp.

SECTION U

TOOLS: SOLDERING IRONS, PLIERS, WRENCHES, SCREWDRIVERS, NUTDRIVERS, PUNCHES, CUTTING TOOLS, NEUTRALIZING & ALIGNMENT TOOLS—CHEMICALS, OILS, PAINTS, ETC.—HARDWARE, SERVICE AIDS OF EVERY DESCRIPTION

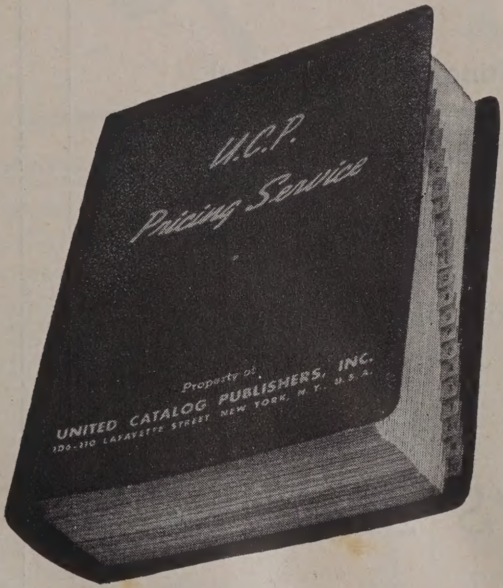
U-1 .... American Electrical Heater Co.
U-2, 3 .... Drake Electric Works, Inc.
U-4, 5 .... General Electric Company
U-6, 7 .... Hexacon Electric Company
U-8 .... Electric Soldering Iron Co., Inc.
U-9 .... Kwikheat Mfg. Co.
U-10 .... Ungar Electric Tool Co., Inc.
U-11 .... Weller Electric Co.
U-12 .... Vasco Div. Mitchell Industries, Inc.
U-13 .... Kester Solder Co.
U-14, 15 .... Multicore Sales Corp.
U-16 .... Alpha Metals, Inc.
U-17 .... Vaco Products Company
U-18 to 21 .... XceLite, Inc.
U-22 to 25 .... Kraeuter & Company, Inc.
U-26, 27 .... Utica Drop Forge & Tool Corp.
U-28 .... Equipto Div. Aurora Equipment Co.
U-29 .... Moody Machine Products Co., Inc.
U-30, 31 .... Greenlee Tool Co.
U-32, 33 .... Rogan Brothers
U-34 .... Harry Davies Molding Co.
U-35 .... Snap-on-Drawer Co.
U-36 .... U. S. Engineering Co.
U-37 .... Keystone Electronics Corp.
U-38, 39 .... United Technical Laboratories
U-40 to 61 .... Walter L. Schott Co.
U-62 .... Waldom Electronics, Inc.
U-63 .... Elmenco Products Co.
U-64 to 73 .... Herman H. Smith, Inc.
U-74 to 93 .... Insuline Corporation of America
U-94 to 115 .... General Cement Mfg. Co.
U-116 .... Lectrohm, Inc.

(FOR DETAILED GENERAL INDEX OF SPECIFIC ITEMS AND THEIR PAGE NUMBERS, REFER TO BACK OF BOOK)

PRICES

Prices of manufacturers and suppliers' products listed in **RADIO'S MASTER** are subject at all times to change without notice — they should not be considered final.

Get quick on-the-spot quotations from your distributor who subscribes to our perpetual up-to-the-minute **PRICING SERVICE.**


U.C.P.
Pricing Service
Property of
UNITED CATALOG PUBLISHERS, INC.
106-110 LAFAYETTE STREET NEW YORK, N. Y. U. S. A.

Official Pricing System of radio - electronic - television parts and equipment. Supported by the industry: distributors, manufacturers, and their sales representatives.

•

Loose-leaf, flexible binder. Contains over 1100 pages.

•

Published by
UNITED CATALOG PUBLISHERS, INC.
106-110 Lafayette Street
New York 13, N. Y.

DELIVERY

Delivery is often dependent on the availability of raw **materials.** So check with your distributor for delivery information.

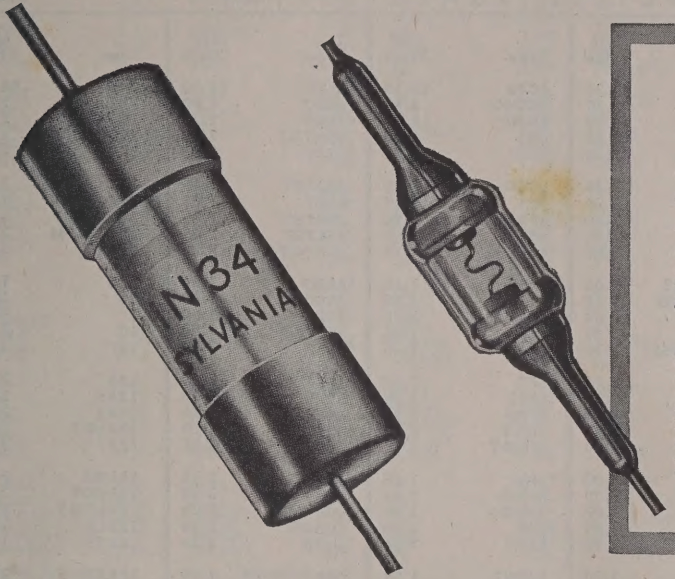
Thank You!

When writing for additional information or when ordering from sources of supply listed in this book, please mention

RADIO'S MASTER

FOR GREATER CIRCUIT EFFICIENCY

insist on Sylvania Crystal Diodes and Electronic Tubes



With Sylvania tubes and crystal diodes, you can be sure of electrical stability, ruggedness, and longer life. Unsurpassed in quality, the Sylvania line is also a complete line. In germanium diodes alone, Sylvania now offers 20 different types to cover a wide range of electric circuits and applications.

Below are suggested resale prices of the most popular Sylvania Electronic Tubes and Crystal Diodes. For further information address: Sylvania Electric Products Inc., Dept. E-2952, Emporium, Pa.

TYPE	DESCRIPTION	SUGGESTED RESALE PRICE
FLASH TUBES		
R-4330	100 watt second Electroflash Tube	$12.50
R-4340	500 watt second Electroflash Tube	37.50
GAS PRESSURE MEASURING TUBES		
R1111	Pirani Tube	5.50
R1111M	Matched Pairs (R1111)	13.15
GERMANIUM CRYSTAL DIODES		
1N34	General Purpose Diode (Ceramic)	.85
1N34A	General Purpose Diode (Glass)	1.05
1N35	Twin Matched Diode	2.05
1N38	100-V Back Voltage (Ceramic)	1.70
1N38A	100-V Back Voltage (Glass)	2.25
1N39	200-V Back Voltage	6.25
1N40	Varistor—Plug In	10.60
1N41	Varistor—Lug Type	11.25
1N42	Varistor—Matched 1N38's	18.75
1N54	High Resistance Diode (Ceramic)	.95
1N54A	High Resistance Diode (Glass)	1.25
1N55	150-Volt Diode (Ceramic)	3.15
1N55A	150-Volt Diode (Glass)	4.05
1N56	High Conduction Diode (Ceramic)	.95
1N56A	High Conduction Diode (Glass)	1.25
1N58	100-Volt Diode (Ceramic)	1.25
1N58A	100-Volt Diode (Glass)	1.55
1N60	Video Detector	.65
1N71	Varistor—Low Impedance—Plug In	6.25
TR & ATR TUBES		
1B24A	9300 mc Tunable TR	62.50
1B35	9300 mc Broad Band ATR	12.50
1B63A	12% 9000 mc Broad Band ATR	78.25
KLYSTRONS		
6BL6	Velocity Modulation Reflex Oscillator	145.00
6BM6	Velocity Modulation Reflex Oscillator	145.00
5836	(SD1103) Velocity Modulation Reflex Oscillator	162.50
5837	(SD1104) Velocity Modulation Reflex Oscillator	162.50
ROCKET TUBES		
2C36	Pulse-Modulated and C. W. Oscillator	40.60
2C37	C. W. Oscillator, Amplifier and Multiplier	40.60
5764	Pulse-Modulated Oscillator	62.50
5765	Broad-Band C. W. Oscillator Int. Feedback	62.50
5767	C. W. Oscillator	62.50
5768	C. W. Amplifier Multiplier	62.50
6018	(SB-846F) Pulse Modulated and C. W. Oscillator	62.50
GLOW MODULATOR TUBES		
R1130B	.055" Crater—(1B59)	14.35
R1131C	.093" Crater	14.35
HYDROGEN THYRATRONS		
4C35	8KV, 90 amp peak	28.75
5C22	15KV, 325 amp peak	53.45
SELENIUM RECTIFIERS		
NA-5	65 ma Rectifier	.80
NB-5	75 ma Rectifier	.93
SELENIUM RECTIFIERS—*Continued*		
NC-5	100 ma Rectifier	$1.14
ND-5	150 ma Rectifier	1.35
NE-5	200 ma Rectifier	1.62
NF-5	250 ma Rectifier	1.80
NG-5	350 ma Rectifier	2.07
NH-5	450 ma Rectifier	2.58
NI-5	400 ma Rectifier	2.55
NJ-5	400 ma Rectifier	2.58
MICROWAVE CRYSTAL DIODES		
1N21	3000 mc Mixer	3.15
1N21A	3000 mc Mixer	3.75
1N21B	3000 mc Mixer	4.40
1N21C	3000 mc Mixer	22.50
1N22	3000-10,000 mc—Instrument Rectifier	3.10
1N23	10,000 mc Mixer	3.75
1N23A	10,000 mc Mixer	4.40
1N23B	10,000 mc Mixer	5.00
1N25	1000 mc High Burnout Mixer	5.35
1N26	24,000 mc Mixer	9.40
1N31	10,000 mc Video Detector	6.25
1N32	3000 mc Video Detector	25.00
1N76	Microwave Video Detector	5.35
1N78	16,000 mc Mixer	11.25
1N82	UHF Mixer	1.10
STROBOTRONS		
1D21/SN4	240 PPS V Neon Duo Grid	5.30
R-4350	Polychromatic Strobotron	12.50
SA-309	Small Polychromatic Strobotron	2.80
MISCELLANEOUS		
OA5	Trigger Tube (Cold Cathode)	4.40
X-6090	Ionization Tube	2.00
SS501	1500-volt U-Discharge	14.40
1237	Full Wave Argon Rectifier	4.25
SD759A	Ramberg Accelerometer Tube	84.00

SYLVANIA

ELECTRONIC DEVICES; RADIO TUBES; TELEVISION PICTURE TUBES; ELECTRONIC TEST EQUIPMENT; FLUORESCENT TUBES, FIXTURES, SIGN TUBING, WIRING DEVICES; LIGHT BULBS; PHOTOLAMPS; TELEVISION SETS

RECEIVING TYPES

PRICES EFFECTIVE JUNE 1, 1952

Type	List Price	Type	List Price	Type	List Price	Type	List Price	Type	List Price	Type	List Price
OOA	$3.55	1N6G	$2.00	6A3	$3.20	6CB6	$2.10	*6SF7	$2.00	7K7	$2.65
O1A	1.50	1P5G	2.40	6A4/LA	3.20	6CD6G	6.60	*6SG7	2.00	7L7	2.65
*OY4	4.80	1P5GT	2.65	6A5G	3.90	6D5G	2.40	*6SH7	2.20	7N7	2.20
*OZ4	1.65	1Q5G	2.40	6A6	2.65	6D6	2.20	6SH7GT	2.00	7Q7	2.00
OZ4G	1.65	1Q5GT	2.65	6A7	2.30	6D7	3.55	*6SJ7	1.65	7R7	2.20
1A1/5E1	1.65	1Q6	2.20	6A7S	3.55	6D8G	3.20	6SJ7GT	1.65	7S7	2.65
1A3	2.20	1R1G	1.65	*6A8	2.20	6E5	2.25	*6SK7	1.65	7V7	2.65
1A4P	4.05	1R4	2.65	6A8G	2.20	6E6	2.90	6SK7GT	1.85	7W7	2.65
1A4T	2.40	1R5	2.10	6A8GT	2.30	6E7	3.55	6SL7GT	2.45	7X7/XXFM	2.65
1A5G	2.40	1S4	2.20	6AB4	1.80	*6F5	1.75	6SN7GTA	2.20	7Y4	1.80
1A5GT	1.80	1S5	1.80	6AB5/6N5	2.65	6F5G	1.65	*6SQ7	1.50	7Z4	1.80
1A6	3.35	1SA6GT	2.40	*6AB7/1853	3.20	6F5GT	1.65	6SQ7GT	1.60	8	2.00
1A7G	2.40	1SB6GT	2.40	6AC5G	2.00	*6F6	2.10	*6SR7	1.50	9	2.00
1A7GT	2.20	1T1G	1.65	6AC5GT	2.90	6F6G	1.65	6SR7GT	1.80	10	3.90
1AB5	3.20	1T4	2.10	*6AC7/1852	2.90	6F6GT	1.65	*6SS7	2.10	10Y	3.90
1B1	1.65	1†5GT	2.40	6AD6G	2.40	6F7	3.20	*6ST7	2.65	12A	2.40
1B3GT	2.55	1U4	2.10	6AD7G	3.20	6F7S	3.55	*6SV7	3.20	12A5	3.55
1B4P	3.90	1U5	1.80	6AE5G	2.40	6F8G	3.20	6SV8GT	2.00	12A6	2.40
1B5/25S	3.35	1V	2.20	6AE5GT	2.00	6G6G	2.65	*6SZ7	2.20	12A6GT	2.90
1B7G	2.90	1V2	1.50	6AE6G	2.00	6H4GT	2.90	6T5	3.55	12A7	3.20
1B7GT	3.35	1V5	2.20	6AE7GT	2.00	*6H6	1.65	6T7G	3.35	12A8G	2.00
1C1	1.65	1W5	2.20	6AF4	3.90	6H6G	1.65	6T8	2.90	12A8GT	2.20
1C5G	2.40	1X1	1.65	6AF5G	2.00	6H6GT	1.80	6U5/6G5	2.00	12AH7GT	2.65
1C5GT	2.30	1X2	2.65	6AF6G	2.65	*6J5	1.50	6U6GT	2.20	12AL5	1.80
1C6	3.35	1X2A	2.65	6AG5	2.15	6J5G	1.50	6U7G	2.20	12AT6	1.55
1C7G	3.35	1Y1	1.65	*6AG7	3.20	6J5GT	1.50	6U8	3.40	12AT7	2.90
1C8	2.40	1Z1	1.65	6AH6	3.90	6J6	2.50	*6V6	3.35	12AU6	1.80
1D1	1.65	2	2.00	6AH7GT	2.40	*6J7	2.10	6V6G	2.00	12AU7	2.40
1D5G	2.00	2A3	3.20	6AJ4	6.00	6J7G	2.20	6V6GT	2.00	12AV6	1.55
1D5GP	4.05	2A4G	4.80	6AK5	3.90	6J7GT	2.20	*6V7	3.55	12AW6	2.40
1D5GT	2.00	2A5	2.20	6AK6	2.20	6J8G	3.20	6V7G	2.00	12AX7	2.50
1D7G	3.35	2A6	2.65	6AL5	1.80	6K5G	1.65	6W4GT	1.80	12B8GT	4.80
1D8GT	3.90	2A7	2.65	6AL7GT	2.90	6K5GT	2.40	6W5G	2.90	12BA6	1.90
1E1	1.65	2A7S	3.55	6AM4	6.00	6K6G	2.40	6W6GT	2.20	12BA7	2.40
1E4G	2.00	2B7	3.20	6AQ5	2.00	6K6GT	1.60	6W7G	2.65	12BD6	2.00
1E5G	4.80	2B7S	3.55	6AQ6	1.80	*6K7	1.85	6X4	1.55	12BE6	1.90
1E5GP	3.90	2E5	2.65	6AQ7GT	2.65	6K7G	2.20	*6X5	2.65	12BH7	2.40
1E5GT	4.80	2G5	2.40	6AR5	1.65	6K7GT	2.15	6X5G	1.65	12BN6	2.90
1E7GT	3.90	2S/4S	3.55	6AS5	2.10	*6K8	2.70	6X5GT	1.55	*12C8	3.20
1F1	1.65	*2W3	2.00	6AT6	1.55	6K8G	2.90	6Y5	4.80	12F5GT	1.80
1F4	2.75	2W3GT	2.00	6AU6	1.80	6K8GT	2.40	6Y5V	3.55	*12H6	1.80
1F5G	2.75	2Z2	3.55	6AV5GT	2.65	6L5G	2.65	6Y6G	2.50	*12J5	1.50
1F6	3.90	3	2.00	6AV6	1.55	*6L6	3.75	6Y7G	2.40	12J5GT	1.55
1F7G	3.90	3A8GT	4.80	6AX5GT	1.65	6L6G	3.20	6Z5	3.55	12J7G	2.00
1F7GH	3.55	3B5GT	2.40	6B4G	3.20	6L6GA	2.90	6Z7G	3.90	12J7GT	2.20
1F7GV	3.55	3B7	2.65	6B5	3.90	*6L7	2.40	6ZY5G	2.20	12K7G	2.00
1G1	1.65	3C6/XXB	3.20	6B6G	2.00	6L7G	3.20	7	2.00	12K7GT	2.10
1G4G	2.00	3D6	2.65	6B7	3.20	6N6G	3.90	7A4/XXL	2.00	*12K8	2.75
1G4GT	2.40	3E6	2.65	6B7S	3.55	*6N7	2.55	7A5	2.20	12K8GT	2.65
1G5G	3.15	3LF4	2.65	*6B8	3.20	6N7G	2.40	7A6	1.80	12Q7G	2.00
1G6G	2.40	3Q4	2.20	6B8G	3.20	6N7GT	2.40	7A7	1.80	12Q7GT	1.80
1G6GT	2.65	3Q5G	2.40	6B8GT	2.00	6P5G	2.00	7A8	1.80	12S8GT	2.65
1H4G	2.20	3Q5GT	2.50	6BA6	1.90	6P5GT	2.40	7AD7	3.20	*12SA7	1.75
1H5G	2.00	3S4	2.00	6BA7	2.40	6P7G	3.55	7AF7	1.80	12SA7GT	1.85
1H5GT	1.70	3V4	2.00	6BC5	2.00	*6Q6	2.90	7AG7	2.20	*12SC7	2.30
1H6G	3.20	4	2.00	6BD6	2.00	6Q6G	2.90	7AH7	2.20	*12SF5	1.90
1H6GT	3.20	4A1	3.55	6BE6	1.90	*6Q7	2.10	7B4	1.80	12SF5GT	2.00
1J1	1.65	4A6G	2.90	6BF5	2.10	6Q7G	1.80	7B5	1.80	*12SF7	2.10
1J5G	2.65	5	2.00	6BF6	1.65	6Q7GT	1.80	7B6	1.80	*12SG7	2.00
1J6G	2.90	5AZ4	1.35	6BG6G	4.80	6R6G	4.80	7B7	1.80	*12SH7	2.20
1J6GT	3.20	*5T4	4.80	6BH6	2.10	*6R7	2.65	7B8	1.80	12SH7GT	2.00
1K1	1.65	5U4G	1.50	6BJ6	2.10	6R7G	1.65	7C4	3.20	12SJ7	1.75
1L4	2.10	5V4G	2.45	6BK5	2.45	6R7GT	2.65	7C5	1.80	12SJ7GT	1.65
1LA4	2.65	*5W4	1.65	6BK7	3.20	6S4	1.70	7C6	1.80	*12SK7	1.75
1LA6	2.65	5W4G	1.35	6BL7GT	3.20	*6S7	2.65	7C7	1.80	12SK7GT	1.85
1LB4	2.65	5W4GT	1.65	6BN6	2.90	6S7G	3.20	7C8	2.65	12SL7GT	2.50
1LC5	2.65	5X4G	1.80	6BQ6GT	3.40	6S8GT	2.65	7E5	2.65	12SN7GT	2.30
1LC6	2.65	5Y3G	1.35	6BX7GT	3.40	6SA7	1.75	7E6	2.20	*12SQ7	1.50
1LD5	2.65	5Y3GT	1.10	6C4	1.70	6SA7GT	1.85	7E7	2.65	12SQ7GT	1.60
1LE3	2.65	5Y4G	1.55	*6C5	1.75	*6SB7Y	2.55	7F7	2.20	*12SR7	2.10
1LG5	2.65	5Y4GT	1.15	6C5G	1.65	*6SC7	2.00	7F8	3.20	12SR7GT	2.20
1LH4	2.65	5Z3	1.75	6C5GT	1.65	6SC7GT	2.00	7G7/1232	2.65	12Z3	2.40
1LN5	2.65	*5Z4	2.65	6C6	2.20	6SD7GT	2.90	7G8	3.90	14	2.90
1N5G	2.40	5Z4GT	2.00	6C7	3.55	*6SF5	1.75	7H7	2.00	14A4	2.65
1N5GT	2.10	6	2.00	6C8G	3.20	6SF5GT	1.80	7J7	2.65	14A5	3.90

*Metal types

†Matched pair

G.E. ELECTRONIC TUBES—RECEIVING TYPES (Cont.)

Type	List Price	Type	List Price	Type	List Price	Type	List Price
14A7/12B7	$2.20	25BQ6GT	$3.35	35Z6G	$2.65	56AS	$3.55
14AF7/XXD	2.40	25C6G	3.20	36	2.65	56S	3.55
14B6	2.20	25D8GT	4.80	37	1.85	57	2.00
14B8	2.20	*25L6	3.20	38	2.20	57AS	3.55
14C5	2.65	25L6G	2.00	39/44	2.65	57S	3.55
14C7	2.40	25L6GT	1.70	40	2.40	58	2.10
14E6	2.20	25N6G	4.80	40Z5	1.65	58AS	3.55
14E7	2.65	25W4GT	1.80	41	2.00	58S	3.55
14F7	2.20	25Y5	2.90	42	2.00	59	3.55
14F8	3.20	25Z5	1.65	43	2.00	70A7GT	3.55
14H7	2.40	*25Z6	2.20	45	2.10	70L7GT	3.90
14J7	2.65	25Z6G	1.50	45Z3	1.80	71A	2.40
14N7	2.65	25Z6GT	1.50	45Z5GT	1.80	75	2.00
14Q7	2.20	26	2.00	46	2.90	75S	3.55
14R7	2.65	27	1.80	46A1	2.00	76	1.65
14S7	2.65	27S	3.55	46B1	2.00	77	2.00
14W7	2.65	30	2.25	47	2.90	78	2.20
14X7	2.65	31	2.65	48	4.80	79	2.65
14Y4	2.40	32	3.70	49	2.65	80	1.35
15	3.20	32L7GT	3.20	50	6.00	81	4.80
18	2.90	33	3.35	50A5	2.20	82	2.65
19	3.20	34	3.55	50B5	2.00	83	2.65
19BG6G	6.00	35/51	2.20	50C5	2.00	83V	3.20
19J6	3.20	35A5	1.80	50C6G	2.90	84/6Z4	1.80
19T8	2.90	35B	2.00	50L6GT	1.70	85	2.20
20	4.80	35C5	2.00	50X6	2.20	85AS	3.55
22	3.55	35L6G	2.00	50Y6G	1.80	89	2.20
24A	2.35	35L6GT	1.70	50Y6GT	1.80	99V	3.55
24S	3.55	35S/51S	3.55	50Y7GT	2.00	99X	3.55
*25A6	3.20	35W4	1.30	50Z7G	2.00	100-70	2.00
25A6G	2.65	35Y4	1.80	52	4.80	100-77	2.00
25A6GT	2.90	35Z3	1.80	53	2.65	100-79	2.00
25AC5G	4.80	35Z4GT	1.50	55	2.20	117L7/M7GT	3.90
25AC5GT	2.90	35Z5G	2.00	55S	3.55	117N7GT	3.90
25AV5GT	2.90	35Z5GT	1.25	56	1.80	117P7GT	3.90

Type	List Price
117Z3	$1.50
117Z4GT	2.90
117Z6GT	2.40
FM-1000	3.20

GERMANIUM DIODES

Type	List Price
1N48	$1.40
†1N48	4.45
1N51	[illegible].85
1N52	2.85
†1N52	7.35
1N63	6.35
†1N63	14.35
1N64	1.20
1N65	1.40
1N69	2.05
1N70	5.25
1N72/G7	2.00
1N73/G9	47.55
1N74/G9A	36.50
1N75	5.55
†1N75	12.65
G6	3.75
G7A	2.00
G7B	4.00
G7C	4.00
G7D	4.00
G7E	4.00
G7F	2.00
G7G	2.00
G10	9.00

Type	List Price
G10A	$3.25
G10B	4.85
G10C	6.50
G11	29.00
G11A	29.00

SELENIUM RECTIFIERS

Type	List Price
6RS5GH1	$1.60
6RS5GH2	1.60

SPECIAL TYPES
with Industrial Applications

Type	Sugg'd User
6AS7G	$6.75
6K4	2.85
7F8/TV	4.00
12AY7	6.00
25A7GT	5.50
25B8GT	4.95
28D7	1.80

*Metal types †Matched pair

TELEVISION PICTURE TUBES

TYPE	LIST PRICE	ENVELOPE	FACEPLATE
*5TP4	$60.00	Round, Glass	Clear
7JP4	25.00	Round, Glass	Clear
8AP4-A	24.20	Round, Metal	Filter
10BP4-A	26.60	Round, Glass	Filter
10FP4	33.65	Round, Glass	Clear, Aluminized
10FP4-A	33.65	Round, Glass	Filter, Aluminized
12KP4-A	37.90	Round, Glass	Filter, Aluminized
12LP4-A	32.30	Round, Glass	Filter
12UP4-B	37.35	Round, Metal	Filter, Etched
14CP4	33.50	Rectangular, Glass	Filter
16AP4-A	50.75	Round, Metal	Filter
16GP4	40.50	Round, Metal	Filter
16GP4-B	40.50	Round, Metal	Filter, Etched
16KP4/16RP4	34.75	Rectangular, Glass	Filter
16KP4-A	42.50	Rectangular, Glass	Filter, Aluminized
16LP4-A	34.75	Round, Glass	Filter
16WP4-A	34.75	Round, Glass	Filter
17BP4-A	56.50	Rectangular, Glass	Filter
17BP4-B	39.75	Rectangular, Glass	Filter, Aluminized
17CP4	35.35	Rectangular, Glass	Filter
†17FP4-A	33.75	Rectangular, Glass	Filter
†17RP4/17HP4	33.75	Rectangular, Glass	Filter, Cylindrical Face
17QP4	32.50	Rectangular, Glass	Filter, Cylindrical Face
17VP4/17LP4	33.75	Rectangular, Metal	Filter, Etched
19AP4-A	60.00	Round, Metal	Filter
19AP4-B	60.00	Round, Metal	Filter, Etched
20CP4	48.75	Rectangular, Glass	Filter
20CP4-A	48.75	Rectangular, Glass	Filter
20HP4-A/20LP4	50.75	Rectangular, Glass	Filter
21EP4-A	51.25	Rectangular, Glass	Filter, Cylindrical Face
21EP4-B	59.50	Rectangular, Glass	Filter, Cylindrical Face
21FP4-A	53.50	Rectangular, Glass	Filter, Aluminized
24AP4	101.00	Round, Metal	Filter, Cylindrical Face

†Electrostatic Focus *Projection Type

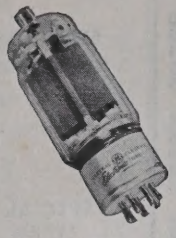
LIST AND SUGGESTED DEALER PRICES INCLUDE FEDERAL EXCISE TAX

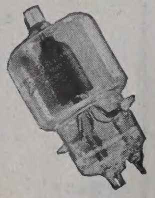
Prices and other data subject to change without notice.

Electronic TUBES

INDUSTRIAL AND TRANSMITTING TYPES

PLIOTRONS—GRID-CONTROLLED HIGH-VACUUM TUBES FOR USE AS MODULATORS, AMPLIFIERS, OSCILLATORS


GL-813 Pliotron


GL-592 Pliotron

GL-7D21 Pliotron

Type No.	Price	No. of Elec-trodes	CATHODE		PLATE				MAX. FREQ. MC.	
			Volts	Amp.	Max. Volts	Max. Amp.	Max. Input, Watts	Max. Dissi-pation, Watts	@ Max. Plate Input	@ 50% Max. Plate Input
GL-2C39-A	$34.00	3	6.3	1.1	350	0.045	15.8	4.8	500	....
GL-2C43	21.50	3	6.3	0.9	500	0.040	16.7	6.7	3370	....
⊙GL-7D21	320.00	4	6.3	30.0	4000	1.0	3000	1200	110	....
◈GL-9C24	570.00	3	6.3	240.	6500	2.0	12000	5000	220	....
GL-592	30.25	3	10	5.0	3500	0.250	600	200	110	....
GL-805	13.50	3	10	3.25	1500	0.210	315	125	30	80
GL-807	2.50	5	6.3*	0.90	600	0.100	60	25	60	125 @ 55%
					750	**0.100**	**75**	**30**		
GL-812-A	5.00	3	6.3	4.00	1250	0.175	175	45	60	100 @ 55%
					1500	**0.175**	**260**	**65**		
GL-813	18.00	5	10.0	5.00	2000	0.180	360	100	30	60 @ 75%
GL-814	14.25	5	10.0	3.25	1250	0.150	180	50	30	100
					1500	**0.150**	**225**	**65**		
⊙GL-833-A	49.50	3	10.0	10.0	4000	0.500	1800	400	30	75 @ 72%
					4000	**0.500**	**2000**	**450**		
◈GL-862-A**	1450.00	3	33	207.0	20000	10.00	200000	100000	1.6	....
◈GL-880	540.00	3	12.6	320.0	15000	4.5	67500	20000	25	100
◈GL-889-A	210.00	3	11	120	8500	2.00	16000	5000	50	150
⊙GL-889-R-A ★	295.00	3	11	120	8500	2.00	16000	5000	40	100
◈GL-893-A★	700.00	3	10§	61.0§	20000	4.00	70000	20000	5	40
⊙GL-893A-R★	1250.00	3	10§	61.0§	20000	4.00	70000	20000	5	25
GL-8000	14.50	3	10	4.5	2500	0.300	750	175	30	100
◈GL-8002	160.00	3	16	38	3500	1.00	3000	1200	150	300
⊙GL-8002-R	190.00	3	16	38	3500	1.00	3000	1200	120	200

Figures in bold type are ICAS ratings.

*Heater-type cathode.

★Lower prices apply when new tube is purchased and radiator in good condition is returned prepaid, to Schenectady.

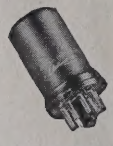
**Credit for return, prepaid, to Schenectady—carton $5.00; tube $10.00.

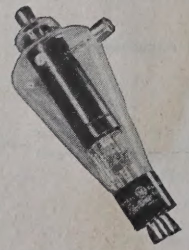
§Single-, three-, or six-phase filament. Voltage is per strand, current is per terminal.

⊙Forced-air cooled type.

◈Water-cooled type.

THYRATRONS—
GRID-CONTROLLED GASEOUS-DISCHARGE-RECTIFIER TUBES


GL-502A
Midget Thyratron


FG-95 Thyratron

Type No.	Price	No. of Elec-trodes	CATHODE		ANODE			Starting Grid Voltage
			Volts	Amp	Peak Volts	Peak Amp	Avg Amp	
GL-3C23	$12.50	3	2.5	7.0	1250	6.0	1.5	Neg
FG-27-A	26.00	3	5.0	4.5	1000	10.0	2.5	Neg
FG-105	49.50	4	5.0	10.0	2500	40.0	6.4	Var
			‡5.5	11.0	750	77.0	2.5	Var
			‡5.5	10.0	10000	16.0	4.0	Var
FG-172	74.00	4	5.0	10.0	2000	40.0	6.4	Var
			‡5.5	11.0	750	77.0	2.5	Var
GL-502-A	1.85	4	6.3	0.6	1300	0.100	0.100	Neg
GL-5557/FG-17	8.50	3	2.5	5.0	5000	2.0	0.5	Neg
GL-5560/FG-95	28.00	4	5.0	4.5	1000	15.0	2.5	Var
			†5.5	4.5	1000	30.0	0.5	Var

†These ratings apply only when the tube is used for ignitor firing.

‡These ratings apply only when the tube is used in thyratron welding-control service.

Prices and other data subject to change without notice.

There's a G-E Electronic Tube for Every Purpose:

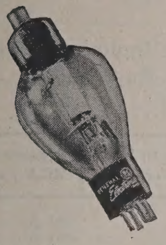
- •Pliotrons
- •Ignitrons
- •Phasitron
- •Glow Tubes
- •Thyratrons
- •Phototubes
- •Ballast Tubes
- •Vacuum Capacitors
- •Phanotrons
- •Lighthouse Tubes
- •Cathode-Ray Tubes
- •Vacuum Switches
- •Kenotrons

INDUSTRIAL and TRANSMITTING TUBES for COMMUNICATIONS and INDUSTRY
GENERAL ELECTRIC

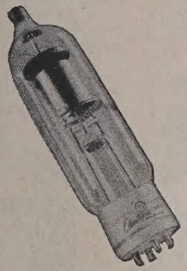
Ask for—ETX-10
For complete Prices, Descriptions and Ratings.

Electronic TUBES

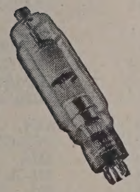
INDUSTRIAL AND TRANSMITTING TYPES



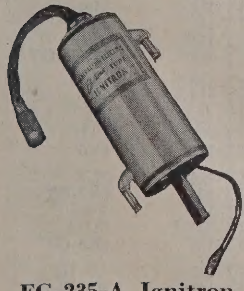
FG-32 Phanotron



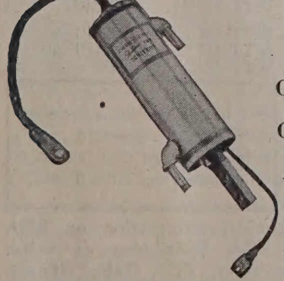
GL-872A/872 Phanotron



GL-8020 Kenotron



FG-235-A Ignitron



FG-271 Ignitron

PHANOTRONS— GASEOUS OR MERCURY-VAPOR RECTIFIER TUBES

Type No.	Price	No. of Electrodes	CATHODE		ANODE		
			Volts	Amp	Peak Volts	Peak Amp	Avg Amp
FG-280	$62.00	2	5.0	10	2000	40	6.4
GL-866-A	2.10	2	2.5	5	10000	1	0.25
GL-869-B	150.00	2	5	19	20000	15	2.5
GL-870-A	1475.00	2	5	65	16000	....	75.0
GL-872-A/872	8.20	2	5	7.5	10000	5	1.25
GL-5558/FG-32	15.50	2	5.0	4.5	5000	15	2.5
GL-5561/FG-104	40.00	2	5.0	10	3000	40*	6.4

*Quadrature operation

KENOTRONS—HIGH-VACUUM RECTIFIER TUBES

Type No.	Price	No. of Electrodes	CATHODE		PLATE		
			Volts	Amp	Max. Inv. Volts	Max. Amp.	Average Amp.
GL-411	$250.00	2	10	14.5	100000	0.300	....
GL-836	9.00	2	2.5*	5.0	5000	1.0	0.25
GL-5625/KC4	250.00	2	20	24.5	150000	1.0	....
GL-8013-A	10.30	2	2.5	5.0	40000	0.150	0.020
GL-8020	24.00	2	5.0	6.0	40000	0.750	0.100
			5.8△	....	12500△	2.△	....

*Heater-type cathode.
△Surge-limiting diode operation.

IGNITRONS—HIGH-PEAK CURRENT, POOL-CATHODE TUBES

Type No.	Price	Supply Volts	MAXIMUM RATINGS			
			Kva Demand	Corresponding Average Anode Current, Amps.	Maximum Average Anode Current, Amps.	Corresponding Kva Demand
GL-5550/GL-415*	$ 50.00	250–600 rms	300	12.1	22.4	100
GL-5551/FG-271*	80.50	250–600 rms	600	30.2	56.0	200
GL-5552/FG-235-A*	121.00	250–600 rms	1200	75.6	140	400
GL-5553/FG-258-A*	265.00	250–600 rms	2400	192	355	800
			MAXIMUM CURRENT			
			Peak Amp.	Average Amp.	Average Amp. 1 Minute	
GL-5554/FG-259-B†	190.00	300	900	150	200	
		600	600	112.5	150	
GL-5555/FG-238-B†	370.00	300	1800	300	400	
		600	1200	225	300	

*Ratings are for voltages of 600 volts rms and below. Ignitor requirements for all welding-control types are 200 volts and 30 amperes.

†Typical ignitor requirements for power-rectifier ignitrons are 75-125 volts, 15-20 amperes. Maximum requirements are 150 volts, 40 amperes.

Prices and other data subject to change without notice.

RCA ELECTRON TUBES REPLACEMENT DIRECTORY

for INDUSTRY and COMMUNICATIONS

Direct Replacement Types

RCA types shown below are direct replacements under all circumstances for corresponding types to be replaced. Tube types covered include: Vacuum Power Tubes, Rectifier Tubes, Thyratrons, Ignitrons, Voltage Regulators, Phototubes, Cathode-Ray Tubes, and Special Types.

Type to be Replaced	Replace by RCA Type	Type to be Replaced	Replace by RCA Type	Type to be Replaced	Replace by RCA Type	Type to be Replaced	Replace by RCA Type
OA3/VR75	OA3	FG-104	5561	FG-259B	5554	889	889-A
OC3/VR105	OC3	VR105-30	OC3	WT-261	6H6	893	893-A
OD3/VR150	OD3	HF120	211	WE-261A	835	902	902-A
CE-1(A-D)	868, 918	VR150-30	OD3	WT-262	866-A	UE-905	805
1P32	927	WT-210-0001	2D21	WT-263	6Z4	905	905-A
2AP1	2AP1-A	WT-210-0003	884	WT-269	OC3	906-P1	3AP1-A
2B4	885	WT-210-0004	2050	WT-270	80	908	908-A
2X2/879	2X2-A	WT-210-0006	6H6	WT-270X	5Z3	914	914-A
3AP1	3AP1-A	WT-210-0008	866-A	FG-271	5551	931	931-A
3BP1	3BP1-A	WT-210-0009	84/6Z4	WT-272	5557	UE-938	838
4D21	4-125A/4D21	WT-210-0011	OC3	WE-274B	5R4-GY	UE-949	849
4-250A	4-250A/5D22	WT-210-0012	80	WE-289A	4B26/2000	UE-966A	866-A
5BP1	5BP1-A	WT-210-0013	5Z3	WT-294	0D3	UE-967	5557
5CP1	5CP1-A	WT-210-0015	5557	WE-295A	203-A	UE-972A	872-A
5CP7	5CP7-A	WT-210-0018	OD3	WT-301	83	UE-975A	575-A
5D22	4-250A/5D22	WT-210-0019	83	UE-303A	203-A	1642	2C21/1642
5FP7	5FP7-A	WT-210-0021	6X5	WE-304B	834	1802-P1	5BP1-A
5HP1-A	5BP1-A‡	WT-210-0025	117Z6-GT	F-307A	207	1803-P4	12AP4
7BP7	7BP7-A	WT-210-0027	872-A	WT-308	6X5-GT	1804-P4	9AP4
PJ-8	5556	WT-210-0028	3Q5-GT	CE-309	5557	1811-P1	7CP1
G9	868	WT-210-0029	6C5	CE-311	3C23	1849	1850-A
BW-11	834	WT-210-0031	902-A	UE-311	211	1850	1850-A
CE-11V(A-D)	917	WT-210-0037	117L7/M7-GT	UE-311C	835	2000	4B26/2000
RK-11	1623	WT-210-0038	172	UE-317C	217-C	2051	2050
12DP7	12DP7-A	WT-210-0040	6X4	WE-322A	803	2525A5	5BP1-A
FG-17	5557	WT-210-0042	5Y3-GT	WE-350A	807	5728	1904
CE-20	927	WT-210-0044	575-A	375-A	575-A	8001	4E27/8001
RK-20A	804	WT-210-0045	892	WT-377	117Z6-GT	8016	1B3-GT
CE-21(A-D)	920	WT-210-0048	5U4-G	WT-389	3Q5-GT	198049	4B26/2000
CE-23(A-D)	923	WT-210-0052	2AP1-A	WT-390	6C5	289416D	4B26/2000
PJ-23	868	WT-210-0053	3AP1-A	WE-397A	2K56	WTT-100	6X4
CE-25(A-D)	927	WT-210-0056	5559	FJ-401	1P29	WTT-102	5Y3-GT
RK-25	802	WT-210-0057	5560	WE-403A	6AK5	WTT-103	6H6
RK-25B	802	WT-210-0058	676	GL-415	5550	WTT-104	575-A
CE-28(A-D)	928	WT-210-0060	OZ4	GL-451	8020	WTT-105	892
RK-28	803	WT-210-0061	117N7-GT	WT-606	2D21	WTT-111	5559
RK-28A	803	WT-210-0062	5557	WL-630	2050	WTT-112	5560
CE-29(A-D)	929, 1P39	WT-210-0069	5557	WL-631	5559	WTT-113	676
CE-30(A-D)	930, 1P40	WT-210-0070	5550	KU-634	677	WTT-114	0Z4
CE-30V	925	WT-210-0071	5551	WL-651/656	5552	WTT-115	117N7-GT
RK-30	800	WT-210-0072	5552	WL-652/657	5551	WTT-117	5557
FG-32	5558	WT-210-0073	5553	WL-653B	5555	WTT-118	105
RK-33	2C21/1642	WT-210-0074	105	WL-655/658	5553	WTT-119	172
CE-34	934	WT-210-0078	172	672	672-A	WTT-122	6SJ7
RK-39	807	WT-210-0079	105	WL-679	5554	WTT-123	6V6
CE-41	921	WT-210-0081	6SJ7	WL-681/686	5550	WTT-124	7K7
CE-42	922	WT-210-0082	6V6	NL-715	5557	WTT-125	6N7-GT
RK-44	837	WT-210-0083	7K7	WL-735	868	WTT-126	50B5
RK-47	814	WT-210-0084	6N7-GT	801	801-A	WTT-127	833-A
UH-50	834	WT-210-0085	50B5	811	811-A	WTT-128	6K8-GT
R51A	927	WT-210-0086	833-A	812	812-A	WTT-129	6J5-GT
CE-55	924	WT-210-0087	6K8-GT	829	829-B	WTT-130	6G6-G
FG-57	5559	WT-210-0088	6J5-GT	829-A	829-B	WTT-131	6C6
RK-57	805	WT-210-0089	6G6-G	832	832-A	WTT-132	OA4-G
RK-58	838	WT-210-0090	6C6	833	833-A	WTT-135	5U4-G
CE-59	5581	WT-210-0091	OA4-G	C-833	833-A	WTT-136	2AP1-A
R59A	868, 918	211-D	211	857	857-B	WTT-137	3AP1-A
R60A	920	CE-226	4B26/2000	862	862-A	WTT-149	172
HY-61/807	807	FG-235A	5552	866	866-A		
R61A	930	FG-238B	5555	866-A/866	866-A		
CE-64	5583	242A	211	869-A	869-B		
FG-67	1904	242B	211	872	872-A		
VR75-30	OA3	WT-245	884	872-A/872	872-A		
FG-95	5560	WT-246	2050	F-872B	872-A		
CE-98	5582	FG-258A	5553	879	2X2-A		

‡ Except in high-altitude service.

See next page for a complete listing and suggested user's prices of more than 340 RCA Non-Receiving Tube Types.

NOTE: For additional replacement data on RCA Tubes for Industry and Communications, refer to the 20-page RCA Interchangeability Directory (Form ID-1020) which lists 1600 tube type numbers used by 24 manufacturers.

For complete technical information on RCA Tubes, see your RCA Distributor or write: Commercial Engineering, RCA Tube Department, Harrison, New Jersey.

RCA ELECTRON TUBES

for INDUSTRY and COMMUNICATIONS

Type	Sugg'd User Price
OA2	$2.90
OA3	2.65
OA4-G	2.90
OB2	3.20
OC3	2.65
OD3	2.65
1C21	2.85
1P21	50.00
1P22	14.75
1P28	15.50
1P29	2.95
1P37	2.85
1P39	1.75
1P40	1.95
1P41	2.80
1P42	5.70
2A4-G	3.20
2AP1-A	10.55
2BP1	9.60
2BP11	11.00
2C21/1642*	1.90
2C22*	1.60
2C40*	24.00
2C43	21.50
2D21	2.00
2D21W‡	3.15
2E24	4.65
2E26	3.85
2F21	105.00
2J50	192.00
2K26	107.15
2V3-G*	5.25
2X2-A	4.35
3A4	1.20
3A5	1.95
3AP1-A	14.25
3B25	6.90
3B28	8.85
3BP1-A	16.50
3C23	12.50
3C33	21.25
3D22	15.00
3E22	8.30
3E29	20.25
3FP7-A	23.00
3JP1	19.00
3JP7	23.00
3KP1	14.50
3KP11	16.50
3MP1	14.75
3RP1	14.50
4-65A	20.00
4-125A/4D21	30.25
4-250A/5D22	41.25
4C33	182.75
4E27/8001	24.50
4E27A/5-125B	35.75
4X150A	48.00
4X500A	121.00
5ABP1	38.20
5BP1-A	22.50
5CP1-A	23.25
5CP7-A	27.25
5CP11-A	27.50
5CP12	27.00
5FP4-A	41.75
5FP7-A	30.25
5FP14	30.25
5R4-GY*	1.85
5UP1	17.75
5UP7	20.25
5UP11	22.00
5WP11	70.00
5WP15	70.00
5ZP16	71.25
6AB7-Y‡*	$1.85
6AC7-W‡*	3.75
6AC7-Y‡*	1.40
6AG7-Y*	1.75
6AK5-W‡*	3.38
6AL5-W‡*	2.95
6AS6*	3.65
6F4*	6.40
6J4*	8.05
6L4*	6.60
6L6-Y‡*	2.90
6SA7-Y‡*	1.10
6SJ7-Y*	1.00
6SK7-W‡*	3.44
6SK7-Y‡*	1.06
6SN7-GTY*	1.40
6V6-GTY‡*	1.08
6V6-Y‡*	4.25
7BP7-A	48.50
7C24	169.00
7CP1	30.75
7CP4	33.00
7JP1	23.50
7MP7	39.50
7MP14	39.50
7NP4	600.00
7QP4	39.50
7TP4	52.00
7WP4	630.00
8D21	1300.00
9C21	922.00
9C22	1300.00
9C25	1080.00
10KP7	50.00
10SP4	54.00
10-Y	3.90
12A6*	2.90
12DP7-A	72.50
12K8-Y‡*	1.75
12L8-GT	2.35
12SA7-Y‡*	1.25
12SG7-Y	3.40
12SP7	47.40
12SW7*	1.20
12SX7-GT*	1.55
12SY7*	1.45
16ADP7	55.00
26A6*	3.10
26A7-GT*	6.55
26C6*	2.10
26D6*	2.85
89-Y*	1.10
105	49.50
172	74.00
203-A	13.75
204-A	130.00
207	240.00
211	13.75
217-C	21.17
502-A	1.85
559	5.35
575-A	21.00
579-B	15.00
627	22.00
629	13.00
672-A	35.00
673	21.00
676	55.00
677	55.00
715-C	63.00
800	11.50
801-A	4.85
802	4.75
803	24.25
804	17.50
805	$13.50
806	34.25
807	2.50
808	10.75
809	4.00
810	16.25
811-A	5.00
812-A	5.00
813	18.00
814	14.25
815	8.20
816	1.65
826	12.50
827-R	172.50
828	13.75
829-B	16.25
830-B	11.50
832-A	12.90
833-A	49.50
834	14.50
835	19.50
836	9.00
837	5.80
838	13.75
841*	4.35
842	4.05
843	2.60
845	13.75
846	250.00
849	138.00
851	340.00
857-B	218.50
860	34.50
861	178.25
862-A	1322.00
864	5.00
865	11.50
866-A	2.10
868	2.50
869-B	138.00
872-A	8.20
874	3.10
878	12.75
880	540.00
884	1.85
885	2.00
886	4.60
889-A	210.00
889R-A	295.00
891	237.00
891-R	385.00
892	237.00
892-R	385.00
893-A	664.00
893A-R	1212.00
898-A	1322.00
902-A	12.50
905-A	65.25
908-A	16.50
912	155.00
913	15.50
914-A	93.50
917	3.50
918	3.10
919	3.50
920	4.15
921	2.05
922	1.95
923	2.05
924	3.30
925	2.40
926	2.90
927	2.50
928	2.85
929	1.50
930	$1.65
931-A	8.60
934	3.40
935	7.80
954*	5.65
955*	3.60
956*	7.00
957*	3.75
958-A*	6.50
959*	6.25
991	.75
1608	7.90
1609	10.25
1610	2.50
1612	2.70
1613	2.45
1614	2.00
1616	8.65
1619	2.50
1620	6.25
1621	1.95
1622	2.50
1623	4.05
1624	4.00
1625	2.65
1626	1.85
1629	1.40
1631*	3.10
1632*	3.25
1633*	1.95
1634*	1.40
1635	2.00
1644*	3.10
1654	4.55
1699	‡‡
1816P4-A	47.00
1850-A	540.00
1904	23.00
1945	135.00
1946	10.90
1947	9.80
1949	11.30
1950	7.80
2050	1.85
5527	49.90
5550	50.00
5551	80.50
5552	121.00
5553	265.00
5554	190.00
5555	370.00
5556	13.50
5557	8.50
5558	15.50
5559	22.00
5560	28.00
5561	40.00
5563	47.00
5581	2.25
5582	2.65
5583	3.05
5584	3.95
5588	120.00
5592	1229.00
5618	3.60
5651	$3.14
5652	6.55
5653	2.40
5654*	5.75
5671	1250.00
5675	17.30
5691	8.55
5692	8.55
5693	6.95
5696	1.90
5713	176.00
5734	18.00
5762	169.00
5763	1.75
5770	995.00
5771	543.00
5786	78.00
5794	16.75
5819	55.00
5820	1200.00
5822	143.00
5823	1.32
5825	13.00
5826	1300.00
5876	18.70
5879	1.75
5890	26.00
5893	19.40
5915	1.20
5946	115.00
5963	1.40
5964	1.50
6012	4.50
6026	2.95
6073	8.00
6074	8.90
6080*	6.00
6082	5.30
6146	4.90
6159	4.90
6161	115.00
6166	780.00
6173	15.80
6181	750.00
6198	360.00
6199	55.00
8000	14.50
8003	14.00
8005	8.40
8008	8.20
8012-A	15.50
8013-A	10.30
8020	24.00
8025-A	11.30
9001*	3.40
9002*	2.50
9003*	3.40
9004*	2.30
9005*	3.45
9006*	1.60

*Subject to Federal Excise Tax. Suggested User prices listed in this schedule include Federal Excise Tax.
‡Supplied only against orders giving government contract number. ‡‡Quotation on request.
Prices in effect May 28, 1952.

RCA ELECTRON TUBES

RECEIVING • TELEVISION • SPECIAL

SUGGESTED LIST PRICES • MAY 1, 1952

Type	Sug'd List Price
OY4	$4.80
OZ4	1.65
OZ4G	1.65
1A3	2.30
1A4P	4.05
1A5GT	1.85
1A6	3.35
1A7GT	2.20
1AC5	2.20
1AD5	2.20
1B3GT	2.55
1B4P	4.05
1B5/25S	3.35
1C5GT	2.30
1C6	3.35
1C7G	3.35
1D5GP	4.05
1D7G	3.35
1D8GT	4.05
1E5GP	4.05
1E7GT	4.05
1E8	2.20
1F4	2.75
1F5G	2.75
1F6	4.05
1F7G	4.05
1G4GT	2.55
1G5G	3.15
1G6GT	2.70
1H4G	2.30
1H5GT	1.70
1H6G	3.35
1J6GT	3.35
1L4	2.10
1LA4	2.65
1LA6	2.65
1LB4	2.65
1LC5	2.65
1LC6	2.65
1LD5	2.65
1LE3	2.65
1LG5	2.65
1LH4	2.65
1LN5	2.65
1N5GT	2.10
1P5GT	2.65
1Q5GT	2.65
1R5	2.10
1S4	2.25
1S5	1.90
1T4	2.10
1T5GT	2.60
1T6	2.20
1U4	2.10
1U5	1.90
1V	2.30
1V2	1.55
1X2A	2.65
2A3	3.35
2A5	2.30
2A6	2.65
2A7	2.75
2B7	3.40
2E5	2.75
3A8GT	4.80
3LF4	2.65
3Q4	2.25
3Q5GT	2.50
3S4	2.00
3V4	2.00

Type	Sug'd List Price
5AZ4	$1.35
5T4	4.40
5U4G	1.50
5V4G	2.45
5W4	1.65
5X4G	1.80
5Y3G	1.35
5Y3GT	1.10
5Y4G	1.55
5Z3	1.75
5Z4	2.80
6A3	3.35
6A6	2.75
6A7	2.30
6A8	2.20
6A8G	2.30
6A8GT	2.30
6AB4	2.00
6AB5/6N5	2.75
6AB7	3.25
6AC5GT	3.00
6AC7	2.90
6AD7G	3.35
6AF6G	2.75
6AG5	2.25
6AG7	3.20
6AH6	3.90
6AK5	4.15
6AK6	2.35
6AL5	1.80
6AL7GT	2.90
6AQ5	2.00
6AQ6	1.90
6AQ7GT	2.65
6AR5	1.65
6AS5	2.10
6AT6	1.55
6AU5GT	2.65
6AU6	1.80
6AV6	1.55
6AX5GT	1.65
6B4G	3.20
6B5	3.35
6B6G	2.10
6B7	3.35
6B8	3.35
6B8G	3.35
6BA6	1.90
6BA7	2.50
6BC5	2.00
6BD6	2.00
6BE6	1.90
6BF6	1.70
6BG6G	4.80
6BH6	2.10
6BJ6	2.10
6BL7GT	2.90
6BQ6GT	3.40
6BQ7	3.05
6C4	1.70
6C5	1.75
6C5GT	1.65
6C6	2.20
6C8G	3.35
6CB6	2.10
6CD6G	6.60
6D6	2.20
6D8G	3.35
6E5	2.25
6F5	1.75

Type	Sug'd List Price
6F5GT	$1.70
6F6	2.10
6F6G	1.75
6F6GT	1.65
6F7	3.35
6F8G	3.35
6G6G	2.75
6H6	1.65
6H6GT	1.85
6J5	1.50
6J5GT	1.50
6J6	2.50
6J7	2.10
6J7G	2.25
6J7GT	2.20
6J8G	3.20
6K5GT	2.40
6K6GT	1.60
6K7	1.85
6K7G	2.15
6K7GT	2.15
6K8	2.70
6K8G	3.30
6L5G	2.75
6L6	3.75
6L6G	3.20
6L7	2.55
6L7G	3.30
6N6G	3.90
6N7	2.55
6N7GT	2.50
6P5GT	2.40
6Q7	2.10
6Q7G	1.85
6Q7GT	1.85
6R7	2.65
6R7GT	2.65
6S4	1.70
6S7	2.75
6S7G	3.35
6S8GT	2.65
6SA7	1.75
6SA7GT	1.85
6SB7Y	2.55
6SC7	2.00
6SF5	1.75
6SF5GT	1.80
6SF7	2.00
6SG7	2.00
6SH7	2.20
6SJ7	1.65
6SJ7GT	1.65
6SK7	1.65
6SK7GT	1.85
6SL7GT	2.45
6SN7GT	2.20
6SQ7	1.50
6SQ7GT	1.60
6SR7	1.80
6SS7	2.15
6ST7	2.65
6SZ7	2.20
6T7G	3.35
6T8	2.90
6U5	2.00
6U7G	2.20
6V6	3.35
6V6GT	2.00
6W4GT	1.85
6W7G	2.75

Type	Sug'd List Price
6X4	$1.55
6X5	2.75
6X5GT	1.55
6X8	2.75
6Y6G	2.50
6Z7G	4.05
6ZY5G	2.30
7A4	2.00
7A5	2.35
7A6	1.90
7A7	1.90
7A8	1.80
7AD7	3.35
7AF7	1.80
7AG7	2.20
7AH7	2.20
7B4	1.80
7B5	1.80
7B6	1.80
7B7	1.90
7B8	1.90
7C5	1.90
7C6	1.80
7C7	1.90
7E6	2.35
7E7	2.75
7F7	2.20
7F8	2.90
7G7/1232	2.75
7H7	2.20
7J7	2.75
7K7	2.75
7L7	2.75
7N7	2.20
7Q7	2.10
7R7	2.35
7S7	2.65
7V7	2.65
7W7	2.65
7X7	2.65
7Y4	1.80
7Z4	1.80
10Y	3.90
12A7	3.35
12A8GT	2.20
12AH7GT	2.75
12AL5	1.80
12AT6	1.55
12AT7	2.90
12AU6	1.80
12AU7	2.40
12AV6	1.55
12AW6	2.50
12AX7	2.50
12BA6	1.90
12BA7	2.50
12BD6	2.00
12BE6	1.90
12BH7	2.40
12C8	3.35
12F5GT	1.85
12H6	1.80
12J5GT	1.55
12J7GT	2.20
12K7GT	2.10
12K8	2.70
12Q7GT	1.85
12S8GT	2.65
12SA7	1.75
12SA7GT	1.85

Type	Sug'd List Price
12SC7	$2.30
12SF5	1.90
12SF7	2.10
12SG7	2.00
12SH7	2.20
12SJ7	1.75
12SJ7GT	1.65
12SK7	1.75
12SK7GT	1.85
12SL7GT	2.50
12SN7GT	2.30
12SQ7	1.50
12SQ7GT	1.60
12SR7	2.10
12Z3	2.60
14A4	2.65
14A5	3.90
14A7/12B7	2.20
14AF7	2.40
14B6	2.20
14B8	2.20
14C5	2.75
14C7	2.40
14E6	2.35
14E7	2.75
14F7	2.20
14F8	3.20
14H7	2.40
14J7	2.75
14N7	2.65
14Q7	2.20
14R7	2.75
19	3.35
19BG6G	6.00
19J6	2.65
19T8	2.90
22	3.20
24A	2.35
25A6	3.40
25AC5GT	2.90
25BQ6GT	3.40
25L6	3.40
25L6GT	1.70
25W4GT	2.00
25Z5	1.65
25Z6	2.30
25Z6GT	1.50
26	2.05
27	1.75
30	2.25
31	2.75
32	3.70
32L7GT	3.20
33	3.35
34	3.50
35	2.35
35A5	1.80
35B5	2.00
35C5	2.00
35L6GT	1.70
35W4	1.30
35Y4	1.80
35Z3	1.80
35Z4GT	1.50
35Z5GT	1.25
36	2.75

Type	Sug'd List Price
37	$1.85
38	2.30
39/44	2.75
41	1.90
42	1.90
43	2.05
45	2.10
45Z3	1.80
45Z5GT	1.80
46	2.90
47	2.90
49	2.75
50	5.15
50A5	2.20
50B5	2.00
50C5	2.00
50C6G	2.90
50L6GT	1.70
50X6	2.20
50Y6GT	1.85
50Y7GT	2.10
53	2.75
55	2.30
56	1.85
57	2.10
58	2.10
59	3.70
70L7GT	3.90
71A	2.35
75	1.70
76	1.70
77	2.15
78	2.15
79	2.75
80	1.30
81	4.65
82	2.75
83	2.75
83V	3.20
84/6Z4	1.80
85	2.30
89	2.30
117L7/M7GT	3.90
117N7GT	4.05
117P7GT	4.05
117Z3	1.55
117Z4GT	2.90
117Z6GT	2.50

XXD use 14AF7
XXFM use 7X7
XXL use 7A4

OTHERS

Type	Sug'd List Price
6AS7G	$7.10

Suggested list prices include Federal Excise Tax where applicable, and are subject to government price regulations. All prices subject to change without notice.

RCA KINESCOPES

DEALER PRICE SCHEDULE

JULY 1, 1952

Type	Suggested List Price†	Suggested Dealer Price††	DESCRIPTION Shape	Material	Face	Focus	Deflection
3KP4	20.00	15.00	Round	Glass	Clear	Electrostatic	Electrostatic
5TP4	60.00	45.00	Round	Glass	Clear	Electrostatic	Magnetic
7DP4	31.50	26.20	Round	Glass	Clear	Electrostatic	Magnetic
7JP4	25.00	18.75	Round	Glass	Clear	Electrostatic	Electrostatic
10BP4-A	27.00	20.00	Round	Glass	Filter	Magnetic	Magnetic
10FP4-A	33.75	25.25	Round	Glass	Filter	Magnetic	Magnetic
12KP4-A	38.00	28.40	Round	Glass	Filter	Magnetic	Magnetic
12LP4-A	31.00	23.25	Round	Glass	Filter	Magnetic	Magnetic
14CP4	33.50	25.00	Rectangular	Glass	Filter	Magnetic	Magnetic
14EP4	33.50	25.00	Rectangular	Glass	Filter	Magnetic	Magnetic
16AP4-A	43.00	32.00	Round	Metal	Filter	Magnetic	Magnetic
16DP4-A	36.00	27.00	Round	Glass	Filter	Magnetic	Magnetic
16GP4	40.00	30.00	Round	Metal	Filter	Magnetic	Magnetic
16GP4-B	40.00	30.00	Round	Metal	Fil.-Fr.	Magnetic	Magnetic
16KP4	35.00	26.00	Rectangular	Glass	Filter	Magnetic	Magnetic
16LP4-A	35.00	26.00	Round	Glass	Filter	Magnetic	Magnetic
16RP4	35.00	26.00	Rectangular	Glass	Filter	Magnetic	Magnetic
16TP4	35.00	26.00	Rectangular	Glass	Filter	Magnetic	Magnetic
16WP4-A	35.00	26.00	Round	Glass	Filter	Magnetic	Magnetic
17BP4-A	33.00	24.50	Rectangular	Glass	Filter	Magnetic	Magnetic
17CP4	33.00	24.50	Rectangular	Metal	Fil.-Fr.	Magnetic	Magnetic
17GP4	35.00	26.25	Rectangular	Metal	Fil.-Fr.	Electrostatic	Magnetic
17HP4	34.00	25.50	Rectangular	Glass	Filter	Electrostatic*	Magnetic
17JP4	33.00	24.50	Rectangular	Glass	Filter	Magnetic	Magnetic
17LP4	34.00	25.50	Rectangular	Glass	Filter	Electrostatic*	Magnetic
17QP4	33.00	24.50	Rectangular	Glass	Filter	Magnetic	Magnetic
17TP4	33.00	24.50	Rectangular	Metal	Fil.-Fr.	Electrostatic*	Magnetic
19AP4-A	50.00	37.50	Round	Metal	Fil.-Fr.	Magnetic	Magnetic
19AP4-B	50.00	37.50	Round	Metal	Filter	Magnetic	Magnetic
20CP4	49.00	36.50	Rectangular	Glass	Filter	Magnetic	Magnetic
20MP4	51.00	38.00	Rectangular	Glass	Filter	Electrostatic*	Magnetic
21AP4	51.50	38.50	Rectangular	Metal	Fil.-Fr.	Magnetic	Magnetic
21MP4	53.50	40.00	Rectangular	Metal	Fil.-Fr.	Electrostatic*	Magnetic

†Suggested List Prices effective June 15, 1952.

††**See your RCA distributor for kinescope return allowance information.**

*Low Voltage

Suggested List and Dealer Prices include Federal Excise Tax and are subject to Government Ceiling Price Regulations.

All prices subject to change without notice.

For the latest Service Aids — for the Best Tubes . . .

ALWAYS KEEP IN TOUCH WITH YOUR RCA DISTRIBUTOR

TUNG-SOL
ELECTRON TUBES

REVISED APRIL 1, 1952

This Price List Is Supplied For Your Convenience By Tung-Sol Electric Inc.

All prices are subject to change without notice. The listing of price for any tubes does not necessarily indicate availability.

Type	Sugg'd Retail Price
0Y4	$4.80
0Z4	1.65
0Z4G	1.65
01A	1.25
1A3	2.30
1A4P	4.05
1A5GT	1.85
1A6	3.35
1A7GT	2.20
1B3GT	2.55
1B4P (1B4/951)	4.05
1B5/25S	3.50
1B7GT	3.35
1C5GT	2.30
1C6	3.35
1C7G	3.35
1C8	2.65
1D5GP	4.05
1D7G	3.35
1D8GT	4.05
1E5GP	4.05
1E7GT	4.05
1F4	2.75
1F5G	2.75
1F6	4.05
1F7G	4.05
1G4GT	2.55
1G5G	3.15
1G6GT	2.70
1H4G	2.30
1H5GT	1.70
1H6G	3.35
1J5G	2.65
1J6G	3.20
1J6GT	3.35
1L4	2.10
1LA4	2.65
1LA6	2.65
1LB4	2.65
1LC5	2.65
1LC6	2.65
1LD5	2.65
1LE3	2.65
1LG5	2.65
1LH4	2.65
1LN5	2.65
1N5GT	2.10
1N6G	1.80
1P5GT	2.65
1Q5GT	2.65
1Q6	2.65
1R5	2.10
1S4	2.25
1S5	1.90
1T4	2.10
1T5GT	2.60
1U4	2.10
1U5	1.90
1V	2.30
1V2	1.55
1V5	2.65
1X2A	2.65
1W5	2.65
2A3	3.35
2A4G	3.20

Type	Sugg'd Retail Price
2A5	$2.30
2A6	2.65
2A7	2.75
2B7	3.40
2E5	2.75
3A8GT	4.80
3B7/1291	2.65
3C6/XXB	3.20
3D6/1299	2.65
3E6	2.65
3LF4	2.65
3Q4	2.25
3Q5GT	2.50
3S4	2.00
3V4	2.00
5AX4GT	1.25
5AZ4	1.35
5T4	4.40
5U4G	1.50
5V4G	2.45
5W4	1.65
5W4GT	1.65
5X4G	1.80
5Y3G	1.35
5Y3GT	1.10
5Y4G	1.55
5Z3	1.75
5Z4	2.80
6A3	3.35
6A4 (LA)	3.20
6A5G	4.05
6A6	2.75
6A7	2.30
6A8	2.20
6A8G	2.30
6A8GT	2.30
6AB4	2.00
6AG5/6N6	2.75
6AB7/1853	3.25
6AC5GT	3.00
6AC7/1852	2.90
6AD7G	3.35
6AF6G	2.75
6AG5	2.25
6AG7	3.20
6AH6	3.90
6AK5	3.90
6AK6	2.35
6AL5	1.80
6AL7GT	2.90
6AQ5	2.00
6AQ6	1.90
6AQ7GT	2.65
6AR5	1.65
6AS5	2.10
6AT6	1.55
6AU5GT	2.65
6AU6	1.80
6AV5GT	2.65
6AV6	1.55
6AX4GT	2.40
6AX5GT	1.65
6B4G	3.20
6B5	3.35
6B6G	2.10

Type	Sugg'd Retail Price
6B7	$3.35
6B8	3.35
6B8G	3.35
6BA6	1.90
6BA7	2 50
6BC5	2.00
6BD5GT	3.35
6BD6	2.00
6BE6	1.90
6BF5	2.35
6BF6	1.70
6BG6G	4.80
6BH6	2.10
6BJ6	2.10
6BL7GT	2.90
6BN6	3.20
6BQ6GT	3.40
6BY5G	2.65
6C4	1.70
6C5	1.75
6C5GT	1.65
6C6	2.20
6C8G	3.35
6CB6	2.10
6CD6G	6.60
6D6	2.20
6D8G	3.35
6E5	2.25
6F5	1.75
6F5GT	1.70
6F6	2.10
6F6G	1.75
6F6GT	1.65
6F7	3.35
6F8G	3.35
6G6G	2.75
6H4GT	2.65
6H6	1.65
6H6GT	1.85
6J5	1.50
6J5GT	1.50
6J6	2.50
6J7	2.10
6J7GT	2.20
6J8G	3.20
6K5GT	2.40
6K6GT	1.60
6K7	1.85
6K7G	2.15
6K7GT	2.15
6K8G	2.70
6K8GT	2.50
6L5G	2.75
6L6	3.75
6L6G	3.20
6L6GA	3.20
6L7	2.55
6L7G	3.30
6N6G	3.90
6N7	2.55
6N7GT	2.50
6P5GT	2.40
6Q7	2.10
6Q7GT	1.85
6R7	2.65

Type	Sugg'd Retail Price
6R7GT	$2.65
6R8	3.20
6S4	1.70
6S7	2.75
6S7G	3.35
6S8GT	2.65
6SA7	1.75
6SA7GT	1.85
6SB7Y	2.55
6SC7	2.00
6SC7GT	2.00
6SD7GT	2.90
6SF5	1.75
6SF5GT	1.80
6SF7	2.00
6SF7GT	1.80
6SG7	2.00
6SG7GT	2.20
6SH7	2.20
6SH7GT	2.20
6SJ7	1.65
6SJ7GT	1.65
6SK7	1.65
6SK7GT	1.85
6SL7GT	2.45
6SN7GT	2.20
6SQ7	1.50
6SQ7GT	1.60
6SR7	1.80
6SF7GT	1.80
6SS7	2.15
6ST7	2.65
6SV7	3.55
6SZ7	2.20
6T7G (6Q6G)	3.35
6T8	2.90
6U4GT	2.65
6U5/6G5	2.00
6U6GT	2.00
6U8	2.90
6U7G	2.20
6V6	3.35
6V6GT	2.00
6V7	3.20
6V7G	1.80
6W4GT	1.85
6W6GT	2.20
6W7G	2.75
6X4	1.55
6X5	2.75
6X5GT	1.55
6Y6G	2.50
6Z7G	4.05
6ZY5G	2.30
7A4/XXL	2.00
7A5	2.35
7A6	1.90
7A7	1.90
7A8	1.80
7AD7	3.35
7AF7	1.80
7AG7	2.20
7AH7	2.20
7B4	1.80
7B5	1.80

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

(Continued next page)

TUNG-SOL ELECTRON TUBES (con.)

Type	Sugg'd Retail Price
7B6	$1.80
7B7	1.90
7B8	1.90
7C4/1203	3.35
7C5	1.90
7C6	1.80
7C7	1.90
7E5/1201	2.65
7E6	2.35
7E7	2.75
7F7	2.20
7F8	3.00
7G7/1232	2.75
7H7	2.20
7J7	2.75
7K7	2.75
7L7	2.75
7N7	2.20
7Q7	2.10
7R7	2.35
7S7	2.65
7V7	2.65
7W7	2.65
7X6	2.20
7X7 (XXFM)	2.65
7Y4	1.80
7Z4	1.80
10	3.90
12A6	2.90
12A6GT	2.90
12A7	3.35
12A8GT	2.20
12AH6GT	2.20
12AH7GT	2.75
12AL5	1.80
12AT6	1.55
12AT7	2.90
12AU6	1.80
12AU7	2.40
12AV6	1.55
12AV7	2.90
12AX4GT	2.40
12AX7	2.50
12AW6	2.50
12AY7	6.00
12BA6	1.90
12BA7	2.50
12BD6	2.00
12BE6	1.90
12BF6	1.65
12BH7	2.40
12C8	3.35
12E5GT	2.20
12F5GT	1.85
12H6	1.80
12J5GT	1.55
12J7GT	2.20
12K7GT	2.10
12K8	2.70
12K8GT	2.65

Type	Sugg'd Retail Price
12Q7GT	$1.85
12S8GT	2.65
12SA7	1.75
12SA7GT	1.85
12SC7	2.30
12SF5	1.90
12SF5GT	2.00
12SF7	2.10
12SF7GT	2.00
12SG7	2.00
12SH7	2.20
12SJ7	1.75
12SJ7GT	1.65
12SK7	1.75
12SK7GT	1.85
12SL7GT	2.50
12SN7GT	2.30
12SQ7	1.50
12SQ7GT	1.60
12SR7	2.10
12SR7GT	2.20
12Z3	2.60
14A4	2.65
14A5	3.90
14A7/12B7	2.20
14AF7 (XXD)	2.40
14B6	2.20
14B8	2.20
14C5	2.75
14C7	2.40
14E6	2.35
14E7	2.75
14F7	2.20
14F8	3.00
14H7	2.40
14J7	2.75
14N7	2.65
14Q7	2.20
14R7	2.75
14S7	2.65
14W7	2.65
14X7	2.65
14Y4	2.40
15	3.20
19	3.35
19C8	3.20
19BG6G	6.00
19J6	2.65
19T8	2.90
22	3.20
24A	2.35
25A6	3.40
25A6G	2.65
25AC5GT	2.90
25BQ6GT	3.20
25C6G	2.90
25L6	3.40
25L6GT	1.70
25W4GT	2.00
25Y5	3.00

Type	Sugg'd Retail Price
25Z5	$1.65
25Z6	2.30
25Z6GT	1.50
26	2.05
27	1.75
30	2.25
31	2.75
32	3.70
32L7GT	3.20
33	3.35
34	3.50
35/51	2.35
35A5	1.90
35B5	2.00
35C5	2.00
35L6GT	1.70
35W4	1.30
35Y4	1.80
35Z3	1.80
35Z4GT	1.50
35Z5GT	1.25
35Z6G	1.80
36	2.75
37	1.85
38	2.30
39/44	2.75
41	1.90
42	1.90
43	2.05
45	2.10
45Z3	1.80
45Z5GT (40Z5GT)	1.80
46	2.90
47	2.90
48	3.90
49	2.75
50	5.15
50A5	2.20
50B5	2.00
50C5	2.00
50C6G	2.90
50L6GT	1.70
50X6	2.20
50Y6GT	1.85
50Y7GT	2.10
53	2.75
55	2.30
56	1.85
57	2.10
58	2.10
59	3.70
70L7GT	3.90
71A	2.35
75	1.70
76	1.70
77	2.15
78	2.15
79	2.75
80	1.30
81	4.65

Type	Sugg'd Retail Price
82	$2.75
83	2.75
83V	3.20
84/6Z4	1.80
85	2.30
89	2.30
117L7/M7GT	3.90
117N7GT	4.05
117P7GT	4.05
111Z3	1.55
117Z4GT	2.90
117Z6GT	2.50
485	2.65
FM1000	3.20
XXD/14AF7	2.40
XXFM/7X7	2.65
XXL/7A4	1.80

CATHODE RAY PICTURE TUBES

7JP4	$25.00
10BP4A	27.00
12LP4A	31.00
14BP4	35.00
16GP4B	40.00
16RP4	35.00
17BP4A	33.00
19AP4B	50.00
16AP4A	50.00
17HP4	34.00
17LP4	34.00
20DP4	49.00
20HP4	51.00

SPECIAL PURPOSE TUBES

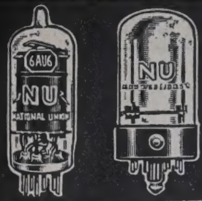
2E22	$6.00
3A4	1.20
5A6	5.50
6AJ5	3.50
6AK5W	3.90
6AR6	5.75
6SC7GTY	3.25
6SU7GTY	4.25
6X4W	2.25
25A7GT	4.00
26Z5W	4.00
5654	4.95
5687	6.00
5881	3.50

TUNG-SOL RADIO DIAL LAMPS

Tung-Sol Lamp No.	Bulb Type	Base	Bead Color	Volts	Amperes	List Price
40	T-3 ¼	Miniature Screw	Brown	6-8	.15	$0.11
41	T-3 ¼	Miniature Screw	White	2.5	.50	.11
42	T-3 ¼	Miniature Screw	Green	3.2	.50	.12
43	T-3 ¼	Miniature Bayonet	White	2.5	.50	.11
44	T-3 ¼	Miniature Bayonet	Blue	6-8	.25	.11
45	T-3 ¼	Miniature Bayonet	Green	3.2	.50	.12
46	T-3 ¼	Miniature Screw	Blue	6-8	.25	.11
47	T-3 ¼	Miniature Bayonet	Brown	6-8	.15	.11
48	T-3 ¼	Miniature Screw	Pink	2.0	.06	.16
49	T-3 ¼	Miniature Bayonet	Pink	2.0	.06	.16
50	G-3 ½	Miniature Screw	White	6-8	.20	.11
*51	G-3 ½	Miniature Bayonet	White	6-8	.20	.09
*55	G-4 ½	Miniature Bayonet	White	6-8	.40	.09
291	T-3 ¼	Miniature Bayonet	White	2.9	.17	.15
292	T-3 ¼	Miniature Screw	White	2.9	.17	.15
416	G-4 ½	Miniature Bayonet	Black	3.2	.60	.47
1490	T-3 ¼	Miniature Bayonet	White	3.2	.16	.13

*Taxable at 2.3% of list. All other taxable at 6.3% of list.

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE



NATIONAL UNION

see BETTER hear BETTER renew with N.U.

RADIO & TV RECEIVING TUBES

PRICE LIST EFFECTIVE MAY 15, 1952
ALL LIST PRICES INCLUDE TAX. PRICES & TYPES SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE.

Type	List
00A	$3.20
01A	1.25
0A2	2.90
0A3/VR75	2.65
0A4G	2.90
0B2	3.20
0B3/VR90	3.35
0C3/VR105	2.65
0D3/VR150	2.65
0Y4	4.80
0Y4G	4.80
0Z4	1.65
0Z4G	1.65
1A3	2.30
1A4	3.90
1A4P	4.05
1A4T	3.90
1A5G	2.20
1A5GT	1.85
1A6	3.35
1A7G	2.20
1A7GT	2.20
1AB5	3.50
1AC5	2.65
1AD5	2.65
1AF4	2.20
1AF5	2.00
1B3GT	2.55
1B4P	4.05
1B5/25S	3.35
1B7G	1.80
1B7GT	3.35
1C3	2.75
1C5G	2.20
1C5GT	2.30
1C6	3.35
1C7G	3.35
1C8	2.65
1D5G	3.90
1D5GP	4.05
1D5GT	3.90
1D7G	3.35
1D8GT	4.05
1E4G	1.80
1E5GP	4.05
1E7G	3.20
1E7GT	3.90
1E8	2.20
1F4	2.75
1F5G	2.75
1F6	4.05
1F7G	4.05
1F7GH	3.90
1F7GV	3.90
1G4G	1.80
1G4GT	2.55
1G5G	3.15
1G6G	2.65
1G6GT	2.70
1H4G	2.30
1H5G	1.80
1H5GT	1.70
1H6G	3.35
1H6GT	3.35
1J5G	2.65
1J6G	3.20
1J6GT	3.20
1L4	2.10
1L6	2.75
1LA4	2.65
1LA6	2.65
1LB4	2.65
1LC5	2.65
1LC6	2.65
1LD5	2.65
1LE3	2.65
1LG5	2.65
1LH4	2.65
1LN5	2.65
1N5G	2.20
1N5GT	2.10
1N6G	1.80
1P5G	2.65
1P5GT	2.65
1Q5G	2.65
1Q5GT	2.65
1Q6	2.20
1R4	2.65
1R5	2.10
1S4	2.25
1S5	1.90
1S6	2.65
1SA6GT	2.20
1SB6GT	2.20
1T4	2.10
1T5GT	2.60
1T6	2.65
1U4	2.10
1U5	1.90
1U6	2.20
1V	2.30
1V2	1.55
1V5	2.65
1W4	2.90
1W5	2.65
1X2	2.65
1X2A	2.65
2A3	3.35
2A4G	3.20
2A5	2.30
2A6	2.65
2A7	2.75
2A7S	3.20
2B7	3.40
2B7S	3.20
2E5	2.65
2G5	2.40
2S/4S	3.20
2W3	1.80
2W3GT	1.80
2X2A	4.35
2Z2/G84	3.20
3A8GT	4.80
3B5GT	2.20
3B7	2.65
3C6/XXB	3.20
3D6	2.65
3E5	2.20
3E6	2.65
3LE4	3.20
3LF4	2.65
3Q4	2.25
3Q5G	2.40
3Q5GT	2.50
3S4	2.00
3V4	2.00
4A6G	2.65
5AX4GT	1.25
5AZ4	1.35
5T4	4.40
5U4G	1.50
5V4G	2.45
5W4	1.65
5W4G	1.25
5W4GT	1.75
5X4G	1.80
5X3	2.20
5Y3G	1.35
5Y3GT	1.10
5Y4G	1.55
5Y4GT	1.05
5Z3	1.75
5Z4	2.80
6A3	3.35
6A4	3.20
6A5G	4.05
6A6	2.75
6A7	2.30
6A7S	3.20
6A8	2.20
6A8G	2.30
6A8GT	2.30
6AB4	2.00
6AB5/6N5	2.75
6AB7/1853	3.25
6AC5G	1.80
6AC5GT	3.00
6AC7/1852	2.90
6AD6G	2.20
6AD7G	3.35
6AE5G	2.20
6AE6G	1.80
6AE7GT	1.80
6AF5G	1.80
6AF6G	2.75
6AG5	2.25
6AG7	3.20
6AH6	3.90
6AH7GT	2.20
6AK5	4.15
6AK6	2.35
6AL5	1.80
6AL7GT	2.65
6AQ5	2.00
6AQ6	1.90
6AQ7GT	2.40
6AR5	1.65
6AS5	2.10
6AT6	1.55
6AU5GT	2.65
6AU6	1.80
6AV5GT	2.65
6AV6	1.55
6AX4GT	2.40
6AX5GT	1.65
6AX6G	2.40
6B4G	3.20
6B5	3.20
6B6G	2.10
6B7	3.35
6B7S	3.20
6B8	3.35
6B8G	3.35
6B8GT	1.80
6BA6	1.90
6BA7	2.50
6BC5	2.00
6BC7	2.65
6BD5GT	3.35
6BD6	2.00
6BE6	1.90
6BF5	2.35
6BF6	1.70
6BG6G	4.80
6BH6	2.10
6BJ6	2.10
6BK7	3.20
6BL7GT	2.90
6BN6	2.90
6BQ6GT	3.40
6BQ7	3.05
6BY5G	2.65
6C4	1.70
6C5	1.75
6C5G	1.35
6C5GT	1.65
6C6	2.20
6C7	3.20
6C8G	3.35
6CB6	2.10
6CD6G	6.60
6D5G	2.20
6D6	2.20
6D7	3.20
6D8G	3.35
6E5	2.25
6E6	2.65
6E7	3.20
6F5	1.75
6F5G	1.65
6F5GT	1.70
6F6	2.10
6F6G	1.75
6F6GT	1.65
6F7	3.35
6F7S	3.20
6F8G	3.35
6G6G	2.75
6H4GT	2.65
6H6	1.65
6H6G	1.65
6H6GT	1.85
6J5	1.50
6J5G	1.50
6J5GT	1.50
6J6	2.50
6J7	2.10
6J7G	2.25
6J7GT	2.20
6J8G	3.20
6K5G	1.50
6K5GT	2.40
6K6GT	1.60
6K7	1.85
6K7G	2.15
6K7GT	2.15
6K8	2.70
6K8G	3.30
6K8GT	2.50
6L5G	2.75
6L6	3.75
6L6G	3.20
6L6GA	3.20
6L7	2.55
6L7G	3.30
6N6G	3.90
6N7	2.55
6N7G	2.50
6N7GT	2.50
6P5G	1.15
6P5GT	2.40
6P7G	3.20
6Q6G/6T7G	3.20
6Q7	2.10
6Q7G	1.85
6R7	2.65
6R7GT	2.65
6R8	3.20
6S4	1.70
6S7	2.75
6S7G	3.35
6S8GT	2.65
6SA7	1.75
6SA7GT	1.85
6SB7Y	2.55
6SC7	2.00
6SD7GT	2.90
6SF5	1.75
6SF5GT	1.80
6SF7	2.00
6SG7	2.00
6SG7GT	2.20
6SH7	2.20
6SH7GT	2.20
6SJ7	1.65
6SJ7GT	1.65
6SK7	1.65
6SK7GT	1.85
6SLGT	2.45
6SN7GT	2.20
6SN7GTA	2.20
6SQ7	1.50
6SQ7GT	1.60
6SR7	1.80
6SR7GT	2.00
6SS7	2.15
6SS7GT	2.00
6ST7	2.65
6SV7	3.35
6SV8GT	2.00
6SZ7	2.20
6T5	3.20
6U5/6G5	2.00
6U6GT	2.20
6U7G	2.20
6U8	2.90
6V3	3.60
6V5GT	3.90
6V6	3.35
6V6G	2.00
6V7	3.20
6V7G	1.80
6V8	3.55
6W4GT	1.85
6W5G	2.65
6W6GT	2.20
6W7G	2.75
6X4	1.55
6X5	2.75
6X5G	1.65
6X8	2.75
6X5GT	1.55
6Y3G	3.90
6Y5	3.90
6Y5G	3.90
6Y6G	2.50
6Y7G	2.20
6Z5/12Z5	3.20
6Z7G	4.05
6ZY5G	2.30
7A4/XXL	2.00
7A5	2.35
7A6	1.90
7A7	1.90
7A8	1.80
7AB7	2.65
7AD7	3.35
7AF7	1.80
7AG7	2.20
7AH7	2.20
7AJ7	2.35
7AU7	2.20
7B4	1.80
7B5	1.80
7B6	1.80
7B7	1.90
7B8	1.90
7C4/1203A	3.35
7C5	1.90
7C6	1.80
7C7	1.90
7C8	2.65
7E5/1201	2.65
7E6	2.35
7E7	2.75
7F7	2.20
7F8	3.00
7G7	2.75
7G8	3.90
7H7	2.20
7J7	2.75
7K7	2.75
7L7	2.75
7N7	2.20
7Q7	2.10
7R7	2.35
7S7	2.65
7V7	2.65
7W7	2.65
7X6	2.20
7X7/XXFM	2.65
7Y4	1.80
7Z4	1.80
10	3.90
10Y	3.90
12A	2.20
12A5	3.20
12A6	2.90
12A6GT	2.90
12A7	3.35
12A8G	2.20
12A8GT	2.20
12AH6GT	2.20
12AH7GT	2.75
12AL5	1.80
12AT6	1.55
12AT7	2.90
12AU6	1.80
12AU7	2.40
12AV6	1.55
12AV7	2.90
12AW6	2.50
12AX4GT	2.40
12AX7	2.50
12AY7	6.00
12AZ7	2.65
12B8GT	3.90
12BA6	1.90
12BA7	2.50
12BD6	2.00
12BE6	1.90
12BF6	1.65
12BH7	2.40
12BJ6	1.50
12BY7	2.65
12BZ7	2.40
12C8	3.35
12E5GT	2.20
12F5GT	1.85
12H6	1.80
12J5	1.50
12J5GT	1.55
12J7G	2.20
12J7GT	2.20
12K7G	2.00
12K7GT	2.10
12K8	2.70
12K8GT	2.65
12Q7G	1.80
12Q7GT	1.85
12S8GT	2.65
12SA7	1.75
12SA7GT	1.85
12SC7	2.30
12SF5	1.90
12SF5GT	2.00
12SF7	2.10
12SF7GT	2.00
12SG7	2.00
12SG7GT	2.20
12SH7	2.20
12SH7GT	2.20
12SJ7	1.75
12SJ7GT	1.65
12SK7	1.75
12SK7GT	1.85
12SL7GT	2.50
12SN7GT	2.30
12SQ7	1.50
12SQ7GT	1.60
12SR7	2.10
12SR7GT	2.20
12Z3	2.60
14A4	2.65
14A5	3.90
14A7/12B7	2.20
14AF7/XXD	2.40
14B6	2.20
14B8	2.20
14C5	2.75
14E6	2.35
14C7	2.40
14E7	2.75
14F7	2.20
14F8	3.00
14H7	2.40
14J7	2.75
14N7	2.65
14Q7	2.20
14R7	2.75
14S7	2.65
14W7	2.65
14Y4	2.40
15	3.20
17	2.65
18	2.65
19	3.35
19BG6G	6.00
19CP	3.20
19J6	2.65
19T8	2.90
19V8	3.55
20	3.90
22	3.20
24A	2.35
24S	3.20
25A6	3.40
25A6G	2.75
25A6GT	3.40
25A7GT	7.40
25AC5G	2.65
25AC5GT	2.90
25AV5GT	2.65
25B5	3.20
25B6G	3.90
25BQ6GT	3.35
25B8GT	4.80
25C6G	3.00
25D8	3.90
25L6	3.40
25L6G	1.80
25L6GT	1.70
25N6GT	3.90
25W4GT	2.00
25Y5	3.00
25Z5	1.65
25Z6G	1.50
25Z6	2.30
25Z6GT	1.50
26	2.05
27	1.75
30	2.25
31	2.75
32	3.70
32L7GT	3.20
33	3.35
34	3.50
35/51	2.35
35A5	1.90
35B5	2.00
35C5	2.00
35L6GT	1.70
35W4	1.30
35Y4	1.80
35Z4GT	1.50
35Z5G	1.80
35Z5GT	1.25
35Z6G	1.80
36	2.75
37	1.85
38	2.30
39/44	2.75
40	2.20
40Z5	1.65
41	1.90
42	1.90
43	2.05
45	2.10
45Z3	1.80
45Z5GT	1.80
46	2.90
47	2.90
48	4.80
49	2.75
50	5.15
50A5	2.20
50AX6G	2.40
50B5	2.00
50C5	2.00
50C6G	2.90
50L6GT	1.70
50X6	2.20
50Y6G	1.80
50Y6GT	1.85
50Y7GT	2.10
50Z7G	1.80
52	3.90
53	2.75
55	2.30
55S	3.20
56	1.85
56S	3.55
57	2.10
57S	3.20
58	2.10
58AS	3.20
58S	3.20
59	3.70
70A7GT	3.20
70L7GT	3.90
71A	2.35
75	1.70
75S	2.20
76	1.70
77	2.15
78	2.15
79	2.75
80	1.30
81	4.65
82	2.75
83	2.75
83V	3.20
84/6Z4	1.80
85	2.30
85A5	3.20
89	2.30
89Y	2.20
99V	3.20
117L7GT/-117M7GT	3.90
117N7GT	4.05
117P7GT	4.05
117Z3	1.55
117Z4GT	2.90
117Z6G	2.40
117Z6GT	2.50
182B/482B	2.65
183/483	2.65
484	2.65
485	2.50
950	2.50
1232	2.65
1273	2.40
1280	2.40
FM1000	3.20
5642	2.20

NATIONAL UNION RADIO CORP.

Main Office: Orange, N. J. Research Division: Orange, N. J. • Plants: Newark, N. J.—Hatboro, Pa.

NATIONAL UNION

PRICE LIST EFFECTIVE APRIL 15, 1952
ALL LIST PRICES INCLUDE TAX. PRICES & TYPES SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE.

see BETTER
hear BETTER
renew
with N.U.

PICTURE TUBES
ELECTRON TUBES

VIDEOTRON TELEVISION PICTURE TUBES

Type	Description	Users Price
7JP4	Electrostatic Deflection	25.00
8BP4	Electrostatic Deflection	30.50
10BP4	White Face — Electrostatic Focus	27.00
10BP4A	Gray Face — Electrostatic Focus	27.00
12LP4	White Face — Magnetic Focus	31.00
12LP4A	Gray Face — Magnetic Focus	31.00
14CP4/14BP4	Rectangular — Gray Face — Magnetic Focus	33.50
14EP4	Rectangular — Gray Face — Magnetic Focus	33.50
14GP4	Electrostatic Focus — High Voltage	33.50
14HP4	Electrostatic Focus — Low Voltage	33.50
16AP4A	Round Metal — Magnetic Focus	50.00
16DP4	Electrostatic Focus — Round Glass	51.00
16DP4A	Electrostatic Focus — Round Glass	51.00
16GP4	Magnetic Focus — Round Glass	40.00
16GP4B	Magnetic Focus — Round Glass — Etched Face	40.00
16JP4	Electrostatic Focus — Round Glass	34.75
16JP4A	Electrostatic Focus — Round Glass	34.75
16KP4/16RP4	Magnetic Focus — Rectangular Glass	34.75
16TP4	Magnetic Focus — Rectangular Glass	34.75
16WP4	Round Glass	34.75
17BP4A	Magnetic — Rectangular Glass	33.00
17BP4F	Magnetic — Rectangular Glass — Etched Face	36.00
17CP4	Magnetic — Rectangular Metal — Etched Face	35.00

Type	Description	Users Price
17FP4	Electrostatic — High Voltage — Rectangular	34.00
17FP4A	Electrostatic — High Voltage — Rectangular	34.00
17HP4A/17HP4F	Electrostatic — Low Voltage — Rectangular — Etched Face	36.00
17JP4	Magnetic — Rectangular Glass	33.00
17KP4	Zero Voltage — Electrostatic Glass	33.00
17LP4/17VP4	Low Voltage — Electrostatic — Cylindrical Glass	34.00
17QP4	Magnetic — Cylindrical Glass	33.00
17RP4/17HP4	Low Voltage — Electrostatic Glass	34.00
19AP4A	Round Metal — Filtered Glass	60.00
19AP4B	Round Metal — Filtered Glass	60.00
19FP4	Electrostatic Glass	65.00
20CP4	Magnetic Glass	49.00
20CP4A	Magnetic Glass	49.00
20CP4C/20CP4F	Magnetic Glass — Etched Face	51.25
20FP4	High Voltage — Electrostatic Glass	49.00
20GP4	High Voltage — Electrostatic Glass	49.00
20HP4	Low Voltage — Electrostatic Glass	51.00
20HP4A	Low Voltage — Electrostatic Glass	51.00
20HP4B/20HP4F	Low Voltage — Electrostatic Glass — Etched Face	53.25
21EP4A	Magnetic — Cylindrical — Glass	51.25
21FP4A	Low Voltage — Electrostatic — Cylindrical — Glass	53.25

TRANSMITTING AND POWER TUBES

Type	Description	Users Price
2C22	V-h-f. triode amplifier	1.60
2C26A	V-h-f. triode amplifier	7.75
2C34/NU34	Twin triode power amplifier	3.50
2C50	Twin triode power amplifier	7.50
2C53	High mu triode amplifier	12.00
2E24	Beam power amplifier	5.10
2E26	Beam power amplifier	3.85
2E30	Beam power amplifier	2.45
3B24	H-w. vacuum rectifier	7.50
3B25	H-w. gas rectifier	5.80
3D22	Tetrode thyratron	15.00
3E29	Pulse beam power amplifier	20.25
4B26/200	H-w. gas rectifier	11.30
15R	H-w. vacuum rectifier	29.50
31Z	Twin triode amplifier	5.50
51A	Power amplifier triode	4.50
51Z	High-mu power amplifier triode	4.50
69	Beam power amplifier	5.50
100TH	High-mu power amplifier triode	16.65
114B	V-h-f. triode	2.25
200	Power amplifier triode	25.00
203A	Power amplifier triode	13.75
211	Power amplifier triode	13.75
217C	H-w. vacuum rectifier	21.50
300	Power amplifier triode	29.50
307A	Pentode amplifier	7.67
311CH	Power amplifier triode	19.00
350A	Tetrode amplifier	8.75
350B	Tetrode amplifier	8.75
371B	H-w. vacuum rectifier	14.50

Type	Description	Users Price
575A	H-w. mercury vapor rectifier	21.00
721B	Gas switch	25.80
801A	Power amplifier triode	4.30
802	Power amplifier pentode	4.75
803	Power amplifier pentode	24.25
804	Power amplifier pentode	17.50
805	Power amplifier triode	13.50
806	Power amplifier triode	34.25
807	Beam power amplifier	2.50
808	Power amplifier triode	10.75
809	Power amplifier triode	4.00
810	Power amplifier triode	14.50
811	High-mu power amplifier triode	3.30
811A	High-mu power amplifier triode	4.05
812	Power amplifier triode	3.30
812A	Power amplifier triode	5.00
812H	Power amplifier triode	7.50
813	Beam power amplifier	16.00
814	Beam power amplifier	14.25
815	V-h-f. beam power amplifier	6.90
816	H-w. mercury vapor rectifier	1.65
826	V-h-f. power amplifier triode	12.50
828	Beam power amplifier	13.75
829B	V-h-f. beam power amplifier	16.25
830	Power amplifier triode	11.50
832	V-h-f. beam power amplifier	13.00
832A	V-h-f. beam power amplifier	12.90
834	V-h-f. power amplifier triode	14.50
836	H-w. vacuum rectifier	9.00
837	Power amplifier pentode	5.80

Type	Description	Users Price
838	Power amplifier triode	13.75
843	Power amplifier triode	2.60
845	Power amplifier triode	13.75
852	Power amplifier triode	32.00
865	Tetrode power amplifier	11.50
866A	H-w. mercury-vapor rectifier	1.95
866JR	H-w. mercury-vapor rectifier	1.30
872A	H-w. mercury-vapor rectifier	8.20
873/973	Grid-controlled mercury-vapor rectifier	17.25
878	H-w. vacuum rectifier	12.75
900 (VT90)	U-h-f. power amplifier triode	35.00
967	Triode thyratron	6.50
975A	H-w. gas rectifier	25.00
1614	Tetrode amplifier	2.00
1616	H-w. vacuum rectifier	8.65
1624	Beam power amplifier	4.00
1625	Beam power amplifier	2.65
1626	Power amplifier triode	1.85
5516	Beam power amplifier	5.95
7193	U-h-f. triode amplifier	1.60
8005	Power amplifier triode	7.40
8020	H-w. vacuum rectifier	32.00
E1148	V-h-f. power amplifier triode	2.25
FG17	Triode thyratron	6.50
HV18	Power amplifier triode	25.00
KU23	Power amplifier triode	30.00
T55	Power amplifier triode	7.50
V70D	Power amplifier triode	7.50
VT52	Power amplifier triode	2.00
UE100	Power amplifier triode	15.00
Z225/866A	H-w. mercury vapor rectifier	1.95

SPECIAL PURPOSE AND CATHODE RAY OSCILLOSCOPE TUBES

Type	Description	Users Price
OZ4A/1003	F-w. gas rectifier	1.20
JAN5851	Beam power amplifier, sub-miniature	17.65
2D21	Tetrode thyratron	2.00
2V3G	H-w. vacuum rectifier	3.15
3A4	Power amplifier pentode	1.20
3A5	Twin triode	1.95
3BP1A	Oscilloscope Tube	16.50
3JP1	Oscilloscope Tube	16.50
3JP2	Oscilloscope Tube	21.00
3JP7	Oscilloscope Tube	21.00
5CP1A	Oscilloscope Tube	23.25
5FP7A	Oscilloscope Tube	30.25
10KP4	Oscilloscope Tube	61.75
12SP7	Oscilloscope Tube	47.75
5R4GY	F-w. vacuum rectifier	1.50

Type	Description	Users Price
5R4WGY	Ruggedized f-w. vacuum rectifier	6.80
5X3	F-w. vacuum rectifier	3.50
6AJ5	Pentode amplifier	3.50
6AS7G	Power amplifier triode	6.75
6AZ6	Rugged u-h-f. double diode, sub-miniature	22.50
6BL5GT/2160	Space charge power amplifier	18.00
6D4	Triode thyratron	2.85
6J4	Triode, grounded grid	8.05
6K4A	Triode, sub-miniature	4.25
12L8GT	Pentode power amplifier	2.25
28D7	Beam power amplifier	1.80
884	Triode thyratron	1.85
885	Triode thyratron	2.00
955	U-h-f. triode, acorn	3.60
1267	Cold cathode thyratron	1.85

Type	Description	Users Price
1612	Pentagrid amplifier	2.70
1620	Pentode amplifier	6.25
1621	Power amplifier pentode	1.95
1622	Beam power amplifier	2.10
1629	Electron ray tuning indicator	1.40
1633	Triode amplifier	1.95
1654	H-w. vacuum rectifier	4.55
2050	Tetrode thyratron	1.85
2051	Tetrode thyratron	1.90
5851	Beam power amp. sub-miniature	17.65
5857	Secondary omission amplifier	65.00
9001	V-h-f. triode amplifier	3.10
9002	V-h-f. triode amplifier	2.50
9003	V-h-f. pentode amplifier	3.10
9006	V-h-f. diode	1.60
R1038	Ionization gauge	29.50

PANEL LAMPS

Type No.	Rated Volts	Amps.	Min. Base	Bead Color	Bulb Style	User's Price
N-13	3.8	.30	Screw	Green	G3½	.11
N-14	2.5	.30	Screw	Blue	G3½	.11
N-40	6-8	.15	Screw	Brown	T3¼	.11
N-40A§	6-8	.15	Bayonet	Brown	T3¼	.11
N-41	2.5	.50	Screw	White	T3¼	.11
N-42	3.2	.35	Screw	Green	T3¼	.12
N-43	2.5	.50	Bayonet	White	T3¼	.11
N-44	6-8	.25	Bayonet	Blue	T3¼	.11
N-45	3.2	.35	Bayonet	Green	T3¼	.12
N-46	6-8	.25	Screw	Blue	T3¼	.11
N-47	6-8	.15	Bayonet	Brown	T3¼	.11

Type No.	Rated Volts	Amps.	Min. Base	Bead Color	Bulb Style	User's Price
N-48	2.0	.06	Screw	Pink	T3¼	.16
N-49	2.0	.06	Bayonet	Pink	T3¼	.16
N-50*	6-8	.20	Screw	White	G3½	.11
N-51*	6-8	.20	Bayonet	White	G3½	.09
N-55*	6-8	.40	Bayonet	White	G4½	.09
N-291/N-292A	2.9	.17	Bayonet	White	T3¼	.15
N-292	2.9	.17	Screw	White	T3¼	.15
N-1455	18.0	.25	Screw	Brown	G5	.12
N-1455A‡	18.0	.25	Bayonet	Brown	G5	.12
N-1456	18.0	.25	Bayonet	Brown	G5	.12
N-1490	3.2	.16	Bayonet	White	T3¼	.11

* Used also in Coin Operated Machines
‡ Replace with N-1456
§ Replace with N-47

NATIONAL UNION RADIO CORP.

Main Office: Orange, N. J. *Research Division:* Orange, N. J. • *Plants:* Newark, N. J. — Hatboro, Pa.

RAYTHEON RADIO and TV RECEIVING TUBES

SUGGESTED LIST PRICES *Effective May 1, 1952*

Type	Price	Type	Price	Type	Price	Type	Price	Type	Price	Type	Price	Type	Price
0Y4	$4.80	3A8GT	4.80	6BC5	2.00	6R7	2.65	7C4	3.35	12SH7	2.20	35Z3	1.80
0Z4	1.65	3B7/1291	2.65	6BC7	2.20	6R7G	2.65	7C5	1.90	12SJ7	1.75	35Z4GT	1.50
0Z4G	1.65	3C6/XXB	3.20	6BD5GT	3.35	6R7GT	2.65	7C6	1.80	12SJ7GT	1.65	35Z5GT	1.25
1A3	2.30	3D6/1299	2.65	6BD6	2.00	6R8	3.20	7C7	1.90	12SK7	1.75	35Z6G	2.65
1A4P	4.05	3E6	2.65	6BE6	1.90	6S4	1.70	7E5	2.65	12SK7GT	1.85	36	2.75
1A5GT	1.85	3LF4	2.65	6BF5	2.35	6S7	2.75	7E6	2.35	12SL7GT	2.50	37	1.85
1A6	3.35	3Q4	2.25	6BF6	1.70	6S7G	3.35	7E7	2.75	12SN7GT	2.30	38	2.30
1A7GT	2.20	3Q5GT	2.50	6BG6G	4.80	6S8GT	2.65	7F7	2.20	12SQ7	1.50	39/44	2.75
1B3GT/8016	2.55	3S4	2.00	6BH6	2.10	6SA7	1.75	7F8	3.00	12SQ7GT	1.60	41	1.90
1B4P	4.05	3V4	2.00	6BJ6	2.10	6SA7GT	1.85	7G7/1232	2.75	12SR7	2.10	42	1.90
1B5/25S	3.35	5AZ4	1.35	6BK7	3.20	6SB7Y	2.55	7H7	2.15	12Z3	2.60	43	2.05
1B7GT	3.35	5T4	4.40	6BL7GT	2.90	6SC7	2.00	7J7	2.75	14A4	2.65	45	2.10
1C5GT	2.30	5U4G	1.50	6BN6	2.90	6SD7GT	2.90	7K7	2.75	14A5	3.90	45Z3	1.80
1C6	3.35	5V4G	2.45	6BQ6GT	3.40	6SF5	1.75	7L7	2.75	14A7/12B7	2.20	45Z5GT	1.80
1C7G	3.35	5W4	1.65	6BQ7	3.05	6SF5GT	1.80	7N7	2.20	14AF7/XXD	2.40	46	2.90
1D5GP	4.05	5W4GT	1.65	6BY5G	2.65	6SF7	2.00	7Q7	2.10	14B6	2.20	47	2.90
1D7G	3.35	5X4G	1.80	6BZ7	3.05	6SG7	2.00	7R7	2.35	14B8	2.20	49	2.75
1D8GT	4.05	5Y3G	1.35	6C4	1.70	6SH7	2.20	7S7	2.65	14C5	2.75	50	5.15
1E5GP	4.05	5Y3GT	1.10	6C5	1.75	6SH7GT	2.20	7V7	2.65	14C7	2.40	50A5	2.20
1E7G-1E7GT	3.90	5Y4G	1.55	6C5GT	1.65	6SJ7	1.65	7W7	2.65	14E6	2.35	50B5	2.00
1F4	2.75	5Y4GT	1.50	6C6	2.20	6SJ7GT	1.65	7X6	2.20	14E7	2.75	50C5	2.00
1F5G	2.75	5Z3	1.75	6C8G	3.35	6SK7	1.65	7X7/XXFM	2.65	14F7	2.20	50C6G	2.90
1F6	4.05	5Z4	2.80	6CB6	2.10	6SK7GT	1.85	7Y4	1.80	14F8	3.00	50L6GT	1.70
1F7G	4.05	6A3	3.35	6CD6G	6.60	6SL7GT	2.45	7Z4	1.80	14H7	2.40	50X6	2.20
1G4GT	2.55	6A5G	4.05	6D6	2.20	6SN7GT	2.20	10Y	3.90	14J7	2.75	50Y6GT	1.85
1G5G	3.15	6A6	2.75	6D8G	3.35	6SQ7	1.50	12A6	2.90	14N7	2.65	50Y7GT	2.10
1G6GT	2.70	6A7	2.30	6E5	2.25	6SQ7GT	1.60	12A6GT	2.90	14Q7	2.20	52	3.90
1H4G	2.30	6A8	2.20	6F5	1.75	6SR7	1.80	12A7	3.35	14R7	2.75	53	2.75
1H5GT	1.70	6A8G	2.30	•6F5GT	1.70	6SR7GT	1.80	12A8GT	2.20	14S7	2.65	55	2.30
1H6G	3.35	6A8GT	2.30	6F6	2.10	6SS7	2.10	12AH7GT	2.75	14W7	2.65	56	1.85
1J6G	3.20	6AB4	2.00	6F6G	1.75	6ST7	2.65	12AL5	1.80	14X7	2.65	57	2.10
1J6GT	3.20	6AB5/6N5	2.75	6F6GT	1.65	6SV7	3.20	12AT6	1.55	14Y4	2.40	58	2.10
1L4	2.10	6AB7/1853	3.25	6F7	3.35	6T7G/6Q6G	3.35	12AT7	2.90	19	3.35	59	3.70
1L6	2.75	6AC5GT	3.00	6F8G	3.35	6T8	2.90	12AU6	1.80	19BG6G	6.00	70L7GT	3.90
1LA4	2.65	6AC7/1852	2.90	6G6G	2.75	6U5/6G5	2.00	12AU7	2.40	19C8	3.20	71A	2.35
1LA6	2.65	6AD7G	3.35	6H6	1.65	6U6GT	2.20	12AV6	1.55	19J6	2.65	75	1.70
1LB4	2.65	6AF4	3.90	6H6GT	1.85	6U7G	2.20	12AV7	2.90	19T8	2.90	76	1.70
1LC5	2.65	6AF6G	2.75	6J5	1.50	6U8	2.90	12AW6	2.50	22	3.20	77	2.10
1LC6	2.65	6AG5	2.25	6J5GT	1.50	6V3	3.90	12AX4GT	2.40	24A	2.35	78	2.10
1LD5	2.65	6AG7	3.20	6J6	2.50	6V6	3.35	12AX7	2.50	25A6	3.40	79	2.75
1LE3	2.65	6AH6	3.90	6J7	2.10	6V6GT	2.00	12AY7	6.00	25A6G	2.75	80	1.30
1LG5	2.65	6AK5	4.15	6J7G	2.25	6V8	3.50	12AZ7	2.65	25A7GT	6.60	81	4.65
1LH4	2.65	6AK6	2.35	6J7GT	2.20	6W4GT	1.85	12BA6	1.90	25AC5GT	2.90	82	2.75
1LN5	2.65	6AL5	1.80	6J8G	3.20	6W6GT	2.20	12BA7	2.50	25BQ6GT	3.35	83	2.75
1N5GT	2.10	6AL7GT	2.65	6K5GT	2.40	6W7G	2.75	12BD6	2.00	25C6G	3.00	83V	3.20
1P5GT	2.65	6AQ5	2.00	6K6GT	1.60	6X4	1.55	12BE6	1.90	25L6GT	1.70	84/6Z4	1.80
1Q5GT	2.65	6AQ6	1.90	6K7	1.85	6X5GT	1.55	12BF6	1.65	25W4GT	2.00	85	2.30
1R4/1294	2.65	6AQ7GT	2.40	6K7G	2.15	6X8	2.75	12BH7	2.40	25Y5	3.00	89Y	2.30
1R5	2.10	6AR5	1.65	6K7GT	2.15	6Y6G	2.50	12C8	3.35	25Z5	1.65	V99	3.20
1S4	2.25	6AS5	2.10	6K8	2.70	6Z7G	4.05	12F5GT	1.85	25Z6GT	1.50	X99	3.20
1S5	1.90	6AT6	1.55	6K8G	3.25	6ZY5G	2.30	12H6	1.80	26	2.05	117L/M7GT	3.90
1T4	2.10	6AU5GT	2.65	6K8GT	2.50	7A4/XXL	2.00	12J5GT	1.55	27	1.75	117N7GT	4.05
1T5GT	2.60	6AU6	1.80	6L5G	2.75	7A5	2.35	12J7GT	2.20	30	2.25	117P7GT	4.05
1U4	2.10	6AV5GT	2.65	6L6	3.75	7A6	1.90	12K7GT	2.10	31	2.75	117Z3	1.55
1U5	1.90	6AV6	1.55	6L6G	3.20	7A7	1.90	12K8	2.75	32	3.70	117Z4GT	2.90
1V	2.30	6AX4GT	2.40	6L6GA	3.20	7A8	1.80	12K8GT	2.65	32L7GT	3.20	117Z6GT	2.50
1V2	1.55	6AX5GT	1.65	6L7	2.55	7AD7	3.35	12Q7GT	1.85	33	3.35	FM1000	3.20
1X2A	2.65	6B4G	3.20	6L7G	3.30	7AF7	1.80	12S8GT	2.65	34	3.50	XXB (use 3C6)	
2A3	3.35	6B5	3.20	6N6G	3.90	7AG7	2.20	12SA7	1.75	35/51	2.35	XXD (use 14AF7)	
2A4G	3.20	6B6G	2.10	6N7	2.55	7AH7	2.20	12SA7GT	1.85	35A5	1.90	XXFM (use 7X7)	
2A5	2.30	6B7	3.35	6N7GT	2.50	7B4	1.80	12SC7	2.30	35B5	2.00	XXL use 7A4)	
2A6	2.65	6B8	3.35	6P5GT	2.40	7B5	1.80	12SF5	1.90	35C5	2.00		
2A7	2.75	6B8G	3.35	6Q7	2.10	7B6	1.80	12SF5GT	2.00	35L6GT	1.70		
2B7	3.40	6BA6	1.90	6Q7G	1.85	7B7	1.90	12SF7	2.10	35W4	1.30		
2E5	2.65	6BA7	2.50	6Q7GT	1.85	7B8	1.90	12SG7	2.00	35Y4	1.80		

Tube prices listed above are for your convenience and do not necessarily indicate type availability.

ALL PRICES SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE.

RAYTHEON ELECTRONIC TUBES

TELEVISION PICTURE TUBES

SUGGESTED LIST PRICES *Effective June 1, 1952*

TYPE		Suggested List Price
3KP4		$20.00
7JP4		25.00
8BP4		30.50
10BP4	Use Type 10BP4A	——
10BP4A		27.00
10FP4	Use Type 10FP4A	——
10FP4A		33.75
10HP4		55.00
12AP4		91.00
12KP4A		38.00
12LP4		31.00
12LP4A		31.00
14BP4		33.50
14CP4		33.50
16AP4	Use Type 16AP4A	——
16AP4A		40.00
16DP4	Use Type 16DP4A	——
16DP4A		50.00
16GP4		40.00
16GP4B		40.00

TYPE		Suggested List Price
16GP4C		$40.00
16KP4		35.00
16KP4A		42.50
16LP4	Use Type 16ZP4	——
16LP4A	Use Type 16ZP4	——
16RP4		35.00
16TP4		35.00
16ZP4		35.00
17AP4		33.00
17BP4A		33.00
17CP4		33.00
17HP4		34.00
19AP4	Use Type 19AP4A	——
19AP4A		50.00
19AP4B		50.00
20CP4		49.00
20CP4A		49.00
20DP4A		49.00
21EP4A		51.25
21FP4A		53.25
24AP4		101.00

TRANSMITTING TUBES

SUGGESTED USER PRICES *Effective May 1, 1952*

TYPE		Suggested User Price	Suggested List Price
2E24	VHF Beam Pent.	$4.65	$——
2E26	VHF Beam Pent.	3.85	——
2E30	Beam Pent.	2.60	——
RK3B26	Clipper Diode	18.00	——
RK4B31	Clipper Diode	50.35	——
4C35	Thyratron Modulator	35.95	——
RK4D22	RF Beam Tetrode	22.40	——
RK4D32	RF Beam Tetrode	22.40	——
5D23/RK65	RF Tetrode	42.15	——
RK65	(Use 5D23/RK65)	——	——
RK73	Clipper Diode	12.50	——

TYPE		Suggested User Price	Suggested List Price
RK715C	Tetrode Pulse Amp.	$63.00	$——
RK721B	S Band TR	25.80	——
RK807	RF Beam Tetrode	2.50	——
RK811A	Pwr. Triode	5.00	——
RK812A	Pwr. Triode	5.00	——
RK813	RF Beam Tetrode	18.00	——
RK814	RF Beam Tetrode	14.25	——
RK829B	RF Dual Beam Tetr.	16.25	——
RK832A	RF Dual Beam Tetr.	12.90	——
RK837	RF Pent.	5.80	——
RK1625	RF Beam Tetrode	2.65	——

RELIABLE AND RUGGED TUBES

6AK5W	RF Pentode	$ 3.25	$——
6AL5W	Double Diode	1.70	——
6AS6W	Pentode Amp.	4.75	——
6C4W	Triode	8.05	——
6J5WGT	Triode Volt. Amp.	4.85	——
6J6W	UHF Dbl. Triode	3.05	——
6SA7WGT	Heptode Converter	**	——
6SJ7WGT	RF-AF Pentode	8.05	——
6SN7WGT	Dbl. Triode Volt. Amp.	2.45	——

12J5WGT	Triode Volt. Amp.	$4.85	$——
CK5654	RF Pentode	4.75	——
CK5686	RF-AF Pentode	5.25	——
CK5725	Pentode	5.50	——
CK5726	Dbl. Diode	2.25	——
CK5749	RF Pentode	2.75	——
CK5751	Dbl. Triode Volt. Amp.	3.75	——
CK5814	Dbl. Triode Volt. Amp.	3.75	——

VOLTAGE REGULATOR — VOLTAGE REFERENCE TUBES

OA2	150 Volts	$——	$2.90
OA3/VR75	75 Volts	——	2.65
OB2	108 Volts	——	3.20
OB3/VR90	90 Volts	——	2.65
OC3/VR105	105 Volts	——	2.65

OD3/VR150	150 Volts	$——	$2.65
CK1017	700 Volts	11.30	——
CK1022	1000 Volts	15.00	——
CK5651	82 - 92 Volts	2.40	——
CK5962	700 Volts	11.30	——

SUBMINIATURE CATHODE-TYPE RELIABLE TUBES

CK5702WA	RF Pentode	$ **	$——
CK5703WA	Med-Mu Tri.	**	——
CK5744WA	Hi-Mu Tri.	**	——
CK5784WA	Pentode	**	——

CK6111	UHF Dbl. Tri.	$ **	$——
CK6112	Hi-Mu Dbl. Tri.	**	——
CK6152	Low-Mu Tri.	**	——

ALL PRICES SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE

** Price Pending OPS Approval

Net

RAYTHEON

ELECTRONIC TUBES

SUBMINIATURE TUBES

SUGGESTED USER PRICES *Effective May 1, 1952*

TYPE		Suggested User Price	Suggested List Price
1AD4	RF Pentode	$ ——	$4.00
1AE4	RF Pentode	1.55	——
1AG5	Diode-Pentode	**	——
1AH4	RF Pentode	2.50	——
1V6	Triode-Pentode	5.65	——
2E31	RF Pent. (long leads)	**	——
2E32	RF Pent. (0.2 leads)	**	——
2E35	Pentode (long leads)	——	4.20
2E36	Pentode (0.2) leads)	——	4.20
2E41	(Use 1AG5)	——	——
2E42	(Use 1AG5)	——	——
2G21	Triode-Hept. (lg.-leads)	**	**
2G22	Triode-Hept. (0.2 leads)	**	**
CK501AX	Pentode Volt. Amp.	——	5.10
CK502AX	Pentode Pow. Amp.	——	4.20
CK503AX	Pentode Pow. Amp.	2.05	——
CK505AX	Pentode Volt. Amp.	——	3.80
CK506AX	Pentode Pow. Amp.	1.50	——
CK510AX	Dbl. Tetr. Volt. Amp.	2.55	——
CK511X	Pent. Volt. Amp.	——	4.75
CK512AX	Pentode Volt. Amp.	1.50	——
CK518AX	Pentode Pow. Amp.	2.15	——
CK522AX	Pentode Pow. Amp.	1.50	——
CK525AX	Pentode Pow. Amp.	——	3.00
CK526AX	Pentode Pow. Amp.	——	3.80
CK527AX	Pentode Pow. Amp.	——	5.10
CK528AX	Pentode Pow. Amp.	——	3.15
CK529AX	Pentode Pow. Amp.	——	3.95
CK531DX	Pentode Pow. Amp.	——	5.10
CK532DX	Pentode Pow. Amp.	——	5.10
CK533AX	Pentode Pow. Amp.	——	3.00
CK534AX	Pentode Volt. Amp.	——	3.00
CK535AX	Pentode Pow. Amp.	——	4.30
CK536AX	Pentode Pow. Amp.	——	3.15
CK537AX	Pentode Pow. Amp.	——	5.20
CK538DX	Pentode Volt. Amp.	——	4.10
CK539DX	Pentode Pow. Amp.	——	5.10
CK541DX	Pentode Pow. Amp.	——	5.10
CK542DX	Pentode Pow. Amp.	——	5.10
CK542DXS	(Shielded CK542DX)	——	5.30
CK544DX	Pentode Pow. Amp.	——	5.10
CK546DX	Pentode Pow. Amp.	——	5.10
CK547DX	Pentode Pow. Amp.	——	5.10
CK548DX	Pentode Pow. Amp.	——	5.10
CK549DX	Pentode Volt. Amp.	——	4.10
CK556AX	(Use CK5676)	——	——
CK568AX	(Use CK5677)	——	——
CK569AX	(Use CK5678)	——	——
CK570AX	(Use CK5697)	——	——
CK571AX	(Use CK5886)	——	——

TYPE		Suggested User Price	Suggested List Price
CK573AX	(Use CK6029)	$——	$——
CK574AX	RF Pentode	1.60	——
CK605CX	(Use CK5702)	——	——
CK606BX	(Use CK5704)	——	——
CK608CX	(Use CK5703)	——	——
CK619CX	(Use CK5744)	——	——
CK1034	Radiation Counter	7.50	——
CK1035	Radiation Counter	7.50	——
CK1036	Half Wave Rect.	7.50	——
CK1037	Voltage Reg.	7.50	——
CK1038	Voltage Reg.	7.50	——
CK1039	Voltage Reg.	7.50	——
CK5642	HW Rect.	——	2.20
CK5672	Pent. Pow. Amp.	1.60	——
CK5676	UHF Triode	1.90	——
CK5677	UHF Triode	3.70	——
CK5678	RF Pentode	1.60	——
CK5697	Triode	3.75	——
CK5702	RF Pentode	4.90	——
CK5703	UHF Triode	1.95	——
CK5704	Diode	2.85	——
CK5744	Triode	2.50	——
CK5783	Volt. Ref. (82-92V)	7.50	——
CK5784	Pentode Amp.	7.50	——
CK5785	Diode-HW Rect.	2.35	——
CK5787	Volt. Reg. (100V)	7.50	——
CK5829	Double Diode	4.50	——
CK5851	Beam Pentode	8.70	——
CK5854	Pent. Pow. Amp.	2.05	——
CK5875	Pentode	2.10	——
CK5884	Dbl. Tetrode	15.00	——
CK5885	Dbl. Tetrode	15.00	——
CK5886	Pentode	4.60	——
CK5889	Pentode	11.30	——
CK5967	RF Dbl. Triode	15.00	——
CK5968	Dbl. Triode	**	——
CK5969	Dbl. Tetrode	**	——
CK5970	RF Dbl. Pent.	**	——
CK5971	Triode	5.25	——
CK5972	RF Pentode	**	——
CK5975	Triode	3.75	**
CK5995	HW Diode	7.50	——
CK6029	UHF Triode	4.50	——
CK6050	UHF Triode	3.70	——
CK6088	Pent. Pow. Amp.	1.50	——
CK6147	Beam Pentode	**	——
CK6148	(Use CK5702WA)	——	——
CK6149	(Use CK5703WA)	——	——
CK6150	(Use CK5784WA)	——	——
CK6151	(Use CK5744WA)	——	——

TRANSISTORS

CK703	(Use CK716)	$——	$——
CK716	Contact type	$18.00	$——

GERMANIUM DIODES

1N66	Gen. Purpose	$ .95	$——
1N67	50 Volts	2.40	——
1N68	100 Volts	2.35	——
CK705	Gen. Purpose	.85	——
CK706	Video Detect.	.55	——
CK707	50 Volts	2.00	——
CK708	100 Volts	2.00	——

CK709	4 Matched diodes	$4.50	$——
CK710	UHF Converter	1.05	——
CK711	4 Matched diodes	16.50	——
CK712	200 Volts	18.10	——
CK713	Computer appli.	.95	——
CK714	8 Matched Diodes	21.00	——
CK715	Freq. Multiplier	.80	——

ALL PRICES SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE

** Price Pending OPS Approval

RAYTHEON

ELECTRONIC TUBES

SPECIAL PURPOSE TUBES

SUGGESTED USER PRICES *Effective May 1, 1952*

TYPE		Suggested User Price	Suggested List Price	TYPE		Suggested User Price	Suggested List Price
OA4G	Triode	$—	$2.90	884	Gas Triode	$1.85	$—
2C33/RX233A	Triode	5.00	—	885	Gas Triode	2.00	—
2C34/RK34	HF Dual Triode	3.50	—	954	UHF Pentode	5.65	—
2C50	Dbl. Tri. Pwr. Amp.	7.50	—	955	UHF Triode	3.60	—
2C52	Dbl. Tri. Vlt. Amp.	7.50	—	956	UHF Pentode	7.00	—
3A4	RF, AF Pentode	1.20	—	957	UHF Triode	3.75	—
3A5	RF Dbl. Triode	1.95	—	CK1089	Gas Tetrode	5.30	—
3B4	RF Beam Pentode	3.60	—	2050	Gas Tetrode	1.85	—
6AJ5	RF-AF Pentode	3.90	—	2051	Gas Tetrode	1.90	—
6AN5	RF-AF Pentode	3.65	—	CK5608A	Dbl. Triode	3.15	—
6AR6	Pent. Pwr. Amp.	**	—	CK5656	RF Dbl. Tetrode	20.55	—
6AS6	Pent. Amp.	3.25	—	CK5694	Dbl. Tri. Pwr. Amp.	3.75	—
6AS7G	Dbl. Triode	—	6.75	CK5910	Pentode	.95	—
6J4	UHF Triode	8.05	—	9001	UHF Pentode	3.40	—
7AK7	Pent. Amp.	7.00	—	9002	UHF Triode	2.50	—
RK60	(Use 1641/RK60)	—	—	9003	UHF Pentode	3.40	—
RK61	Triode	3.30	—	9005	UHF Diode	3.45	—
CK118	Thermal Relay	3.40	—	9006	UHF Diode	1.60	—
310A	RF-AF Pent.	12.45	—				

RECTIFIER TUBES

BH	Full Wave	$4.50	$—	RX215	FW Merc.	$24.30	$—
OZ4A/CK1003	Full Wave	1.30	—	RK866A	Half Wave Merc.	2.10	—
2X2A	Half Wave-Hi Vac.	—	4.35	RK872A	Half Wave Merc.	8.20	—
RK3B24W	Half Wave-Hi Vac.	11.75	—	CK1005	Full Wave	—	1.90
RK3B29	Half Wave-Hi Vac.	18.00	—	CK1006	Full Wave	5.85	—
5R4GY	Full Wave	1.85	—	CK1007	Full Wave	1.10	—
5R4WGY	Full Wave	7.25	—	CK1012	Full Wave	3.10	—
6X4W	Dbl. Tri. FW	1.80	—	CK1024	Full Wave	3.60	—
6X5WGT	Full Wave	**	—	CK1027	Half Wave	3.40	—
RK72	Half Wave-Hi Vac.	11.75	—	CK1028	Half Wave	22.50	—
RX120	HW, Merc. Argon	21.65	—	1641/RK60	FW—Hi Vac.	3.00	—
RX120A	HW Merc.	24.30	—	CK5517	Half Wave	3.40	—
RX212	HW Merc.	32.95	—				

RADIATION COUNTER TUBES

1B90	$14.25	$—	CK1023	$11.50	$—
CK1018	14.25	—	CK1026	3.15	—
CK1019	14.25	—	CK1029	15.00	—
CK1020	12.00	—	CK1032	3.15	—
CK1021	11.50	—			

MAGNETRONS

RK2J25	$300.00	$—	RK2J71	$320.00	$—
RK2J42	186.00	—	QK174B	320.00	—
RK2J55	186.00	—	QK312	320.00	—
RK2J70	170.00	—	RK5609	109.00	—

KLYSTRONS

RK2K25	Inter. Cavity	$ 65.00	$—	QK292	Inter. Cavity	$384.00	$—
RK2K26	Inter. Cavity	78.50	—	QK293	Inter. Cavity	384.00	—
RK2K28	Exter. Cavity	67.85	—	QK294	Inter. Cavity	384.00	—
RK2K33	Inter. Cavity	384.00	—	QK295	Inter. Cavity	513.00	—
QK140	Inter. Cavity	384.00	—	QK306	Inter. Cavity	384.00	—
QK226	Inter. Cavity	384.00	—	RK707B	Exter. Cavity	67.85	—
QK227	Inter. Cavity	384.00	—	RK5721	Exter. Cavity	307.70	—
QK289	Inter. Cavity	384.00	—	RK5976	Exter. Cavity	78.55	—
QK290	Inter. Cavity	384.00	—	RK6043	Inter. Cavity	67.85	—
QK291	Inter. Cavity	384.00	—				

ALL PRICES SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE

** Price Pending OPS Approval

MANUFACTURERS OF RECEIVING TUBES SINCE 1921

CBS-HYTRON

Originator of Studio-Matched Rectangular Tubes

MAIN OFFICE: SALEM, MASS.

Originator of the famous Bantam GT

LIST PRICES OF CBS-HYTRON TUBES

EFFECTIVE MARCH 15, 1952

TYPE	LIST
OZ4	$1.65
OZ4G	1.65
1A4P	4.05
1A5GT	1.85
1A6	3.35
1A7GT	2.20
1AX2	2.55
1B3GT	2.55
1B4P	4.05
1B5/25S	3.35
1C5GT	2.30
1C6	3.35
1C7G	3.35
1D5GP	4.05
1D7G	3.35
1D8GT	4.05
1F4	2.75
1F5G	2.75
1F6	4.05
1F7G	4.05
1G4GT	2.55
1G6GT	2.70
1H4G	2.30
1H5GT	1.70
1H6GT	3.35
1J6GT	3.20
1L4	2.10
1LA4	2.65
1LA6	2.65
1LB4	2.65
1LC5	2.65
1LC6	2.65
1LD5	2.65
1LE3	2.65
1LG5	2.65
1LH4	2.65
1LN5	2.65
1N5GT	2.10
1P5GT	2.65
1Q5GT	2.65
1R4	2.75
1R5	2.10
1S4	2.25
1S5	1.90
1T4	2.10
1T5GT	2.60
1U4	2.10
1U5	1.90
1V	2.30
1V2	1.55
1X2A	2.55
2A3	3.35
2A4G	3.20
2A5	2.30
2A6	2.65
2A7	2.75
3A8GT	4.80
3LF4	2.65
3Q4	2.25
3Q5GT	2.50
3S4	2.00
3V4	2.00
5AZ4	1.35
5U4G	1.50
5V4G	2.45
5W4	1.65
5W4GT	1.65
5X4G	1.80
5Y3G	1.35
5Y3GT	1.10
5Y4G	1.55
5Z3	1.75
5Z4	$2.80
6A3	3.35
6A6	2.75
6A7	2.30
6A8	2.20
6A8G	2.30
6A8GT	2.30
6AB4	2.00
6AB7	3.25
6AC5GT	3.00
6AC7	2.90
6AD7G	3.35
6AG5	2.25
6AG7	3.20
6AH4GT	2.20
6AH6	3.90
6AK5	3.90
6AK6	2.35
6AL5	1.80
6AL7GT	2.90
6AQ5	2.00
6AQ6	1.90
6AQ7GT	2.65
6AR5	1.65
6AS5	2.10
6AT6	1.55
6AU5GT	2.65
6AU6	1.80
6AV5GT	2.65
6AV6	1.55
6AW6	2.65
6AX4GT	2.40
6AX5GT	1.65
6B4G	3.20
6B5	3.35
6B6G	2.10
6B7	3.35
6B8G	3.35
6BA6	1.90
6BA7	2.50
6BC5	2.00
6BD6	2.00
6BE6	1.90
6BF5	2.35
6BF6	1.70
6BG6G	4.80
6BH6	2.10
6BJ6	2.10
6BK7	3.20
6BL7GT	2.90
6BN6	2.90
6BQ6GT	3.20
6BQ7	3.05
6BY5G	2.65
6BZ7	3.05
6C4	1.70
6C5	1.75
6C5GT	1.65
6C6	2.20
6C8G	3.35
6CB6	2.10
6CD6G	6.60
6D6	2.20
6D8G	3.35
6E5*	2.25
6F5	1.75
6F5GT	1.70
6F6	2.10
6F6G	1.75
6F6GT	1.65
6F8G	3.35
6G6G	2.75
6H6	$1.65
6H6GT	1.85
6J5	1.50
6J5GT	1.50
6J6	2.50
6J7	2.10
6J7G	2.25
6J7GT	2.20
6J8G	3.20
6K5GT	2.40
6K6GT	1.60
6K7	1.85
6K7G	2.15
6K7GT	2.15
6K8	2.70
6K8GT	2.50
6L5G	2.75
6L6	3.75
6L6G	3.20
6L6GA	3.20
6L7	2.55
6L7G	3.30
6N6G	3.90
6N7	2.55
6N7GT	2.50
6P5GT	2.40
6Q7	2.10
6Q7G	1.85
6Q7GT	1.85
6R7	2.65
6R7GT	2.65
6S4	1.70
6S7G	3.35
6S8GT	2.65
6SA7	1.75
6SA7GT	1.75
6SB7Y	2.55
6SC7	2.00
6SD7GT	2.90
6SF5	1.75
6SF5GT	1.80
6SF7	2.00
6SG7	2.00
6SH7	2.20
6SJ7	1.65
6SJ7GT	1.65
6SK7	1.65
6SK7GT	1.65
6SL7GT	2.45
6SN7GT	2.20
6SQ7	1.50
6SQ7GT	1.50
6SR7	1.80
6SR7GT	2.00
6SS7	2.15
6SV7	3.55
6T7G	3.35
6T8	2.90
6U4GT — Use 6AX4GT	2.40
6U5*	2.00
6U7G	2.20
6U8	2.90
6V3	3.90
6V6	3.35
6V6GT	2.00
6W4GT	1.85
6W6GT	2.20
6X4	1.55
6X5GT	1.55
6X8	2.75
6Y6G	2.50
6ZY5G	2.30
7A4(XXL)	$2.00
7A5	2.35
7A6	1.90
7A7	1.90
7A8	1.80
7AD7	3.35
7AF7	1.80
7AG7	2.20
7AH7	2.20
7B4	1.80
7B5	1.80
7B6	1.80
7B7	1.90
7B8	1.90
7C5	1.90
7C6	1.80
7C7	1.90
7E5/1201	2.65
7E6	2.35
7E7	2.75
7F7	2.20
7F8	3.00
7G7/1232	2.75
7H7	2.20
7J7	2.75
7K7	2.75
7L7	2.75
7N7	2.20
7Q7	2.10
7R7	2.35
7S7	2.65
7V7	2.65
7W7	2.65
7X7(XXFM)	2.65
7Y4	1.80
7Z4	1.80
12A4	2.00
12A7	3.35
12A8GT	2.20
12AH7GT	2.75
12AL5	1.80
12AT6	1.55
12AT7	2.90
12AU6	1.80
12AU7	2.40
12AV6	1.55
12AV7	2.90
12AW6	2.50
12AX4GT	2.40
12AX7	2.50
12AZ7	2.65
12B4	2.00
12BA6	1.90
12BA7	2.50
12BD6	2.00
12BE6	1.90
12BH7	2.40
12BY7	2.65
12BZ7	2.40
12J5GT	1.55
12J7GT	2.20
12K7GT	2.10
12K8	2.70
12K8GT	2.65
12Q7GT	1.85
12SA7	1.75
12SA7GT	1.75
12SF5	1.90
12SF5GT	2.00
12SF7	2.10
12SF7GT	2.00
12SG7	2.00
12SH7	2.20
12SJ7	$1.75
12SJ7GT	1.65
12SK7	1.75
12SK7GT	1.75
12SL7GT	2.50
12SN7GT	2.30
12SQ7	1.50
12SQ7GT	1.50
12Z3	2.60
14A4	2.65
14A7/12B7	2.20
14AF7(XXD)	2.40
14B6	2.20
14B8	2.20
14C5	2.75
14C7	2.40
14E6	2.35
14E7	2.75
14F7	2.20
14F8	3.00
14H7	2.40
14J7	2.75
14N7	2.65
14Q7	2.20
14R7	2.75
14S7	2.65
14W7	2.65
14Y4	2.40
19	3.35
19BG6G	6.00
19J6	2.65
19T8	2.90
24A	2.35
25AC5GT	2.90
25AV5GT	2.90
25BQ6GT	3.20
25L6GT	1.70
25W4GT	1.80
25Y5	3.00
25Z5	1.65
25Z6	2.30
25Z6GT	1.50
26	2.05
27	1.75
30	2.25
32	3.70
32L7GT	3.20
33	3.35
34	3.50
35/51	2.35
35A5	1.90
35B5	2.00
35C5	2.00
35L6GT	1.70
35W4	1.30
35Y4	1.80
35Z3	1.80
35Z4GT	1.50
35Z5GT	1.25
36	2.75
37	1.85
38	2.30
39/44	2.75
41	1.90
42	1.90
43	2.05
45	2.10
45Z3	1.80
45Z5GT	1.80
46	2.90
47	2.90
50A5	2.20
50B5	2.00
50C5	$2.00
50L6GT	1.70
50X6	2.20
50Y6GT	1.85
50Y7GT	2.10
53	2.75
56	1.85
57	2.10
58	2.10
70L7GT	3.90
71A	2.35
75	1.70
76	1.70
77	2.15
78	2.15
80	1.30
81	4.65
83	2.75
83V	3.20
84/6Z4	1.80
85	2.30
117L/M7GT	3.90
117N7GT	4.05
117P7GT	4.05
117Z3	1.55
117Z4GT	2.90
117Z6GT	2.50
1273	2.65
1280	2.65
5642	2.20

SPECIAL PURPOSE TYPES

TYPE	LIST
OA2*	$2.90
OA3*	2.65
OB2*	3.20
OB3*	3.35
OC3*	2.65
OD3*	2.65
3A5*	1.95
5R4GY	1.85
6AS7G	7.10
9001*	3.40
9002*	2.50

TV PICTURE TYPES

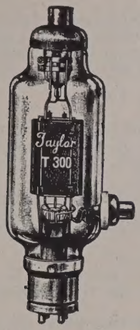
Type	Suggested Retail
7JP4	$25.00
10BP4A	27.00
12LP4A	31.00
14BP4	35.00
14CP4	34.00
16AEP4	36.00
16AP4A	50.75
16GP4	40.50
16KP4	35.00
16RP4	35.00
16TP4	35.00
17BP4A	34.00
17CP4	33.25
17HP4 (17RP4)	34.50
17LP4 (17VP4)	34.50
17QP4	34.00
17YP4	34.00
19AP4A	60.00
20CP4A	50.00
20DP4A	50.00
20HP4A(20LP4)	52.00
21EP4A	52.00
21FP4A(21LP4)	54.00

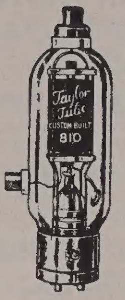
* Non-taxable

All Prices Subject to Change Without Notice and Subject to O.P.S. Regulations

Taylor CUSTOM BUILT Tubes

2312-18 WABANSIA AVENUE, CHICAGO 47, ILLINOIS





Taylor
Tube
CUSTOM BUILT
TR40M

TRIODES

Type	Filament Volts	Filament Amps	Max. Plate Dissipation Watts	Max. Plate D.C. Volts	Max. Plate D.C. M.A.	Max. Grid Drive Watts	Amp. Factor	Base	Size L.	Size D.	Max. Mc. For 100% Input	Price
TZ-20	7.5	1.75	20	750	85	3.5	62	4 P.MED.	6.0	2.37	60	$4.00
T-40	7.5	3.0	40	1500	150	9.0	25	4 P.MED.	6.25	2.5	60	4.50
TZ-40	7.5	3.0	40	1500	150	9.0	62	4 P.MED.	6.25	2.5	60	4.50
T-55	7.5	3.0	55	1500	165	7.0	20	4 P.MED.	7.0	2.62	125	9.50
T-60	10.0	3.0	60	1500	150	9.0	15	4 P.MED.	6.75	2.5	60	11.50
T-125	10.0	4.5	125	2500	250	12.5	25	4 P.JUM.	8.25	3.0	60	13.50
T-200	10.0	5.75	200	2500	350	20.0	17	4 P.JUM.	9.5	3.75	30	25.00
T-300	10-11	6.0	300	3000	300	18.0	23	4 P.JUM.	12.0	4.87	30	30.00
805	10.0	3.25	125	1750	210	10.0	45	4 P.JUM.	8.5	2.32	30	13.50
810	10.0	4.5	125	2250	275	15.0	36	4 P.JUM.	8.75	3.0	30	14.50
822	10.0	4.0	200	2500	300	17.0	30	4 P.JUM.	9.0	2.62	30	20.00
845	10.0	3.25	100	1230	175	10.0	5	4 P.JUM.	7.5	2.32	20	13.75
8000	10.0	4.5	175	2500	250	20.0	16.5	4 P.JUM.	8.5	2.12	30	14.50

RECTIFIERS AND *CONTROL TUBES

Type	Filament Volts	Filament Amps	Anode Volts Peak Inverse	Anode Amps. Peak	Anode Amps Average	Base	Price
866 JR	2.5	2.5	5000	.5	0.125	4 P.MED.	$1.65
866A	2.5	5.0	10000	1.0	0.250	4 P.MED.	1.95
872A	5.0	6.75	10000	5.0	1.25	4 P.JUM.	8.20
875A	5.0	10.0	15000	6.0	1.5	4 P.JUM.	21.00
249C	2.5	7.5	10000	1.5	0.375	4 P.MED.	9.00
249S	2.5	7.5	5000	0.5	0.125	4 P.MED.	7.00
8008	5.0	6.75	10000	5.0	1.25	SPEC.	8.20
8013A	2.5	5.0	40000	0.15	0.02	4 P.MED.	10.30
8020	2.5	6.0	40000	0.75	0.10	4 P.MED.	22.00
TR40M	5.0	10.5	60000	1.0	0.25	4 P.MED.	20.00
*TT-17	2.5	5.0	2500	2.0	0.5	4 P.MED.	7.00
*873	5.0	6.75	3000	10.0	2.5	4 P.JUM.	17.25

TAYLOR MANUFACTURES SPECIAL TUBE TYPES FOR MANY INDUSTRIAL AND COMMERCIAL APPLICATIONS. CONTACT OUR APPLICATION ENGINEERING DEPARTMENT FOR YOUR REQUIREMENTS OF SPECIAL PURPOSE TUBE TYPES.

Net

CETRON ELECTRONIC TUBES

Engineered and Manufactured by Continental Electric Co.

CETRON PHOTOTUBES

CETRON phototubes are either of the gas-filled or of the vacuum type. With the gas-filled type, greater effective response is obtained, particularly in low impedance circuits, while the vacuum type is recommended where maximum stability is desired.

CETRON phototubes are selected as to their sensitivity and priced accordingly. Phototubes of the Super Class A/B or Q are generally used for experimental purpose where very high sensitivities are required; Class C or R mostly for motion picture equipment; Class D for relay work, etc.

CETRON RED SENSITIVE PHOTOTUBES

CETRON red sensitive phototubes are available in three sensitivity classes, A/B, C and D. The CETRON gas-filled red sensitive tubes comprise the most complete line of phototubes designed for sound reproduction. For complete engineering specifications, write for our PC 8/9.

CETRON BLUE SENSITIVE PHOTOTUBES

CETRON blue sensitive phototubes are available in two sensitivity classes, Q and R. The gas-filled CETRON blue sensitive tubes comprise a most complete line for sound reproduction work from dye recorded film. For complete engineering specifications, write for our PC 8/9.

CETRON LEAD SULFIDE PHOTOCELLS

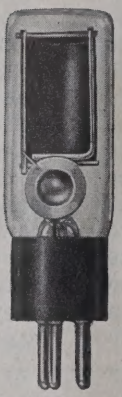
CETRON lead sulfide photo conductive cells are made in a variety of miniature types. They are also available in a variety of sensitive areas and resistances. CETRON lead sulfied photocells are available in three sensitivity classes, A, C and D. For complete engineering specifications, write for our lead sulfide literature.

Continental Electric also manufactures a complete line of special purpose photocells, such as the CE-5, CE-7, CE-8, CE-10, CE-12, CE-15, CE-18, CE-26, etc. We will be happy to work with you on design and development problems, also on any special phototubes your application may require. Full data, price, etc. on special phototubes will be forthcoming upon request.

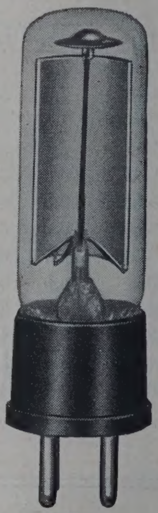
LIST PRICES

RED SENSITIVE TYPES, GAS-FILLED. RMA SPECTRAL RESPONSE S1.

Type	Class A/B	Class C	Class D
CE-1/918	$6.20	$4.10	$2.50
CE-2/1P30	8.50	5.50	3.65
CE-3/1P31	8.50	5.50	3.30
CE-4/1P36	8.50	5.50	3.30
CE-21/920		5.60	3.60
CE-22		4.00	2.40
CE-23/923	5.50	2.90	1.75
CE-B25/927	12.00	5.50	2.50
CE-30/930	5.50	2.60	1.50
CE-36	12.00	5.50	2.50



CE-B25



CE-1
CE-91

RED SENSITIVE TYPES, VACUUM, RMA SPECTRAL RESPONSE S1

CE-1V	$8.50	$4.20	$2.60
CE-2V	10.00	6.00	3.30
CE-4V	10.00	6.00	3.65
CE-11V/917	12.00	5.00	3.00
CE-25V	12.00	5.50	3.00
CE-30V	8.50	2.80	1.85
CE-31V/919	12.00	5.00	3.00

BLUE SENSITIVE TYPES, GAS-FILLED, RMA SPECTRAL RESPONSE S4

	Q	R
CE-59/5581	$9.00	$4.40
CE-64/5583	10.00	3.60
CE-74	12.00	6.50
CE-83/5612	16.00	10.00
CE-91	10.00	3.30
CE-97/5614	16.00	10.00

BLUE SENSITIVE TYPES, VACUUM, RMA SPECTRAL RESPONSE S4

CE-29/929	$9.00	$2.00
CE-34	10.00	4.50
CE-61	10.00	6.60
CE-99	16.00	6.50

CE-30

MINIATURE TYPES

LEAD SULFIDE TYPES

CE-701 Side Type	$10.00
CE-702 Side Type	10.00
CE-703 End Type	10.00
CE-704 Double Side Type	15.00
CE-705 End Type	10.00
CE-711 Three-Pin Side Type	10.00

CE-702

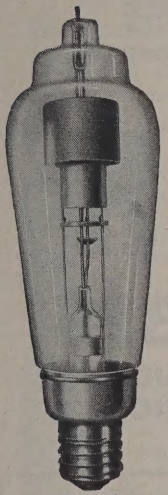
CE-701

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

CETRON ELECTRONIC TUBES

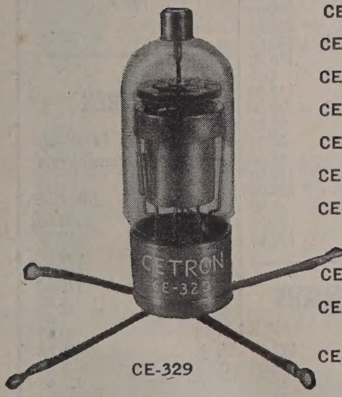
Engineered and Manufactured by Continental Electric Co.

CETRON RECTIFIER and GRID CONTROL TUBES



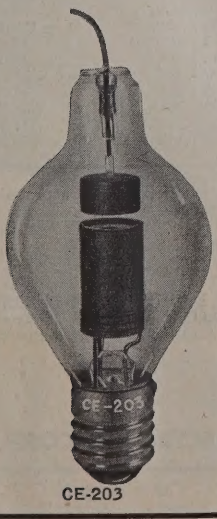
CE-202

Type New No.	Old No.	Description	List Price	Data Sheet No.
CE-3B28	—	0.5 amp. half wave gas filled 1500 volts DC with medium 4 pin base	$ 8.50	143
CE-200A	CE-200	2 amp. full wave mercury vapor 250 volts DC with standard 4 pin base	7.75	111
CE-201A	CE-201	2 amp. full wave mercury vapor 250 volts DC with special 4 long pin base.	8.00	111
CE-202B	CE-202	15 amp. half wave mercury vapor 250 volts DC Mogul Screw base	35.00	108
CE-203	—	15 amp. half wave mercury vapor 150 volts DC Mogul Screw base	11.60	104
CE-205	2-RA-5	5 amp. half wave mercury vapor 250 volts DC Mogul Screw base	12.60	105
CE-206	2-RA-6	6 amp. half wave mercury vapor 90 volts DC Mogul Screw base	6.00	106
CE-207	—	15 amp. half wave mercury vapor 150 volts DC Mogul Screw base	35.00	108
CE-210A	CE-210	2 amp. full wave mercury vapor and gas 250 volts D.C. with standard 4 pin base	7.75	131
CE-212A	CE-212	2 amp. half wave gas filled 60 volts DC Medium Screw Base	4.00	120
CE-213A	CE-213	2½ amp. half wave mercury vapor 600 volts DC standard 4 pin base	7.50	107
CE-215	2-RA-15	15 amp. half wave mercury vapor 75 volts DC Mogul Screw base	10.40	103
CE-220	CE-72	.020 amp. 20,000 half wave high vacuum, rect. tubes. Stand. 4 pin base	5.85	113
CE-221	4B25	6.4 amp. full wave gas filled 200 volts DC special 4 pin base	19.00	125
CE-222	—	1 amp. full wave gas filled 200 volts DC with medium 4 pin base	8.50	115
CE-225	—	6 amp. half wave gas filled 60 volts DC with Mogul Screw base	5.00	121
CE-226	R-6-A	6 amp. half wave gas filled 90 volts DC Mogul Screw base	5.00	112
CE-230	3B24	.060 amp. 20,000 half wave high vacuum rect. med. 4 pin base	13.20	123
CE-235	R-15-A	15. amp. half wave gas filled 60 volts DC Mogul Screw base	10.00	109
CE-235A	—	15 amp. half wave gas filled 60 volts DC Mogul Screw base and flexible anode lead	10.00	109
CE-249C	—	0.64 amp. half wave mercury vapor 2000 volts DC with medium 4 pin base	9.50	144
CE-303	3C31	1 amp. grid control tube, gas filled standard 4 pin base	13.25	114
CE-304	—	12.5 amp. grid control mercury vapor 125 amp. peak current No. 4310 4 pin ind. base	74.75	119
CE-305	—	2 amp. grid control tube, gas filled, standard 4 pin base	28.00	116
CE-306	—	6 amp. grid control tube, gas filled, 40 amp. peak current, 4 pin base No. 412	33.60	118
CE-309	FG17	.5 amp. grid control tube mercury vapor 5000 peak inverse med. 4 pin base	7.90	126
CE-311	3C23	1.50 amp. grid control tube mercury and gas filled 1000 peak inverse med. 4 pin base	15.75	127
CE-393A	—	1.50 amp. grid control tube mercury and gas filled 1250 peak inverse med. octal base	15.75	127
CE-323B	—	1.5 amp. grid control tube mercury vapor and gas filled 1250 peak inverse. Medium 5 pin base	15.75	133
CE-329	—	3 amp. grid controlled, gas filled, indirectly heated, short deionization time, peak inverse 1250V, flexible leads	45.00	137
CE-330	—	5 amp. grid controlled, gas filled, indirectly heated, short deionization time, peak inverse 1250V, flexible leads	50.00	138
CE-331	—	10 amp. grid controlled, gas filled, indirectly heated, short deionization time, peak inverse 1250V, flexible leads	95.00	139
CE-394A	—	0.64 amp. grid control tube mercury and gas filled with medium 4 pin base	9.50	141
CE-627	—	0.64 amp. grid control tube mercury vapor with medium 4 pin base	15.75	142



CE-329

Detailed engineering specifications on all tubes are available upon request. The extensive engineering and manufacturing facilities which we have, make possible the development and production of many types of special tubes to your specifications. If you have a problem involving the use of any CETRON tubes you are invited to consult us.

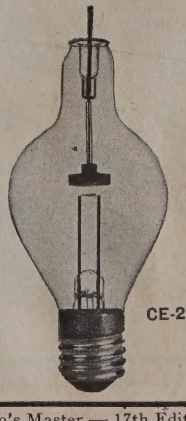


CE-203

WARRANTY

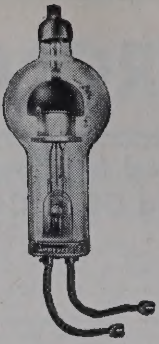
We guarantee all products manufactured by us to be free from all material and manufacturing defects and to give satisfactory service when operated in accordance with instructions indicated for their use.

Continental Electric Co.

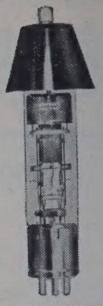


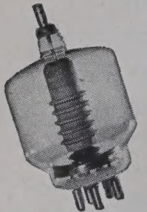
CE-226

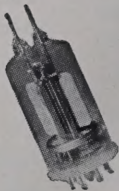
833A


857B

813

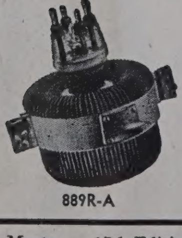

AGR-9951/5870


AX-9902/5868


AX-9903/5894

VC25
VC50
VC100

891R
892R


889R-A

AMPEREX

ELECTRONIC TUBES

COMMUNICATION - RECTIFICATION - INDUSTRIAL
ELECTRO-MEDICAL - RADIATION DETECTION
SPECIAL PURPOSE

TYPE	PRICE	TYPE	PRICE	TYPE	PRICE
3B28	$ 9.00	450TH	$77.00	893A	$630.00
4B32	12.00	450TL	77.00	893AR*	1150.00
4C35**		468	28.50	1701 (FG17)	6.50
AX4-125A	30.25	492	260.00	HF-3000	400.00
AX4-250A	41.25	492R	260.00	ZB-3200	300.00
5C22**		498	450.00	5604	540.00
HF60	12.50	501R	100.00	5619	390.00
98R	200.00	502	80.00	5658	510.00
HF100	15.00	502R	130.00	5666	225.00
100TH	18.25	504R	125.00	5667	302.50
FG105	48.00	508	500.00	8002	132.00
HF120	17.50	575A	24.00	8002R	160.00
ZB120	17.50	673	24.50	8008	8.25
HF125	25.00	805	13.50	8020	32.00
HF130	19.00	807	2.50	AX-9900	22.00
HF140	17.50	810	14.50	AX-9901	33.00
HF150	19.00	813	16.00	AX-9902	60.00
AB150	20.00	828	13.75	AX-9903	19.00
HF175	20.00	832A	12.90	AX-9904	175.00
HF200	28.50	833A	49.50	AX-9904R	225.00
HF201A	28.50	834	14.50	AX-9905	6.00
203A	13.75	838	13.75	AGR-9950	25.00
203H	25.00	845	13.75	AGR-9951	110.00
204A	115.00	846	250.00		
207	242.00	849	138.00		
211	13.75	849A	135.00		
211C	19.00	849H	135.00		
211D	17.50	851	253.00		
211H	19.00	857B	209.00		
212E	102.00	858	500.00		
221A	20.00	859	500.00		
222A	300.00	866A	2.25		
233	500.00	866AX	2.50		
237A	435.00	869B	132.00		
HF250	30.00	872A	8.20		
250TL	33.00	880	510.00		
250TH	33.00	889A	210.50		
258B	11.00	889RA*	285.00		
267B	22.00	891	223.00		
270A	194.70	891R*	362.00		
HF300	35.00	892	223.00		
311CH	19.00	892R*	362.00		

CONDENSERS

TYPE	PRICE
VC6/20	$22.50
VC6/32	24.50
VC12/20	22.50
VC12/32	24.50
VC25/20	22.50
VC25/32	24.50
VC50/20	26.50
VC100/20	30.00
VC100/32	33.00
VC100A/20	37.50
VC100A/32	40.00
VC250/32	75.00
VC500/20	90.00

MAGNETRONS **

TYPE
2J55
2J56
4J47
4J52
725-A

AMPEREX

tubes for use in Western Electric transmitters

TYPE	PRICE
212F	$102.00
220C	365.00
228A	325.00
232C	560.00
241B	115.00
242C	15.00
249B	9.00
249C	9.00
251A	300.00
255B	145.00
266B	210.00
279A	355.00
284D	17.50
308B	100.00
315AW	38.60
319A	22.00
321A	38.60
332A	50.00
342A	582.00
343A	370.00
343AA	435.00

* Credits will be allowed for return of radiator and crate in good condition prepaid to factory in Brooklyn, N. Y., in accordance with this schedule.

$30.00 for Type No. 889-RA
45.00 " " Nos. 891-R, 892-R
150.00 " " No. 893-AR

** Price on request

HELPFUL CHARTS AND LITERATURE FREE: Write for set of INTERCHANGEABILITY CHARTS, information at a glance, RAPID TUBE DATA REFERENCE TABLES, 19 pages of condensed information arranged for quick reference. Address your distributor or Amperex direct.

AMPEREX

AMPEREX ELECTRONIC CORP.

CHATHAM ELECTRONICS

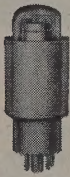
Electronic Tubes and Equipment

Tubes listed on this page can usually be supplied direct from stock. Many other types are available for immediate delivery — write for catalog. CHATHAM also designs, develops and manufactures special tubes to exact customer specifications — inquiries are invited.

• CHATHAM RUGGEDIZED 2D21W THYRATRON
A ruggedized Xenon filled shield grid thyratron for grid controlled rectifier service. Permits use of high resistance in the grid circuit. Heater 6.3 volts, .6 amp. . . . inverse peak plate voltage 1300 volts, average plate current 100 ma.

• CHATHAM RUGGEDIZED 5R4WGY RECTIFIER
A ruggedized full wave high vacuum rectifier designed for high altitude operation. Heater voltage 5 volts, heater current 2 amps. Peak inverse voltage 2800 volts, peak plate current 650 ma.

• CHATHAM RUGGEDIZED 6AL5W TWIN TRIODE
A ruggedized miniature type twin diode. Heater voltage 6.3 volts, heater current .3 amps. Peak inverse plate voltage 330 volts, DC output current per plate 9 ma. max.



• CHATHAM RUGGEDIZED OC3W REGULATOR
A ruggedized glow discharge regulator tube designed to maintain D.C. output voltage constant at 105 volts with a maximum regulation of 2 volts. Tube operating current 5 to 40 ma.

• CHATHAM 1Z2 RECTIFIER
A small bulb high voltage vacuum rectifier. Low cathode heating power and low dielectric losses make tube suitable for radio frequency supply circuits. Fil. 1.25 volts, .265 amp. . . . Inverse peak plate voltage 15,000 volts, 1.5 ma. average, 8.5 ma. peak plate current.

• CHATHAM 3B28 RECTIFIER
This rugged half wave Xenon filled rectifier will operate in any position and throughout an ambient temperature range of −75°C to +90°C Fil. 2.5 volts, 5.0 amp. . . . Inverse peak anode voltage 10,000 volts, .25 amp. average anode current.

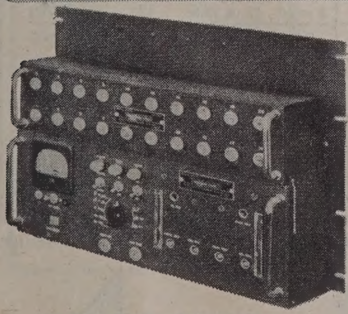
• CHATHAM 4B32 RECTIFIER
A rugged half wave Xenon filled rectifier. Operates in any position throughout an ambient temperature range of —75°C to +90°C Fil. 5 volts, 7.5 amp. . . . Inverse peak anode voltage 10,000 volts, 1.25 amp. average anode current.

• CHATHAM 394A THYRATRON
A Mercury vapor and Argon filled thyratron for grid controlled rectifier service. Operates over a wide ambient temperature range. Heater 2.5 volts, 3.2 amps. . . . Inverse peak anode voltage 1250, average anode current 640 ma.

• CHATHAM 395A COLD CATHODE GAS TRIODE
Requires no filament supply and is used in many grid controlled rectifier and relay applications. Maximum DC anode current, 10 ma. Maximum DC anode voltage, 150 volts.

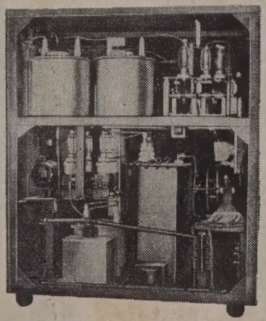
Custom-Built Electronic Equipment

CHATHAM specializes in the development, design, and construction of custom-built electronic equipment to exactly meet customers' requirements. Our capable staff of engineers will furnish prompt estimates or, if desired, will call to discuss your problem personally. Call or write today for complete information.



• Pulse life test equipment built by CHATHAM checks receiver type tubes under pulse operating conditions.

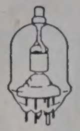
Write today for the informative CHATHAM catalog. For free copy address requests on company letterhead — no obligation.

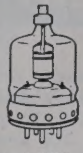


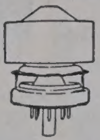
• 5 Megawatts radar modulator built by CHATHAM to rigid government standards.

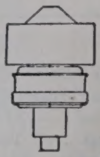
CHATHAM ELECTRONICS • INC

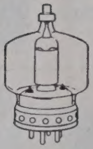
475 WASHINGTON STREET • NEWARK 2, NEW JERSEY

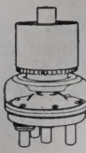


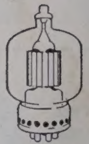


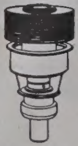


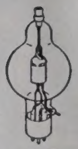


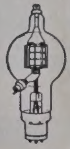


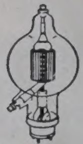


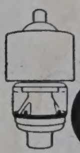


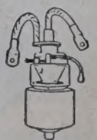


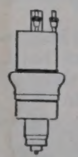












Long the criteria of good design in any electronic equipment, Eimac tubes are today the undisputed leaders of their field. Complete data on any of the Eimac products listed are available by writing direct.

Eimac TUBES

TRANSMITTING TYPE TUBES

EIMAC TUBE TYPE	PRICE	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS			
		Plate Dissipation Watts	Plate Voltage	Plate Current Milliamperes	Grid Dissipation Watts	Screen Voltage	Screen Dissipation Watts	Filament, Volts	Filament, Amperes	Amplification Factor	Transconductance umhos
TETRODES											
4-65A	$ 20.00	65	3000	150	5	400	10	6.0	3.5	5	4000
4-125A	30.25	125	3000	225	5	400	20	5.0	6.5	6.2	2450
4-250A	41.25	250	4000	350	5	600	35	5.0	14.5	5.1	4000
4-400A	60.50	400	4000	350	5	600	35	5.0	14.5	5.1	4000
4-1000A	132.00	1000	6000	700	25	1000	75	7.5	21	7.2	10,000
4PR60A	90.00	60	20,000	†	†	1500	8	26	2.25	†	†
4X150A	48.00	150	1000	250	2	300	12	6.0	2.8	5	12,000
4X150G	54.00	150	1250	250	2	300	15	2.5	6.25	5.0	12,000
4X500A	121.00	500	4000	350	10	500	30	5.0	13.5	6.2	5200
4X500F	93.50	500	4000	350	10	500	30	5.0	12.2	6.2	5200
		†Pulse Modulator									
TRIODES											
2C39A	36.50	100	1000	125‡	2	...	..	6.3	1.0	100	22,000
3C24	9.00	25	2000	75	8	...	..	6.3	3.0	23	2500
3W10000A3	957.00	10,000	5000	10,000	100	...	..	7.0	15	20	55,000
3X2500A3	198.00	2500	6000	2000	150	...	..	7.5	51	20	20,000
3X2500F3	198.00	2500	6000	2000	150	...	..	7.5	51	20	20,000
3X3000A1*	198.00	3000	6000	2500	50	...	..	7.5	51	5	11,000
3X12500A3*	962.50	12,500	6000	8000	600	...	..	7.5	192	20	80,000
25T	9.00	25	2000	75	7	...	..	6.3	3.0	24	2500
35T	10.50	50	2000	150	15	...	..	5.0	4.0	39	2850
35TG	11.00	50	2000	150	15	...	..	5.0	4.0	39	2850
75TH	13.25	75	3000	225	16	...	..	5.0	6.25	20	4150
75TL	13.25	75	3000	225	13	...	..	5.0	6.25	12	3350
100TH	18.25	100	3000	225	20	...	..	5.0	6.3	40	5500
100TL	18.25	100	3000	225	15	...	..	5.0	6.3	14	2300
152TH	28.75	150	3000	450	30	...	..	5 or 10	12.5 or 6.2	20	8300
152TL	28.75	150	3000	450	25	...	..	5 or 10	12.5 or 6.2	12	7150
250TH	33.00	250	4000	350	40	...	..	5.0	10.5	37	6650
250TL	33.00	250	4000	350	35	...	..	5.0	10.5	14	2650
304TH	60.50	300	3000	900	60	...	..	5 or 10	25 or 12.5	20	16,700
304TL	60.50	300	3000	900	50	...	..	5 or 10	25 or 12.5	12	16,700
450TH	77.00	450	6000	600	80	...	..	7.5	12.0	38	6650
450TL	77.00	450	6000	600	65	...	..	7.5	12.0	18	6060
592/3-200A3	30.25	200	3500	250	25	...	..	10.0	5.0	25	3600
750TL	137.50	750	10,000	1000	100	...	..	7.5	21.0	15	3500
1000T	137.50	1000	7500	750	80	...	..	7.5	17.0	35	9050
1500T	220.00	1500	8000	1250	125	...	..	7.5	24.0	24	10,000
2000T	275.00	2000	8000	1750	150	...	..	10.0	25.0	23	11,000
PENTODE											
4E27A/5-125B	35.75	125	4000	200	5	750	20	5.0	7.5	5.0	2150

*External Anode requiring forced-air cooling
**Water-cooled
‡Cathode Current

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

COMPLETE DATA AVAILABLE UPON REQUEST

SEE NEXT PAGE

EITEL-McCULLOUGH, INC.
San Bruno, California

Eimac product-reputation is the result of years of efficient, dependable performance in varied fields of service. It is the reason the criteria of good design of any electronic equipment are components trademarked "Eimac."

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

RECTIFIERS

HIGH VACUUM TYPES

TYPE	PRICE	FILAMENT VOLTAGE	FILAMENT CURRENT AMPS.	PEAK INVERSE VOLTAGE	CURRENT AMPS. PEAK PLATE	AVERAGE PLATE CURRENT MA
2-01C	$ 15.25	6.3	0.4	1,000	0.010	..
2-25A	11.00	6.3	3.0	25,000	.....	50
2-50A	13.75	5.0	4.0	30,000	.....	75
2-150D	19.25	5.0	13.0	30,000	.....	150
2-240A	66.00	7.5	12.0	40,000	.....	500
2-2000A	214.50	10.0	25.0	75,000	.....	750
250R	22.00	5.0	10.5	60,000	.....	250
253	20.50	5.0	10.0	15,000	.....	350
8020(100R)	15.00	5.0	6.5	40,000	.....	100
MERCURY VAPOR TYPES						
*KY21A	13.25	2.5	10.0	11,000	3	750
RX21A	9.00	2.5	10.0	11,000	3	750
866A	1.95	2.5	5.0	10,000	1	250
872A	8.20	5.0	7.5	10,000	5	1250

*Grid Controlled

VACUUM CAPACITORS

TYPE	PRICE	VARIABLE CAPACITY	RATING RF PEAK
VVC60-20	$ 66.00	10-60 mmfd	20-KV
VVC2-60-20	147.50	Split Stator 5-30 mmfd	40-KV
		Parallel 20-120 mmfd	20-KV
VVC4-60-20	284.00	Split Stator 10-60 mmfd	40-KV
		Parallel 40-250 mmfd	20-KV

TYPE	FIXED PRICE	CAPACITY	RATING RF PEAK
VC6-20	$15.00	6 mmfd	20-KV
VC6-32	17.25	6 mmfd	32-KV
VC12-20	16.50	12 mmfd	20-KV
VC12-32	20.00	12 mmfd	32-KV
VC25-20	20.00	25 mmfd	20-KV
VC25-32	23.25	25 mmfd	32-KV
VC50-20	24.25	50 mmfd	20-KV
VC50-32	27.50	50 mmfd	32-KV

AIR-SYSTEM SOCKETS

TYPE	4X150A/4501	4-400A/4000	4-1000A/4000
COMPLETE ASSEMBLY PRICE	$18.00	$16.00	$22.50
REPLACEMENT CHIMNEY PRICE	.60	6.00	7.50
FOR USE WITH TUBE TYPE	4X150A	4-400A	4-1000A

HEAT DISSIPATING CONNECTORS

TYPE	Price	HOLE DIA.
HR-1	$ .60	.052
HR-2	.60	.0625
HR-3	.60	.070
HR-4	.80	.1015
HR-5	.80	.125
HR-6	.80	.360
HR-7	1.60	.125
HR-8	1.60	.570
HR-9	3.00	.570

VACUUM PUMP

HY-1 DIFFUSION PUMP Price $125.00

An air-cooled, oil diffusion type, vacuum pump. Ultimate vacuum, 4x10^{-7}mm. of mercury. Speed (without baffle) approx. 67 liters/seconds.

100 IG, IONIZATION GAUGE $22.50

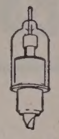
An electronic vacuum pressure gauge. Filament voltage 3.5 to 7.5 volts.

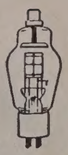
DIFFUSION PUMP OIL A $5.00 qt.

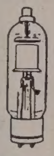
VACUUM SWITCH

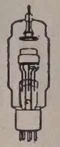
VS-2 Price $13.25

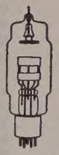
Single pole double throw switch within a high vacuum adaptable for high voltage switching. Contact spacing .015". Switch will handle R-F potentials as high as 20 Kv. In DC switching will handle approximately 1.5 Amps. at 5 Kv.

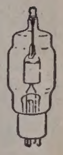

2-01C

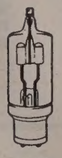

866A

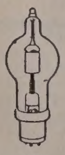

872A

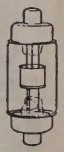

RX21A

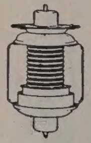

KY21A

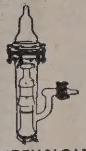

8020

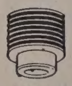

2-150D

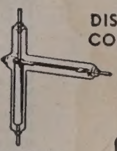

250R

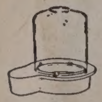

FIXED VACUUM CAPACITOR


VARIABLE VACUUM CAPACITOR


DIFFUSION PUMP


HEAT DISSIPATING CONNECTOR

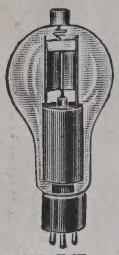

VACUUM SWITCH

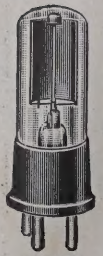

AIR-SYSTEM SOCKET

EITEL-McCULLOUGH, INC.
San Bruno, California

WESTINGHOUSE ELECTRONIC TUBES

Westinghouse will be in production on RECEIVING TUBES and CATHODE RAY TUBES during the last half of 1952. Complete data on these tubes is available on request. WESTINGHOUSE ELECTRONIC TUBE DIVISION, Elmira, N. Y.


WL-767
WL-773
WL-775


SR-50

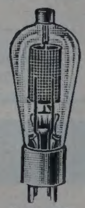
PHOTOTUBES

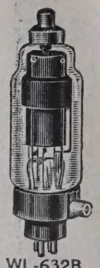
Type Number	Spectral Ranges Au.	Vacuum or Gas	Cathode Surface	Luminous Sensitivity Microamperes per lumen (o cycles)	Anode Volts Max.	**List Price**
WL-1P29	3300–9000	Gas	S3	40	100	**$ 2.95**
SR-50		REPLACEMENT		ONLY		**7.35**
SK-60		REPLACEMENT		ONLY		**7.35**
WL-734	4000–12000	Vac.	S1	15	500	**2.75**
WL-767	2000–3150	Vac.	Zirconium	—	500	**82.50**
WL-773	2000–3675	Vac.	Thorium	—	500	**82.50**
WL-775	2000–3000	Vac.	Tantalum	—	500	**82.50**
WL-789	Below 2100	Vac.	Platinum	—	500	**137.50**
WL-868	4000–12000	Gas	S1	90	100	**2.50**
WL-917	4000–12000	Vac.	S1	20	500	**3.50**
WL-918	4000–12000	Gas	S1	150	90	**3.10**
WL-919	4000–12000	Vac.	S1	20	500	**3.50**
WL-920	4000–12000	Gas	S1	100	90	**4.15**
WL-921	4000–12000	Gas	S1	135	90	**2.05**
WL-922	4000–12000	Vac.	S1	20	500	**1.95**
WL-923	4000–12000	Gas	S1	135	90	**2.05**
WL-924	4000–12000	Gas	S1	90	90	**3.30**
WL-925	4000–12000	Vac.	S1	20	250	**2.40**
WL-926	3300–9000	Vac.	S3	6.5	500	**2.90**
WL-927	4000–12000	Gas	S1	125	90	**2.50**
WL-928	4000–12000	Gas	S1	65	90	**2.85**
WL-929	3000–6700	Vac.	S4	45	250	**1.50**
WL-930	4000–12000	Gas	S1	135	90	**1.65**
WL-931A‡	3000–6700	Vac.	S4	*	1250	**9.75**

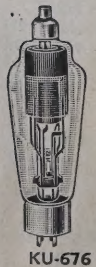
*Sensitivity 10 amps. per lumen at 100 volts per stage.
‡ Multiplier.

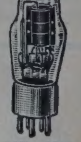
THYRATRONS

GRID CONTROLLED GAS OR MERCURY VAPOR RECTIFIERS


KU-627


WL-632B


KU-676

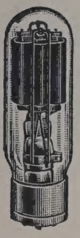

WL-629

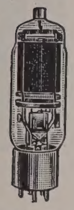
Type Number	Filament		Volts Peak Inverse	Amps. Peak	Amps. Ave.	Gas	Number of Electrodes	**List Prices**
	Volts	Amps.						
WL-2D21	6.3	0.6	1300	0.5	0.1	Inert	4	**$ 2.00**
WL-3C23	2.5	7.0	1250	6.0	1.0	Hg.	3	**12.50**
WL-33				See WL-5720/33				
WL-41				See WL-5830/41				
WL-81A	2.5	5.0	500	2.0	0.5	Inert	3	**16.00**
WL-105	5.0	10.0	2500	40.0	6.4	Hg.	4	**48.00**
WL-172	5.0	10.0	2000	40.0	6.4	Hg.	4	**65.00**
WL-414	5.0	20.0	2000	100.0	12.5	Hg.	4	**120.00**
WL-502A	6.3	0.6	1300	1.0	0.1	Inert	4	**1.85**
KU-610	2.5	6.5	500	0.4	0.1	Inert	3	**22.00**
KU-618			REPLACEMENT		ONLY			**15.75**
WL-624	5.0	10.0	2500	80.0	6.4	Hg.	3	**48.00**
KU-627	2.5	5.0	5000	2.5	0.64	Hg.	3	**22.00**
KU-628	5.0	11.5	2500	8.0	2.0	Hg.	3	**34.00**
WL-629	2.5	2.6	350	0.2	0.04	Inert	3	**13.00**
WL-632B	5.0	5.0	1500	30.0	2.5	Hg.	4	**29.00**
KU-636	2.5	7.5	350	0.4	0.1	Inert	3	**25.00**
WL-672A	5.0	5.0	2500	40.0	3.2	Hg.	4	**35.00**
KU-676	5.0	10.0	2500	40.0	6.4	Hg.	3	**55.00**
WL-677	5.0	10.0	10000	15.0	4.0	Hg.	3	**55.00**
WL-678	5.0	7.5	15000	6.0	1.6	Hg.	3	**47.00**
WL-759			REPLACEMENT		ONLY			**25.00**
WL-884	6.3	0.6	350	0.3	0.075	Inert	3	**1.85**
WL-885	2.5	1.5	350	0.3	0.075	Inert	3	**2.00**
WL-2050	6.3	0.6	1300	1.0	0.1	Inert	4	**1.85**
WL-5557/17	2.5	5.0	5000	2.0	0.5	Hg.	3	**7.75**
WL-5559/57	5.0	4.5	1000	15.0	2.5	Hg.	3	**19.50**
WL-5664	2.5	6.3	1250	8.0	1.0	Inert	3	**9.80**
WL-5665	2.5	31.0	1250	160.0	16.0	Inert	3	**59.50**
WL-5683	2.5	6.3	1250	8.0	1.0	Inert	3	**10.20**
WL-5684	2.5	9.0	1250	30.0	2.5	Inert	3	**15.60**
WL-5685	2.5	21.0	1250	77.0	6.4	Inert	3	**31.90**
WL-5720/33	5.0	4.5	1000	15.0	2.5	Hg.	3	**21.00**
WL-5796	2.5	8.5	1500	20.0	1.6	Inert	3	**13.75**
WL-5830/41	5.0	20.0	10000	75.0	12.5	Hg.	3	**182.00**

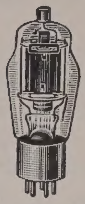
Prices subject to change without notice.

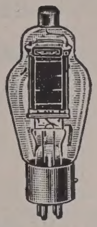
WESTINGHOUSE ELECTRONIC TUBES

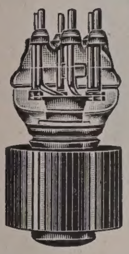
PLIOTRONS — Modulators, Amplifiers, Oscillators

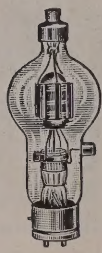

WL-211


WL-803


WL-807


WL-809


WL-5736


WL-806

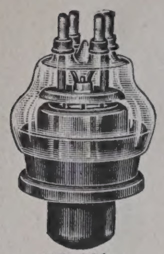
Type Number	Filament		Max. Plate D-C** Volts	Max. Plate D-C** Ma.	Max. Plate Diss** Watts	Plate Output Watts Class C	Ampl. Factor	Max. MC For 100% Input	List Prices
	Volts	Amps.							
WL-4D21/4-125A	5.0	6.5	3000	225	125	375	Tetrode	120	**$ 30.25**
WL-4X150A#	6.0	2.8	1000	250	150	74	Tetrode	500	**48.00**
WL-4X500A#	5.0	13.5	4000	350	500	1320	Tetrode	120	**121.00**
WL-4-1000A	7.5	21.0	6000	700	1000	2200	Tetrode	110	**132.00**
WL-5D22/4-250A	5.0	14.5	4000	350	250	1000	Tetrode	75	**41.25**
WL-203A	10.0	3.25	1250	175	100	120	25	15	**13.75**
WL-204A	11.0	3.85	2500	275	250	450	23	3	**115.00**
WL-207	22.0	50.00	15000	2000	10000	20000	20	1.6	**242.00**
WL-211	10.0	3.25	1250	175	100	130	12	15	**13.75**
WL-450TH	7.5	12.0	6000	600	450	1800	38	40	**77.00**
WL-473#	6.0	60.00	5000	1400	2500	3900	22	60	**165.00**
RH-507	2.0	0.06	9	0.6	.....	.....	0.8	.....	**48.00**
RJ-571			REPLACEMENT ONLY						**15.75**
WL-801A	7.5	1.25	600	70	20	25	8	60	**4.30**
WL-802	6.3	0.90	500	60	10	15	.....	30	**4.75**
WL-803	10.0	5.00	2000	175	125	225	.....	20	**24.25**
WL-805	10.0	3.25	1500	210	125	215	50	30	**13.50**
WL-806	5.0	9.50	3000	200	150	450	12.6	30	**34.25**
WL-807	6.3	0.90	600	100	25	40	.....	60	**2.50**
WL-808	7.5	4.00	1500	150	50	150	47	30	**10.75**
WL-809	6.3	2.50	750	100	25	55	50	60	**4.00**
WL-810	10.0	4.50	2000	250	125	375	36	30	**14.50**
WL-811A	6.3	4.00	1250	125	40	115	160	60	**4.05**
WL-812A	6.3	4.00	1250	125	40	115	29	60	**4.05**
WL-813	10.0	5.00	2000	180	100	260	.....	30	**16.00**
WL-814	10.0	3.25	1250	150	50	130	.....	30	**14.25**
WL-815	6.3	1.60	400	150	20	44	.....	150	**6.90**
WL-826	7.5	4.00	1000	125	60	25	31	250	**12.50**
WL-828	10.0	3.25	1250	160	70	150	.....	30	**13.75**
WL-829B	°6.3	°1.125	750	240	40**	87**	.....	200	**16.25**
WL-832A	°6.3	°0.80	750	90	15	26	.....	200	**12.90**
WL-833A	10.0	10.00	4000	500	400**	1440**	35	20	**49.50**
WL-837	12.6	0.70	500	80	12	20	.....	20	**5.80**
WL-838	10.0	3.25	1250	175	100	130	54	30	**13.75**
WL-845	10.0	3.25	1250	120	100	57	5.3	.....	**13.75**
WL-849	11.0	5.00	2500	350	400	560	19	3	**138.00**
WL-862A	33.0	207.0	20000	10000	100000	100000	45	1.6	**1,322.00**
WL-880	12.6	315.00	10500	6000	20000	45000	20	25	**483.00**
WL-889A	11.0	120.00	8500	2000	5000	10000	21	50	**210.50**
WL-889RA	11.0	120.00	8500	2000	5000	10000	21	40	**285.00**
★WL-891	22.0	60.00	12000	2000	6000	12000	8	1.6	**223.00**
★WL-891R	22.0	60.00	10000	2000	4000	11000	8	1.6	**362.00**
★WL-892	22.0	60.00	15000	2000	10000	20000	50	1.6	**223.00**
★WL-892R	22.0	60.00	12500	2000	4000	14000	50	1.6	**362.00**
‡WL-893A	20.0	183.00	20000	4000	20000	50000	36	5	**630.00**
‡WL-893AR	20.0	183.00	20000	4000	20000	50000	36	5	**1,150.00**
†WL-895	19.0	138.00	17000	9000	40000	100000	37	6	**950.00**
‖WL-895R	19.0	138.00	17000	9000	20000	90000	37	6	**1,300.00**

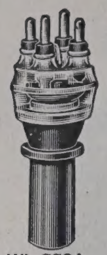
See notes at end of this table on next page.

(PLIOTRONS continued on next page)

Prices subject to change without notice.

WESTINGHOUSE ELECTRONIC TUBES


WL-880

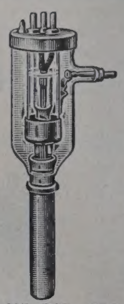

WL-889A

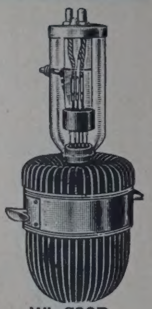
PLIOTRONS— Cont'd

MODULATORS

AMPLIFIERS

OSCILLATORS


WL-891, 892


WL-892R

Type Number	Filament		Max. Plate D-C** Volts	Max. Plate D-C** Ma.	Max. Plate Diss** Watts	Plate Output Watts Class C	Ampl. Factor	Max. MC For 100% Input	**List Prices**
	Volts	Amps.							
WL-1000T	7.5	17.0	7500	750	1000	4625	35	50	**$ 137.50**
WL-1623	6.3	2.50	750	100	25	55	20	60	**4.05**
WL-5604#	11.0	176.00	12500	3000	10000	22500	19.5	22.5	**540.00**
WL-5619	11.0	176.0	12500	3000	20000	22500	19.5	22.5	**390.00**
WL-5671#	11.0	285.0	15000	8000	25000	75000	39	10	**1,225.00**
WL 5691	6.3	0.60	275	2.3	1	.....	70	.....	**7.75**
WL 5692	6.3	0.60	275	6.5	1.75	.....	20	.....	**7.75**
WL 5693	6.3	0.30	300	3.0	2.0	.....	.....	.....	**6.40**
WL-5736#	6.0	60.0	5000	1400	2500	4100	22	60	**160.00**
‖**WL-5833#**	20.0	143.00	18000	10000	35000	136000	37	6	**1,885.00**
‖**WL-5891#**	11.0	95.00	15000	8000	25000	70000	36	10	**1,350.00**
‖**WL-5936**	20.0	143.00	18000	10000	70000	136000	37	15	**1,100.00**
WL-8000	10.0	4.50	2000	250	125	375	16.5	30	**14.50**
WL-8003	10.0	3.25	1350	250	100	256	12	30	**14.00**
WL-8005	10.0	3.25	1250	200	75	170	20	60	**7.40**
WL-8025A	6.3	1.92	1000	80	40	35	18	500	**10.00**

** Max. C.C.S. ratings in Class C oscillator service.

★ Two filament strands in series with large post at neutral junction; operate in series at 22 volts or two phase with 11 volts per strand.

★★ This rating applies only with forced air cooling.

° Per unit, heater can be arranged to operate from either a 6.3 or 12.6 volt supply.

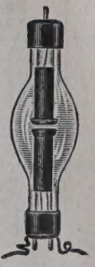
‡ Six filament strands connected from each post to floating neutral. See individual data sheets for connections.

† Three filament terminals Y-connected in 3 phase. Values are per phase.

‖ Three filament terminals Y-connected in 3 phase with neutral center terminal. Values are per phase.

or R Indicates forced air-cooled radiator.

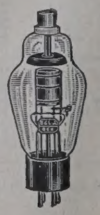
KENOTRONS — Vacuum Rectifiers

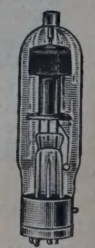

WL-456

Type Number	Filament		Anode			Type of Cooling	**List Price**
	Volts	Amperes	Volts Peak Inverse	Amp. Peak	Amp. Average		
WL-456	11.0	20	140000	0.50	0.06	Air	**$100.00**
WL-481A	2.5	5	25000	0.015	0.005	Air	**4.50**
WL-579B	2.5	6	20000	0.27	0.025	Air	**15.00**
WL-585	5.0	1.1	1500	0.011	0.003	Air	**19.00**
WL-608		REPLACEMENT ONLY					**168.00**
WL-612		REPLACEMENT ONLY					**299.00**
WL-613		REPLACEMENT ONLY					**210.00**
WL-616	20.0	24.5	150000	0.75	0.25	Air	**225.00**
WL-660	10.0	10	230000	0.10	0.03	Air	**273.00**
WL-836	2.5	5	5000	1.0	0.25	Air	**9.00**
WL-8020	5.0	6	40000	0.75	0.1	Air	**22.00**

PHANOTRONS — Gas and Mercury Vapor Rectifiers

Type Number	Filament		Anode		Amp. Average	Type of Cooling	**List Price**
	Volts	Amperes	Volts Peak Inverse	Amp. Peak			
WL 3B22/1C	2.5	6.0	725	4.0	1.0	Air	**$ 7.80**
WL 4B24/3C	2 5	11.5	725	10.0	2.5	Air	**8.90**
WL-575A	5.0	10.0	15000	6	1.5	Air	**21.00**
WL-670A	2.5	24	1000	9.5	6.0	Air	**17.30**
WL-816	2.5	2	7500	.5	.125	Air	**1.65**
WL-857B	5.0	30	22000	40	10.0	Forced Air	**209.00**
WL-866A	2.5	5	10000	1	0.25	Air	**1.95**
WL-869B	5.0	18	20000	10	2.5	Forced Air	**132.00**
WL-872A	5.0	7.5	10000	5	1.25	Air	**8.20**
WL-5558/32	5.0	4.5	2000	15	2.5	Air	**14.00**
WL-5561/104	5.0	10.0	3000	40	6.4	Air	**38.00**
WL-8008		Same as WL-872A except for Base					**8.20**


WL-866A


WL-872A

Prices subject to change without notice.

WESTINGHOUSE ELECTRONIC TUBES

WL-5550/681

WL-5552/651

WL-5555/653B

IGNITRONS

WELDER CONTROL SERVICE

Type Number	Size	RMS Volts Range	Max. KVA Demand and Corresponding Average Current		Max. Aver. Current and Corresponding KVA Demand		Type Cooling	List Price
			KVA	Amps	KVA	Amps		
WL-5550/681	A	200–600	300	12.1	100	22.4	Clamp	**$ 50.00**
WL-5551/652	B	200–600	600	30.2	200	56	Water	**80.50**
WL-5552/651	C	200–600	1200	75.6	400	140	Water	**121.00**
WL-5553/655	D	200–600	2400	192.0	800	355	Water	**265.00**
WL-5554/679		2400	1200	75.0	300	113	Water	**190.00**
WL-5555/653B		2400	2400	135.0	1105	207	Water	**370.00**
WL-654/659		Replacement only						**100.00**

POWER RECTIFICATION SERVICE

Type Number	D-C Output Voltage	Max. Average Amps Per Tube			Type Cooling	List Price
		Continuous	2-Hour Overload	1 Min. Overload		
WL-5554/679	300	100	150	200	Water	**$190.00**
	600	75	112.5	150	Water	
WL-5555/653B	300	200	300	400	Water	**370.00**
	600	150	225	300	Water	

MICROWAVE TUBES

Type No.	Class	Resonant Frequencies Megacycles	Loaded Q	Insertion Loss at Resonant Frequency
WL-1Q22	Reference Cavity	9250 ±0.3	1900–2400	4–6 db
WL-1Q23	Reference Cavity	9280 ±0.3	1900–2400	4–6 db
WL-5846*	Reference Cavity	9280 ±0.3	1900–2400	4–6 db
WL-1Q24	Reference Cavity	9310 ±0.3	1900–2400	4–6 db
WL-1Q25	Reference Cavity	9375 ±0.6	1900–2400	4–6 db

* Interchangeable with 1Q23 except for attenuator card slot.

Type No.	Class	Frequency (Megacycles)
WL-1B24	TR Tuneable	8490–9600
WL-1B35	ATR	9000–9600
WL-1B37	ATR	8500–9000
WL-1B60	TR Tuneable	8490–9600
WL-5939	Pre TR (Gas-switching)	1300

Type No.	Class	Breakdown Voltage (KV per Tube)	Nominal Peak Modulator Power for 2 Tubes (Megawatts)
WL-1B41	Series Spark Gap	8.7—10.2	2
WL-1B45	Series Spark Gap	13.1—15.1	4
WL-1B49	Series Spark Gap	11.2—12.7	3

MISCELLANEOUS

Type Number	Use	Cathode	D-C Anode Volts Min	D-C Operating Current Ma	D-C Operating Volts	Regulation Volts (5–40 Ma)	List Price
OA3	Voltage Regulator	Cold	105	5–40	75	5	**$1.35**
OC3	Voltage Regulator	Cold	133	5–40	105	2	**1.35**
OD3	Voltage Regulator	Cold	185	5–40	150	4	**1.30**

KX-642

Type Number	Use	Filament		Ion Collector Voltage	Grid Voltage	Sensitivity	List Price
		Volts	Amps.				
WL-5966	Ionization Vacuum Gauge	6.0	2.5	−22.5	150	1 μamp/10^{-5} mm Hg.	**$25.00**

Type Number	Use	Volts, RMS		Current		List Price
		Breakdown	Maximum Operating	Maximum 2 Sec.	Maximum 10 Min.	
KX-642	Protector	300–500	230	50 Amps.	7 Amps.	**$12.60**

Prices subject to change without notice.

TUBES with nine-plus lives built in

THE LOS GATOS LONG SUIT

LOS GATOS TYPE NUMBER	TUBE TYPE	LIST PRICE
4E27	Beam Pentode	$24.50
4E27TV	Pentode specially designed for TV transmitters	27.50
4E27A	Beam Pentode	35.75
100R	Rectifier	13.50
100TH	Triode	16.50
100TL	Triode	16.50
250R	Rectifier	20.00
250TH	Triode	22.50
250TL	Triode	22.50
254	Triode	16.50
332A	Pentode	32.00
705A	Rectifier	19.00
719A	Clipper Diode	32.00
8020	Rectifier	22.00

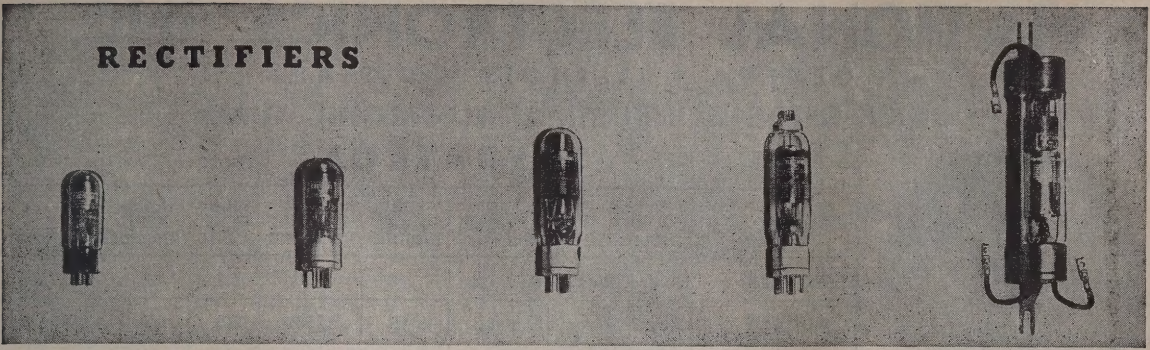
Los Gatos Brand Tubes in both JAN and commercial types are setting new performance records throughout the electronic field. Exclusive new SINTERCOTE black-body surface on molybdenum anodes improves heat dissipation, keeps tubes hard during operation. Send for technical data bulletins.

Inquiries are welcomed for special tubes designed to your specifications.

LEWIS AND KAUFMAN, INC.
LOS GATOS CALIFORNIA
LOS GATOS
LONG LIFE

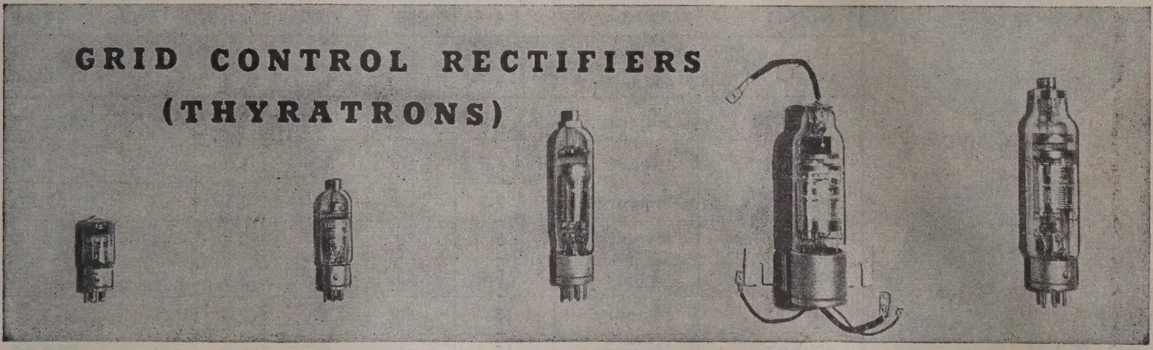
"EL" XENON GAS-FILLED TUBES

RECTIFIERS



	FULL WAVE RECTIFIER EL 1C	FULL WAVE RECTIFIER EL 3C	FULL WAVE RECTIFIER EL 6C	HALF WAVE RECTIFIER EL 6B & EL 6F	HALF WAVE RECTIFIER EL 16F
D.C. Output (Amps.)	1.0	2.5	6.4	6.4	16.0
Peak Anode Current	4.0	10.0	25.6	40.0	96.0
Peak Inverse Volts	725	725	725	920	620
Filament Volts	2.5	2.5	2.5	2.5	2.5
Filament Amperes	6.0	11.5	17.0	21	36
Overall Length	5½"	7"	7½"	(6B) .. 9" (6F) .. 8¼" (Panel Mounting)	15⅝" (Panel Mounting)
Price	$7.52	$8.90	$16.63	$12.40	$24.30

GRID CONTROL RECTIFIERS (THYRATRONS)



	EL C1K	EL C3J	EL C6J	EL C16J	EL C6C
D.C. Output (Amps.)	1.0	2.5	6.4	16.0	6.4
Peak Anode Current	8.0	30.0	77.0	160.0	77.0
Peak Forward Volts	1000	750	750	1000	2000
Peak Inverse Volts	1250	1250	1250	1250	4000
Filament Volts	2.5	2.5	2.5	2.5	2.5
Filament Amperes	6.3	9.0	21.0	31.0	24.0
Overall Length	4¼"	6⅛"	9"	10" (Panel Mounting)	11"
Price	$9.43	$12.15	$30.90	$56.67	$43.22

	EL C1B/A	EL C3J/A	EL C6J/A
D.C. Output (Amps.)	1.0	2.5	6.4
Peak Anode Current	8.0	30.0	77.0
Peak Forward Volts	750	1000	1000
Peak Inverse Volts	1250	1250	1250
Filament Volts	2.5	2.5	2.5
Filament Amperes	6.3	9.0	21.0
Overall Length	4½"	6⅛"	9"
Price	$9.43	$15.04	$31.90

ELECTRONS, INCORPORATED
127 SUSSEX AVENUE
NEWARK 4, N. J.

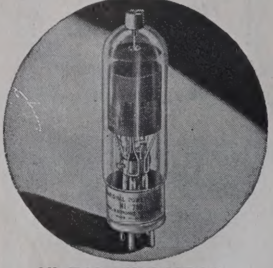
ENGINEERING MANUAL & CATALOG WILL BE SENT AT YOUR REQUEST

NATIONAL ELECTRONICS, INC.

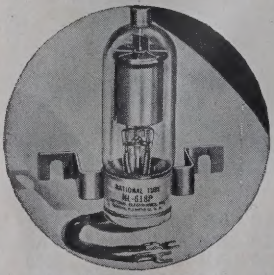
GENEVA • ILLINOIS • U.S.A.

QUICK-HEATING INDUSTRIAL ELECTRONIC TUBES

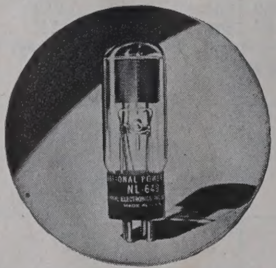
NL-3C23 THYRATRON



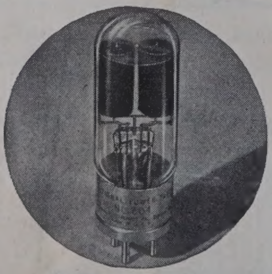
NL-740 THYRATRON



NL-618P RECTIFIER



NL-649/5834/249R RECTIFIER



NL-604 RECTIFIER

THYRATRONS

TYPE NUMBER	GAS FILLING	DC OUTPUT AMPERES	PEAK AMPS. RATING	PEAK INVERSE VOLTAGE	FILA-MENT VOLTS	FILA-MENT AMPERES	PRICE
NL-3C23	**Arg. & Merc.**	**1.5**	**6**	**1250**	**2.5**	**7**	**$12.50**
NL-323B	**Arg. & Merc.**	**1.5**	**6**	**1250**	**2.5**	**7**	**$13.25**
NL-393A	**Arg. & Merc.**	**1.5**	**6**	**1250**	**2.5**	**7**	**$13.25**
NL-710/ 6011	**Arg. & Merc.**	**2.5**	**30**	**1250**	**2.5**	**9**	**$12.15**
NL-714	**Arg. & Merc.**	**1**	**3**	**1250**	**2.5**	**5**	**$7.75**
NL-715/ 5557	**Mercury**	**1**	**3**	**5000**	**2.5**	**5**	**$7.75**
NL-740	**Arg. & Merc.**	**4**	**50**	**1250**	**2.5**	**16**	**$20.50**
NL-741	**Mercury**	**4**	**50**	**5000**	**2.5**	**16**	**$20.50**

HALF-WAVE RECTIFIERS

TYPE NUMBER	GAS FILLING	DC OUTPUT AMPERES	PEAK AMPS. RATING	PEAK INVERSE VOLTAGE	FILA-MENT VOLTS	FILA-MENT AMPERES	PRICE
NL-249C	**Mercury**	**.64**	**2.5**	**7500**	**2.5**	**7.5**	**$12.75**
NL-614	**Xenon**	**2.5**	**15**	**900**	**2.5**	**8.5**	**$8.90**
NL-615	**Mercury**	**2.5**	**10**	**2000**	**2.5**	**7**	**$7.50**
NL-617	**Mercury**	**5**	**20**	**1000**	**2**	**12**	**$11.60**
NL-618	**Xenon**	**6.4**	**40**	**750**	**2.5**	**18**	**$12.40**
NL-623	**Mercury**	**15**	**45**	**500**	**2.5**	**20**	**$11.60**
NL-625	**Mercury**	**15**	**45**	**900**	**2.5**	**20**	**$29.00**
NL-627	**Mercury**	**20**	**120**	**1000**	**2.5**	**26**	**$35.00**
NL-635	**Mercury**	**6.4**	**40**	**1000**	**2.5**	**18**	**$12.60**
NL-643	**Mercury**	**15**	**90**	**700**	**2.5**	**23**	**$13.50**
NL-649/ 5834/249R	**Mercury**	**2**	**10**	**900**	**2.5**	**7**	**$7.50**
NL-653/ 5835/BR-3	**Mercury**	**3**	**12**	**900**	**2.5**	**10**	**$10.75**

FULL-WAVE RECTIFIERS

TYPE NUMBER	GAS FILLING	DC OUTPUT AMPERES	PEAK AMPS. RATING	PEAK INVERSE VOLTAGE	FILA-MENT VOLTS	FILA-MENT AMPERES	PRICE
NL-600	**Arg. & Merc.**	**1**	**4**	**900**	**2.5**	**6**	**$8.20**
NL-602	**Arg. & Merc.**	**2**	**4**	**900**	**2.5**	**9**	**$10.20**
NL-604	**Arg. & Merc.**	**2.5**	**10**	**900**	**2.5**	**12**	**$8.90**

IGNITRONS

TYPE NUMBER	SUPPLY VOLTS	MAXIMUM RATINGS				PRICE
		Maximum Kva Demand	Corresponding Current DC-Amps.	Maximum Current DC-Amps.	Corresponding Kva Demand	
NL-1001	**250 - 600**	**150**	**4.9**	**9.0**	**50**	**$37.50**
NL-5552	**250 - 600**	**1200**	**75.6**	**140**	**400**	**$121.00**

Prices and other data subject to change without notice.

WRITE FOR INDIVIDUAL TUBE DATA SHEETS FOR FULL DETAILS.

This is Britain's famous power amplifying tube . . . for years the favorite tube of experimenters and research laboratories; acknowledged in every country of the world to be the finest tetrode ever made. It is currently used in the Leak, Williamson, Radio Craftsmen and other fine amplifiers.

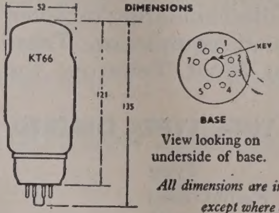
The KT66 is a versatile power tetrode with a number of useful applications. It may be used in the output stage of an audio-frequency power amplifier, either tetrode-connected for maximum sensitivity and power output or triode-connected for high quality working. In transmitting circuits using frequencies up to 30 Mc/s it may also be used as an oscillator or as a radio frequency amplifier.

A high slope, indirectly heated beam tetrode, the KT66 is suitable for either single or push-pull audio operation and may be employed as a beam tetrode with aligned grids. This alignment of the grids reduces losses in the screen and makes for the highest possible power conversion efficiency. With this system of construction high orders of power output may be obtained with a low screen dissipation, and the anode is designed to dissipate 25 watts continuously with a reliable life performance.

MADE & PATENTED IN ENGLAND
KT66
8

THE FINEST AUDIO TUBE EVER MADE!
KT66

NOTE: The KT66 and the American tube 6L6 can work interchangeably in any circuit; the pins and connections of both are identical.



View looking on underside of base.

7-PIN "OCTAL"

Pin 1 :	Not connected
2 :	Heater
3 :	Anode
4 :	Screen Grid, g2
5 :	Control Grid, g1
6 :	Omitted
7 :	Heater
8 :	Cathode

All dimensions are in mm. and are the maximum except where otherwise stated.

RATINGS

	Tetrode connected	Triode connected	
Heater Voltage	6·3	6·3	volts
Heater Current	1·27	1·27	amps.
Anode Voltage	500	400	volts max.
Screen Voltage	400	—	volts max.
Anode Dissipation	25	25	watts max.
Screen Dissipation	3·5	—	watts max.
Anode Impedance*	22500	1450	ohms.
Mutual Conductance* ...	6·3	5·5	mA/volt
*measured at Va ...	250	400	
Vg2 ...	250	—	
Vg1 ...	–15	–38	

Capacitances :

	Tetrode connected	Triode connected	
Grid to all	16·0		pF approx.
Anode to all	11.5		" "
Anode to Grid	1·1		" "
Grid to Cathode		8·7	" "
Anode to Cathode		15·8	" "
Anode to Grid		7·2	" "

PRECAUTIONS IN USE

1. For the prevention of parasitic oscillation, always connect a resistance of 100/300 ohms close to the screen grid terminal of the valve holder. When used as a triode this resistance is connected between screen and anode. A control grid (stopper) resistance of 10,000 ohms to 50,000 ohms is also recommended.

2. The maximum permissible D.C. resistance from control grid to cathode is limited to 0.5 megohms for auto bias and 0.1 megohm for fixed bias application.

3. The heater-cathode voltage should not exceed 100 volts when used as a cathode-coupled driver valve, the heater and cathode should be joined and a separate heater supply used for each valve.

4. In push-pull applications showing a large change in anode current between the quiescent and full output conditions, a choke input smoothing circuit having a good regulation should be used. A badly regulated supply will lead to a fall in power output and/or excessive quiescent anode dissipation.

5. The use of a common auto-bias resistance is not recommended except in applications where the maximum anode dissipation is not attained under any condition of operation.

6. Ventilation: Adequate ventilation around the bulb should be provided.

The circuit information given does not imply any license under any patents which may be involved.

OPERATING CONDITIONS

Single Valve A.F. Amplifier

	Tetrode connected	Triode connected		
Anode and Screen Voltage	250	400	250	volts
Bias Voltage	–15	–38	–19	volts
Anode Current	85	63	60	mA.
Screen Current ...	6·3	—	—	mA.
Input Voltage	15	38	19	volts peak
Bias Resistance ..	160	600	315	ohms.
Anode Load Resistance	2200	4500	2750	ohms.
Distortion	9	7	6	%
Power Output ...	7·25	5·8	2·2	watts

Two Valves Push-Pull, A.F. Amplifier. Tetrode connected, Auto Bias.

(Data per pair of valves unless otherwise stated.)

		450v. supply	250v. supply	
Anode Voltage.	Full load ...	390	250	volts
Screen Voltage.	Full load ..	275	250	volts
Bias Voltage ...	... ...	–22·5	–17·5	volts
Anode Current	No load ...	104	162	mA.
	Full load ...	125	165	mA.
Screen Current	No load ...	5	12	mA.
	Full load ...	18	20	mA.
Anode Dissipation, per valve	No load	9·5	12	watts.
Screen Dissipation, per valve		2·5	2·5	watts
Bias Resistance, per valve	..	500	200	ohms.
Input Voltage, grid to grid	...	70	36	volts
Load Resistance, anode to anode	...	8000	4000	ohms.
Distortion	... ...	6	4	%
Power Output	... ...	30	17	watts

Two Valves Push-Pull, A.F. Amplifier. Triode connected, Auto Bias.

(Data per pair of valves unless otherwise stated).

	450v. supply	250v. supply	
Anode and Screen Voltage	400	250	volts
Bias Voltage	–38	–20	volts
Anode Current	125	110	mA.
Input Voltage, grid to grid ...	80	40	volts
Bias Resistance, per valve	600	360	ohms.
Load Resistance, anode to anode ...	4000	2500	ohms.
Distortion	3·5	2	%
Power Output	14·5	4·5	watts

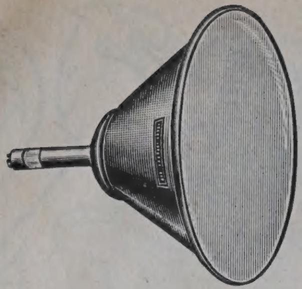
Two Valves Push-Pull, A.F. Amplifier. Tetrode connected, Fixed Bias.

For low distortion and permitting continuous full load operation.
(Data per pair of valves unless otherwise stated).

	No signal	Full signal	
Anode Voltage	510	475	volts
Screen Voltage†	395	360	volts
Bias Voltage	–40	–40	volts
Anode Current	80	175	mA.
Screen Current	3	19	mA.
Anode Dissipation, per valve ...	21	17	watts
Screen Dissipation, per valve	0·6	3·5	watts
Input Voltage, grid to grid ...	—	80	volts
Load Resistance, anode to anode ...	5000	5000	ohms.
Distortion	—	5	%
Power Output	—	50	watts.

† Stabilised screen supply voltage

BRITISH INDUSTRIES CORPORATION • NEW YORK 13, N. Y.



DU MONT
TELETRONS

Du Mont Teletrons have consistently led the field of television picture tubes since 1939. Lifelike pictures along with unsurpassed dependability and uniformity have made Teletrons the choice of the most discriminating receiver manufacturers for original equipment. These same qualities make Du Mont Teletrons the finest replacement picture tube on the market.

The Selfocus* types listed below may be used for replacing either magnetic or electrostatic tube types of the same mechanical characteristics without any alterations. They provide automatic focus at all times without a focusing coil or control.

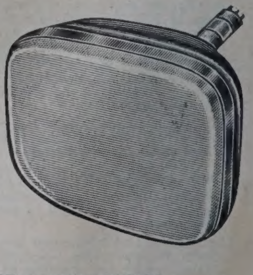
TUBE TYPES OFFERED BY DU MONT AT TIME OF PRINTING

Tube	Type	Picture Area	Deflection Angle	Focusing
12LP4A	Round Glass	88 sq. in.	55°	Magnetic
12QP4, 12QP4A	Round Glass	88 sq. in.	55°	Magnetic
B1034	Round Glass	88 sq. in.	55°	Magnetic
B1014	Round Glass	145 sq. in.	57°	Magnetic
16FP4	Round Glass	152 sq. in.	62°	Magnetic
16TP4	Rectangular Glass	145 sq. in.	70°	Magnetic
17AP4	Rectangular Glass	150 sq. in.	70°	Magnetic
17BP4A	Rectangular Glass	150 sq. in.	70°	Magnetic
17HP4	Rectangular Glass	150 sq. in.	70°	Low-Voltage Electrostatic
17KP4	Rectangular Glass	150 sq. in.	70°	Selfocus*
17LP4	Rectangular Glass Cylindrical face	152 sq. in.	70°	Low-Voltage Electrostatic
19AP4 19AP4A	Round Metal	203 sq. in.	66°	Magnetic
20CP4 20CP4A	Rectangular Glass	215 sq. in.	70°	Magnetic
20HP4A	Rectangular Glass	215 sq. in.	70°	Low-Voltage Electrostatic
20JP4	Rectangular Glass	215 sq. in.	70°	Selfocus*
21EP4A	Rectangular Glass Cylindrical face	245 sq. in.	70°	Magnetic
21FP4A	Rectangular Glass Cylindrical face	245 sq. in.	70°	Low-Voltage Electrostatic
21KP4A	Rectangular Glass	245 sq. in.	70°	Selfocus
24AP4	Round Metal	338 sq. in.	70°	Magnetic
24BP4	Round Metal	338 sq. in.	70°	Low-Voltage Electrostatic
30BP4	Round Metal	536 sq. in.	90°	Magnetic

* Trade Mark.

THE COMPLETE PICTURE TUBE LINE

Additional information and specifications on tubes on request.
The name of the Du Mont representative in your area on request.

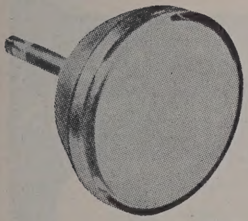


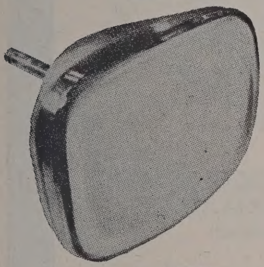
DU MONT

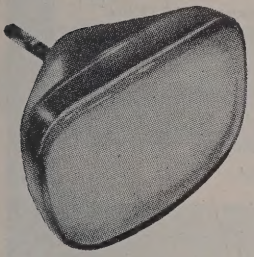
CATHODE-RAY TUBE DIVISION
ALLEN B. DU MONT LABORATORIES, INC.
CLIFTON, NEW JERSEY.

TEL-O-TUBE TV PICTURE TUBES

Magnetic Focus Picture Tube Specifications

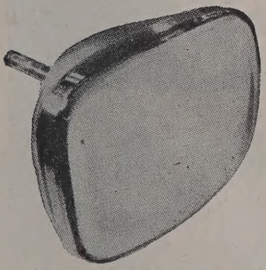


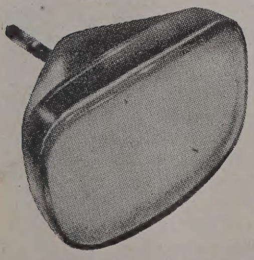




Type	Face Plate	Deflection	Ion Trap	Coating	Electron Gun
ALL GLASS ROUND TELEVISION TUBES					
12 LP4A	Gray Filter	55°	Single Pole	External Conductive	Straight
16 DP4A	Gray Filter	60°	Single Pole	External Conductive	Straight
19 FP4A	Gray Filter	66°	Single Pole	None	Straight
ALL GLASS RECTANGULAR TELEVISION TUBES (Spherical Face)					
14CP4	Gray Filter	70°	Single Pole	External Conductive	3° Offset
16 KP4	Gray Filter	70°	Single Pole	External Conductive	3° Offset
17BP4	Gray Filter	70°	Single Pole	External Conductive	3° Offset
20CP4A	Gray Filter	70°	Single Pole	External Conductive	3° Offset
20DP4A	Gray Filter	70°	Single Pole	External Conductive	3° Offset
ALL GLASS RECTANGULAR TELEVISION TUBES (Cylindrical Face)					
17UP4	Gray Filter	70°	Single Pole	External Conductive	3° Offset
21EP4A	Gray Filter	70°	Single Pole	External Conductive	3° Offset

Electrostatic Focus Picture Tube Specifications





ALL GLASS RECTANGULAR TELEVISION TUBES (Spherical Face)

17HP4	Gray Filter	70°	Single Pole	External Conductive	3° Offset
20HP4A	Gray Filter	70°	Single Pole	External Conductive	3° Offset

ALL GLASS RECTANGULAR PICTURE TUBES (Cylindrical Face)

17LP4	Gray Filter	70°	Single Pole	External Conductive	3° Offset
21FP4A	Gray Filter	70°	Single Pole	External Conductive	3° Offset

TEL-O-TUBE Corporation of America

Sales Office: TEL-O-TUBE Sales Corporation, 580 Fifth Ave., New York 19, N. Y.

Sheldon TELEVISION PICTURE TUBES

MAKE ANY SET BETTER

Sheldon
NATURAL IMAGE
SOFT GLOW
Picture Tube

RECTANGULAR TYPES

14BP4	Black Screen
16KP4	Black Screen
17BP4A	Black Screen
17QP4*	Cylindrical Face
19EP4	Black Screen
20CP4	Black Screen
21AP4*	Cylindrical Face
21EP4*	Cylindrical Face
21KP4	Metal

*Vitatron

Sheldon
NATURAL IMAGE
SOFT GLOW
Picture Tube

GLASS-METAL TYPES

16GP4	Black Screen
19AP4A	Black Screen
19AP4B	VITATRON
19AP4D	VITATRON Clear Screen
24AP4	Black Screen

Sheldon
NATURAL IMAGE
SOFT GLOW
Picture Tube

ALL-GLASS ROUND TYPES

10BP4A	Black Screen
12LP4A	Black Screen
16AP4A	Black Screen
16HP4A	Black Screen
16JP4A	Black Screen
16LP4A	Black Screen
16YP4	Black Screen

LOW VOLTAGE ELECTROSTATIC RECTANGULAR ALL-GLASS

(except as noted)

17HP4	Rectangular All-Glass
17LP4*	Cylindrical Face
20HP4	Rectangular All-Glass
21FP4A*	Cylindrical Face
21MP4*	Metal
16"	Rectangular
24"	Round

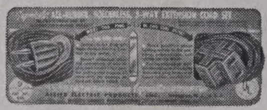
*Vitatron

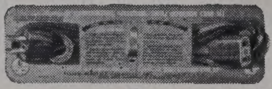
Spring Action PLUGS and CAPS

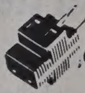
TRADE MARK REG U S PAT OFF

Tapmaster CUBE TAPS & CORD SETS

Work Better in Any Outlet


A


B


C

E

G

I

D

F

H

J

A—Cat. No. 810, Tapmaster Solderless, Indestructible, 3-way Extension Cord Set. 6, 9, 12 or 15 ft. lengths. Brown.

B—Cat. No. 715, Tapmaster Solderless, Indestructible, Single Extension Cord Set. 6, 9, 12 or 15 ft. lengths. Brown.

C—Cat. No. 135, Rubber Tapmaster Cube Tap. Brown. List Price 25c.

D—Cat. No. 109, Brown Bakelite Tapmaster Cube Tap. List price 15c.

E—Cat. No. 100, Brown Bakelite Pony Grip Cap. List Price 10c.

F—Cat. No. 102, Black Rubber Handle Grip Cap. List Price 15c.

G—Cat. No. 107, Flat Side Brown Bakelite Grip Cap. List Price 10c.

H—Cat. No. 117, Black Rubber Handle Grip Cap. List Price 15c.

I—Cat. No. 105, Flat Side Brown Bakelite Handle Grip Cap. List Price 15c.

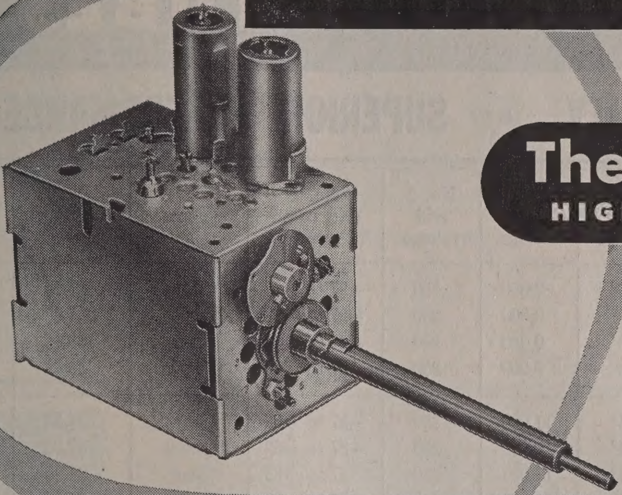
J—Cat. No. 101, Heavy Duty Brown Bakelite Handle Grip Cap. List Price 15c.

Bakelite plugs also supplied in Ivory.

ALLIED ELECTRIC PRODUCTS INC.
SHELDON ELECTRIC COMPANY DIVISION

68-98 COIT STREET • IRVINGTON 11, N. J.

A Natural Combination

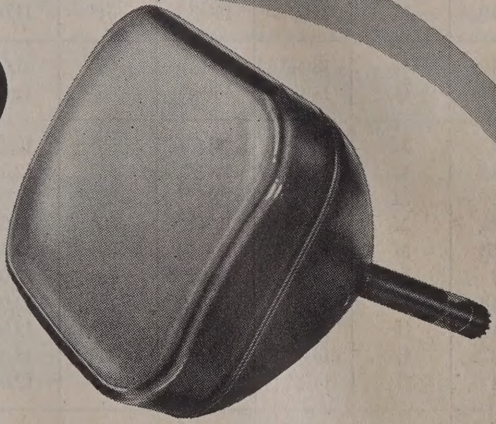


The Tarzian Tuner
HIGH QUALITY—LOW COST

It's only natural that the world's largest producer of switch-type tuners should produce the BEST.

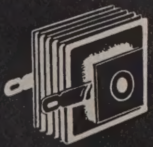
Tarzian Tubes
ROUNDS OR RECTANGULARS

METAL	16AP4A 16GP4 19AP4A
GLASS	16RP4 16TP4 17BP4 20CP4

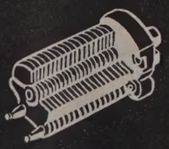


With every TARZIAN TUBE *goes a* BONDED WARRANTY *underwritten by* CAPITOL INDEMNITY INSURANCE COMPANY

OTHER TARZIAN PRODUCTS



Selenium Rectifiers



Air Trimmers

SARKES TARZIAN, Inc.
BLOOMINGTON, INDIANA

RAULAND *Television* PICTURE TUBES

PROVEN DEPENDABILITY ▪ SUPERIOR PERFORMANCE

Tube type	Bulb △	Maximum diameter	Length	Deflection angle approx.	Normal anode voltage	No. 2 grid voltage	No. 1 grid cutoff volts	Face glass	List Price	Suggested resale
10BP4	G	10½″	17⅝″	50°	9,000	250	−27 to −63	Clear	**$27.00**	**$20.00**
10BP4A	G	10½″	17⅝″	50°	9,000	250	−27 to −63	†Luxide	**27.00**	**20.00**
10FP4★	G	10½″	17⅝″	50°	9,000	250	−27 to −63	Clear	**33.65**	**25.25**
10FP4A★	G	10½″	17⅝″	50°	9,000	250	−27 to −63	†Luxide	**33.65**	**25.25**
12KP4★	G	12 7/16″	17⅝″	54°	11,000	250	−27 to −63	Clear	**37.90**	**28.40**
12KP4A★	G	12 7/16″	17⅝″	54°	11,000	250	−27 to −63	†Luxide	**37.90**	**28.40**
12LP4	G	12 7/16″	18¾″	54°	11,000	250	−27 to −63	Clear	**31.00**	**23.25**
12LP4A	G	12 7/16″	18¾″	54°	11,000	250	−27 to −63	†Luxide	**31.00**	**23.25**
12UP4	M	12 7/16″	18⅝″	54°	11,000	250	−27 to −63	Clear	**40.50**	**30.25**
12UP4A	M	12 7/16″	18⅝″	54°	11,000	250	−27 to −63	†Luxide	**40.50**	**30.25**
12UP4B	M	12 7/16″	18⅝″	54°	11,000	250	−27 to −63	‡Luxan	**40.50**	**30.25**
14BP4	G	13 11/16″ □	16 11/16″	65°	11,000	250	−27 to −63	†Luxide	**33.50**	**25.00**
14CP4	G	13 11/16″ □	16 11/16″	65°	11,000	250	−27 to −63	†Luxide	**33.50**	**25.00**
16AP4	M	15⅞″	22¼″	53°	12,000	300	−33 to −77	Clear	**51.00**	**38.20**
16AP4A	M	15⅞″	22¼″	53°	12,000	300	−33 to −77	†Luxide	**51.00**	**38.20**
16EP4	M	15⅞″	19⅝″	60°	12,000	300	−33 to −77	Clear	**51.00**	**38.20**
16EP4A	M	15⅞″	19⅝″	60°	12,000	300	−33 to −77	†Luxide	**51.00**	**38.20**
16EP4B	M	15⅞″	19⅝″	60°	12,000	300	−33 to −77	‡Luxan	**51.00**	**38.20**
16GP4	M	15⅞″	17 11/16″	70°	12,000	300	−33 to −77	†Luxide	**40.50**	**30.25**
16GP4B	M	15⅞″	17 11/16″	70°	12,000	300	−33 to −77	‡Luxan	**40.50**	**30.25**
16TP4	G	14⅞″ □	18⅛″	65°	12,000	300	−33 to −77	†Luxide	**34.75**	**26.00**
16KP4	G	14⅞″ □	18″ □	65°	12,000	300	−33 to −77	†Luxide	**34.75**	**26.00**
16RP4	G	14⅞″ □	18″ □	65°	12,000	300	−33 to −77	†Luxide	**34.75**	**26.00**
17BP4A	G	16⅝″ □	19¼″	70°	12,000	410	−33 to −77	†Luxide	**33.00**	**24.75**
17AP4	G	16⅝″ □	19¼″	70°	12,000	410	−33 to −77	†Luxide	**33.00**	**24.75**
17CP4	G	16⅝″ □	19¼″	70°	12,000	410	−33 to −77	‡Luxan	**35.00**	**26.25**
*17HP4	G	16⅝″ □	19 3/16″	70°	14,000	300	−33 to −77	†Luxide	**34.00**	**25.50**
17LP4	G	16⅝″ □	19 3/16″	70°	14,000	300	−33 to −77	†Luxide	**34.00**	**25.50**
19AP4A	M	18⅝″	21½″	66°	13,000	250	−27 to −63	†Luxide	**60.00**	**45.20**
19AP4B	M	18⅝″	21½″	66°	13,000	250	−27 to −63	‡Luxan	**60.00**	**45.20**
20CP4	G	20 3/32″ □	21 7/16″	70°	15,000	410	−33 to −77	†Luxide	**49.00**	**36.75**
20HP4	G	20 3/32″	21¾″	70°	14,000	300	−33 to −77	†Luxide	**51.00**	**38.25**
21AP4	M	20¾″	22⅝″	70°	14,000	300	−33 to −77	‡Luxan	**56.75**	**42.50**
21EP4A	G	21 7/32″ □	23″	70°	14,000	300	−33 to −77	†Luxide	**51.25**	**38.50**
*21FP4A	G	21 7/32″ □	23″	70°	14,000	300	−33 to −77	†Luxide	**53.25**	**40.00**
21MP4	M	20¾″	22⅝″	70°	16,000	500	−33 to −77	‡Luxan	**57.50**	**43.00**
24AP4	M	24″	24¼″	70°	15,000	300	−33 to −77	†Luxide	**101.00**	**75.30**
*24BP4	M	24″	24¼″	70°	15,000	300	−33 to −77	†Luxide	**101.00**	**75.30**
27AP4	M	26⅞″	21⅜″	90°	15,000	300	−33 to −77	‡Luxan	**151.50**	**113.00**

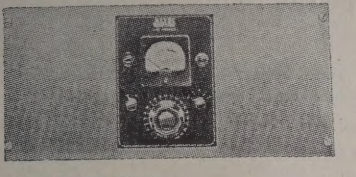
★ Aluminized type, no ion magnet required. △ Metal-Glass—M. All Glass—G. □ Retangular bulb—diagonal dimension. All heaters 6.3 volts, 0.6 amps. All types magnetic deflection and focus. * Electrostatic Lo Focus Vol. † Dark Face. ‡ Dark Face Etched.

amplifiers

ALTEC
LANSING CORPORATION

9356 Santa Monica Blvd.
Beverly Hills, Calif.

161 Sixth Avenue
New York 13, N.Y.



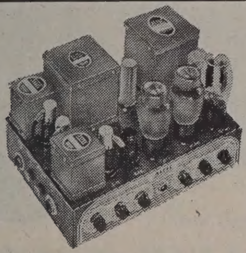
A-127 AMPLIFIER

Rack mounted power amplifier. POWER: 18 watts. GAIN: 66 db. IN: A-127—100,000 ohms; A-127A, A-127B—30, 250, 500-600 ohms. OUT: A-127, A-127A—8, 16 ohms; A-127B—500, 2,000, 3,000 ohms. FREQUENCY: ±1 db, 20-20,000 cycles, NOISE: —53 db. POWER SUPPLY: 105-130 V. at 50-60 cycles. EXT. VOLTAGES: 6.3 V. at 2.5 amp.; 350 V. at 20 Ma. DIM: 19″ wide; 8¾″ high; 7″ deep. WT.: 18 lbs. COLOR: Blue Gray. **NET PRICE: A-127—$210.00; A-127A or A-127B—$252.00.**

A-287WS AMPLIFIER

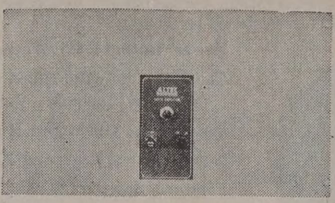
Class B power amplifier especially adaptable to installations where large audio power is required in 1 package. POWER: 250 watts. GAIN: 12 db. IN: 3,000 ohms. OUT: 2.25-20 ohms. FREQUENCY: ±1 db, 100 - 10,000 cycles. NOISE: —27.8 db. POWER SUPPLY: 105-130 V.; 50-60 cycles. DIM: 23$\frac{15}{16}$″ high; 20$\frac{1}{16}$″ wide; 13″ deep, in wall cabinet. WT.: 141 lbs. COLOR: Gray.

NET PRICE: $715.00



A-324A AMPLIFIER

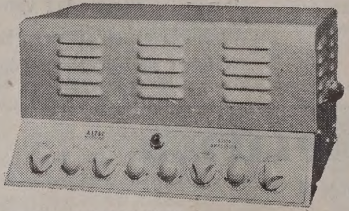
Portable public address amplifier. POWER: 18 watts. IN: 2 microphone inputs—30, 250, 500/600 ohms, 102 db gain; 2 radio phonograph inputs—500,000 ohms, 72 db gain. OUT: 2.5-5, 8-12, 16-24 ohms. FREQUENCY: ±1 db, 20-20,000 cycles. NOISE: —45 db. POWER SUPPLY: 110-125 V.; 50-60 cycles. DIM: 9″ deep; 12″ wide; 9″ high. WT.: 14 lbs. COLOR: Gray.
NET PRICE: 198.00; 10349 dust cover—$8.50.



A-247B AMPLIFIER

Single stage Class AB2 push-pull beam power amplifier. POWER: 75 watts. GAIN: 10 db. IN: 16 ohms. OUT: 4, 8 and 16 ohms. FREQUENCY: ±1 db; 20-20,000 cycles. NOISE: —27 dbm. POWER SUPPLY: 105-125 V.; 50-60 cycles. DIM: 10½″ high; 19″ wide; 8½″ deep. WT.: 56 lbs. COLOR: Blue gray.

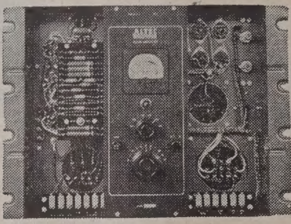
NET PRICE: $276.00



A-332A AMPLIFIER

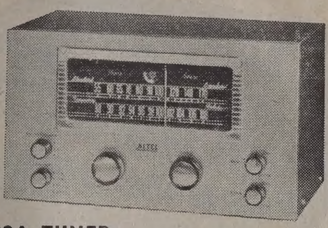
Portable public address amplifier designed to operate with the Altec 21B Microphone. POWER: 18 watts. GAIN: 110 db. INPUT: for Altec 21B microphones and variable reluctance pickup. OUT: 2, 4, 8 and 16 ohms. NOISE: —27-. dbm. POWER SUPPLY: 117 V.; 50-60 cycles. DIM: 17″ wide; 11″ deep; 9″ high. WT.: 35 lbs. COLOR: Gray.

NET PRICE: $299.00.



A-256C AMPLIFIER

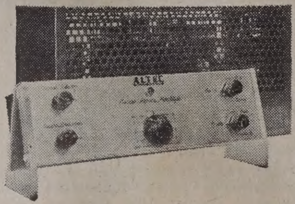
Beam power rack mounted amplifier designed for high quality public address and monitor purposes. POWER: 75 watts. GAIN: 50 db. IN: 500 ohms, 5,000 ohm bridging. OUT: 4, 8 and 16 ohms (can be supplied with TM-226 output transformer—500 ohm and 70 V. line). FREQUENCY: ±1 db, 20-20,000 cycles. NOISE: —45 dbm. POWER SUPPLY: 105-130V.: 50-60 cycles. EXT. VOLTAGES: 6.3 V. at .6 amp., 300 V. at 5 Ma. DIM: 14″ high; 19″ wide; 9″ deep. WT.: 60 lbs. COLOR: Blue gray. **NET PRICE: $348.00**



303A TUNER

AF-FM tuner includes a built-in power supply and multistage audio circuit. AM section is of the superhet type, designed to provide a broad band flat top curve. FM circuit employs two grounded grid RF stages, a separate oscillator and triode mixer stage, two stages of IF amplification and a ratio detector. Both the AM and FM sections incorporates AVC and a magic eye. Multistage amplifier includes a preamp equalized for variable reluctance pickup and contains a four-channel selector switch for AM, FM, phono and spare; three-step selection of record crossover frequencies; filter for 33⅓ recording characteristic use; variable control of rise and droop in both treble and bass, and a continuously variable volume control. Cathode follower used in output stage enables the tuner to be connected to any power amplifier with a high impedance input. For best results the Altec A-333A power amplifier is recommended.

NET PRICE: $280.00



A-333A POWER AMPLIFIER
A-433A REMOTE CONTROL PRE-AMPLIFIER

Designed especially for use in home music systems for the highly critical audiophile. Extremely versatile. Remote pre-amplifier contains controls for bass rise and droop; treble rise and droop; 3 selections for recording crossover frequencies; equalization for variable reluctance pickup; filter for 33⅓ recording characteristic rise; 3 input selector switch and volume control. System frequency response flat to +0 —1 db from 20 cycles to 20,000 cycles and is within 3 db of flat response up to 100,000 cycles. Power amplifier will deliver full 27 watts of audio power at less than 5% total harmonic distortion; 20 watts at less than 2% total harmonic distortion; and 15 watts at less than ½% total harmonic distortion.

NET PRICES: A-333A—$111.00; A-433A—$75.00

1400 SERIES AMPLIFIERS WITH 30A POWER SUPPLY*

This series forms a versatile amplifying, pre-amplifying mixing group that can be adapted to meet all quality amplifying requirements.

1410A PRE-AMPLIFIER: 2 channels. **Gain:** 32 db or 38 db. **In:** 30, 250, 600 ohms. **Out:** 10,000 ohms. **Dim:** 4$\frac{7}{16}$″ wide; 5$\frac{3}{16}$″ high; 5″ deep. **List Price: $94.80.**

1420A AMPLIFIER: Rack mounted. **Power:** 35 watts. **Gain:** 96 db. **In:** 100,000 ohms. **Out:** 4, 8, 16 ohms and 70 V. line. **Ext. Voltages:** for one 1410A pre-amplifier mounted on chassis and two mounted remotely. **Dim:** 19″ wide; 10½″ high; 9″ deep. **Wt.:** 55 lbs. **List Price: $253.20.**

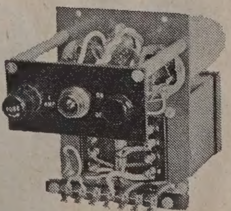
1430A AMPLIFIER: Rack mounted. **Power:** 75 watts. **Gain:** 98 db. **In:** 100,000 ohms. **Out:** 4, 8, 16 ohms and 70 V. line. **Ext. Voltages:** for two 1410A pre-amplifiers mounted on chassis and four mounted remotely. **DIM:** 19″ wide; 14″ high; 9″ deep. WT.: 60 lbs. **List Price: $327.15.**

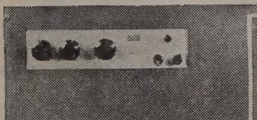
1440A AMPLIFIER: **Gain:** 65 db. **In:** 100,000 ohms. **Out:** 62.5, 125, 500 ohms. **Dim:** 3½″ wide; 5$\frac{3}{16}$″ high; 6¼″ deep. **List Price: $94.95.**

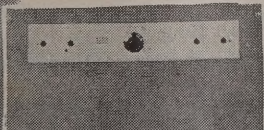
1450A APPARATUS UNIT: Line level matching transformer and 100,000 ohm gain control. **Trans.-Pri.:** 30, 150, 250, 600 ohms; **Sec.:** 15,000-60,000 ohms. **Dim:** 4$\frac{7}{16}$″ wide; 5$\frac{3}{16}$ high; 5″ deep. (Not shown) **List Price: $38.25**

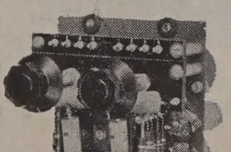
30A POWER SUPPLY: 300 V.—50 Ma. Max.; 6.3 V.—3.2 amp. max. **Dim:** 3½″ wide; 5$\frac{3}{16}$″ high; 6¾″ deep. **List Price: $48.00.**

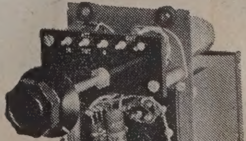
*Distributed by Graybar Electric Co.











BELL SOUND EQUIPMENT

TAPE RE-CORD-O-*fone* (Three Speed) Model RT-65-B

SPECIFICATIONS

Power Output: 3.5 Watts

Controls: Re-wind-Off-Forward; Tone with AC Power Switch; Erase or Record-Playback; Volume; Equalization Switch.

Output: 3.2 Ohms and High Impedance for Headphones.

Input: Microphone and External Radio or Phono.

Forward Speed: 1⅞, 3¾ and 7½ inches per second.

Speaker: 8 Watts 6″ P.M.

Rewind: 45 inches per second.

Record: Dual Track Type "A" Tape.

Frequency Response: 70 Cycles to 8,000 Cycles at 7½ IPS.

Tubes: 1-12AX7; 1-12AU7; 1-6V6GT; 1-6X5GT.

Power: 80 Watts—117 Volts—60 Cycles A.C.

Dimensions: 16″ Deep; 8½″ High; 15″ Wide.

Weight: 33 Lbs. Net; Shipping Wt. 40 Lbs.

HIGH FIDELITY AMPLIFIER Model 2122-B

SPECIFICATIONS

Output: 10 Watts at Less than 3%. Peak Power 15 Watts.

Frequency Response: ±¾ db 30 to 15,000 Cycles with Controls set for Flat Response.

Gain: Radio (Hi-Z) 76 db; Crystal Phono (Hi-Z) 74 db; Mag #1 95 db; Mag #2 110 db.

Hum Level: 65 db. Below Rated Output.

Inputs: 1-Radio; 1-Crystal Phono; 1-Mag. #1; 1-Mag. #2. Selected by 3 Position Switch.

Input Impedance: Radio 100K; Crystal Phono .6 Meg; Mag #1 27K; Mag #2 47K.

Controls: (4) 1-Overall Volume Control; 1-Bass Control —14 db to +13 db, at 100 Cycles; 1-Treble Control with AC Power Switch —13 db to +12 db, at 10K Cycles; 1-Selector Switch (3 positions) #1—TV, Tape or Crystal Pickup, #2—Radio, #3—Magnetic Pickup.

Output Impedance: 4 ohms; 8 ohms; 16 ohms.

Power Consumption: 76 Watts; 117 Volts; 60 Cycles.

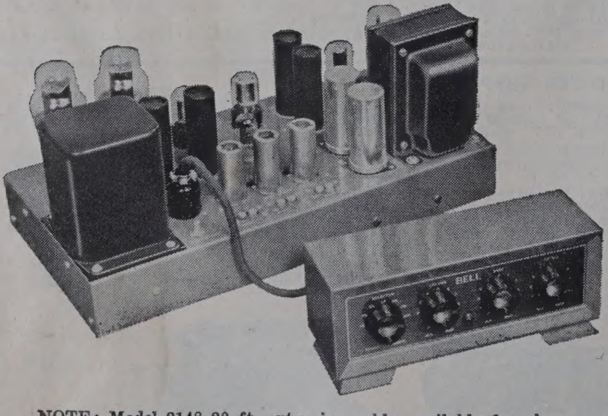
Tubes: 1-5Y3GT; 2-6V6GT; 1-6SL7GT; 2-6SC7.

Dimensions: 7½″ Deep; 6″ High; 11½″ Long.

Net Weight: 8½ Lbs.

BELL
MODEL 2122-B

CUSTOM HIGH FIDELITY AMPLIFIER Model 2145-A



NOTE: Model 2148 20 ft. extension cable available for above.

SPECIFICATIONS

Frequency Response: Within ±.25 db 20 to 30,000 cycles.

Power-Distortion: (a) Distortion at normal listening levels is less than .2 of 1%.
(b) 20 watts at less than 2%. Peak output 30 watts.
(c) Less than .1 of 1% total distortion contributed by pre-amplifiers and control unit.

Hum and Noise Level: (a) 80 db below full output minimum.
(b) No audible hum with all controls at maximum, noise at least 10 db below surface noise of best record surface.

Inputs: Six: Hi-level mag; Lo-level mag; Crystal pickup; Microphone; Hi-level radio; Lo-level radio.

Controls: Remote Control Unit Selector Switch: 5 phono positions, 2 radio positions; Volume control (compensated); Bass control; Treble control; Power Amplifier: AC switch, Provision for remote AC switch, Master gain control.

Output Impedance: 4, 8, 16 ohms.

Tubes: Eleven—3-12AU7; 3-12AX7; 2-6SN7GTA; 2-6B4G; 1-5V4G.

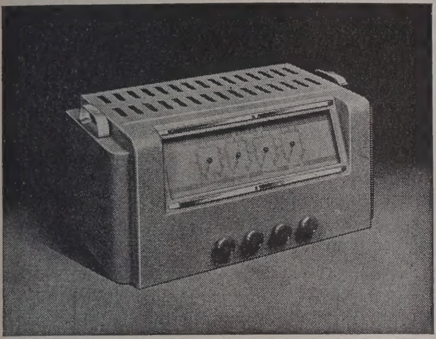
Power Consumption: 150 watts nominal at 117 Volts, 50-60 Cycles.

Dimensions and Weights: Remote Control Unit: 3½″ deep, 10″ wide, 4¼″ high—Weight: 3½ Lbs.
Power Amplifier: 8½″ deep, 17″ wide, 7″ high—Weight: 35 Lbs.

BELL SOUND EQUIPMENT

15 WATT BELL AMPLIFIER

Model 3715-A



This amplifier is as fine in performance as its functional and modern design suggests. The beautiful gray and silver case, with it's illuminated, full-view control panel, is high lighted by distinctive red plastic control knobs. The amplifier has an undistorted output of 15 watts with a peak of 18 watts. It utilizes push-pull beam power output tubes, inverse feedback that reduces harmonic distortion, and has three input channels with separate volume controls that permit mixing of two microphones and a phonograph simultaneously.

- Three Input Circuits.
- Illuminated Control Panel.
- Beam Power Output Tubes.
- Simplified Operation.
- Exceptional Tone Quality.

SPECIFICATIONS
Model 3715-A

Power Output: 15 Watts at less than 5%. Peak Power 18 Watts.
Freq. Response: Plus or Minus 1 db. 30 to 13,000 Cycles.
Overall Gain: Microphone Channels 120 db.; Phono Channel 87 db.
Hum Level: —63 db. Below Rated Output.
Inputs: 2 Microphone; 1 Phonograph.
Input Imped: Microphone Channels 10 Megs; Phono Channel ½ Meg.
Controls: 2 Microphone Volume Controls; 1 Phono Volume Control; 1 Tone Cont. W/AC Switch.
Output Imp: 2.5; 4; 8; 16; 250; 500 ohms and 70v. Constant Voltage Tap.
Power Cons: 100 Watts; 117 Volts; 50-60 Cycles.
Tubes: 2—7B7; 1—6SF5; 1—6N7; 2—6V6G; 1—5U4G.
Dimensions: 11½″ Deep; 8″ High; 16½″ Wide.
Shipping Weight: 32 lbs.

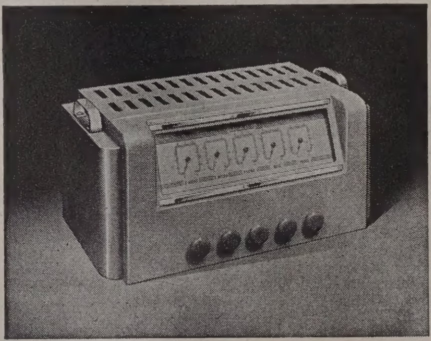
25 WATT BELL AMPLIFIER

Model 3725-A

An ideal Amplifier of medium wattage. This seven tube model has proven to be one of the most popular units that Bell has ever manufactured. For a good all around amplifier of medium price it cannot be beaten. Experienced engineering and time proven circuits has made it one that thousands of users rely on day in any day out for continuous satisfactory service. The Model 3725-A is truly the "Work Horse" of Bell's entire amplifier line.

SPECIFICATIONS
Model 3725-A

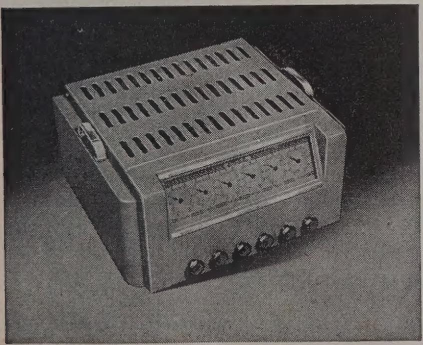
Power Output: 25 Watts at Less than 5%. Peak Power 33 Watts.
Freq. Response: Plus or Minus 2 db. 50 to 18,000 Cycles.
Overall Gain: Microphone Channels 122 db.; Phono Channel 89 db.
Hum Level: —65 db. Below Rated Output.
Inputs: 2 Microphone; 1 Phonograph.
Input Imped: Micro. Channels 10 Megs: Phono Channel ½ Meg.
Controls: 2 Microphone Volume Controls: 1 Phono Vol. Control: 1 Bass Tone Cont.; 1 Treble Tone Cont. W/AC Sw.
Output Imp: 2.5; 4; 8; 16; 250; 500 ohms and 70v. Constant Voltage Tap.
Power Cons.: 150 Watts; 117 Volts; 50-60 Cycles.
Tubes: 2—7B7; 1—6SF5; 1—6N7; 2—6L6G; 1—5U4G.
Dimensions: 11½″ Deep; 8″ High; 16½″ Wide.
Shipping Weight: 38 lbs.



- Treble and Bass Boost.
- Ultra-Modern Design.
- Three Input Circuits.
- Illuminated Control Panel.
- Built to Last—Easy to Service.

50 WATT BELL AMPLIFIER

Model 3750-A



This unit offers "powerhouse" performance with sufficient wattage to cover 90% of all commercial sound requirements. It has power to spare and has been designed for the ultimate in flexibility and operation. Three microphones and a phonograph can be simultaneously mixed by the operator. New tone control circuits, operating in an inverse feedback network, provide extremely wide tone adjustments with greatly reduced distortion. For example, the Bass Control is adjustable from flat response to plus 10 db or to minus 20 db and the treble control from plus 8 db to minus 22 db, 30 db overall.

- Rugged Construction.
- Four Inputs.
- Bass and Treble Boost.
- Available for Remote Standby Operation.
- Excellent Frequency Response.

SPECIFICATIONS
Model 3750-A

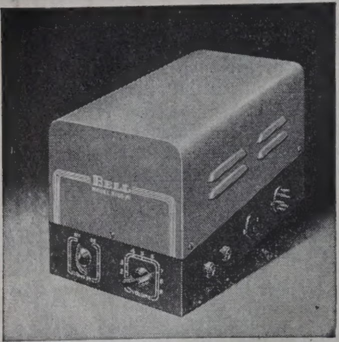
Power Output: 50 Watts at Less than 5%. Peak Power 88 Watts.
Freq. Response: Plus or Minus 1 db., 30 to 15,000 Cycles.
Overall Gain: Microphone Channels 125 db.; Phono Channel 90 db.
Hum Level: 67 db. Below Rated Output.
Inputs: 3 Microphone; 1 Phonograph.
Input Imped: Microphone Channels 10 Megs: Phono Channel ½ Meg.
Controls: 3 Microphone Volume Controls; 1 Phono Volume Control; 1 Bass Tone Cont; 1 Treble Tone Cont. W/AC Switch.
Output Imp: 2.5; 4; 8; 16; 250; 500 ohms and 70v. Constant Voltage Tap.
Power Cons: 260 Watts; 117 Volts; 50-60 Cycles.
Tubes: 3—7C6; 3—6SC7; 1—6SN7GT; 2—6L6G; 1—5U4G; 1—5R4GY; 1—5V4G.
Dimensions: 16½″ Deep; 8″ High; 16½″ Wide.
Shipping Weight: 62 lbs.

Model 3750-R same as above but provided with a relay to permit remote operation of "B" supply.

Mfg. by THE BELL SOUND SYSTEMS, Inc. • Columbus 7, Ohio

BELL SOUND EQUIPMENT

8 WATT BELL MOBILE AMPLIFIER Model 3706-M



- Phono & Micro Inputs.
- Chassis Removable for Servicing.
- Fits under most dashboards.
- Battery Stand-by Switch.

Here is a brand new addition to the time-proven Bell line of amplifiers. A compact, rugged and amazingly efficient low wattage mobile amplifier. It was especially designed for use by Municipal Police and Fire Departments, Safety Patrols, Traffic Control and outdoor audible advertising. The tubes and vibrator can be inspected or changed without disturbing the installation because the chassis and front panel are so constructed that they easily slide out of the case. In an emergency a whole new spare unit can be inserted in the case. It will operate on 6 volts DC or 117 volts 60 cycles and is provided with a standby switch to conserve battery drain. It comes complete with two cables. Any high impedance microphone can be used with this amplifier.

SPECIFICATIONS
Model 3706-M

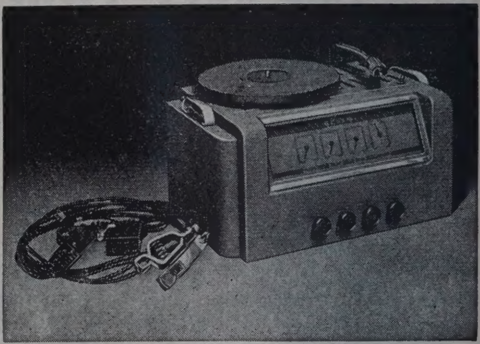
Power Output: 8 Watts at Less than 5%. Peak Power 12 Watts.
Freq. Response: Plus or Minus 2 db., 60 to 15,000 Cycles.
Overall Gain: Microphone Channel 112 db.; Phono Channel 75 db.
Hum Level: 60 db. Below Rated Output.
Inputs: 1 Microphone; 1 Phonograph.
Input Imped: Microphone Channel 10 meg.; Phono Channel ½ meg.
Controls: 1 Microphone and Phono Volume Control with Power Switch; 1 Battery saver stand-by switch.
Output Imp: 4; 8; 16 ohms.
Power Cons: 45 Watts; 117 Volts; 60 Cycles; 11 Amperes; 6 Volts D.C.
Tubes: 1-6SJ7; 1-6SN7GT; 1-6L6; 1-6X5GT.
Dimensions: 10″ Deep; 6½″ High; 5½″ Wide.
Shipping Weight: 15 lbs.

25 WATT BELL MOBILE AMPLIFIER Model 3723-M

This unit is another new member of the Bell line of Amplifiers. It is a medium wattage mobile Amplifier of the most modern design. It has a microphone input and a built-in phono unit. The volume of both the microphone and phono are individually controlled and in addition, a tone control is provided to permit individual selection or adjustment of the bass or treble response. There is also a stand-by switch provided to turn off the "B" supply while the filaments remain heated. This permits economical operation and extends the life of the battery power supply.

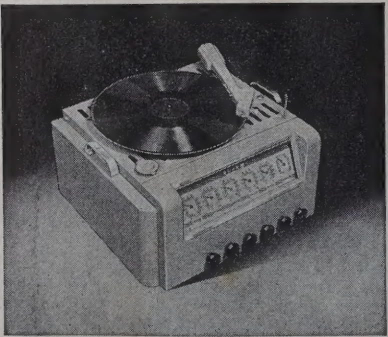
SPECIFICATIONS
Model 3723-M

Power Output: 25 Watts at Less than 5%. Peak Power 38 Watts.
Freq. Response: Plus or Minus 2 db. 30 to 15,000 Cycles.
Overall Gain: Microphone Channel 115 db.; Phono Channel 82 db.
Hum Level: 60 db. Below Rated Output.
Inputs: 1 Microphone; 1 Phonograph.
Input Imped: Microphone Channel 10 meg.; Phono Channel ½ meg.
Controls: 1 Microphone Volume Control; 1 Phono Volume Control; 1 Tone Control W/AC Switch, 1 Standby Switch, 1 Phono motor off-on switch.
Output Imp: 2.5; 4; 8; 16; 250; 500 ohms and 70v Constant Voltage Tap.
Power Con: 115 Watts; 117 Volts 60 Cycles; 24 Amperes; 6 Volts D.C.
Tubes: 1-7B4; 1-6C5; 1-6SN7GT; 2-6L6G; 2-6X5GT.
Dimensions: 11½″ Deep; 10″ High: 16½″ Wide.
Shipping Weight: 40 lbs.



- Built in Phono unit.
- Standard Bell Cabinet.
- Illuminated Control Panel.
- Remote Drive on Controls.
- Heavy Steel Construction.

30 WATT BELL MOBILE AMPLIFIER Model 3728-M



- Astatic AB-8M Mobile Pickup.
- Circuit Breaker Protection on 6 volts.
- Bass Boost and Treble Compensators.
- Power Economizer Switch.
- Three Input Channels.
- Heavy Duty Dual Vibrator.

One of the most completely satisfying mobile Amplifiers ever offered for general use. The "Moto-Master" combines a 30-watt amplifier of tone and quality, with a phono pickup of new design, that plays all 12″ and smaller records. Market research proves its capacity is more than ample for the majority of needs.

This high gain unit operates on either a 6 volt DC storage battery or 117 volt 60 cycle AC line current. Conversion from one type of current to another is achieved by simply removing one plug and inserting the other. Current consumption on battery is reduced by a power economizer switch. High fidelity; improved wide range tone controls; beam power output tubes; and two microphones inputs and one phono input, each with separate volume controls are features of the "Moto-Master".

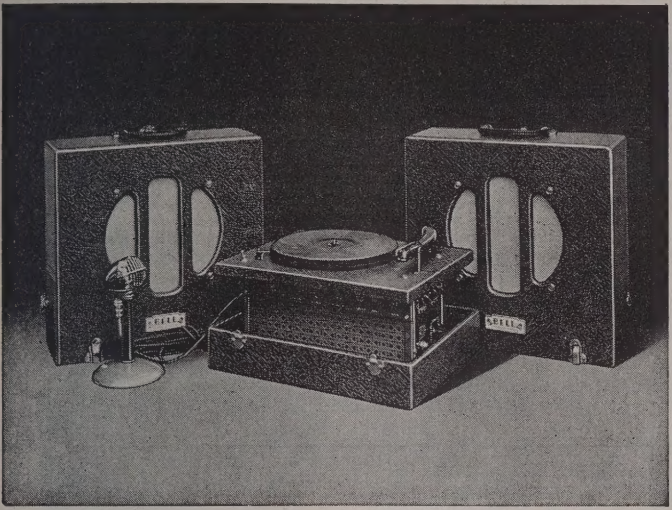
Turntable speed of 78 r.p.m. New type crystal pickup stays "in the groove."

SPECIFICATIONS
Model 3728-M

Power Output: 30 watts at Less than 5%. Peak Power 45 Watts.
Freq. Response: Plus or Minus 2 db. 50 to 14,000 Cycles.
Overall Gain: Microphone Channels 120 db.; Phono Channel 84 db.
Hum Level: 60 db. Below Rated Output AC; 58 db. on DC.
Inputs: 2 Microphone; 1 Phonograph.
Input Imped: Microphone Channels 10 Meg.; Phono Channel 1 Meg.
Controls: 2 Microphone Volume Controls; 1 Phono Volume Control; 1 Bass Tone Cont; 1 Treble Tone Cont. with Power Switch; 1 Stand by Switch; 1 Phono OFF-ON Switch.
Output Imp: 2.5; 4; 8; 16; 250; 500 ohms and 70v. Constant Voltage Tap.
Power: Cons: 27 amp., 6 volts DC; 120 watts; 117 volts; 60 Cycles.
Tubes: 1-7Y4; 2-7Z4; 3-7B4; 1-6SL7GT; 2-6L6G.
Dimensions: 16½″ Deep; 10″ High; 16½″ Wide.
Shipping Weight: 60 lbs.

Mfg. by THE BELL SOUND SYSTEMS, Inc. • Columbus 7, Ohio

BELL SOUND EQUIPMENT



10 WATT BELL PHONO-PA SYSTEM

SPECIFICATIONS Model PA-3710-P

Amplifier: 3710.
Speakers: 2-10″ Heavy Duty P.M.
Cables: 2-25′ Type SV with Plugs.
Phono Equipment: 78 RPM Turntable with Crystal Pickup.
Microphone: JT-30 with desk type stand.
Microphone Cable: 15′ Shielded Rubber with Connector.
Microphone Stand: Furnished with Micro.
Case: Model 3710, 3 piece Portable.
Dimensions: 12″ Deep; 18½″ High; 15¾″ Wide.
Shipping Weight: 50 lbs.
Model PA-3710-P3 same as above but is equipped with three speed (33⅓, 45, 78 RPM) motor and turntable and dual purpose turnover crystal pickup.

15 WATT BELL SINGLE CASE PA SYSTEM

SPECIFICATIONS Model PA-3715-A

Amplifier: 3715-A (see page B-3).

Speakers: 2-10″ Heavy Duty P.M.

Cables: 2-25′ Type SV with Plugs.

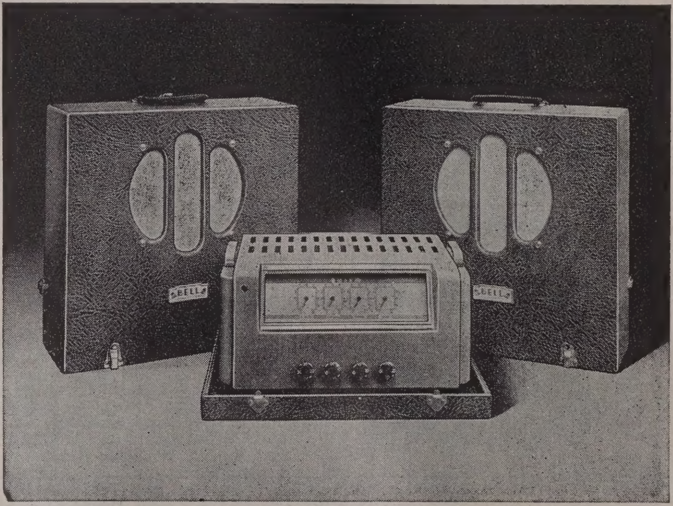
Built-in Phono Equipment: None.

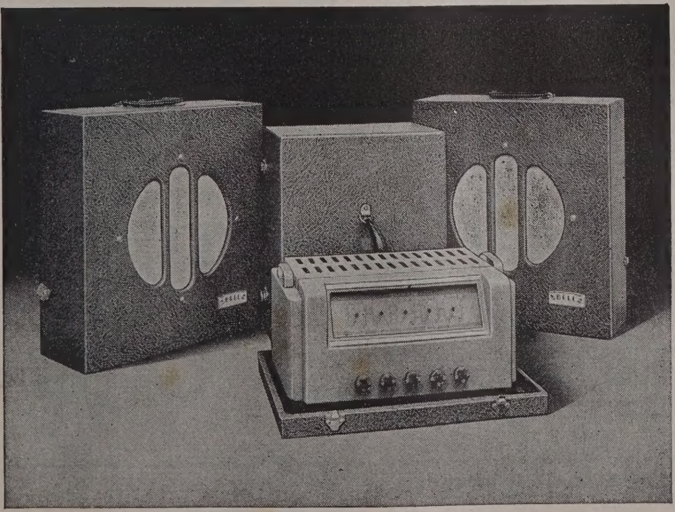
Microphone: Not furnished with this system.

Case: Model 15 Three pc.

Dimensions: 13¾″ Deep; 19¾″ High; 17¾″ Wide.

Shipping Weight: 62 lbs.





25 WATT BELL DUO-CASE PA SYSTEM

SPECIFICATIONS Model PA-3725-A

Amplifier: 3725-A (See page B-3).

Speakers: 2-12″ Heavy Duty P.M. with Line Matching Trans.

Cables: 2-50′ Type SV with Plugs.

Built-in Phono Equipment: None.

Microphone: Not furnished with this system.

Case: 1 Model 95. 1 Model 14-A.

Dimensions: Model 14-A, 13½″ Deep; 10¼″ High; 18″ Wide.

Model 95, 10¼″ Deep; 19¾″ High; 19″ Wide.

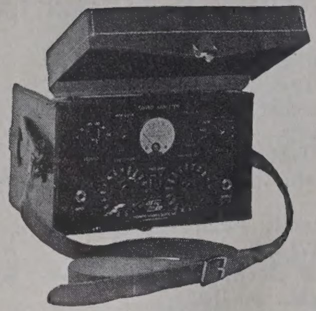
Shipping Weight: Complete System, 90 lbs.

Mfg. by THE BELL SOUND SYSTEMS, Inc. • **Columbus 7, Ohio**

HERMON HOSMER SCOTT, INC.

"PACKAGED ENGINEERING"

385 PUTNAM AVE. • CAMBRIDGE 39, MASS.



TYPE 420-A SOUND ANALYZER, FILTER SET

An extremely compact portable sound analyzer and ½ octave filter set. Independently adjustable high and low cut-off filters can be varied separately or by means of a single knob. Thus a pass-band of extreme flexibility and versatility is achieved. The unit is completely self-contained, and is battery operated. Housed in an attractive saddle-leather case, the 420-A can be operated while carried about on the leather shoulder strap. The Analyzer meets all proposed ASA Standards and, in addition, has an adjustable band-width varying from ½ octave upward in steps of ½ octave. The range of the amplifier exceeds 20 to 20,000 cps. The frequency range exceeds proposed ASA Specifications by one octave at both low and high-frequency limits. The instrument includes a calibrated attenuator giving, with the indicating meter, a range of 66 db. The meter meets ASA ballistic requirements, and an output circuit is provided so that the unit may be used as a general-purpose filter. While designed particularly for use with the Type 410-B Sound Level Meter, the Analyzer may be used with practically any other sound level meter or suitable signal source. Size, 9'' x 10'' x 6''; Weight, Approx. 15 lbs. net, incl. case. Write for prices.

TYPE 410-B SOUND LEVEL METER, for NOISE, SOUND, VIBRATION

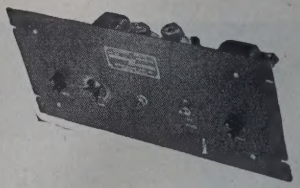
Sound Level Range, 34 to 140 db above standard ASA reference level of 0.0002 dynes/cm.^{2}; Weighting Characteristics, all three standard ASA curves, flat (C), 70 db (B) and 40 db (A); Accuracy characteristics of the instrument meet the ASA standards for Sound Level Meters. The amplifier gain is standardized within ± 1 db for absolute measurements. Comparison accuracy is approximately ± 0.2 decibels; Calibration, an adjustment resets the amplifier gain to original factory-calibrated value; Output signal is available for operating anlyzers, etc.; Inexpensive and readily available hearing aid type batteries are used; Meets American Standards Association Specifications Z24.3-1944 for sound level meters, including extended low-frequency response to 25 cps; Dimensions, 11⅝'' long, 2½'' diameter; Net Weight, two lbs. seven oz., including batteries. Type 410-B Sound Level Meter $299.50; Type 410-X1 Carrying Case $22.00; Type 410-X2 Microphone Calibration Curve $30.00; Type 410-X3 Low Capacitance Extension Cable $24.50; Type 410-X4-A Mounting Tripod $15.00; Type 410-X5 Vibration Integrator and Type 410-X6 Vibration Pickup $99.50; Type 410-X8 Input Adaptor $12.50; Type 410-X9 Moving Coil Microphone and Type 410-X10 Matching Transformer $140.00; Type 410-X11 100 ft. Extension Cable for use with 410-X10 $29.50.

TYPE 610-A PRODUCTION COMPARATOR

This radically new test instrument has already saved up to 95% of the testing time in commercial production of amplifiers, equalizers, filters, etc. The Comparator quickly compares the unit under test with a production standard. The instrument indicates any difference directly in percentage, plus or minus. Patents are pending. Frequency range, 10 cps to 100 kc; Accuracy equivalent to a conventional voltmeter accuracy of 1½%; Input voltage, ranges of 0.5, 1.5, 5.0, and 15 volts for full-scale meter deflection at 30% difference; Meter range, at rated input, ± 40%. Minimum detectable difference at rated input is ± 1½% (sensitivity may be further increased by increasing the input voltage); Input impedance, 1½ megohm in parallel with 50 mmf. Two separate shielded input circuits for Standard and Unknown; Attenuators, two calibrated and matched ganged attenuators; Calibration, a switch and a control are provided for instant calibration. There are independent controls for AC and DC balance; Tubes, 2—12AU7, 2—6H6, 1—6X5; Weight 6¼ lb. net; Dimensions, 9½'' x 6½'' x 6½''. Write for prices.

TYPE 221-A LABORATORY POWER AMPLIFIER

Power Output, rated output 20 watts, maximum output 25 watts; Frequency Range, flat from 12 to 55,000 cps; Harmonic Distortion, less than 0.5% at 20 watt output, less than 0.3% at 15 watts, less than 0.2% at 8 watts; Input Impedance, 0.5 megohms for low level input, 1.5 megohms for high level input, 100,000 ohm variable input; Output Impedance, taps available of 2, 4, 8 and 16 ohms, matching all speakers from 1 to 24 ohms impedance; Low output impedance provides less than 2 db regulation and optimum speaker damping; Hum Level, minus 90 db below full output; Input for 20 watt output, 0.5 volt on low level input, 1.5 volt on high level input; Power Supply Socket, for powering external equipment. Voltage and current ratings available 310 volt DC at 10 milliamps, 6.3 volt AC at 2.5 amps, 24 volt DC at 150 milliamps; Weight, 18 lbs.; Dimensions, panel size 19'' x 9'', amplifier chassis 14'' long x 6½'' high x 7¾'' deep. Type 221-A Laboratory Power Amplifier $148.50; Type 221-A1 Laboratory Power Amplifier $165.00; (Type 221-A1 Amplifier has output impedances of 4, 8, 16 and 500 ohms).



TYPE 140-A DECADE AMPLIFIER

This unit is a small, low-cost general-purpose laboratory voltage amplifier with many applications. It has a low noise level and a low flux-density transformer so that it can be used at low signal levels, and will not affect nearby instruments. Amplifier provides gains of X10 or X100, recalibration possible by user at any time; Frequency range, 10 cps to 1 mc, ± 0.5 db; Input impedance, 2 megohms resistive shunted by 25 mmf; Output impedance, 600 ohms; Maximum output voltage, 30 volts (open circuit); Maximum output current 1 m.a.; Noise level, 80 db below maximum output; Distortion at maximum output, less than 0.5% Tubes, 1—6X5, 1—OA2, 2—6AU6, 1—12AU7; Power supply, AC operated, completely self-contained, low-flux-density transformer; Connections, Plug-in type binding posts, ¾'' spacing, fit conventional banana-type plugs; Dimensions, 6'' x 6'' x 6¾''; Weight, 4½ lbs. net. Write for prices.

TYPE 810-A RANDOM NOISE GENERATOR and TYPE 20-B POWER SUPPLY

Frequency Ranges, AF: 20-20,000 cps.; RF: Gradually reduced output above 200,000 cps.; ASA: "Noise of a General Character" specified in ASA Standard Z24.3-1944; AF Output Voltage, 0 to 0.2 volts; Tubes, 6C4 and 6D4 Power Requirements, AC, 6.3 volts at 0.6 amps., 250-350 volts at 12 ma. (provided by Type 20-B Power Supply); Weight, 1 lb., 11 oz. (with power supply, 5 lbs., 7 oz.); Dimensions, 7'' long, 4'' wide, 4½'' high. Type 810-A Noise Generator $56.50; Type 20-B Power Supply $25.00.

SPECIFICATIONS AND PRICES SUBJECT TO CHANGE WITHOUT NOTICE

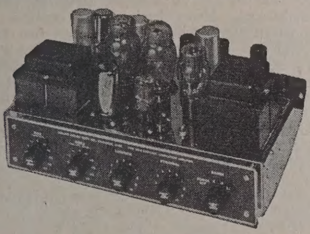
HERMON HOSMER SCOTT, INC.

"PACKAGED ENGINEERING"

385 PUTNAM AVE. • CAMBRIDGE 39, MASS.

THESE MAKE THE DIFFERENCE . . . CONTROL, COMPENSATION, FIDELITY, WARRANTY

There is indeed a difference between even the best high fidelity amplifiers. Why are H. H. Scott Amplifiers the standard against which others are compared? Only because they give not only extreme fidelity and power but also complete control and compensation under all record conditions, room acoustics, and individual preferences.

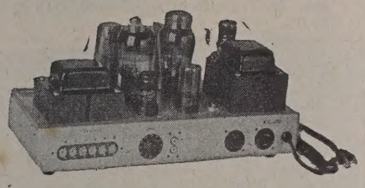


TYPE 210-B DYNAURAL LABORATORY AMPLIFIER

Rated power output, 20 watts, maximum power 25 watts; 1st order difference-tone intermodulation distortion at full rated output less than 0.1%; Harmonic distortion, less than 0.5% at full rated 20 watt output, less than 0.3% at 15 watts, 0.2% at 8 watts; Frequency range, flat from 12 to 22,000 cycles; New-type automatic loudness control; 3-channel continuously adjustable bass and treble controls; Dynamic noise suppressor, latest wide-range DYNAURAL gate circuits open to full range of amplifier; Input impedance, 0.5 megohms; Speaker impedance, matches all speakers from 1 to 24 ohms; Hum level 84 db below full output; Exclusive pickup level adjustment; Preamplifier, operated entirely on DC; Adjustable record-distortion filter; Tubes, 2—12SL7GT, 1—6SN7GT, 1—6SQ7, 2—6SG7, 1—6J5, 2—6L6G, 1—5V4G; Weight, 19¼ lbs.; Dimensions, total depth including knobs, etc. 10¾", depth behind panel 10¼", width 12½", height 8½". Net price $224.00.

TYPE 120-A EQUALIZER-PREAMPLIFIER

Three high-level and one low-level inputs; 8 position record-equalizer to match almost all record characteristics and levels; also offers input switching between phono, tuner, TV, recorder, etc.; Frequency range, flat from 19 to 35,000 cps; New-type automatic loudness control; 3-channel continuously variable tone controls; Pickup level adjustment; Minimum input for rated output, 6 mv on phono input, 0.6 volt on 3 high-level inputs; Preamplifier entirely DC operated; Effective preamp. noise equivalent to 5 micro-volts at low level input, hum below thermal noise level; With low capacity cable, remote control can be placed up to 70 ft. from power amplifier; Input impedances 1 meg. on all inputs; Normal load impedance, 250,000 ohms or more; Tubes: 1—12AX7, 2—12AU7; Weight 8 lbs.; Dimensions 10 x 4½ x 6¾; Walnut cabinet; Unit can be used with power amplifiers other than 220-A below; Net price $76.25.



TYPE 220-A LABORATORY POWER AMPLIFIER

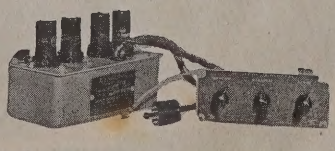
The first-order difference-tone intermodulation distortion at full rated peak output is less than 0.1%; Harmonic distortion, less than 0.5% at full rated 20 watt output, less than 0.3% at 15 watt output, less than 0.2% at 8 watt output; Rated power output 20 watt, maximum power output 25 watt; Frequency range, flat from 12 to 55,000 cycles; Input impedance, 0.5 megohms for low level input, 1.5 megohms for high level input; Speaker impedance, matches all speakers from 1 to 24 ohms impedance; Low output impedance provides less than 2 db regulation, and optimum speaker damping; Hum level, minus 90 db below full output; Input for full rated 20 watt output, 0.5 volt on low level input, 1.5 volt on high level input; Power supply socket, for powering Type 120-A Equalizer Preamplifier or similar unit; Tubes, 1—6SN7GTA, 1—6J5, 1—5V4G, 2—6L6G; Weight, 18 lbs.; Dimensions, 14" x 6½" x 7¾". Net price $117.50.

TYPE 214-A REMOTE CONTROL AMPLIFIER

Consists of Type 120-A Equalizer-Preamplifier and Type 220-A Laboratory Power Amplifier. 120-A is separated from 220-A by 6 ft. extension cable. A 20 ft. extension cable is available as an accessory (Type 120-X1). Specifications, weights and dimensions given above. Type 214-A Remote Control Amplifier net price $193.75.

TYPE 112-B DYNAURAL PREAMPLIFIER

Features: wide-range DYNAURAL noise suppressor; excellent preamplifier for magnetic pick ups; range control and record-distortion filter with high frequency cutoffs of 5,000, 9,000, and 15,000 cps; adjustable turnover control providing turnover frequencies at 300, 500 or 800 cps; AM whistle filter; Frequency range, flat 30-15,000 cycles, usable 20-20,000 cycles; input: level 6 mv minimum, impedance 23,000 ohms; output: level (average) 0.5 volt, load impedance ½ megohm or more; exclusive pickup level adjustment; tubes 1—6SC7, 1—6SQ7, 2—6SG7; power required 180-300 v DC @ 6 ma, 6.3 v AC @ 1.1 amp., obtained from adapter plug inserted under amplifier power-output tube such as 6K6, 6V6, 6L6, 6F6; weight 3 lbs. Net price $51.00.



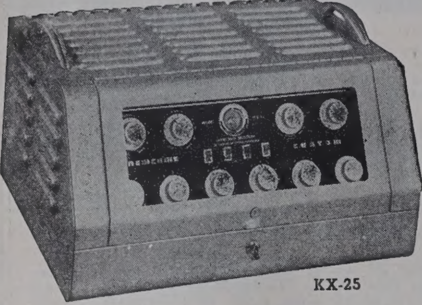
TYPE 111-B DYNAURAL CONVERTER

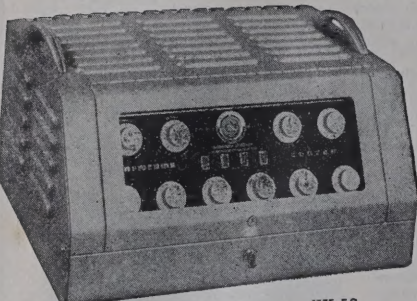
Amazing DYNAURAL Noise Suppressor virtually eliminates annoying record scratch and turntable rumble; frequency range, flat 30-10,000 cycles, usable 20-15,000 cycles; input: level, 0.2 v minimum, impedance, ½ megohm; Output; level (average), 0.5 volt; Impedance, ½ megohm or higher; Pickup: Crystal or other high-level pickup; Controls: A single remote control allows continuous adjustment of the DYNAURAL suppression from no suppression to maximum suppression. A calibrated adjustment is also provided to compensate for different pickup levels; Tube complement: One Type 6SQ7, two Type 6SG7; Power required: 180-300 v DC @ 5 ma., 6.3 v AC @ 0.8 a. (obtained from radio set or amplifier by means of adaptor provided); Special a-c power supply also available); Weight: 2½ lbs.; Dimensions: 7" long, 3¾" wide and 4¾" high. Net price $31.00.

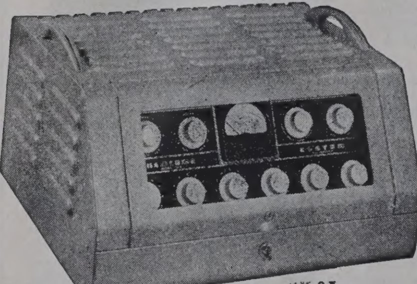
SPECIFICATIONS AND PRICES SUBJECT TO CHANGE WITHOUT NOTICE

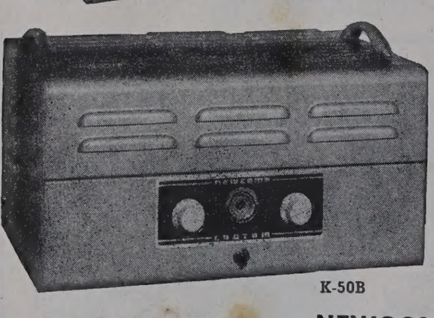
Newcomb CUSTOM K SERIES AMPLIFIERS

Designed and Built To The
Very Highest Standards of
Quality In The Entire Industry


KX-25


KX-50


KX-6A


K-50B

Without equal at any price. The best examples why the name Newcomb is so revered by Engineers and Owners alike. Will improve any system. A **must** when using the new 2-way wide range speakers. Check these important features and specifications.

- ★ **20—20,000 cycles ± 1 db**
- ★ **Less than 3% distortion**
- ★ **90% of rating at less than 1%**
- ★ **Full power any output tap**
- ★ **Audio bandwidth selectors**
- ★ **Hum and noise level—80 db.**
- ★ **Remote control provision—all inputs**
- ★ **U/L approved**
- ★ **Continuous duty—longer life parts**
- ★ **Key locked control cover**
- ★ **Sensitive volume and overload indicators**
- ★ **Wired for plug-in input transformers**

Full audio power, 50 to 5000 cycles (region of all major power requirements) within ± ¼ db, less than 5% distortion. Separate tone controls for Bass and Treble Boost or Attenuation of advanced design for better curve shape, greater range. Feedback controlled, 2 stage mike pre-amplifiers. Hum balancing control, all models but booster. Linear mixer frequency response. All but Pre-Amplifier have output impedance of 4, 8, 16, 250, 500 ohms, PLUS a 70 volt "constant voltage" tap, with convenient, simple, impedance selector. Multistage inverse feedback. Large, heavy duty power and output transformers thoroughly impregnated against moisture. Rear connections avoid unsightly wires, simplify rack installation. A. C. convenience outlet in rear, all models except booster. Cabinets: Heavy gauge welded steel beautifully styled. Finish: Silver Grey Hammertone Baked Enamel. Panels: Etched metal, illuminated. Knobs: Round, large, skirted type, for easy operation. Additional specifications given under specific model numbers.

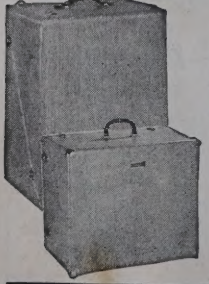
KX-25 POWER OUTPUT: 25 watts design center rating, 30 watts max. at less than 3% distortion any output tap. PEAK POWER: 40 watts design center, 48 watts max. INPUTS (6): 5 mike (2 meg.), gain 123 db; 1 phono either Magnetic input gain 99 db based on 27,000 ohm input, bass equalization + 10 db or Crystal input ½ meg. gain 90 db REMOTE CONTROL: Use RC-6 remote control unit. BASS TONE CONTROL: Range —16 to +25 db. TREBLE TONE CONTROL: Range —30 to +20 db. HUM: —80 db controls off, —75 db crystal phono, —65 db mike and magnetic pickup inputs (Referred to rated output). CONTROLS (15): 5 mike, 1 phono, 1 bass, 1 treble, 4 bandwidth, 1 master, 1 volume indicator (all under keylocked control cover) A.C. power switch. TUBES (15): 6—6SC7, 2—6J5, 1—6J7, 1—6SQ7, 1—6SN7, 2—6L6G, 1—6AF6G, 1—5U4G. POWER CONSUMPTION: 135 watts, 117 volts 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 9⅜" x 17¾" x 14¾". SHIPPING WEIGHT: 40 lbs. LIST: (with tubes) $379.50. Plug Kit: $6.92.

KX-50 POWER OUTPUT: 50 watts design center rating, 60 watts max. at less than 3% distortion any output tap. PEAK POWER: 80 watts design center, 90 watts, max. BOOSTER COUPLING JACK for connecting K50B Boosters for 100 watts or more. All other characteristics identical with KX-25 except gains, which are all 3 db higher than KX-25. TUBES (18): 6—6SC7, 2—6J5, 1—6SQ7, 1—6J7, 1—6SN7, 4—6L6G, 1—6AF6G, 2—5U4G. POWER CONSUMPTION: 235 watts, 117 volts 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 9⅜" x 17¾" x 14¾". SHIPPING WEIGHT: 49 lbs. LIST: (with tubes) $460.00. Plug Kit: $7.03.

KX-6A: A 6 channel mixer pre-amplifier designed to feed broadcast lines or boosters for finest quality. OUTPUT: +31 VU, less than 3% distortion, +30 VU at less than 1%. Has built in power supply and genuine VU meter with meter range extension switch. INPUTS for 5 mikes (2 meg.) gain 97 db and 1 phono either crystal (½ meg.) gain 64 db or magnetic (27,000 ohms) gain 73 db. Use RC-6 Unit for remote control. Includes Master Volume Control and same fine Dual Tone Controls and Audio Bandwidth Selectors as in KX-25 and KX-50. BASS TONE CONTROL: Range —16 to +25 db. TREBLE TONE CONTROL: Range —30 to +20 db. HUM: —80 db controls off, —80 db crystal —75 db mike and magnetic. CONTROLS (12): 5 mike, 1 phono, 1 bass, 1 treble, 1 master, 1 four position bandwidth (all under key locked cover), 1 A.C. power switch, 1 VU meter range switch (in rear). TUBES (12): 6—6SC7, 4—6J5, 1—6J7, 1—6X5. POWER CONSUMPTION 35 WATTS, 117 volts 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 9⅜" x 17¾" x 14¾". SHIPPING WEIGHT: 32 lbs. LIST: (with tubes) $345.00. Plug Kit: $5.29.

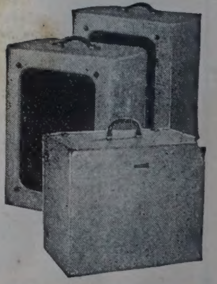
K50B: Booster Amplifier. Performance, power and output impedance same as KX-50 with but one input of ½ meg. impedance, gain 71 db. Provision for plug-in bridging or low impedance transformer. Built for continuous duty with long life parts, separate plate, and filament power transformers, individually fused, permits dependable plate power switching. Includes volume and overload indicators as in KX-50. Ample multistage feedback to minimize effects of speaker load variations. Etched metal panel. TUBES (10): 1—6SJ7, 1—6SN7, 1—6SQ7, 4—6L6G, 1—6AF6G, 2—5U4G. POWER CONSTRUCTION: 230 watts 117 volts 60 cycles. 129 volts max. DIMENSIONS: 9⅜" x 17¾" x 12¼". SHIPPING WEIGHT: 45 lbs. LIST: (with tubes) $210.00. Plug Kit: $2.50.

NEWCOMB CUSTOM PORTABLE SYSTEMS



KX-2512X: Portable system with KX-25 amplifier and two heavy duty, extremely efficient speakers, each with 50' cable. System is carried in two cases: Model KA for the amplifier, size 19" x 11¾" x 16⅞"; Model K-212 for two speakers, size 18½" x 12½" x 22½". Speakers face inside for maximum protection when split case is closed. Mikes and mountings not included as requirements vary.

KX-25R12X: Portable system identical to KX-2512X but with each speaker mounted in an individual portable reflex baffle, Model KR-112, for utmost tone quality. Speaker cases size, 18½" x 12½" x 24½". Mikes and mountings not included as requirements vary.



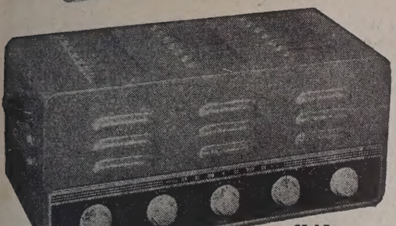
KA: Amplifier case fits all model K amplifiers.

All Prices and Specifications Subject to Change Without Notice.

Newcomb AUDIO PRODUCTS COMPANY
6824 LEXINGTON AVENUE • LOS ANGELES 38, CALIFORNIA

Newcomb DELUXE H SERIES AMPLIFIERS

Compare These Deluxe Amplifiers with Any Other Brand at Any Price

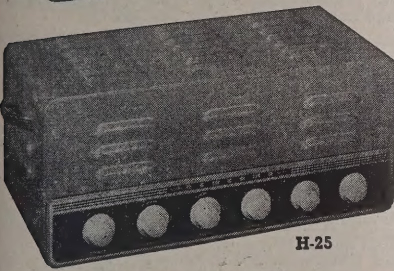

H-15

For Performance, Dependability and Value check these features and specifications:

- ★ **20-20,000 cycles ± 2 db**
- ★ **Full Power any output tap**
- ★ **Less than 5% distortion**
- ★ **90% of rated power at less than 2%**
- ★ **Remote Control provision—all mikes**
- ★ **U/L approval**
- ★ **Continuous duty—longer life parts**
- ★ **Wired for plug-in input transformers**

Full Audio Power, 50 to 5000 cycles (region of all major power requirements) within ± ½ db, less than 5% distortion. Individual boost and attenuate type bass and treble tone controls in new distortion free circuit. Linear mixer frequency response. All models but pre-amplifier have output impedances of 4, 8, 16, 250, and 500 ohms PLUS a 70 volt "constant voltage" tap, with easily-operated impedance selector. Multi-stage inverse feedback. Large heavy duty power and output transformers thoroughly impregnated against moisture. Rear connections avoid unsightly wires, simplify rack installations. A. C. convenience outlet in rear, all models except boosters. Cabinets: Heavy gauge welded steel beautifully styled in modern functional simplicity that endures. Finish: Silver Grey Hammertone Baked Enamel. Panel: Etched metal, illuminated. Knobs: large, round, skirted type, for ease of operation. Additional specifications under specific model numbers.

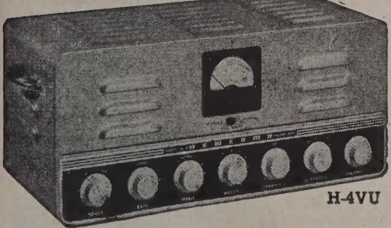
H-15 POWER OUTPUT: 17 watts design center rating, 20 watts max. at less than 5% distortion, **any** output tap. PEAK POWER: 26 watts design center, 31 watts max. INPUTS (3): 2 mike (2 meg.), gain 120 db; 1 phonograph (½ meg.), gain 80 db. BASS TONE CONTROL: Range —16 to +14 db. TREBLE TONE CONTROL: —34 to +13 db. HUM: — 72 db phono input, —62 db mike inputs (referred to rated output). CONTROLS (5): 1 mike-phono, 1 mike, 1 bass, 1 treble, 1 A.C. power switch. REMOTE CONTROL: Use RC-2 remote control unit. TUBES (7): 2-6SF5, 1-6SJ7, 1-6SN7, 2-6L6G, 1-5Z4. POWER CONSUMPTION: 85 watts, 117 volts 60 cycles A.C. Max. input 129 volts. DIMENSIONS: 8¼" x 19" x 10⅛". SHIPPING WEIGHT: 23 lbs. LIST: (with tubes) $149.50. Plug Kit: $4.09.


H-25

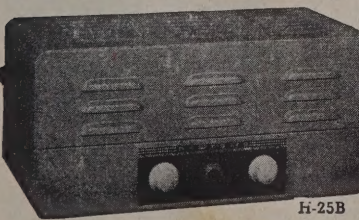
H-25 POWER OUTPUT: 25 watts design center rating, 30 watts max. at less than 5% distortion, **any** output tap. PEAK POWER: 40 watts design center, 48 watts maximum. INPUTS (4): 3 mike (2 meg.), gain 124 db; 1 phonograph (½ meg.), gain 80 db. BASS TONE CONTROL: —18 to +15 db. TREBLE TONE CONTROL: Range —27 to +10 db. HUM: —72 db phono input, —62 db mike inputs (referred to rated output). CONTROLS (6): 2 mike, 1 mike-phono, 1 bass, 1 treble, 1 A.C. power switch. REMOTE CONTROL: Use RC-3 remote control unit. TUBES (8): 3-6SF5, 1-6SJ7, 1-6SN7, 2-6L6G, 1-5U6G. POWER CONSUMPTION: 125 watts, 117 volts 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 8½" x 19" x 10⅛". SHIPPING WEIGHT: 27 lbs. LIST: (with tubes) $186.50. Plug Kit: $5.03.

H-50

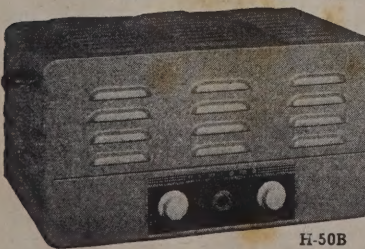
H-50 POWER OUTPUT: 50 watts design center rating, 60 watts max. at less than 5% distortion, **any** output tap. PEAK POWER: 80 watts design center, 90 watts max. INPUTS (5): 4 mike (2 meg.), gain 124 db. 1 phono (½ meg.), gain 81 db. BOOSTER COULPING JACK for connecting H-25B or H-50B Boosters for 75 to 100 watts or more. BASS TONE CONTROL: Range —21 to +16 db. TREBLE TONE CONTROL: Range —27 to +10 db. HUM: —72 db phono input, —62 db mike inputs (referred to rated output). CONTROLS (7): 3 mike, 1 mike-phono, 1 bass, 1 treble, 1 A.C. power switch. REMOTE CONTROL: Use RC-4 remote control. TUBES (12): 4-6SF5, 1-6SJ7, 1-6SN7, 4-6L6G, 2-5U4G. POWER CONSUMPTION: 225 watts, 117 volts 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 9¼" x 19" x 12½". SHIPPING WEIGHT: 42 lbs. LIST: (with tubes) $250.00. Plug Kit: $6.10.


H-4VU

H-4VU Mixer Pre-Amp. with built-in power supply. Extremely low hum. Suitable for feeding telephone lines or booster amplifiers such as the H-25B or H-50B. Output +22 db at less than 5% distortion. +21 db at less than 2%. INPUTS for three mikes (2 mg.), gain 90 db. 1 phono (½ meg.), gain 51 db. HUM: Better than, —80 db from phono input or —75 db, mike inputs. Use RC-3 Unit for remote control. Includes master control and genuine VU meter with meter range extension switch. BASS TONE CONTROL: Range —16 to +14 db. TREBLE TONE CONTROL: Range —27 to +13 db. TUBES (7): 3-6SF5, 1-6SJ7, 1-6SN7, 1-6J5, 1-6X5. POWER CONSUMPTION: 30 watts, 117 volts 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 8⅛" x 19" x 10⅛". SHIPPING WEIGHT: 21 lbs. LIST: (with tubes) $195.00. Without VU meter: $150.00. Plug Kit: $3.44


H-25B

H-25B Booster Amplifier — Performance Power and Output Impedances same as H-25 with but one input of ½ meg. impedance, gain 68 db. Provision for plug-in bridging or low impedance transformer. Etched metal panel with pilot light, A.C. power switch and volume control. Ideal for use with H-4 Pre-amplifier. Built for long life. TUBES (5): 1-6SJ7, 1-6J5, 2-6L6G, 1-5U4G POWER CONSUMPTION: 120 watts, 117 volts, 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 8⅛" x 19" x 10⅛". SHIPPING WEIGHT: 25 lbs. LIST: (with tubes) $127.50. Plug Kit: $1.69.


H-50B

H50B Booster Amplifier — Performance, Power and Output Impedances are same as H-50 with but ont input of ½ meg. impedance, gain 71 db. Provision for plug-in bridging or low impedance transformer. Etched metal panel with pilot light, A.C. switch and volume control. Built for long life. Ideal for use with H-4 Pre-Amp. TUBES (8) 1-6SJ7, 1-6J5, 4-6L6G, 2-5U4G. POWER CONSUMPTION: 220 watts, 117 volts, 60 cycles A.C. Max. Input 129 volts. DIMENSIONS: 9¼" x 19" x 12½". SHIPPING WEIGHT: 38 lbs. LIST: (with tubes) $162.50. Plug Kit: $1.69.

Newcomb Deluxe Portable Systems

H-1512R: Portable system with H-15 amp. and two 12" speakers, each with 25' cable, in split case Model EH-212, size 11⅛" x 20½" x 21", covered in washable fabricoid. Kickproof metal grills protect speakers. Mikes and mountings not included as requirements vary.

H-2512R: Portable system with H-25 amp. and two 12" speakers, each with 25' cable in split case, Model EH-212. Size, 20½" x 11⅛" x 21". Mikes and mountings not included as requirements vary.

All Prices and Specifications Subject to Change Without Notice.

Newcomb AUDIO PRODUCTS COMPANY

6824 LEXINGTON AVENUE • LOS ANGELES 38, CALIFORNIA

Newcomb

E SERIES AMPLIFIERS

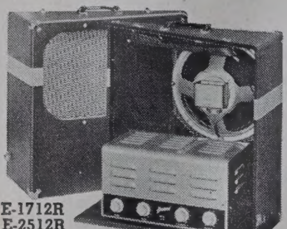
A Low Priced Line of Superior Utility Amplifiers

The same fine workmanship and materials as the incomparable KX- and H-Series. Designed to lead the low-price field. For performance, dependability and economy the E-Series is today's best combination of high quality and low cost. All models U/L approved.

E-1010S

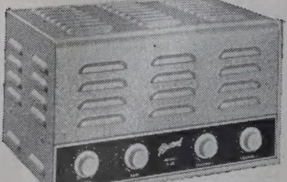
E-10 AMPLIFIER . . . Delivers full 10 watts from push-pull 6V6 tubes. Inputs for mike and phono. **SPECIFICATIONS** . . . POWER OUTPUT: 10 watts at less than 5% distortion. FREQUENCY RESPONSE: 40 to 15,000 cycles ±2 db. Inputs (2): 1 mike (2 meg.), gain 116 db; 1 phono (½ meg.), gain 77 db. TONE CONTROL: Range 0 to —24 db. MULTI-STAGE INVERSE FEEDBACK CIRCUIT. OUTPUT IMPEDANCES: 4, 8 and 16 ohms to octal socket. TUBES (5): 1-6SC7, 1-6SQ7, 2-6V6GT and 1-6X5GT. FINISH: Silver-gray hammertone baked enamel. PANEL: Genuine etched metal. DIMENSIONS (Incl. cover): 5¾″ x 10⅜″ x 6¾″ high. POWER CONSUMPTION: 60 watts at 117 volts; 60 cycles A.C. SHIPPING WEIGHT: Amplifier only, less cover, 9 lbs. Including cover, 10½ lbs. LIST: (with tubes) $65.00. Cover: $6.00. Plug Kit: $1.71.

E-1010S PORTABLE SYSTEM . . . 10 watt basic system with 10″ speaker, 25′ cable and plug, and E-10 amp. Case model E-110, size 12¼″ x 15¾″ x 8¾″. Mike and mountings not included.


E-1712R
E-2512R

E-17 AMPLIFIER . . . A conservative 17-watt amplifier with separate bass and treble tone controls, phonograph bass boost, multistage inverse feedback circuit, and provision for conversion to low impedance mike input. Input controls for mike and phone. **SPECIFICATIONS** . . . POWER UNIT 17 watts at less than 5% distortion. FREQUENCY RESPONSE: ±2 db, 40 to 15,000 cycles. INPUTS: 1 mike (2 meg.) gain 115 db; 1 phono (½ meg.), gain 77 db. OUTPUT IMPEDANCES: 4, 8, 16 and 500 ohms. TUBES (5): 1-6SC7, 1-6SJ7, 2-6L6G, 1-5Z4. PANEL: Etched metal, illuminated. FINISH: Silver-gray hammertone baked enamel. DIMENSIONS: (Incl. cover): 8⅜″ x 14⅛″ x 8″ high. POWER CONSUMPTION: 75 watts at 117 volts, 60 cycles A.C.SHIPPING WT.: 18 lbs. LIST: (with tubes less cover) $93.00. Cover $6.50. Phono Cover $39.50*. 3 Speed Cover $49.50*. Changer Cover $99.50. Plug Kit: $2.28. (*Plus Excise Tax.)

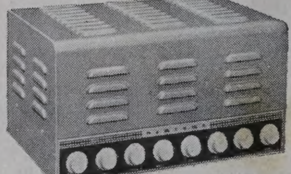
E-1712R PORTABLE SYSTEM . . . 17 watt amp. model E-17 and two 12″ speakers each with 25′ cable and plug. Split case model EH-212, size 20½″ x 11⅛″ x 21″. Mikes and mountings not included.


E-25, E-50

E-25 AMPLIFIER . . . A dependable full 25-watt amplifier with inputs for two mikes and one phono, separate bass and treble tone controls, phono bass boost, multistage inverse feedback circuit, and provision for conversion to low impedance mike inputs. **SPECIFICATIONS** . . . POWER OUTPUT: 25 watts at less than 5% distortion. FREQUENCY RESPONSE: ±2 db, 40 to 15,000 cycles. INPUTS (3): 2 mike (2 meg.), gain 117 db; and 1 phono (½ meg.), gain 77 db. OUTPUT IMPEDANCES: 4, 8, 16 and 500 ohms. TUBES (6): 1-6SJ7, 1-6SC7, 1-6J5, 2-6L6G and 1-5Z4. FINISH: Two-tone hammertone baked enamel. PANEL: Etched metal, illuminated. POWER CONSUMPTION: 90 watts at 117 volts; 60 cycles A.C. SHIPPING WT.: 19 lbs. LIST: (with tubes less cover) $118.50. 3 Speed Cover $49.50*. Cover $6.50. Phono Cover $39.50*. Changer Cover $99.50*. Plug Kit: $3.24. (*Plus Excise Tax.)

E-2512R PORTABLE SYSTEM . . . 25 watt amp. model E-25 and two 12″ speakers each with 25′ cable and plug. Split case model EH-212, size 20½″ x 11⅛″ x 21″. Mikes and mountings not included.

E-50 AMPLIFIER . . . A distortion-free conservatively rated 50-watt amplifier using push-pull parallel 6L6 tubes and multistage inverse feedback circuit. Has inputs for two mikes and one phono, separate bass and treble tone controls, phono bass boost, and provision for conversion to low impedance mike inputs. **SPECIFICATIONS** . . . same as E-25 except as following: POWER OUTPUT: 50 watts at less than 5% distortion. Mike gain 120 db.; phono gain 79 db. OUTPUT IMPEDANCES: 4, 8, 16 and 250 ohms. TUBES (6): 1-6SJ7, 1-6SC7, 1-6J5, 4-6L6G and 2-5Z4. DIMENSIONS (including cover): 11¼″x14¾″. POWER CONSUMPTION: 170 watts at 117 volts; 60 cycles A.C. SHIPPING WT.: 31 lbs. LIST: (with tubes) $189.50. Plug Kit: $3.24.


E-50D

E-50D AMPLIFIER . . . A 50 watt amp. with separately controlled, individual 25 watt output channels and inputs for 3 mikes and 1 phono. Separate bass and treble controls. Bass boost on phono only. Additional amp. jack. **SPECIFICATIONS:** POWER OUTPUT: 50 watts, 25 watts each channel at less than 5% distortion. FREQUENCY RESPONSE: ±2 db, 40 to 15,000 cycles. INPUTS: (4) 3 mike (2 meg.), gain 127 db, 1 phono (½ mag.), gain 85 db. OUTPUT IMPEDANCES: (each channel) 4, 8, 16 and 500 ohms. TUBES (12): 3-6SF5, 1-6SJ7, 2-6SN7, 4-6L6G, 2-5Z4. DIMENSIONS (with cover): 17½″ x 9¼″ x 11¼″. POWER CONSUMPTION: 190 watts, 117 volts, 60 cycles A.C. WEIGHT: 32 lbs. LIST: (with tubes) $239.50. Plug Kit: $3.50.

E-10M

E-10M MOBILE AMPLIFIER . . . The Model E-10-M is a particularly rugged, dependable, low cost 10 watt mobile amplifier, designed for use on 6 V.D.C. or 117 volts, 60 cycles A.C. power. Features push-pull beam power output tubes with inverse feedback for low distortion; Standby battery saver switch; New freedom from vibrator hash; Special mounting to simplify removal of chassis for servicing; Inputs for mike and phono; Sturdy Jones connectors for battery and A.C. cables. **SPECIFICATIONS** . . . POWER OUTPUT: 10 watts at less than 5% distortion. FREQUENCY RESPONSE: 50 to 15,000 cycles ±2 db. Mike Input (2 megs.), gain 115 db; Phono Input (½ meg.), gain 75 db. OUTPUT IMPEDANCES: 4, 8, and 16 ohms. Jewelled pilot lamp. Etched metal panel. Silvertone-gray, baked enamel hammertone finish. TUBES (5): 1-6SC7, 1-6SF5, 2-6V6GT, 1-6X5GT. POWER CONSUMPTION: 60 watts at 117 volts A.C. 8 amps at 6 V.D.C. SHIPPING WEIGHT: 13½ lbs. LIST: (with tubes) $97.50. Plug Kit: $1.39.

E-25MP

E-25MP PHONO TOP MOBILE AMPLIFIER . . . A full 25 watts from either 6 V. Storage Battery or 117 V. A.C. at new low price. Consumes least possible current per watt output. "Standby" switch reduces battery consumption, keeps tubes warm for instant use. Separate A.C. power and turntable switches. Heavy duty Jones plugs and receptacles provide dependable connections to battery or A.C. power source. **SPECIFICATIONS** . . . POWER OUTPUT: A full 25 watts at less than 5% distortion from either 117 volts A.C. or 6-volt storage battery. RESPONSE: ±2 db, 50-15,000 cycles. INPUTS for two mikes (2 meg.) gain 119 db; and one phono (½ meg.), gain 78 db. HIGH FREQUENCY ATTENUATOR range, 28 db. CIRCUIT FEATURES: Multistage inverse feedback, resistance capacity coupling, phase correction for phono motor, 2000 volt Hermetically sealed oil buffer condenser. OUTPUT IMPEDANCES: 4, 8, 16 and 500 ohms to two octal speaker sockets and impedance selector. PHONOGRAPH MOTOR: Constant speed 78 R.P.M. PICKUP: Crystal. TUBES (7): 1-6SC7, 1-6SJ7, 1-6J5, 2-6L6, 2-6X5GT. POWER CONSUMPTION: 107 watts at 117 volts, 60 cycles A.C. or 20.5 amps. including phono motor from 6-volt storage battery. FINISH: Silver-gray hammertone baked enamel. PANEL: Etched metal, illuminated. DIMENSIONS (including cover): 8¾″ x 14⅛″ x 10″ high overall. SHIPPING WT.: 30 lbs. LIST: (with tubes and phono cover) $199.50. Plug Kit: $3.24. (Excise Tax on cover).

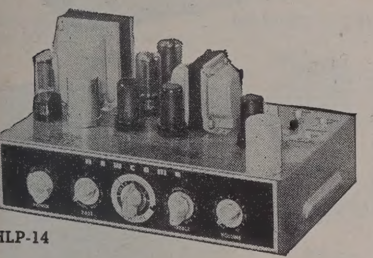
E-25M . . . Same as E-25MP, Mobile Amplifier, with cover, tubes, less phono unit. Power consumption: 91 watts A.C. or 17 amps. from 6 V.D.C. Dimensions: 8⅜″ x 14⅛″ x 8″ high. SHIPPING WT.: 27 lbs. LIST: (with tubes and plain cover) $181.00. Plug Kit: $3.24.

All Prices and Specifications Subject to Change Without Notice.

Newcomb PHONO AMPLIFIERS

For the Finest Phonograph
Performance Ever Achieved

KXLP-30


HLP-14

P-10A

KXLP-30 A phonograph amplifier unsurpassed by any other in the field, regardless of price. Ample power permits use of KX Series dual tone control circuit. Provides tonal range and balance unattainable in less costly circuits, and controlled emphasis of desirable but power-consuming fundamental bass tones, avoiding emphasis of harmonic bass—the "Boomy" or one-tone bass so unacceptable to true music lovers. U/L approved. Features "Magic Red Knob" Record Condition Compensator and built in magnetic pick-up pre-amplifier.

SPECIFICATIONS: POWER OUTPUT: 30 watts at less than 5% distortion. 27 watts at less than 1%. FREQUENCY RESPONSE: 20 to 20,000 cycles ±1 db. Response of magnetic and variable reluctance inputs corrected for requirements of these pickups. INPUTS: For radio and choice of crystal or variable reluctance pickup inputs. GAIN: Crystal input, 90 db. at ½ meg. input impedance. Magnetic or variable reluctance input, 112 db. at ½ meg., input impedance of 95 db. at 10,000 ohms. Signal required at radio and TV inputs for full output is .5 v. BASS TONE CONTROL: 0 to +22 db. with special curve shape for maximum emphasis of fundamental bass tones and minimum emphasis of harmonic bass. TREBLE TONE CONTROL: —25 db. to +25 db. RECORD CONDITION COMPENSATOR: Five positions: #1, radio #2, records, condition "A" (Perfect); #3, records, condition "B"; #4, records, condition "C"; #5, records, condition "D" (badly worn, very noisy). HUM BALANCER CONTROL: To correct variation in tubes. OUTPUT IMPEDANCES: 4, 8, 16 and 500 ohms to octal socket. POWER CONSUMPTION: 150 watts, 129 volts, 60 cycles A.C. for use on 105-129 volts. TUBES (7): 1-6SC7, 3-6J5, 2-6L6G, 1-5U4G. DIMENSIONS: Chassis: 13½" x 9½" x 3". Height overall, 7⅞". WEIGHT: 22 lbs. LIST: (with tubes) $250.00. Plug Kit: $.83.

HLP-14 Brings to music lovers new listening pleasure in a unit less expensive than the KXLP-30. It, too, features the "Magic Red Knob" record condition compensator. Built-in pre-amplification and equalization, required for new low level pickups, make the HLP-14 ideal for the lower cost home installation. Exceptional tonal balance at whisper volumes is an outstanding feature. U/L approved.

SPECIFICATIONS: POWER OUTPUT: 14 watts at less than 5% distortion. 12½ watts at less than 2%. PEAK POWER OUTPUT: 19 watts. FREQUENCY RESPONSE: 30 to 15,000 cycles ±1 db for crystal pickup and radio inputs. Magnetic and variable reluctance inputs have response adjusted to requirements of these pickups. INPUTS: Same as KXLP-30. GAIN: Crystal input 90 db. at ½ meg. input impedance. Magnetic or variable reluctance input 109 db. at ½ meg. or 92 db. at 10,000 ohms impedance. Signal from radio or TV required for full output is .5 v. TONE COMPENSATION: Variable. BASS TONE CONTROL: 0 to +16 db. TREBLE TONE CONTROL: —29 db. to +12.5 db. RECORD CONDITION COMPENSATOR: (Same as KXLP-30). OUTPUT IMPEDANCES: 3, 4, 6, 8, 16 and 500. POWER CONSUMPTION: 75 watts, 129 volts, 60 cycles A.C. for use on 105-129 volts. TUBES (6): 1-6SC7, 1-6SJ7, 1-6J5, 2-6V6GT and 1-5Y3LT. DIMENSIONS: Chassis, 13⅛" x 8 1/16" x 3". Height overall: 6¾". WEIGHT: 13 lbs. LIST (with tubes) $162.50. Plug Kit: $.83.

P-10A This remarkable new amplifier has a frequency response with ±1 db. from 30 to 15,000 cycles and delivers a full clean 10 watts. Includes distortion free, individual bass and treble tone controls for bass boost and treble boost or attenuation. Plus three individual inputs to permit connection of Radio, Phono and T.V. without need of switching. Basic amplifier designed for high impedance inputs. Plug-in pre-amp, illustrated, permits use of all magnetic cartridges. Circuit includes multi-stage inverse feedback. The low hum level achieved is of utmost importance when used with modern efficient speakers in bass reflex cabinets operated in quiet rooms. The low price makes it the truly outstanding buy in the field. U/L approved.

SPECIFICATIONS: POWER OUTPUT: 10 watts at less than 5%, 9 watts at less than 2%. INPUTS: (3 ½ meg.; Gain, 75 db. Bass tone control range 0 to +16 db. Treble tone control range: —25 db. to +15 db. Output Impedances: 4, 8 and 16 ohms. Etched metal panel, grey baked enamel hammertone finish. Tubes (5): 1-6SC7, 1-6SQ7, 2-6V6GT and 1-6X5GT. Dimensions: 11⅛" x 6¼" x 5¾" high. Power consumption: 60 watts at 117 volts, 60 cycles A.C. WEIGHT: 7¾ lbs. LIST: (with tubes) no cover, $72.50. Plug Kit: $.91.

MPA Plug-in Pre-Amplifier provides additional gain and equalization needed for magnetic pickups with the P-10A. Includes effective scratch suppressor that can be cut in or out at will by means of a switch. LIST: (with tubes and plug) $15.00.

PROFESSIONAL MUSICAL INSTRUMENT AMPLIFIER

G-12

G-12 Gives full, clear true tones at any desired volume. Lightness and beautiful appearance. Plus exceptional ruggedness and dependability characterize the Model G-12. There are three inputs with ample gain for Musical Instruments, plus an additional higher gain input for a microphone. Entire unit weighs only 20½ lbs. for easy carrying. The amplifier frequency response is 30 to 15,000 cycles. Special circuit designed for musical instruments, provides a full 12 watts power at less than 5% distortion (over 90% of full output at less than 2% distortion). Exceptionally efficient big full 12" Alnico V permanent magnet speaker in an acoustically designed enclosure. A kickproof grill gives real protection for speaker. Case construction gives needed rigidity for best tone and freedom from rattles and strength necessary to stand the abuse of constant traveling. Amplifier mounting screws enter into metal inserts. The case is covered in durable, washable, airplane type fabric. Truly a professional instrument. Built for years of trouble free service under the most rugged conditions. U/L Approved.

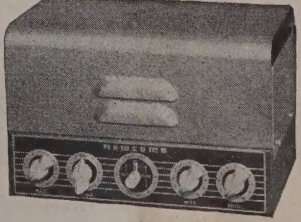
SPECIFICATIONS: Power Consumption: 65 watts at 117 volts, 60 cycles A.C. Tubes (5): 1-6SC7, 1-6SF5, 2-6V6GT, and 1-5Y3GT. Size: 9¼" deep x 14⅞" x 18⅜" high. WEIGHT: 23 lbs. LIST: (with tubes) $115.00.

(All Prices & Specifications subject to change)

RESTAURANT AMPLIFIER

PM-10 PM-10 differs from usual phono or P.A. Amplifiers in that a switch on the panel cuts music and selects area to be paged. When paging, tonal adjustments set for music are automatically cut and flat response is substituted for proper voice quality. Paging Switch returns to music and music response when released. Operator has choice of paging "All" or a selected area. Bass boost tone control and separate high frequency tone control for boost or attenuation give desired response for music. Ideal for use with Long Playing Microgroove Changers for good music at lowest cost with added feature of paging. U/L Approved.

SPECIFICATIONS: POWER OUTPUT: 10 watts at less than 5% distortion. Frequency Response: ±1 db., 40 to 15,000 cycles. Mike Input (2 meg.) gain 105 db. Phono Input (½ meg.) gain 77 db. Bass tone control range: 0 to +14 db. Treble Tone Control Range: +15 db. to —22 db. Output Impedances: .7, 1.4, 4, 8, and 16 ohms. Etched metal illuminated panel. Two-toned, grey, baked enamel hammertone finish. Tubes (5): 1-6SC7, 1-6SN7, 2-6V6GT, 1-6X5GT. Dimensions: 11⅛" x 6¼" x 6⅝" high. WEIGHT: 10¼ lbs. LIST: (with tubes and cover) $95.00. Plug Kit: $1.97.



Newcomb AUDIO PRODUCTS COMPANY
6824 LEXINGTON AVENUE • LOS ANGELES 38, CALIFORNIA

Newcomb

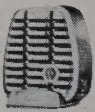
COMBINATION TRANSCRIPTION PLAYERS—P. A. SYSTEMS

TR-25AM

TR-16AM

TR-25AM A 25 watt, 3-speed transcription player and P.A. system that plays all records up to 17¼". Features 2 mike inputs and separate tone controls for phono and mike with second mike unaffected by either set of tone controls. Speed control knob provides variation from any of the three basic speeds, 33⅓, 45 or 78 rpm. Scratch suppressor controls surface noise. Pickup is twist type, dual needle G.E. variable reluctance. "Floating Sound" prevents needle skipping due to jars. Two 12" speakers in split case, protected by kickproof metal grills. Each has 25' cord. Amp-phono case is 16¼" x 16¼" x 7⅞", weighs 36 lbs. Speaker case 16¼" x 16¼" x 12", weighs 19 lbs. Power Output: 25 watts at less than 5% distortion. Frequency response ±2 db 40-15,000 cycles. Inputs for 2 high impedance mikes, gain 120 db. Tubes (10) 2-6SC7, 1-6SJ7, 1-6SN7, 4-6V6GT, 2-5Y3. Output impedances 4 or 8 ohms to two speaker sockets. Power consumption 130 watts 117 volts 60 cycles A.C. including phono motor. LIST: $352.50.

TR-16AM Deluxe 10 watt, 3-speed player and P.A. system plays all records up to 17¼". Separate mike and phono volume controls allow mixing. Individual bass and treble tone controls prevent phono bass boost from adding unwanted bass to mike. 3-speed motor is also variable. Has extra speaker socket, an A.C. receptacle, and a radio jack for connecting to phono changer or B-100 radio. Scratch suppressor controls surface noise. Pickup is G.E. dual needle, variable reluctance, magnetic. "Floating Sound" avoids needle skipping. 12" Alnico #5PM dynamic speaker in removable lid with 25' cord and kickproof grill. Size: 14¾" x 15¾" x 11⅞". Weight 33 lbs. Power consumption 70 watts 117 volts 60 cycles A.C. including phono motor. Amp. response ±2 db 50-10,000 cycles. Tubes (6) 2-6SC7, 1-6SJ7, 2-6V6GT, 1-6X5GT. LIST: $235.00.


CR-11

T-112R

TR-16A A 10 watt, 3-speed player and P.A. system with dual needle, crystal pickup. Has all features of TR-16AM except scratch suppressor. Needles are semi-permanent, easily replaceable. Tubes (5) 1-6SC7, 1-6SJ7, 2-6V6GT, 1-6X5GT. Weight 33 lbs. LIST: $212.50.

TR-16M A 10 watt, 2-speed player and P.A. system with G.E. variable reluctance, magnetic pickup and the Newcomb scratch suppressor. Plays 33⅓ and 78 rpm records up to 17¼". Otherwise identical to TR-16AM. LIST: $212.50.

TR-16 A 10 watt, 2-speed player and P.A. system with crystal pickup (no scratch suppressor) otherwise identical to TR-16A. LIST: $189.00.

T-112R EXTRA SPEAKER for TR-16 series. A 12" Alnico #5PM dynamic, with 25' cord, kickproof metal grill. Plywood case covered with fabricoid. Size 16¼" x 16¼" x 7⅞". Weight 12 lbs. LIST: $45.00.

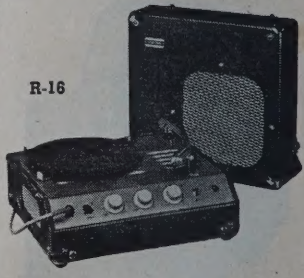
CR-11 NEWCOMB-SHURE hand or desk mike. For all TR models and R-16. New controlled reluctance principal combines good voice with ruggedness. Has on-off switch. Comes with bracket for mounting in system case, 7' cable and plug. LIST: $23.75.

R-12

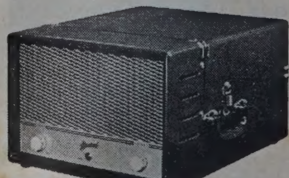
NEWCOMB PORTABLE PHONOGRAPHS AND RADIOS

R-12 Here is "Console" quality in a portable case only 13¾" x 14⅛" x 7¾" weighing only 20 lbs. Complete A.C. construction. Has a 5 watt amp. with inverse feedback. A 3-speed turntable with crystal pickup and a 6" x 9" Alnico #5 dynamic speaker. Plays 33⅓, 45 or 78 rpm records any size up to 12". Has tone control, volume control and pilot light. "Floating Sound" prevents needle skipping. Case is plywood covered with fabricoid. Speaker grill is kickproof metal. Designed especially for classroom use, it is ideal wherever portable quality is desired. LIST: $79.50.

R-16



R-16 A 3-speed transcription player and P.A. system for schools. Weighs only 22 lbs. in case 14" x 15" x 8½". Has a 5 watt straight A.C. amp. with inverse feedback and a 10" Alnico #5 dynamic speaker. A mike input jack and mixing volume control make it a practical P.A. system. Speaker section has 25' cord. Plays all control, volume control and pilot light. "Floating Sound" prevents needle skipping. Panel includes pilot light, tone control, mike volume control, and phono volume control. Speaker protected by kickproof metal, case is plywood covered with fabricoid. LIST: $115.00.


RC-12

RC-12 Combines a dependable 3-speed record changer with all the quality and performance features of the R-12 model. Plays all records up to 12". Smartly styled case is plywood covered with fabricoid, size 14⅜" x 9⅝" x 18½". Weighs only 31½ lbs. LIST: $115.00.

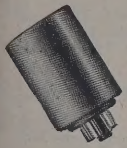
B-100 A portable AM radio, extremely sensitive, gives exceptional performance in all areas. Has built-in loop. 3-gang design eliminates heterodynes squeals and assures adequate selectivity. Has jack for connection to any TR-16 series system for added volume. May also be used for headphones. All A.C. construction. Speaker is 6" Alnico #5PM dynamic. Amp. design utilizes inverse feedback circuit and beam powered output. Plywood cabinet covered in two-toned fabricoid. Metal grill protects speaker. Size 7⅝" x 14¼" x 8". Weighs 13¼ lbs. Tubes (6) 2-6SK7, 1-6SA7, 1-6SQ7, 1-6V6GT, 1-6X5GT. LIST: $69.50.

B-100

(All Models Subject to Excise Tax) **ALL MODELS U/L APPROVED**

All Prices and Specifications Subject to Change Without Notice.

Newcomb **AUDIO PRODUCTS COMPANY**
6824 LEXINGTON AVENUE • LOS ANGELES 38, CALIFORNIA



TR-91: A distinct contribution to high quality P.A. systems. Features sextuple alloy and copper shielding for quiet operation right in amp. proper; alloy core and specially designed windings for extended frequency response from 20 to 20,000 cycles; plug base for easy installation without tools in any H or K series Newcomb amp. For use between 30-50 or 200-250 ohm mikes and grid. Shipping weight, 1¼ lbs. LIST: $27.50.

TR-92: Input impedance 5,000 ohms to grid for bridging a 500-600 ohm line. Alloy shielded for minimum hum. When plugged into the socket provided on K50B, H50B, H25B, it converts these amps for use as bridging amps. Shipping weight, 1¼ lbs. LIST: $25.00.

TR-100: Identical to TR-91 but designed for use between 125-150 or 500-600 ohm microphone and grid. LIST: $27.50.

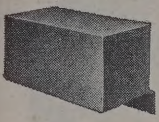
LS-4

LS-5

LS-2: (not shown) High Power Impedance matching auto-transformer having 28 impedance from 580 ohms to 1.21 ohms. Capacity 100 watts. Shipping weight, 5¼ lbs. LIST: $22.50.

LS-4: Multi-winding general purpose transformer. Range of impedance from 3,000 to 18,000 ohms in steps of 1,500 ohms. Capacity 8 watts. LIST: $10.00.

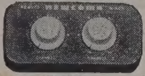
LS-5: Transformer: Similar to LS-4 with range of impedances from 500 to 3,000 ohms in steps of 250 ohms. Capacity 20 watts. LIST: $12.50.



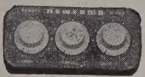
TC

TC-: Weatherproof housing for use with all three transformers. Box size: 3¼" x 4" x 5¾". LIST: $7.50.

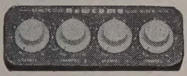
REMOTE CONTROL UNITS



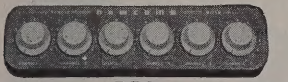
RC-2



RC-3



RC-4



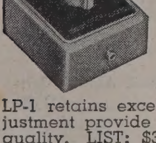
RC-6

Permit mixing and fading from a remote point all "H" Series microphone inputs. On "K" Series, all microphone inputs PLUS phonograph may be controlled. Up to 2000 ft. cable may be used. No inductive pickup.

RC-2 for H-15 amp. Requires ordinary 3 wire cable. Dimensions: 2¾" x 6" x 2⅛". Shipping weight: 1 lb. LIST: $10.50.

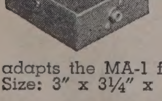
RC-3 for H-25 or H-4 amplifiers. Requires ordinary 4 wire cable. Dimensions: 2¾" x 6" x 2⅛". Shipping weight: 1 lb. LIST: $15.50.
RC-4 for H-50 amp. Requires ordinary 5 wire cable. Dimensions: 2¾" x 7⅝" x 2⅛". Shipping weight: 1¼ lbs. LIST: $19.50.
RC-6 for KX-25, KX-50, KX-6A amplifiers. Requires ordinary 7 wire cable. Dimensions: 2¾" x 11¼" x 2⅛". Shipping weight: 2 lbs. LIST: $27.50.

LP-1 SCRATCH FILTER

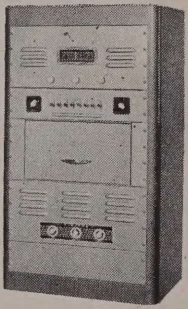


For improved record response. Simple to install in commercial or professional systems or home phonographs. Wired between a crystal pickup and an amplifier, it greatly improves the response of the pickup and provides a remarkably effective control of needle scratch. Unlike other methods the LP-1 retains excellent brilliance of response. Four steps of adjustment provide adequate control for all records, regardless of quality. LIST: $30.00.

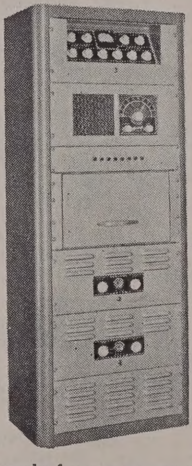
MA-1 MAGNETIC PICKUP ADAPTER



MA-1 provides an inexpensive means of connecting variable reluctance pickups such as the new G.E., to any mike input. Added feature is an effective scratch filter which cuts in or out with switch. Initial wiring is for G.E. Pickup. Simple jumper charge quickly adapts the MA-1 for others such as Pickering, Lear, Astatic, etc. Size: 3" x 3¼" x 1¼". Shipping weight: 1 lb. LIST: $6.50.



MODEL 4151C: Designed to furnish phonograph, A.M. Radio, or Wired Music, plus paging facilities to 6 selected areas. A 50 watt amplifier supplies ample power for the majority of applications. Operating controls include a monitor key, monitor volume control, an "all" key, and a program selector. Provides inputs for two microphones. Construction is by individual panels permitting future modifications to fit changing needs. Phono is enclosed in a ball bearing slide drawer. Radio is a dependable, full A.C., A.M. Radio. For detailed amplifier specifications refer to Model E-50. Special sockets permit use of plug-in type input transformers for low impedance mike input and balanced line wired music input when desired. Includes a monitor speaker wired to permit checking of program before connecting to various areas. Amplifier plate supply is relay operated. LIST: (with tubes and plugs) $950.00. (Subject to Excise Tax.)



RACK AND PANEL ASSEMBLIES

To assist engineers in assembling sound units, for the varied applications of industry, schools, churches, fairs, stadiums, etc., Newcomb offers the basic elements for custom cabinet rack systems. Designed for flexibility, the rack assemblies enable the engineer to install public address equipment of the highest quality, tailored to each customer's exact needs. Any standard Newcomb amplifier may be obtained panel mounted on special order in 19" x 8¾" panels, thus giving the custom designer a wide choice of equipment to meet any need.

MODEL 595-19 CABINET: (Illustrated) Supplies a demand for a beautifully finished housing that is fully in keeping with the Newcomb tradition and reputation for quality. Panel space is 56". Design accepts standard 19" wide panels. Mounting holes are RMA standard 1¼" and ½" spacings. Panel mounting holes are tapped in ⅛" stock. Fully ventilated rear door provides easy accessibility. Entire cabinet is a complete welded assembly ready for use as you receive it. Finish is dark grey hammertone. Provision is made in the rear for nine ½" conduits. Included is a removable terminal strip mounting plate located near conduit inlets. Overall dimensions: 59½" x 23" wide x 16" deep. Shipping weight: 92 lbs. LIST: $189.50.

MODEL 385-19 CABINET: Identical to model illustrated except that it provides 35" of panel space for standard 19" panels. Mounting holes are standard RMA, 1¼" and ½" spacings. Overall dimensions: 38½" x 23" wide x 16" deep. Shipping weight: 72 lbs. LIST: $149.50.
In addition to the panel mounted amplifiers Newcomb also provides a wide selection of other equipment designed for custom rack installations.

MODEL 1050-C PHONOGRAPH CHANGER PANEL is a practical solution to mounting a phono changer in cabinet 595-19. Ball bearing drawer with wood motor board is adaptable for mounting most popular changers. Panel size 19" x 10½". All panels are finished in silver-grey hammertone baked enamel. **MODEL E2-525 PRE-AMPLIFIER** answers the need for a simple, dependable but economical pre-amp for rack use. **MODEL TB2-525 INTERCOM AMPLIFIER** has built-in power supply, speaker, talk-listen switch and separate talk and listen volume controls. **MODEL B-100-875 AM RADIO** is the Newcomb B-100 radio mounted on an 8¾" panel. (See listing page B-35.) **MODEL 700-MP MONITOR** is available for installation of any 6" speaker. **LEVER KEY PANELS** are provided for use with CRL keys, 3½" deep with slots for 6, 8, 10 or 12 keys. **LOUVERED PANELS** for additional ventilation and **BLANK PANELS** are made in assorted sizes. A self-powered **TONE GENERATOR** can be furnished on special order on panel 3½" deep. **SPECIAL PANELS** are made to order to fit special equipment. Templates or suitable drawings must accompany order for any special sheet metal work. Full details of Newcomb rack and panel equipment available on request.

(All Newcomb specifications and prices subject to change without notice)

Bogen SOUND EQUIPMENT

MODEL HX50

50 WATTS

SPECIFICATIONS

POWER OUTPUT: 50 watts at less than 3%.
PEAK POWER: 90 watts.
FREQUENCY RESPONSE: 20-20,000 cycles ±2 db.
TONE CORRECTOR RANGE: bass control: —30 to +20 db at 100 cycles; treble control: —14 to +21 db at 10,000 cycles.
HUM: Fund.: —65 db. Mic.: —58 db.
OUTPUT IMPEDANCE: 4-8-15 ohm and 2 constant voltage taps (70 and 140 V).
POWER CONSUMPTION: 240 watts, 117 V, 50-60 cycles AC.
TUBES: Total 12. 5-6SC7, 2-6SL7, 1-6SN7, 1-5R4GY, 2-807, 1-5Y3.
DIMENSIONS: 17" long, 9" high, 14" deep.

THREE MICROPHONE CHANNELS — ONE PHONOGRAPH CHANNEL — DUAL ELECTRONIC TONE CORRECTORS — CONSTANT VOLTAGE OUTPUT UNDERWRITERS' LABORATORIES APPROVED

The proudest achievement in Bogen's 20 years of sound leadership. Incorporates the new Bogen ANTI-FEEDBACK CONTROL which permits easy "tuning out" of acoustic feedback. Allows greater output to be used—makes mike placement less critical—stabilizes entire sound system.

Model HX50

HX50 HIGH IMPEDANCE AMPLIFIER: Complete with tubes.
List Price.......$279.40

HXL50 LOW IMPEDANCE AMPLIFIER: Same as HX50 but first microphone input is low impedance 200 ohms. (50 or 500 ohms available if specified.)
List Price.......$304.15

HX30 HIGH IMPEDANCE AMPLIFIER: Similar to HX50 but 30 watts output.
List Price.......$219.45

MODEL H30

30 WATTS

SPECIFICATIONS

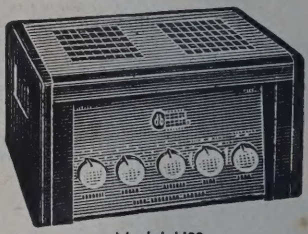
POWER OUTPUT: 30 watts at less than 5%.
PEAK POWER: 40 watts.
FREQUENCY RESPONSE: 30-12,000 cycles, ±2.5 db.
GAIN: Microphone: 119 db. Phono: 77 db.
HUM: Fund.: —68 db. Mic.: —60 db.
OUTPUT IMPEDANCE: 4-8-16 ohms and 70V-TAP (167 ohms.)
POWER CONSUMPTION: 140 watts, 117 V, 50-60 cycles AC.
TUBES: Total 7: 3-6SF5, 1-6SL7, 2-6L6G, 1-5U4G.
DIMENSIONS: 15½" long, 11" deep, 7½" high.

TWO MICROPHONE CHANNELS — ONE PHONOGRAPH CHANNEL SIX POSITION MULTI-RANGE TONE CORRECTOR LOW NOISE LEVEL — UNDERWRITERS' LABORATORIES APPROVED

H30 HIGH IMPEDANCE AMPLIFIER: Complete with tubes.
List Price.......$132.83

HL30 LOW IMPEDANCE AMPLIFIER: Same as H30 but first microphone input is low impedance, 200 ohms. (50 or 500 ohms available if specified.)
List Price.......$157.58

H15 HIGH IMPEDANCE AMPLIFIER: Similar to H30 but 15 watts output.
List Price.......$114.13


Model H30

MODEL H623

23 WATT MOBILE SYSTEM

SPECIFICATIONS

POWER OUTPUT: AC: 23 watts at 5%. DC: 20 watts at 5%.
PEAK POWER: 30 watts.
FREQUENCY RESPONSE: 30-14,000 cycles ±2.5 db.
GAIN: Microphone channel: 116 db. Phono channel: 73 db.
HUM: AC: Fund.: —74 db.; Mic.: —60 db. DC: Fund.: —75 db.; Mic.: —62 db.
OUTPUT IMPEDANCE: 4-8-15 ohms and 70 V.
POWER CONSUMPTION: 115 watts, 117 V. AC; 14 amp, 6 V DC.
TUBES: Total 6: 2-6SF5, 1-6SL7GT, 2-6L6G, 1-7Z4.
DIMENSIONS: 15¼" long, 10⅞" deep, 10⅛" high.

UNIVERSAL OPERATION 6 VOLT DC OR 110 VOLT AC ONE MICROPHONE CHANNEL — ONE PHONOGRAPH CHANNEL SIX POSITION TONE CORRECTOR BUILT-IN PHONOGRAPH — UNDERWRITERS' LABORATORIES APPROVED

H623 AMPLIFIER: Complete with phono and tubes.
List Price.......$204.88

H623TJ OUTDOOR SYSTEM: Includes: H623 amplifier with tubes; 1 Jensen VH20 projector unit, 1 Bogen-Shure 710 crystal microphone with stand adapter, 7' cable and plug.
List Price.......$291.83

H623TU OUTDOOR SYSTEM: Same as H623TJ substituting Bogen-University PH trumpet with MA25 unit.
List Price.......$269.83

Model H623

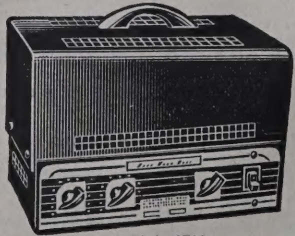
MODEL HE10

10 WATTS

SPECIFICATIONS

POWER OUTPUT: 10 watts at 4%.
PEAK POWER: 15 watts.
FREQUENCY RESPONSE: 60-10,000 cycles, ±1.5 db.
GAIN: Mic. channel: 117 db. Phono channel: 66 db.
HUM: Fund.: —66 db. Mic.: —59 db.
OUTPUT IMPEDANCE: 4-8-15-500 ohms.
POWER CONSUMPTION: 70 watts, 117 V, 50-60 cycles AC.
TUBES: Total 5: 1-6SJ7, 1-6SL7, 2-6V6, 1-5Y3GT.
DIMENSIONS: 7" deep, 11" wide, 7¼" high.

ONE MICROPHONE CHANNEL — ONE PHONOGRAPH CHANNEL SIX POSITION MULTI-RANGE TONE CORRECTOR — PUSH-PULL OUTPUT FIVE TUBE, HIGH GAIN CIRCUIT — LOW NOISE LEVEL UNDERWRITERS' LABORATORIES APPROVED


Model HE10

HE10 HIGH IMPEDANCE AMPLIFIER:
List Price.......$71.23

HEL10 LOW IMPEDANCE AMPLIFIER: Complete with tubes. Same as HE10 but microphone input is low impedance, 200 ohms. 50 or 500 ohms available on transformer.
List Price.......$95.98

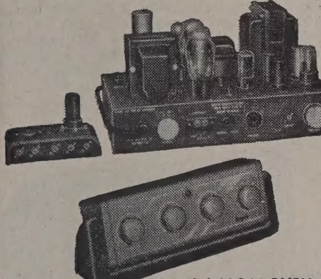
FOR FURTHER INFORMATION ON AMPLIFIERS AND COMPLETE BOGEN SYSTEMS ASK FOR THE LATEST BOGEN CATALOG

PRICES IN ZONE 2 ARE APPROXIMATELY 5% HIGHER • ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

DAVID BOGEN CO., INC., NEW YORK 14, N. Y.

Bogen HIGH FIDELITY EQUIPMENT

MODEL HO10
10 WATT POWER AMPLIFIER
and
MODEL RXPX
REMOTE CONTROLLER-PREAMPLIFIER


Model HO10-RXPX

THE BOGEN BATON—THE VERY FINEST IN HIGH FIDELITY

YOU lead the orchestra right from your armchair with this magnificent new equipment—a combination of all triode 10-watt power amplifier and brilliantly executed remote controller. HO10-RXPX reproduces broadcast or recorded music with less than three-tenths of one percent distortion, provides complete remote control of power, function selection, volume, turnover frequency and bass and treble tones (separately). Preamplifier section has inputs for AM, FM, TV and all popular phono cartridges. Remote control cabinet complements every decor. Underwriters' Laboratories Approved.

SPECIFICATIONS

POWER OUTPUT: 10 watts at three-tenths percent distortion; Peak 25 watts.

FREQUENCY RESPONSE (at 10 Watts):
HO10 only: 10 to 20,000 cps ± .2 db. 10 to 50,000 cps ± 1.8 db.
HO10 with RXPX: 10 to 20,000 cps ± 1.5 db. 10 to 50,000 cps ± 2.5 db.

GAIN: HO10 only: 75 db; Tuner input to RXPX-HO10: 80 db.; G.E. Cartridge input to RXPX-HO10: 101 db.

HUM: HO10 with RXPX: Fund.: —70 db. Max.: —60 db.

OUTPUT IMPEDANCE: 12 ohms (may be used with 8 to 16 ohm loads with no perceptible increase in distortion).

INPUTS: G.E. Phono; Pickering Phono; Tuner: 500,000 ohms.

TONE CONTROL ACTION: (With RXPX): Bass: +19 to —20 db. at 100 cps. Treble: + 14 to —16 db. at 10,000 cps.

DAMPING FACTOR: Exceeds 20.

POWER CONSUMPTION: 150 watts at 117 volts, 60 cps.

TUBES: HO10: 1-6SL7GT, 2-6SQ7, 1-6SN7GT, 2-6B4G, 1-6X5GT, 1-5V4G. RX: 1-12AX7. PX: 1-6SC7.

DIMENSIONS: HO10: 15" w. x 10"d. x 8" h. RX: 12⅜" w. x 3¾" d. x 4½" h. PX: 6" w. x 3½" d. x 3¾" h.

WEIGHT: HO10: 25 lbs. RXPX: 3 lbs.

HO10—Power Amplifier and tubes	**List Price $159.50**
RXPX—Remote Controller and Preamplifier	**List Price $ 90.75**
EXT-20—20 ft. extension cable for RXPX	**List Price $ 16.50**

MODEL PX15
15 WATT PHONO AMPLIFIER

SPECIFICATIONS

POWER OUTPUT: 15 watts at less than 2% distortion. **PEAK POWER:** 30 watts.

FREQUENCY RESPONSE: 30-20,000 cycles ±1½ db.

TONE CORRECTOR RANGE: Bass control: —23 db. to +20 db. at 60 cps. Treble control: —20 db. to +20 db. at 10,000 cps.

GAIN: Magnetic: 106 db.; Crystal: 78 db.

HUM: —75 db (referred to rated output).

OUTPUT IMPEDANCE: 4-8-16-500 ohms.

POWER CONSUMPTION: 117 V, 50-60 cycles, 105 watts.

TUBES: Total 6: 1-12SJ7, 1-12AU7, 1-6SL7, 2-6L6G, 1-5Y3GT.

DIMENSIONS: 15" x 8" x 9¼".

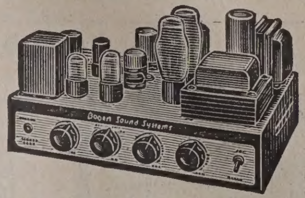
A SUPERB AMPLIFIER FOR THE MOST CRITICAL LISTENER

New rangemaster control corrects for various conditions of record noise. Built-in preamplifier for G.E., Pickering, Astatic and similar magnetic pickups. Preamplifiers and voltage amplifier tubes use D.C. heated filaments for minimum hum. Dual tone controls provide bass boost and attenuation, treble boost and attenuation. Fifteen watts output at less than 2%. Provision for simple external switching of pickup and tuner removing preamplifier load when tuner is in the circuit. Underwriters' Laboratories approved.

PX15 AMPLIFIER and tubes (less cage).
List Price $160.33

EXT-5 4 ft. control extension kit for PX15, to facilitate cabinet installations.
List Price $23.38

CAG15—Cage for PX15.
List Price $7.26



Model PX15

MODEL DB10
10 WATT PHONO AMPLIFIER

SPECIFICATIONS

POWER OUTPUT: 10 watts at 3%.

PEAK POWER: 15 watts.

FREQUENCY RESPONSE: 30-18,000 cps ± 1 db.

GAIN: Phono: 70 db.; with preamp. section: 92 db.

HUM: —68 db. (referred to rated output).

OUTPUT IMPEDANCE: 4, 8 and 16 ohms.

POWER CONSUMPTION: 70 watts at 117 v, 60 cps.

TUBES: 1-6SC7, 1-6SL7, 2-6V6GT, 1-5Y3GT.

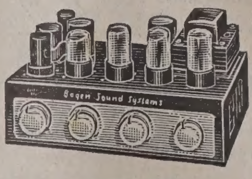
DIMENSIONS: 11" w. x 7" d. x 7 5/16" h. (with cage.)

WEIGHT: 15 lbs.

TONE CONTROL: Bass: +19 to -20 db at 100 cps. Treble: +14 to -16 db at 10,000 cps.

FOR TRUE HIGH FIDELITY AT MODERATE COST

Separate bass and treble controls. Built-in preamplifier for G.E., Pickering, Astatic and similar magnetic pickups. Provision for simple external switching of pickup and tuner, removing preamplifier load when tuner is in circuit. Extremely low hum and noise level. Underwriters' Laboratories Approved.



Model DB10

DB10 AMPLIFIER and tubes (less cage).
List Price $90.75

EXT-4 4 ft. control extension kit for DB10, to facilitate cabinet installations.
List Price $19.25

CAG8—Cage for DB10.
List Price $5.78

MODEL PH10
10 WATT MULTI-RANGE PHONO AMPLIFIER

MODEL PH10 AMPLIFIER: Complete with tubes.
List Price $56.38

EXT-2 4 ft. control extension kit for PH10, to facilitate cabinet installations.
List Price $11.00

MULTI-RANGE TONE SWITCH WITH FOUR LABORATORY SELECTED RESPONSE CURVES — VIRTUALLY HUMLESS PERFORMANCE IN ANY TONE POSITION — PUSH-PULL OUTPUT.

SPECIFICATIONS

POWER OUTPUT: 10 watts at 5%.

PEAK POWER: 14 watts.

FREQUENCY RESPONSE: (Full Range) 40-15,000 cps ±1 db.

GAIN: 72 db.

INPUT IMPEDANCE: (1) 500,000 ohms.

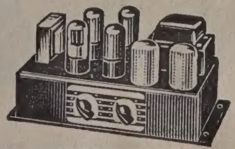
OUTPUT IMPEDANCE: 3.2 and 8 ohms.

HUM: —80 db. (referred to rated output).

POWER CONSUMPTION: 60 watts, 117 V, 60 cycles.

TUBES: Total 4: 1-6SL7GT, 2-6V6GT, 1-5Y3GT.

DIMENSIONS: 5" x 11" x 3" (overall height 6").


Model PH10

WRITE FOR DESCRIPTIVE HIGH FIDELITY FOLDER LISTING ADDITIONAL UNITS.

PRICES IN ZONE 2 ARE APPROXIMATELY 5% HIGHER • ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

DAVID BOGEN CO., INC., NEW YORK 14, N. Y.

Bogen CENTRALIZED SOUND SYSTEMS AND COMMUNO-PHONES

BOGEN CENTRALIZED SCHOOL SOUND SYSTEMS: The entirely new Bogen centralized school systems now make available to progressive educators an instructional tool for which they have long sought. Simple—yet versatile—the new systems provide for radio and record program transmission selectively to any or all classrooms. Skillful design, which embodies many exclusive features, enables the entire school body to participate in dramatic presentations, school debates and similar activities where the audience was previously limited to the seating capacity of the auditorium.

Bogen Centralized School Sound Systems are designed to meet every requirement of the modern educational institution, regardless of size. They comply fully with requirements of the U. S. Office of Education and the RTMA. Simplicity of operation enables the administrator to reduce confusion and thus to assure efficient, effective work in all departments. Versatility of the systems speeds learning, provides instant communication for fire drills and supplements the general routine.

Write for Complete Descriptive Catalog C10-51S.

BOGEN CUSTOM DIVISION: The Custom Division of the David Bogen Co. is maintained for the express purpose of offering engineering consultation on custom built requirements. This technical service covers initial design and layout of electrical specifications of any sound installation, large or small.

Although the David Bogen Co. manufactures the largest and most complete line of standard and De Luxe sound equipment, very often a customer's problem requires the design and construction of special equipment to meet particular requirements.

We invite you to submit your sound problems, technical inquiries, or requests for quotations on special equipment to our Custom Division. If no specifications are available for your particular problem, merely send a description and pencilled sketch of the intended installation to our Custom Division. Its Engineering Staff is equipped with the finest facilities in the country and they will be glad to aid you in the solution of your particular problem, without obligation.

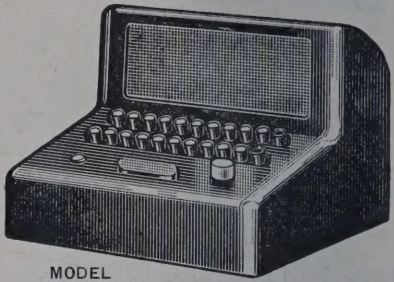
NEW BOGEN DELUXE COMMUNO-PHONE SYSTEMS

Two Versatile Models to Solve Every Intercommunication Problem

MODEL "X"—Completely universal. Will serve installations requiring single master and several remote stations—installations requiring several masters—or installations requiring several masters and several remotes. Hand-rubbed walnut finished cabinets; typewriter keyboard action; automatic busy signal; provision for plug-in of handset; 115 v. A.C.; U.L. Approved.

MODEL "D"—Serves installations requiring either a single master and several remote stations or several master stations only. Operates on voice coil lines. Will not serve installations requiring a combination of several masters and remotes. A.C.-D.C.; no busy signal; similar to Model "X" in other respects.

WRITE FOR LATEST BOGEN COMMUNO-PHONE CATALOG


MODEL
21X, 21D

CHALLENGER SOUND EQUIPMENT

30 WATT AMPLIFIER

FEATURES

- Individual controls for two microphones, phonograph, selectone.
- Terminal strip and 2 speaker plug-in sockets for connection of speaker lines.
- Moulded bakelite sockets throughout.
- Inverse feedback for better response and regulation.
- Extractor type fuse. • Recessed carrying handles.
- Underwriters' Lab. Approved.

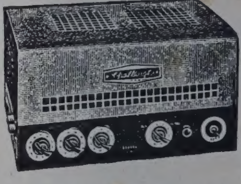
Model CH30X

MODEL CH30X—30 watt amplifier, tubes and built-in phono. top. **List Price**............................**$121.28**

MODEL CH30XP-1—Complete portable system containing 1-CH30X amplifier with tubes; 2-12″ Alnico V PM speakers, each with 25 ft. cable and plug, mounted in split portable case which also carries amplifier; 1 BOGEN-Shure 710 Crystal Microphone with Stand Adapter, 7 ft. cable and plug.
List Price...**$198.00**

SPECIFICATIONS

Power Output: 30 watts.
Response: 30-12,000 c.p.s. ±2 db.
Gain: Mic. No. 1: 118 db. Mic. No. 2: 118 db. Phono: 85 db.
Output Impedances: 4, 8, 15 ohms, 70 volts.
Tubes: 2-6SC7, 1-6SL7GT, 2-6L6G, 1-5U4G.
Tone Control: SelecTone.
Dimensions: CC30: 15″ W. x 10″ D. x 8″ High.


Model CH30

MODEL CH30—30 watt amplifier, tubes and cage.
List Price...**$96.80**

MODEL CH30P-1—Complete portable system containing 1-CH30 amplifier with tubes, cage; 2-12″ Alnico V PM speakers, each with 25 ft. cable and plug, mounted in split portable case which also carries amplifier; 1 BOGEN-Shure 710 Crystal Microphone with Stand Adapter, 7 ft. cable and plug.
List Price...**$170.50**

MODEL CH618 18 WATT UNIVERSAL MOBILE AMPLIFIER

For 115 Volt A.C. and 6 Volt D.C.

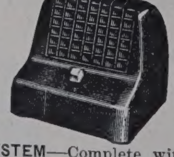
Features individual controls for microphone, phono, tone; inverse feedback for better response and regulation; constant voltage output for easy speaker matching. Built-in constant speed phonograph. Complete with tubes and cage. Underwriters' Lab. Approved.

List Price...**$153.18**

SPECIFICATIONS

Power Output: 18 watts.
Response: 30-12,000 c.p.s. ±2 db.
Gain: Mic.: 118 db.. Phono: 78 db.
Output Impedances: 4, 8, 15 ohms, 70 volts.
Tone Control: SelecTone.
Tubes: 2—6SF5, 1—6SL7GT, 2—6V6GT, 1—7Z4.
Dimensions: 15″ Wide x 10″ Deep x 10″ High.

CHALLENGER INTERCOM SYSTEMS



CHALLENGER 200 is a complete system—a master, a remote station and 50 ft. of cable. Operates 117V. AC-DC. Dual-Duty volume control keeps remote "alive" or permits master to silence it. Excellent for nursery, restaurant, business use. Underwriters' Lab. Approved.

CHALLENGER 200 SYSTEM—Complete with 50 ft. of cable and plugs.
List Price...**$43.95**

CHALLENGER 600 Master may be used in one of two systems: (1) A single master with up to five remote stations; (2) An all master system of six stations. Operates 117 V AC-DC. In sturdy beautiful polystyrene cabinet. Remote can initiate calls also. Underwriters' Lab. Approved.

CHALLENGER 600 MASTER with tubes. **List Price**..................**$39.05**
CHALLENGER 60R REMOTE STATION.
List Price..................................**$12.93**

For complete listings of CHALLENGER Amplifiers, Systems and Intercoms, ask for latest CHALLENGER catalog.
PRICES APROXIMATELY 5% HIGHER IN ZONE 2.

CHALLENGER AMPLIFIER CO., NEW YORK 14, N. Y.

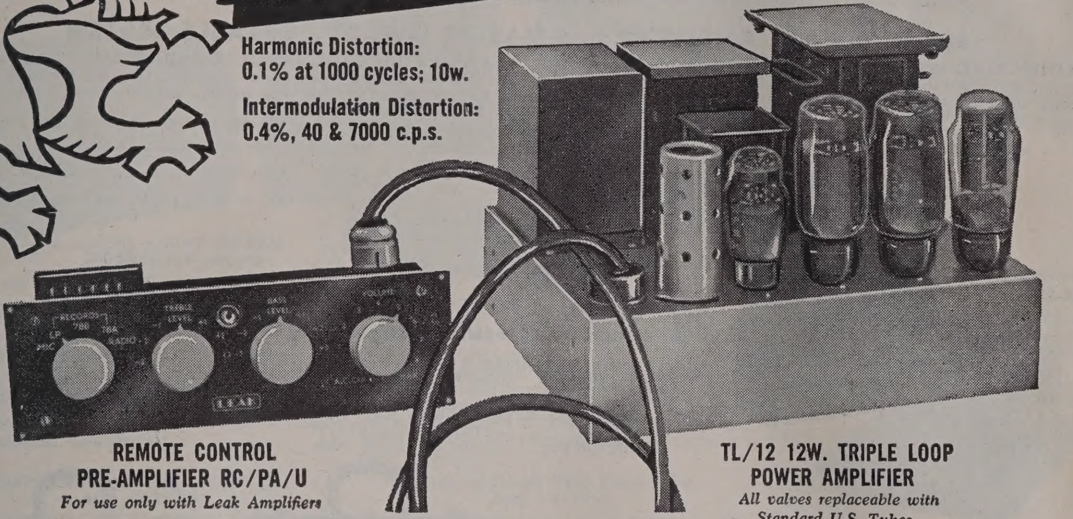
LEAK "POINT ONE"

Britain's Best AUDIO AMPLIFIER

Frequency Response 20—20,000 cycles, ±0.1 db.

Harmonic Distortion: 0.1% at 1000 cycles; 10w.

Intermodulation Distortion: 0.4%, 40 & 7000 c.p.s.



REMOTE CONTROL PRE-AMPLIFIER RC/PA/U
For use only with Leak Amplifiers

TL/12 12W. TRIPLE LOOP POWER AMPLIFIER
All valves replaceable with Standard U.S. Tubes

A Leak two-stage feedback tone-control pre-amplifier of negligibly low distortion in which resonant circuits or resonant filters are not used. This pre-amplifier is a complete re-design, electronically, of the original RC/PA and of the modified version previously supplied to the U.S. market. The RC/PA/U will meet world conditions of use, and it embodies not only the best features of the previous models but every refinement suggested by users in Britain and the U.S., with additions considered desirable by ourselves.

Will operate from Audak, G. E. or Pickering Cartridges; from any moving coil microphone; from any radio unit.

Equalization circuit: Proper equalization positions for LP records, Foreign or American recordings of all speeds.

Switching for Pick-up, Microphone and FM-AM tuner, with automatic alterations of tone-control characteristics.

Controls: Input Selector; Bass Gain and Loss; Treble Gain and Loss; Volume with AC on-off switch to permit switching of remotely placed power amplifier.

Output Impedance: 0-30,000 ohms at 20 kc.p.s.

Panel light serves as a visual reminder.

Chassis: 10" x 3" x 2¾" high.

Front Panel: 10¾" x 3½".

The Leak Amplifier offers exceptional performance and reliability in a manner acceptable both to the amateur enthusiast and the professional communications engineer seeking the highest available standard of sound reproduction. Incorporates a Leak 3 stage triple loop feedback circuit, the main loop giving 26 db. feedback and covering the complete amplifier from input to output terminals.

Push-pull triode output stage, 400 V. on Anodes. No H. V. electrolytic smoothing or decoupling condensers. Impregnated transformers; tropically finished components. H. V. and L. V. supplies for pre-amp. and radio units. **Distortion:** 1/10 of 1% at 1000 c.p.s. and 10 w. output: no significant increase at any other frequencies. **Hum and noise:** minus 80 db. on 10 w. **Frequency response:** ±0.1 db. from 20 c.p.s. to 20,000 c.p.s. **Sensitivity:** 160 mV. **Damping factor:** 40, with negligible variation throughout power range. **Input impedance:** 1 meg. **Output impedances:** 2, 7-9, 15-20, and 28-36 ohms. **Stability margins:** Gain, 10 db. ±3 db.; Phase, 20°±10°. **Dimensions:** 12½" x 10" x 8¼" high.

The Leak triple Loop feedback circuit (the main loop giving 26 db. feedback over 3 stages and the output transformer) results in the following major advantage:

In the TL/12 amplifier the hum and noise levels fall within—80 db. and—72 db. relative to 10 watts. This amount of power, as hum and noise, is inaudible from the most efficient loudspeakers. Notice particularly that the feedback is taken from the low side of the output transformer. Many circuits show it as taken from the anode side, which will result in higher hum levels than without feedback.

In this amplifier, due to the magnitude of feedback, there can be no rise of voltage to cause "boom" in the loudspeaker at the frequency of bass resonance, and the capability of a loudspeaker to reproduce transients, especially low-frequency transients, is astonishingly improved.

UNEXCELLED RADIO-PHONOGRAPH REPRODUCTION —
Used with the RC/PA/U pre-amplifier and complementary equipment, the TL/12 power amplifier offers music lovers reproduction that is unsurpassed by any equipment at any price.

LABORATORY USE —
as a stabilized-gain audio-frequency power amplifier.

HIGHEST POSSIBLE QUALITY OF REPRODUCTION —
from Pickup, Radio, Film and Magnetic Tape.

DISK RECORDING —
for highest possible standard.

DRIVER AMPLIFIER —
in the speech modulator chain of broadcast transmitters. The TL/12 Amplifier is used by broadcasting companies throughout the world!

ALSO AVAILABLE! TL/25 A — 25 WATT MODEL, A MODIFICATION OF THE TL/12. DISTORTION APPROXIMATELY 0.25% AT 1000 CYCLES FOR 20W. OUTPUT. GAIN AND FREQUENCY RESPONSE ARE APPROXIMATELY THE SAME AS THE TL/12.

12W and 25W Amplifier sold with or without pre-amplifier. Pre-amplifier is not sold separately.

731 LEAK amplifiers are used by broadcasting authorities throughout the world, including:

The British Broadcasting Corporation • The South African Broadcasting Corporation
Societé Suisse Radiodiffusion • Radiotjanst Stockholm • Radio Italiana

BRITISH INDUSTRIES CORPORATION • NEW YORK 13, N. Y.

MASCO manufactures complete deluxe and economy lines of amplifiers and sound systems ranging in power output from 8 to 125 watts, including phono-top, mobile and high fidelity amplifiers and magnetic tape recorders, transcription players, school systems, plant broadcasting and intercommunication systems. All *MASCO* amplifiers, many of which are shown as portable systems, are also recommended for use in FIXED SYSTEMS.

MA-8N 8-WATT AMPLIFIER *and* MAS-8N 8-WATT PORTABLE SYSTEM

AMPLIFIER FEATURES: Microphone and phono input separately controlled • Bass-treble tone control • Hammertone-finish chassis • Light, compact and sturdy • U/L Approved.

APPLICATIONS FOR AMPLIFIER AND SYSTEM: Both units are ideal for paging systems for bus and railroad stations and they are recommended for side shows, auction rooms, sales meetings, small taverns and clubs.

AMPLIFIER SPECIFICATIONS MODEL MA-8N

POWER OUTPUT	8 Watts, Class A, at less than 5% distortion
PEAK POWER	13 Watts
INPUTS	Two: 1-microphone, and 1-phono
FREQUENCY RESPONSE	± 2 DB 50 to 10,000 CPS
POWER GAIN	Microphone, 128.5 DB; Phono, 75 DB
CONTROLS	Three: Microphone, Phono, Tone (On-Off Switch)
TUBES	1-6SF5, 1-6SJ7, 1-6L6G. 1-5Y3GT (Rectifier)
OUTPUT IMPEDANCES	3.2, 8 and 500 Ohms
HUM LEVEL	60 DB below output level of 8 Watts
POWER CONSUMPTION	75 Watts at 117 Volts
VOLTAGE	105-125 Volts, 60 CPS
DIMENSIONS	10″ x 6″ x 7½″ high

MA-8N Amplifier (less cover, with Tubes) Shipping Weight: 14 lbs.	$65.00
Cover for MA-8N	12.00
Kit of Matched Plugs and Connectors	1.73
MAS-8N Portable System Shipping Weight: 30 lbs.	132.50

Consists of:
- 1—MA-8N Amplifier with Cover with tubes
- 1—10″ PM Speaker
- 1—25-ft. Speaker Cable and Plug
- 1—Model 303 Portable Carrying Case (Attractive Luggage Style)
- 1—Astatic JT-30 Microphone with 15-ft. Cable and Connectors

MA-17N 17-WATT AMPLIFIER *and* MAS-17N 17-WATT PORTABLE SYSTEM

AMPLIFIER FEATURES: Two microphone inputs • One phono input • Individual volume controls • Separate bass and treble controls • Tapped line and voice-coil impedances • U/L Approved.

APPLICATIONS FOR AMPLIFIER AND SYSTEM: They are suitable for small orchestras, lecturers, ballyhoo, store demonstrations, night clubs and ballrooms.

AMPLIFIER SPECIFICATIONS • MODEL MA-17N

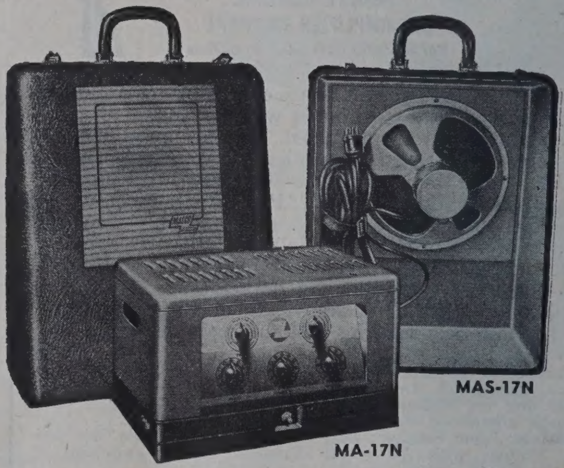
POWER OUTPUT	17 Watts, Class A, at less than 5% distortion
PEAK OUTPUT	26 Watts
INPUTS	Three: 2-microphone, 1-phono
FREQUENCY RESPONSE	± 2 DB 50 to 12,000 CPS
POWER GAIN	Microphone, 132 DB; Phono, 78 DB
CONTROLS	Five: 2-microphone, Phono, Bass, Treble, Separate Power On-Off Switch
TUBES	1-6SC7, 1-6SJ7, 1-6SL7GT, 2-6L6G. 1-5V4G (Rectifier)
OUTPUT IMPEDANCES	4, 8, 15, 125, 250, 500 Ohms
HUM LEVEL	62 DB below output level of 17 Watts
POWER CONSUMPTION	125 Watts at 117 Volts
VOLTAGE	105-125 Volts, 60 CPS

Has tapped primary to compensate for line voltage fluctuations.

DIMENSIONS	13″ x 8″ x 8⅜″ high

PRICES	**List Price**
MA-17N Amplifier with Tubes Shipping Weight: 20 lbs.	$110.00
Kit of Matched Plugs and Connectors	2.65
MAS-17N Portable Systems Shipping Weight: 45 lbs.	205.00

Consists of:
- 1—MA-17N Amplifier with Tubes
- 2—12″ PM Speakers
- 2—25-ft. Speaker Cables and Plugs
- 1—Model 304 Portable Carrying Case (attractive luggage style)
- 1—Astatic JT-30 Microphone with 15-ft. Cable and Connectors



MA-17PN 17-WATT PHONO TOP AMPLIFIER *and* MAS-17PN 17-WATT PHONO TOP PORTABLE SYSTEM

APPLICATIONS FOR AMPLIFIER AND SYSTEM:

For recorded music, alone or combined with voice • Plays 12″ and smaller records • Widely preferred as record demonstrators.

AMPLIFIER SPECIFICATIONS MODEL MA-17PN

Same as MA-17N (Described on this page) but includes phono-top.
Chassis size: 14″ x 11″ x 8⅜″.

PRICES	**List Price**
***MA-17PN** Amplifier with tubes, with single-speed motor	$150.00
Kit of Plugs and Connectors	1.73

PRICE	**List Price**
***MAS-17PN** Portable System Shipping Weight: 56 lbs.	$245.00

Consists of:
- 1—MA-17PN Amplifier with tubes
- 2—12″ PM Speakers
- 2—25-ft. Speaker Cables and Plugs.
- 1—Model 305 Portable Carrying Case (attractive luggage style)
- 1—Astatic JT-30 Microphone with 15-ft. Cable and Connectors

*MA-17PN with three-speed motor and all purpose pickup with "Turn-Over" cartridge, add to List Price $10.00.

To secure a LOW-IMPEDANCE INPUT for amplifiers, see PAGE B-20

WEST OF ROCKIES ADD 5% TO ABOVE LIST PRICES

Specifications and prices subject to change without notice.

WRITE FOR COMPLETE CATALOG

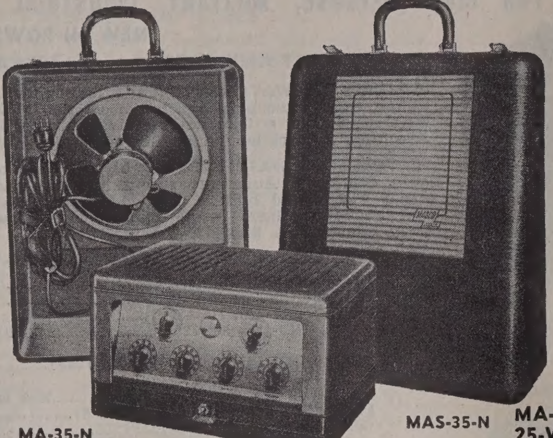
MASCO ELECTRONIC SALES CORP. • LONG ISLAND CITY 3, N. Y.

SOUND MASCO EQUIPMENT

TYPICAL PORTABLE
SYSTEM ILLUSTRATED →

MAS-25N and MAS-25PN
Systems incorporate carrying
case as illustrated.

MA-25N MA-25NR



MA-35-N

MAS-35-N

MA-25PN

MA-25N 25-Watt Amplifier *and* MAS-25N 25-Watt Portable System

AMPLIFIER FEATURES: Four inputs • Four-channel electronic mixing • Separate bass and treble controls • Tapped line and voice-coil impedances • Full 25 watts of undistorted output • Over-all negative feedback • U/L Approved.

APPLICATIONS FOR AMPLIFIER AND SYSTEM:

They are ideal for the larger auditoriums, churches, night clubs, orchestras, indoor sports arenas, and also for outdoor use at fairs, bazaars, children's camps, and similar locations.

AMPLIFIER SPECIFICATIONS
MODEL MA-25N

POWER OUTPUT..........25 Watts, Class AB-1, at less than 5% distortion
PEAK POWER..........40 Watts
INPUTS..........Four: 3-microphone, 1-phono
FREQUENCY RESPONSE..........± 2 DB 50 to 15,000 CPS
POWER GAIN...Microphone, 133.5 DB; Phono, 79 DB
CONTROLS......Six: 3-microphone, Phono, Bass, Treble, Separate Power On-Off Switch
TUBES..4-6J7, 2-6SC7, 2-6L6G. 1-5V4G (Rectifier)
OUTPUT IMPEDANCES.........4, 8, 15, 125, 250, 500 Ohms
HUM LEVEL......64 DB below output level of 25 Watts
POWER CONSUMPTION..........145 Watts at 117 Volts
VOLTAGE..........105-125 Volts, 60 CPS
Has tapped primary to compensate for line voltage fluctuations.
DIMENSIONS..........15″ x 8½″ x 8⅜″ high

PRICES **List Price**

MA-25N Amplifier with tubes....................$145.00
Shipping Weight: 30 lbs.
Kit of Matched Plugs and Connectors........... 3.24
MAS-25N Portable System......................... 240.00
Shipping Weight: 60 lbs.
Consists of:
1—MA-25N Amplifier with tubes
2—12″ PM Speakers
2—25-ft. Speaker Cables and Plugs
1—Model 305 Portable Carrying Case (Attractive Luggage Style)
1—Astatic JT-30 Microphone with 15-ft. Cable and Connectors

MA-25NR 25-Watt Remote-Control Amplifier

The Model MA-25NR Remote-Control Amplifier follows closely all specifications for the Model MA-25N, but has, in addition, a built-in circuit for remote control of two of the microphone channels when used with the Model RCB Remote-Control Box.

PRICES **List Price**

MA-25NR Remote-Control Amplifier with tubes $177.50
Kit of Matched Plugs and Connectors for MA-25NR 3.24

MA-35N 35-Watt Amplifier *and* MAS-35N 35-Watt Portable System

AMPLIFIER FEATURES: Four inputs • Three microphone and one phono input, each separately controlled • Electronic mixing over-all • Individual bass and treble equalizers • Tapped output impedances of 4, 8, 15, 125, 250, and 500 ohms • U/L Approved.

APPLICATIONS FOR AMPLIFIER AND SYSTEM:

They are suitable for use at beaches and fairs, for paging and announcing at airports and terminals and the like, and equally ideal for orchestras, theatres and carnivals.

AMPLIFIER SPECIFICATIONS
MODEL MA-35N

POWER OUTPUT..........35 Watts, Class AB-2, at less than 5% distortion
PEAK POWER..........50 Watts
INPUTS..........Four: 3-microphone, 1-phono
FREQUENCY RESPONSE..........± 2 DB 50 to 15,000 CPS
POWER GAIN...Microphone, 135 DB; Phono, 80.5 DB
CONTROLS......Six: 3-microphone, Phono, Bass, Treble, Separate Power On-Off Switch
TUBES..............1-6SC7, 3-6J7, 3-6SN7GT, 2-6L6G. 1-5U4G, 1-6X5GT (Rectifiers)
OUTPUT IMPEDANCES..........4, 8, 15, 125, 250, 500 Ohms
HUM LEVEL......65 DB below output level of 35 Watts
POWER CONSUMPTION..........190 Watts at 117 Volts
VOLTAGE..........105-125 Volts, 60 CPS
Has tapped primary to compensate for line voltage fluctuations.
DIMENSIONS..........15″ x 9½″ x 8⅜″ high

PRICES **List Price**

MA-35N Amplifier with tubes.......................$180.00
Shipping Weight: 32 lbs.
Kit of Matched Plugs and Connectors........... 3.24
MAS-35N Portable System......................... 298.75
Shipping Weight: 63 lbs.
Consists of:
1—MA-35N Amplifier with tubes
2—EXTRA-HEAVY-DUTY 12″ PM Speakers
2—25-ft. Speaker Cables and Plugs
1—Model 305 Portable Carrying Case (Attractive Luggage Style)
1—Astatic JT-30 Microphone with 15-ft. Cable and Connectors

MA-25PN
25-Watt Phono Top Amplifier *and* MAS-25PN
25-Watt Phono Top Portable System

Application for Amplifier and System for recorded music alone, or combined with voice. Plays 12″ and smaller records. Widely preferred as record demonstrators

AMPLIFIER SPECIFICATIONS
MODEL MA-25PN

Same as MA-25N Amplifier (described on this page) but includes phono top. Chassis size for MA-25PN: 14″ x 11″ x 8⅜″ high.

PRICES **List Price**

***MA-25PN** Amplifier with tubes, with single speed motor $172.50
Shipping Weight: 32 lbs.
Kit of Matched Plugs and Connectors........... 2.27
***MAS-25PN** Portable System.................... 275.00
Shipping Weight: 61 lbs.
Consists of:
1—MA-25PN Amplifier with tubes
2—12″ PM Speakers
2—25-ft. Speaker Cables and Plugs
1—Model 305 Portable Carrying Case (Attractive Luggage Style)
1—Astatic JT-30 Microphone with 15-ft. Cable and Connectors

*MA-25PN with three-speed motor and all-purpose pickup with "Turn-Over" cartridge, add to List Price $10.00.

MA-35RN

MA-35RN 35 Watt Amplifier featuring the Webster Model 100 Three-speed Record Changer Top

Amplifier specifications same as MA-35N (except for record changer mechanism). Chassis size: 15″ x 15″ x 10½″ high.

PRICES **List Price**

MA-35RN Amplifier with tubes, with Webster Model 100, 3 speed record changer top $280.00
Shipping Weight: 52 lbs.
Kit of Matched Plugs and Connectors............ 2.27

To secure a **LOW-IMPEDANCE INPUT** for amplifiers, see **PAGE B-20**

WEST OF ROCKIES ADD 5% TO ABOVE LIST PRICES

Specifications and prices subject to change without notice.

WRITE TO FACTORY FOR COMPLETE CATALOG

MASCO ELECTRONIC SALES CORP. • LONG ISLAND CITY 3, N. Y.

SOUND MASCO EQUIPMENT

HIGH-POWERED AMPLIFIERS FOR CIVIL DEFENSE, MILITARY, INDUSTRIAL AND INSTITUTIONAL USE

NEW HI-POWER

125 WATT AMPLIFIER   125 WATT BOOSTER AMPLIFIER

MASCO HI-POWER AMPLIFIER

MA-125

PRICES		List Price
MA-125	Amplifier with ubes, with cover	$312.50
MA-125P	Amplifier, with tubes, with 10½″ x 19″ high panel, less cover	324.00

Shipping Weight: 61 lbs.

MASCO HI-POWER BOOSTER

MB-125

PRICES		List Price
MB-125	Booster Amplifier, with tubes, with cover	$237.50
MB-125P	Booster Amplifier, with tubes, with 10½″ x 19″ panel, less vcover	249.00

Shipping Weight: 61 lbs.

FEATURES 125 WATT AMPLIFIER: 3 Microphone, 1 Phono Inputs individually controlled • Separate bass and treble controls • Oil-filled filters • Safety automatic interlock switch • Optional built-in press-to-talk relay for stand-by operation • Available for rack mounting • Two-tone gray hammertone finish • U/L approved.

FEATURES 125 WATT BOOSTER AMPLIFIER: Constant voltage outputs • Master gain control • Automatic safety interlock switch • Oil-filled filters • Fully fused • Optional built-in press-to-talk relay for stand-by operation • Optional low impedance (zero level) input • Available for rack mounting • Two-tone gray hammertone finish • U/L approved.

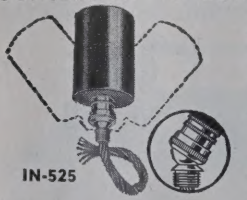
AMPLIFIER SPECIFICATIONS FOR MA-125, MA-125P, AND MB-125, MB-125P

POWER OUTPUT (ALL MODELS)	125 watts at less than 5% distortion
PEAK POWER	175 watts
INPUTS: (MA-125, MA-125P)	Four: 3 microphone, 1 phono
(MB-125, MB-125P)	High impedance 0.5 megohm or 500 ohm balanced line (special order)
INPUT SENSITIVITY: (MA-125, MA-125P)	Microphone .006 v., Phono. 0.3 v. for full output
(MB-125, MB-125P)	High impedance—3.5 volts; 500 ohms—zero level
FREQUENCY RESPONSE (ALL MODELS)	20 to 20,000 cps ± 2 db.
CONTROLS: (MA-125, MA-125P)	Six: 3 Microphone, Phono, Bass, Treble. Separate Master Power Switch, Automatic Interlock Switch (MA-125)
(MB-125, MB-125P)	Master Gain, Master Power Switch, Automatic Interlock Switch (MB-125)
TUBES: (MA-125, MA-125P)	3-6SJ7, 2-6SL7GT, 3-6SN7GT, 2-807. 1-5R4GY, 1-5Y3GT (Rectifiers)
(MB-125, MB-125P)	1-6SL7GT, 3-6SN7GT, 2-807. 1-5R4GY, 1-5Y3GT (Rectifiers)
OUTPUT IMPEDANCES (ALL MODELS)	70 ohms; 70 volts (40 ohms), 140 volts (200 ohms) constant voltage taps. High impedance Output on MA-125 for MB-125 Booster
HUM LEVEL: (MA-125, MA-125P)	60 db below full output
(MB-125, MB-125P)	70 db below full output
POWER CONSUMPTION (ALL MODELS)	350 watts, 117 volts, 50-60 cycles
DIMENSIONS: (MA-125, MB-125)	17″ x 13″ x 9″ high
(MA-125P, MB-125P)	Chassis 17″ x 13″, Panel 10½″ x 19″

OPTIONAL EQUIPMENT

PRESS-TO-TALK RELAY for standby operation may be had in any of the above models. Specify when ordering and add to list price	$23.75
TRANSFORMER FOR CONVERSION TO LOW IMPEDANCE INPUT, MODEL IN-3—500 ohm balanced input for Models MB-125 and MB-125P. Specify when ordering. Factory installed	17.50
TRANSFORMER FOR CONVERSION TO LOW IMPEDANCE INPUT, MODEL IN-525, low impedance microphone input transformer for Models MA-125 and MA-125P. Factory installed, per input (specify impedance when ordering)	31.25

IN-525 • LOW-IMPEDANCE TRANSFORMER CONVERSION TO LOW-IMPEDANCE INPUT



IN-525

MASCO Amplifiers may be readily converted to a low impedance by the installation of *MASCO* Transformer No. IN-525. Available are: 50 ohms unbalanced line; 200 ohms or 500 ohms balanced or unbalanced line. Specify tap-setting when ordering.

PRICES		List Price
IN-525	Low Impedance Transformer	$23.75
	Factory-installed (per input)	31.25

Shipping Weight: 2 lbs.

MM-4 FOUR CHANNEL MICROPHONE MIXER

MM-4

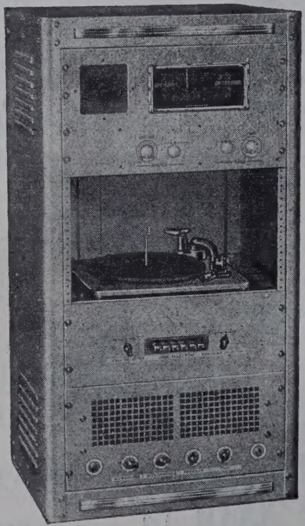
Can be connected to the high-impedance microphone input of any amplifier. Four independent gain controls and four microphone connectors allow for mixing and fading over-all. Converts an amplifier having only one microphone input to four-channel operation.

PRICES		List Price
MM-4	Four Channel Mixer, with 4 ft. Cable and Connector	$21.25

Shipping Weight: 4 lbs.

Specifications and prices subject to change without notice.

BR-60 60 WATT SOUND BROADCASTER



BR-60

FEATURES: U/L approved • Six-position zone selector switch • 60-watt heavy-duty amplifier • Separate all-call switch • Constant voltage output • Oversized components assuring trouble-free service • Three inputs • Attractive Hammertone steel cabinet • Hinged rear door • AM-FM tuner • Webster Model 100 3-speed record changer.

APPLICATION: Offers performance to be had ONLY in custom-built equipment. Its all-in-one feature allows for Voice Paging, Phono and Radio Operation • For use in Airports • Hospitals • Institutions • Schools and Playgrounds.

PRICES		List Price
BR-60	Sound Broadcaster	$890.00

No Federal Excise Tax Applies.
Shipping Weight: 120 lbs.

Consists of:
- Steel Cabinet with Hinged Rear Door
- 60-Watt Amplifier
- AM-FM Tuner
- Webster Model 100 3-speed record changer
- Six-Position Zone Selector Switch
- Separate "All-Call" Switch
- Built-in Monitor Speaker

BR-60R	Sound Broadcaster, same as above but with built-in Microphone Relay and built-in Tone Signal	$930.00

No Federal Excise Tax Applies.

For one additional built-in Six-Position Zone Selector Switch, add.............$13.50

WRITE TO FACTORY FOR COMPLETE CATALOG

MASCO ELECTRONIC SALES CORP. • LONG ISLAND CITY 3, N. Y.

SOUND MASCO EQUIPMENT

HIGH-POWERED AMPLIFIERS FOR CIVIL DEFENSE, MILITARY, INDUSTRIAL AND INSTITUTIONAL USE

MA-77 75 WATT AMPLIFIER • PUSH-PULL 807 TUBES

FEATURES: Full electronic mixing of all channels • Individual bass and treble equalizers • 75 watts of undistorted power • Peak Power output 90 watts • Fully fused • Special high impedance jack for driving MB-77 booster amplifier (0 db. level) • U/L Approved.

The Models MA-77 and MA-77R are powerful wide-range amplifiers that deliver better than 75 watts of usable power. Multi-tapped line and voice coil impedances match any speaker, or speaker groups and lines. The model MA-77R is designed to permit remote control of two microphone channels by means of the RCB Remote Control Box.

APPLICATION: Used for the larger auditoriums, theatre re-inforcement, indoor and outdoor rinks, stadia, and the like, wherever numerous speakers are required. Excellent for church chime applications. Ideal as the basic unit for paging and fire-alarm systems in hotels.

MA-77

PRICES	List Price
MA-77 Amplifier with tubes Shipping Weight: 44 lbs.	$280.00
Kit of Matched Plugs and Connectors	3.67

AMPLIFIER SPECIFICATIONS FOR MODELS MA-77, MA-77R, MB-77, AND MB-77P

POWER OUTPUT	75 watts at less than 5% distortion
PEAK POWER	90 watts
INPUTS: (MA-77, MA-77R)	Five: 4 microphone, 1 phono
(MB-77, MB-77P)	One: 500 ohm balanced or unbalanced
FREQUENCY RESPONSE	±2 db 50 to 15,000 cps
SENSITIVITY: (MA-77, MA-77R)	Mike, .005 volts; phono, .4 volts for full output
(MB-77, MB-77P)	0.35 volts unbalanced .68 volts balanced for full output
CONTROLS: (MA-77, MA-77R)	Seven: 4-microphone, phono, bass, treble. Separate power on-off switch
(MB-77, MB-77P)	One Master Gain; separate power on-off switch
TUBES: (MA-77, MA-77R)	4-6J7, 1-6SJ7, 1-6SL7GT, 1-6SC7, 1-6SN7GT, 2-807. 3-5Y3GT (Rectifiers)
(MB-77, MB-77P)	1-6SL7GT, 1-6SN7GT, 2-807. 3-5Y3GT (Rectifiers)
OUTPUT IMPEDANCE	4, 8, 16 ohms; 70 volts, 140 volts, constant voltage
HUM LEVEL: (MA-77, MA-77R)	67 db below 75 watts
(MB-77, MB-77P)	60 db below 75 watts
POWER CONSUMPTION:	
(MA-77, MA-77R)	190 watts, 117 volts, 60 cps AC
(MB-77, MB-77P)	185 watts, 117 volts, 60 cps AC
DIMENSIONS:	
(MA77, MA-77R)	16″ x 11″ x 8⅜″ high
(MB-77)	17″ x 12″ x 8½″ high
(MB-77P)	Chassis: 17″ x 12″, Panel: 10½″ x 19″

MB-77 75 WATT BOOSTER AMPLIFIER • PUSH-PULL 807 TUBES

FEATURES: Zero-level input • May be parallelled for any audio power requirements • Tapped line and voice-coil impedances • Constant voltage outputs • Master gain control • 75 watts of undistorted power • U/L Approved.

DESIGN AND CONSTRUCTION: A new circuit in booster amplifiers. The driving power needed is only 1.45 volts RMS with a balanced line (0.8 volts with unbalanced line). The input impedance is 500 ohms. Adaptable for either line or bridging. These boosters are designed to operate with the Models MA-77 and MA-77R described above when additional power is required. Chassis finished in blue and gray Hammertone. The booster may be used either in or out of a rack. The circuit is fused, and the components built to withstand long-hour usage. The MB-77P is supplied with mounted panel and supporting side brackets for standard 19″ rack installation. Panel finished in baked gray wrinkle.

MB-77

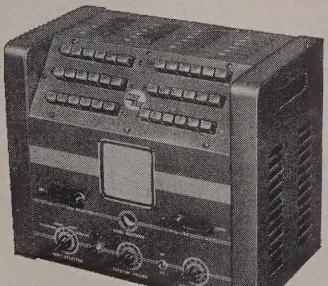
PRICES	List Price
MB-77 Booster Amplifier with tubes, less Cover	$187.50
If cover is desired for MB-77 add to list	43.75
MB-77P Booster Amplifier with tubes, with 10½″ x 19″ panel, less cover Shipping Weight: Either model—41 lbs.	205.00
Kit of Output Plugs for either model	1.19

School and Institutional Control Amplifier with Complete Program Facilities

MICROPHONE · RADIO · PHONOGRAPH

MS SERIES FOR 6 TO 36 STATIONS

28 Watts of Audio Power, 40 Watts Peak Power for 6, 12, 18, 24, 30 and 36 Stations with Built-in Intercommunication Channel.



MS-36

FEATURES: 28 Watt Amplifier • Built-in Intercommunication Channel • Two-way conversation • Simultaneous or selective paging • External phono provision • Volume-level indicator • Input selector switch • External microphone provision • Provision for external radio • U/L approved.

DESIGN AND CONSTRUCTION: Ample power for each speaker. Ample gain for external microphone and phonograph pickup. Group or selective paging. Calls may originate from any room to master when proper interconnecting cable is used. Separate volume controls for level adjustment of all calls. Volume-level indicator for correct level setting. Provision for connecting an external phonograph. Any standard radio may be adjusted for Use of more than 15 db of inverse feed-back assures negligible easy communication. Balanced line for simplicity of installation. Use of more than 15 db of inverse feedback assures negligible change of volume level regardless of varying speaker loads.

PRICES	List Price
MODEL MS-6—Control Amplifier with tubes for 6 stations	$232.50
MODEL MS-12—Control Amplifier with tubes for 12 stations	237.50
MODEL MS-18—Control Amplifier with tubes for 18 stations	242.50
MODEL MS-24—Control Amplifier with tubes for 24 stations	250.00
MODEL MS-30—Control Amplifier with tubes for 30 stations	257.50
MODEL MS-36—Control Amplifier with tubes for 36 stations	272.50

WEST OF THE ROCKIES, ADD 5% TO ABOVE LIST PRICES

School and Institutional Control Amplifier with Self-Contained AM-FM Radio-Webster Three Speed Automatic Record Changer-Transcription Player

MPS SERIES FOR 10 TO 40 STATIONS

MPS-40

28 Watts Power Output 40 Watts Peak Power

Complete Program or Intercommunication Facilities

FEATURES: Built-in sensitive FM-AM tuner • Optional built-in three speed transcription player or Webster Model 100 three-speed record changer • Provides for 10 to 40 stations • Electronic Volume-level Indicator • Speaker switches provide for selective or group paging • Master switch allows for simultaneous paging • Built-in speaker is used for "talk" and "Listen" • Input is provided for external microphone • May be installed for private or non-private operation • Private operation prohibits the control operator from "listening in" unless switched in at the station location • Use of more than 15 db of inverse feed-back assures negligible change of volume level regardless of varying speaker loads • U/L approved.

PRICES	List Price
MODEL MPS-10 (for 10 stations) Control Amplifier with tubes with AM-FM Tuner and Single Speed Manual Phonograph	$618.75
MODEL MPS-20 (for 20 stations) Control Amplifier with ubes with AM-FM Tuner and Single Speed Manual Phonograph	640.00
MODEL MPS-30 (for 30 stations) Control Amplifier with tubes with AM-FM Tuner and Single Speed Manual Phonograph	656.25
MODEL MPS-40 (for 40 stations) Control Amplifier with tubes with AM-FM Tuner and Single Speed Manual Phonograph	675.00
To substitute Webster 100 three-speed record changer in above systems add	55.00
To subsitute 3-speed motor and all-purpose "turnover" pickup in above systems, add	10.00

WRITE TO FACTORY FOR COMPLETE CATALOG TR-51

MASCO ELECTRONIC SALES CORP. • LONG ISLAND CITY 3, N. Y.

Copyright by U. C. P., Inc.

MASCO'S OUTSTANDING MOBILE SOUND EQUIPMENT

6-VOLT DC AND 117-VOLT AC MOBILE AMPLIFIERS

THE ONLY COMPLETE LINE OF U/L APPROVED MOBILE EQUIPMENT

25 Watts, Class AB-1, at less than 5% distortion — 40 Watts Peak Power

FEATURES contained in these six models are: Four input channels • Standby switch • Heavy-duty switches • Low battery drain • Fused circuit • Hum- and ripple-free operation • Heavy-duty dual vibrator • Crystal pick-up input • Lock-in arm rest • Underwriters' Laboratories approved.

Operate as efficiently from 6-volt batteries as from 117-volt AC source. Rugged and powerful, expressly designed for sound truck and other outdoor applications. The battery-saver switch, which shuts off the vibrator during intermissions, reduces battery drain to a minimum. The extra-heavy-duty dual vibrator maintains steady voltage and frequency. These amplifiers are provided with separate cables, fitted with rugged heavy-duty plugs and receptacles for each voltage supply.

APPLICATION: The widely varied types of these amplifiers adequately meet all possible needs for applications such as outdoor gatherings, bathing beaches, traveling road shows, open-air theatres, election campaigns and charity drives, traveling evangelists, police and fire department rescue work, and other locations where AC power is unavailable.

MC-25PN

MAC-25PN

GENERAL AMPLIFIER SPECIFICATIONS:

POWER OUTPUT...25 Watts, Class AB-1, at less than 5% distortion

PEAK POWER....................................40 Watts

INPUTS......................Four: 3-microphone, 1-phono

FREQUENCY RESPONSE..................± 2 DB 50 to 15,000 CPS

POWER GAIN.........Microphone, 133.5 DB; Phono, 79 DB

CONTROLS.........Six: 3-microphone, Phono, Bass, Treble, Separate Motor Switch and Battery-Saver Switch

TUBES......4-6J7, 1-6SC7, 2-6L6G, 1-6SL7GT. 2-7Z4 (Rectifiers)

OUTPUT IMPEDANCES......4, 8, 15, 125, 250, 500 Ohms

HUM LEVEL............AC: 64 DB below 25 Watts DC: Ripple-free

POWER CONSUMPTION......AC: 145 Watts at 117 Volts (including phono motor);

DC: 23 Amps. at 6 Volts (battery) (includes phono motor)

VOLTAGE..............105-125 Volts, 60 CPS AC or 6 Volts DC (Storage Battery)

Power Cables included with all Mobile Amplifiers.

MC-25PC

***MC-25PN** **List Price**

Phono-top Mobile Amplifier with tubes....$225.00
Shipping Weight: 44 lbs.
Kit of Matched Plugs and Connectors...... 3.24
Dimensions: 14" x 11" x 8⅜" high

***MAC-25PN** **List Price**

Portable Mobile System..........................$320.00
Shipping Weight: 72 lbs.

Consists of:
- 1—MC-25PN Phono-top Amplifier with tubes
- 2—12" PM Speakers
- 2—25-ft. Speaker Cables and Plugs
- 1—Model 305 Portable Carrying Case (Attractive Luggage Style)
- 1—Astatic JT-30 Microphone with 15-ft. Cable and Connectors

(If amplifier is desired with plain cover less phono-top mechanism, deduct from above list price $10.00)

***MC-25PC** **List Price**

Phono-top Mobile Amplifier with Hinged Cover with tubes..............................$260.00
Shipping Weight: 46 lbs.
Kit of Matched Plugs and Connectors...... 3.24
Dimensions: 14" x 11" x 10⅞" high

***MCO25PN** **List Price**

Outdoor Mobile System..............................$377.50
Shipping Weight: 86 lbs.

Consists of:
- 1—MC-25PN Phono-top Amplifier with tubes
- 2—Masco-University PH Trumpets
- 2—Masco-University MA-25 Driver Units
- 2—25-ft. Cables and Connectors
- 1—Astatic JT-30 microphone with 15-ft. Cable and Connectors

MC-25N **List Price**

Mobile Amplifier, Plain Cover without Phono-top with tubes..........................$215.00
Shipping Weight: 39 lbs.
Kit of Matched Plugs and Connectors...... 2.27
Dimensions: 14" x 11" x 8⅜" high

MC-25RC **List Price**

Mobile Amplifier with Webster Model 100 3-speed record changer top with tubes $325.00
Shipping Weight: 52 lbs.
Kit of Matched Plugs and Connectors...... 3.24
Dimensions: 15" x 15" x 10½" high

*If desired with 3-speed motor and all-purpose pickup with "Turnover" Cartridge, add to list price $10.00
If Astatic MODEL AB8-M Pickup is desired, add to list price $11.88.

MC-25RC

MASCO 12 WATT MOBILE AMPLIFIERS

FOR 6 OR 12 VOLT DC AND 117 VOLT AC OPERATION

12 WATTS POWER OUTPUT • 18 WATTS PEAK POWER

FEATURES: Two inputs, microphone and phono • Push-pull output • Separate microphone and phono control • Low battery drain • Ripple-free operation • Light-weight, rugged • Remote control permits within-reach adjustment of amplifier controls • U/L approved.

APPLICATION: 12-watt mobile amplifier built expressly for operation in a moving vehicle. Easily mounted, it fits under the dashboard. Separate volume controls provide independent or simultaneous use of both inputs. For application in police safety and traffic work, fire department, transportation systems, hearses and ambulance service. Any standard speaker may be used.

MC-126P

MAC-126P

AMPLIFIER SPECIFICATIONS:

POWER OUTPUT......12 Watts, Class AB-1 at less than 5% distortion

PEAK POWER......................................18 Watts

INPUTS....................Two: 1-microphone, 1-phono

FREQUENCY RESPONSE............±3 DB 100 to 8,000 CPS

POWER GAIN....................Microphone, 110 DB; Phono 75 DB

CONTROLS..........Microphone, Phonograph, On-Off Standby-Operate (Battery-Saver) Switch

TUBES................1-6SF5, 1-6SL7GT, 2-6V6GT. 1-7Z4 (Rectifier)

OUTPUT IMPEDANCES......3.2, 8 and 15 Ohms

HUM LEVEL.........................60 DB below output level of 12 Watts

POWER CONSUMPTION............AC: 60 Watts at 117 Volts; DC: Model MC-12 4 amps at 12 volts (battery); Model MC-126 8 amps at 6 volts (battery)

DIMENSIONS......................12" x 6" x 8" high

PRICES: Amplifiers

List Price

MC-126P Phono-top Mobile Amplifier, 12 Watts (6 Volt DC and 117 Volt AC), with tubes, with cables.............................$141.25

MC-126 Same as above with plain cover less phono-top mechanism..........................$ 95.00

Shipping Weight: 15 lbs.

PRICES: Mobile Portable Systems

List Price

MAC-126P Phono-top Portable Mobile System $206.25
Shipping Weight: 36 lbs.

Consists of:
- 1—12 Watt Mobile Amplifier with Tubes
- 1—10" PM Speaker
- 1—25-ft. Speaker Cable and Plug
- 1—Model 303 Portable Case
- 1—Astatic JT-30 microphone with 15-ft. Cable and Connectors

PRICES: Mobile Outdoor Systems

MCO-126P **List Price**

Mobile Outdoor System..............................$206.25

Consists of:
- 1—12 Watt Mobile Amplifier with Tubes
- 1—Masco University Model IB8 Loudspeaker
- 1—25-ft. Cable and Plug
- 1—Astatic JT-30 microphone with 15-ft. Cable and Connectors

RCM Remote Control and Clamp attachment to steering post...$ 14.50

WRITE TO FACTORY FOR COMPLETE CATALOG AND INFORMATION ON 12 VOLT SYSTEMS

WEST OF THE ROCKIES ADD 5% TO ABOVE LIST PRICES • Specifications and prices subject to change without notice

SOUND MASCO EQUIPMENT

THE ULTIMATE IN HIGH FIDELITY AMPLIFIERS . . . UNEXCELLED BY ANY STANDARD

OFF
VOLUME
EXPANDER
TONE
MED BASS
BASS
NORMAL
TREBLE
MODEL MHP-110X

MHP-110
MHP-110X

MHP-110 10-WATT HIGH FIDELITY AMPLIFIER
MHP-110X *(illustrated)* 10-WATT HIGH FIDELITY AMPLIFIER WITH BUILT-IN EXPANDER CIRCUIT

AMPLIFIER FEATURES:

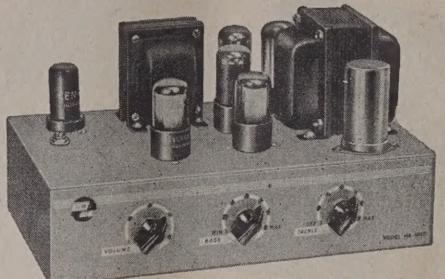
Exclusive *MASCO* 4-Way Tone Compensator • Voltage Supply Socket for Attachment of External Pre-amplifier • Power Supply Socket • Crystal Pickup input provision • Radio Tuner input provision • Pre-amplifier input provision • Safety fused • Over-all negative feedback • U/L Approved • Expander circuit available • 10-Watt power output

AMPLIFIER SPECIFICATIONS:
MODEL MHP-110 *and* MODEL MHP-110X

POWER OUTPUT	10 Watts at less than 5% distortion
PEAK POWER OUTPUT	14 Watts
FREQUENCY RESPONSE	± 1 DB 40 to 15,000 CPS (Tone Compensator Normal)
GAIN AND SENSITIVITY	MHP-110: .9 Volts — 70 DB MHP-110X: .5 Volts — 75 DB
VOLUME CONTROL	Continuously Variable; with Power On-Off Switch
4-WAY INDIVIDUAL TONE COMPENSATOR:	Position — No. 1: Deep bass with high cut No. 2: Medium bass (Bass Boost with normal treble) No. 3: Normal (Flat response) No. 4: Treble (Normal bass with treble boost)
VARIABLE EXPANDER (MHP-110X only):	Manually controlled from zero to + 10 DB. Operates instantaneously. No chopping effect. No time lag.
TUBES USED MHP-110	1-6SL7GT, 2-6V6GT. 1-5Y3GT (Rectifier)
TUBES USED MHP-110X	3-6SL7GT, 2-6V6GT. 1-5Y3GT (Rectifier)
OUTPUT IMPEDANCES	4 and 8 Ohms
POWER CONSUMPTION	60 Watts at 117 Volts, 60 CPS
HUM LEVEL	80 DB below 10 Watts
AC RECEPTACLE	Provided for external attachment of phonograph or radio tuner. (Radio tuner may be adjusted for use.)
CHASSIS DIMENSIONS	10″ x 5½″ x 2½″ high

PRICES	**List Price**
MHP-110 High Fidelity 10-Watt Amplifier with Tubes and Input Connector Weight: 9 lbs.	$51.25*
MHP-110X High Fidelity 10-Watt Amplifier with Built-in Expander Circuit, with Tubes and Input Connector Weight: 9½ lbs.	72.50*
FS-1 Flexible extension shaft 3 foot long for cabinet or panel mounting. Each flexible shaft is supplied with two coupling connectors. One end of shaft connects to the control and the other end of shaft takes a standard knob. List Price each shaft	3.51

WEST OF ROCKIES ADD 5% TO ABOVE LIST PRICES



MA-10HF
MA-10EX

MA-10HF *(illustrated)* 10-WATT HIGH FIDELITY AMPLIFIER

MA-10EX 10-WATT HIGH FIDELITY AMPLIFIER WITH BUILT-IN EXPANDER CIRCUIT

AMPLIFIER FEATURES:

10 Watts of hum-free power • Built-in compensated pre-amplifier • Four inputs • Two inputs equalized for various magnetic and reluctance pickups • One input equalized for crystal pickup • One input unequalized for radio tuner • Ideal for L.P. pickups • Expander circuit available • Individual bass and treble boost and attenuation • Heavy duty output transformer with impedances of 2-4-8-16 and 500 ohms to match most speakers • Inverse feedback 12 DB over-all • Safety fused • U/L Approved.

AMPLIFIER SPECIFICATIONS:
MODEL MA-10HF *and* MODEL MA-10EX

POWER OUTPUT	10 Watts at less than 5% distortion
PEAK POWER OUTPUT	14 Watts
FREQUENCY RESPONSE	± 1 DB 40 to 20,000 CPS (Tone controls normal)
GAIN AND SENSITIVITY	Magnetic Input No. 1: .011 Volts 93 DB at 1000 CPS Magnetic Input No. 2: .1 Volts 67 DB at 1000 CPS Crystal Input: .35 Volts 76 DB at 1000 CPS Radio Input: .35 Volts 76 DB at 1000 CPS
VOLUME CONTROLS	Continuously variable
TREBLE CONTROLS (MA-10HF only)	High frequency boost 15 DB Attenuation at 15,000 CPS 14 DB
BASS CONTROL (MA-10HF only)	12.5 DB boost at 50 CPS, and 12.5 DB attenuation at 50 CPS
4-WAY INDIVIDUAL TONE COMPENSATION (MA-10EX only):	Position — No. 1: Deep bass with high cut No. 2: Medium bass (Bass boost with normal treble) No. 3: Normal (Flat response) No. 4: Treble (Normal bass with treble boost)
VARIABLE EXPANDER (MA-10EX only):	Manually controlled from zero to + 10 DB. Operates instantaneously. No chopping effect. No time lag.
TUBES USED MA-10HF	1-6SC7, 2-6SL7GT, 2-6V6GT. 1-5Y3GT (Rectifier)
TUBES USED MA-10EX	1-6SC7, 3-6SL7GT, 2-6V6GT. 1-5Y3GT (Rectifier)
OUTPUT IMPEDANCES	2, 4, 8, 16, 500 Ohms
POWER CONSUMPTION	75 Watts at 117 Volts, 60 CPS
HUM LEVEL	70 DB below 10 Watts Contains 2 hum balancing potentiometers
AC RECEPTACLE	Provided for external attachment of phonograph or radio tuner. (Radio tuner may be adjusted for use.)
CHASSIS DIMENSIONS	12″ x 7″ x 2½″ high

PRICES	**List Price**
MA-10HF High Fidelity 10-Watt Amplifier with Tubes and Input Connector Weight: 11½ lbs.	$75.00*
MA-10EX High Fidelity 10-Watt Amplifier with Built-in Expander Circuit, with Tubes and Input Connector Weight: 12 lbs.	97.50*
FS-1 Flexible extension shaft 3 foot long for cabinet or panel mounting. Each flexible shaft is supplied with two coupling connectors. One end of shaft connects to the control and the other end of shaft takes a standard knob. List Price each shaft	3.51

Specifications and prices subject to change without notice.

***Plus Federal Excise Tax**

WRITE TO FACTORY FOR COMPLETE CATALOG

MASCO ELECTRONIC SALES CORP. • LONG ISLAND CITY 3, N. Y.

SOUND MASCO EQUIPMENT

THREE MODERN-PACKAGED INTER-COMMUNICATION SYSTEMS

FOR HOME, PROFESSIONAL AND COMMERCIAL USE
AVAILABLE IN WHITE BAKED ENAMEL OR BROWN HAMMERTONE FINISH UNBREAKABLE CAST ALUMINUM HOUSINGS

FEATURES:

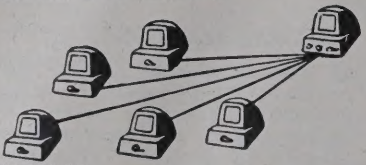
- Master Station equipped with Volume Control with on-off switch
- Master Station has On-Off Pilot Light
- Separate "press to talk" switch
- Remote Station has "press to talk" switch to originate call to Master Station if desired and allow for privacy
- Remote Station can be used for two way conversation without manual operation
- Natural voice reproduction
- Ample Sensitivity
- Matching Master and Remote Stations
- Unbreakable Cast-Aluminum housings
- Finished in attractive Walnut Hammertone or white Baked Enamel
- U/L Approved

PACKAGED TWO STATION SYSTEM
MODEL JMR

One Master with On-Off Pilot Light and One Remote Station Complete with 50 Feet of Cable.

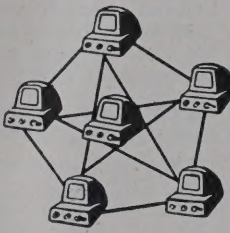
MASTER TO REMOTE SYSTEMS
MODELS JM-5 AND JM-10

Take up to ten remote stations



ALL MASTER SYSTEMS
MODELS IM-5 AND IM-10

Accommodate up to eleven Master Stations

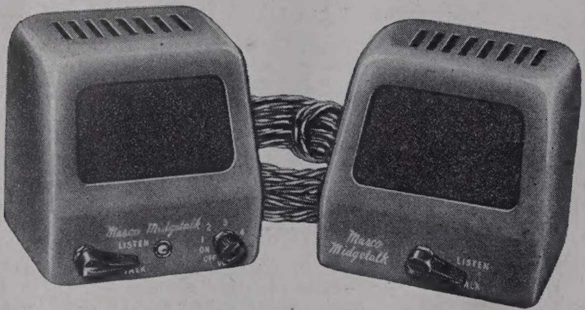


ALL MASTER HOOK-UP
NO CROSS-TALK

PRICES:	**List Price**
***MODEL JMR**—Two-Station System complete. One master with tubes, one remote, and 50 ft. of cable	$56.70
***MODEL JM-5**—Master, with tubes. For communication between it and five remote stations; can converse with all 5 stations or can select any one remote station. Master has press-to-talk and station selector switch and volume control with on-off switch	45.90
***MODEL JM-10**—Same as above, for up to 10 remote stations	53.75
***MODEL JR**—Remote. "Press-to-talk" switch allows remote to originate call to JM5 Master, permitting privacy; JR can be used as two-way paging system. Use of switch may be omitted. System uses 3-Wire Vinylite Covered Cable	16.20
***MODEL IM-5**—All Master, with tubes. Communication between it and 5 other masters. Each master can converse two-way with any or all masters in system. Has press-to-talk and station selector switches and volume control with on-off switch	45.90
***MODEL IM-10**—Same as above, but for communication with up to 10 other masters	53.75
5-Conductor Cable for use with up to 4 master stations (per ft.)	.24
7-Conductor Cable. Must be used with 5 or 6 master stations (per ft.)	.29
12-Conductor Cable for use with up to 11 master stations (per ft.)	.3125

*Available in white baked enamel finish at slightly higher prices.

MIDGETALK — COMPLETE TWO STATION INTERCOM SYSTEM



MIDGETALK
COMPLETE TWO STATION SYSTEM

FEATURES:

Master Station has Volume Control with on-off switch • Master Station has separate "press to talk" switch • Master Station has on-off Pilot Light • Remote Station has "press-to-talk" switch to originate call to Master Station if desired and to allow for privacy • Remote Station can be used for two-way conversation without manual operation • Natural voice reproduction • Ample sensitivity • Matching Master and Remote Stations • Unbreakable Cast Zinc Housings • Finished in attractive, beautiful mahogany • U/L Approved.

No other intercom in the field can match the value of the MASCO MIDGETALK

$43.15 list complete.

Nothing more to purchase.

U/L and CSA approved one master with on-off pilot light and one remote with 50 feet of 3-wire cable.
Color styled . . . $43.15 in mahogany. Slightly higher prices for white, blue, pink, green, yellow matched stations.
Remote may be used for private or non-private operation; has press-to-talk switch that allows it to originate call to master.
Natural voice reproduction. Ample sensitivity. Unbreakable cast zinc housings.

SPECIFICATIONS:

VOLTAGE	117 volts AC or DC
POWER OUTPUT	2.5 Watts
POWER CONSUMPTION	30 Watts
TUBES	12SJ7—Voltage Amplifier 50B5—Beam Power Amplifier Selenium Rectifier
SPEAKERS	In Master and Remote are 3" Alnico V Magnet—3.2 ohm voice coil
DIMENSIONS	5" x 4½" x 5⅜" high

Shipping Weight: 7½ pounds

WEST OF ROCKIES ADD 5% TO ABOVE LIST PRICES

Specifications and prices subject to change without notice.

WRITE TO FACTORY FOR COMPLETE CATALOG

MASCO ELECTRONIC SALES CORP. • LONG ISLAND CITY 3, N. Y.

MASCO CON-FER-PHONE — A Completely Flexible Master for any Combination System.

Build a system around any one Master to meet your requirements. Available in Six and Twelve Station Masters. Remote Available With or Without Call Switch and With 6 Position Master Station Selector.

JMP-12 MASTER STATION

JMP-6 MASTER STATION

JS-6 REMOTE

FEATURES:

- For Master-to-Master-to-Remote Intermixed Installation.
- For Master-to-Master Installation.
- For Master-to-Remote Installation.
- Remote Station for two-way conversation with Masters.
- Remote Station can originate call to Masters.
- Masters may have personal remo
- Push-Button station selection.
- Press-to-talk switch with dictate position on Master.
- Individual or group conversation.
- Volume control with on-off switch.
- On-Off indicating light.
- AC-DC operation.
- Finished in attractive walnut hammertone.
- Finish available in baked white enamel.
- U/L Approved.

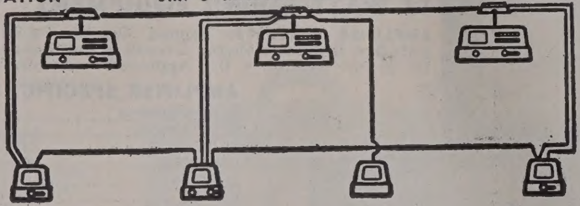


Illustration of a Master-to-Master-to-Remote Inter-Mixed Installation

The above is an inter-mixed system using both Masters and Remotes.
Masters may call selectively or to all masters and remotes in the circuit. Master stations can originate calls to any remote at will.
Remotes can answer any master from a distance but cannot originate calls nor talk to other remotes. Remotes can originate calls to any master in the circuit, but cannot talk with other remotes. Model JS Remote may originate a call to only one master. Model JS-6 Remote may originate a call to as many as six masters.
Remotes with switch can be installed for private or non-private use.

Each master can have his own private hookup of remotes. The remotes may or may not originate calls to the individual master. Masters can call each other regardless of whether master being called has its power on or off.

Illustration shows less than the maximum number of units possible in installation.

A JMP-6 Master may be connected to a total of six other units and a JMP-12 Master to a total of twelve other units. These units may be other masters or the JL, JS, and JS-6 Remotes, or the MB-8N Booster Amplifier. All of these units may be mixed.

SPECIFICATIONS FOR MODELS JMP-6 *and* JMP-12 MASTERS *and* MODELS JL, JS, *and* JS-6 *REMOTES*

MASTER

VOLTAGE	117 Volts AC or DC
POWER OUTPUT	2.5 Watts
POWER CONSUMPTION	30 Watts
CONTROLS	6 and 12 Push-Button station selectors Volume control with on-off switch Talk-Listen—Dictate Switch
TUBES	1-12SJ7 Dual Triode Amplifier 1-50L6 Beam Power Amplifier Selenium Rectifier

MASTER AND REMOTE

SPEAKER	4″ Alnico V Magnet 13-Ohm Voice Coil
FINISH	Walnut Hammertone or White Baked Enamel
DIMENSIONS	Master: 12⅝″ x 7½″ x 5½″ high Remote: 6⅝″ x 7⅛″ x 5¼″ high
SHIPPING WEIGHT	Master: 8 lbs. Remote: 3¼ lbs.

PRICES		**List Price**
JMP-6	Six-Station Master with Tubes	$71.28
JMP-12	Twelve-Station Master with Tubes	83.16
JL	Remote Less Call Switch	16.20
JS	Remote With Call Switch	18.09
JS-6	Remote with 6-Position Master Station Selector and Call Switch	32.40
MB-8N	Booster Amplifier, 8 Watts, with Cover, with Matched Tubes	85.32
BJ-6	Junction Box for use with JMP-6 Master and JS-6 Remote. Consists of a terminal strip containing 8 pair of terminal lugs mounted on a metal chassis including dust cover	10.26
	Above Junction Box, **factory installed**	16.69
BJ-12	Junction Box for use with JMP-12 Master. Consists of a terminal strip containing 14 pair of terminal lugs mounted on a metal chassis and includes a dust cover	14.04
	Above Junction Box, **factory installed**	18.36

CABLE PRICES		**List Price, per 100 ft.**
SC	One Pair Shielded Twisted No. 20 Solid. No outside covering	$ 7.83
SCB	One Pair Shielded Twisted No. 20 Solid, with over-all Weather-proof Braid Covering. (This is not water-proof)	11.61
TW-4	Four Pair, each pair Twisted No. 20 Solid with over-all outside Braid Covering all four pair	19.76
TW-7	Seven Pair, each pair Twisted No. 20 Solid with over-all outside Braid Covering all seven pair	32.94
TW-13	Thirteen Pair, each pair Twisted No. 20 Solid with over-all outside covering all thirteen pair	55.08
S	One Pair Twisted Unshielded No. 20 Solid. No outside covering	4.32

MB-8N 8-WATT BOOSTER AMPLIFIER

FEATURES: U/L Approved • Tapped Output • Master Gain Control • Input Matched to Master • Designed for Long-Hour Usage.

APPLICATION: Where paging is required in conjunction with intercommunication. It is the answer to high noise level voice penetration or for large area voice coverage. It is used with separate speakers and baffles.

AMPLIFIER SPECIFICATIONS • MODEL MB-8N

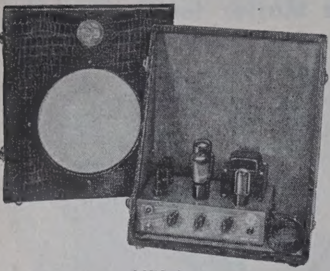
POWER OUTPUT	8 Watts, at less than 5% distortion
PEAK OUTPUT	13 Watts
INPUT	One, 13 Ohms
FREQUENCY RESPONSE	±2 DB 50 to 10,000 CPS
CONTROLS	One Master Gain with On-Off Switch
TUBES	1-6SJ7, 1-6L6G, 1-5Y3GT (Rectifier)
OUTPUT IMPEDANCES	3.2, 8, 500 Ohms
HUM LEVEL	60 DB below output of 8 Watts
POWER CONSUMPTION	75 Watts, 117 Volts, 60 Cycles
DIMENSIONS	10″ x 6″ x 7½″ high
SHIPPING WEIGHT	14 lbs.

Write to factory for catalog giving complete description of Con-Fer-Phone Intercommunication Equipment.

WEST OF ROCKIES ADD 5% TO ABOVE LIST PRICES

MASCO ELECTRONIC SALES CORP. • LONG ISLAND CITY 3, N. Y.

THE MASCO ECONOMY LINE


MES-8

8 WATT SOUND EQUIPMENT

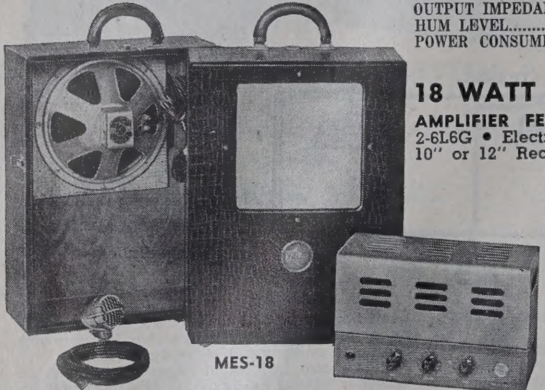
AMPLIFIER FEATURES: Microphone and phono input • Electronic mixing • Variable tone control • Standard voice coil output • 8 Watts undistorted output.

AMPLIFIER SPECIFICATIONS FOR ME-8

POWER OUTPUT	8 Watts
PEAK POWER	12 Watts
INPUTS	Two: Microphone and Phono
FREQUENCY RESPONSE	50 to 10,000 CPS ±2DB
SENSITIVITY:	
Microphone	.007 Volts for 8 Watts
Phonograph	.4 Volts for 8 Watts
CONTROLS	Three: Microphone, Phono, Tone
TUBES	1-6SJ7, 1-6SF5, 1-6L6G. 1-5Y3GT (rectifier)
OUTPUT IMPEDANCES	3.2, 8 and 500 Ohms
HUM LEVEL	25 DB below Zero Level
POWER CONSUMPTION	63 Watts
OPERATION	117 Volts, 60 Cycles
DIMENSIONS	10″ x 5½″ x 4½″ high

PRICES	List Price
ME-8 Amplifier with tubes Shipping Weight 14 lbs.	$56.16
MES-8 Portable System Shipping Weight 24 lbs.	106.92

MES-8 Portable System Consists of:
- 1—8 Watt amplifier, with tubes
- 1—10″ PM Speaker
- 1—25′ Cable and plug
- 1—Portable carrying case Model 3030
- 1—Astatic JT-30 microphone with cable and connectors


MES-18

18 WATT SOUND EQUIPMENT

AMPLIFIER FEATURES: Tapped Output, 2-4-8-15-500 ohms • Beam Power Output 2-6L6G • Electronic Mixing Overall • Full Range Controls • Plug-in Phono Top • Plays 10″ or 12″ Records • U/L Approved • Available with Three-speed Motor.

AMPLIFIER SPECIFICATIONS — Models ME-18, ME-18P

POWER OUTPUT	18 Watts
PEAK POWER	24 Watts
GAIN	Microphone 118 DB, Phono 74 DB
CONTROLS	Three: Microphone, Phono, Tone. With On-Off Switch
INPUTS	Two: Microphone and Phono
TUBES	1-6SJ7, 1-6SC7, 2-6L6G. 1-5Y3GT (Rectifier)
OUTPUT	Tapped 2-4-8-15-500 Ohms
POWER CONSUMPTION	(ME-18) 93 Watts, 117 Volts, 60 CPS
POWER CONSUMPTION	(ME-18P) 107 Watts, 117 Volts, 60 CPS
HUM LEVEL	56 DB below 18 Watts
FREQUENCY RESPONSE	50 to 10,000 Cycles ± 2 DB
DIMENSIONS	(ME-18P) 12″ x 10″ x 8″ high
DIMENSIONS	(ME-18) 12″ x 6¾″ x 7¾″ high

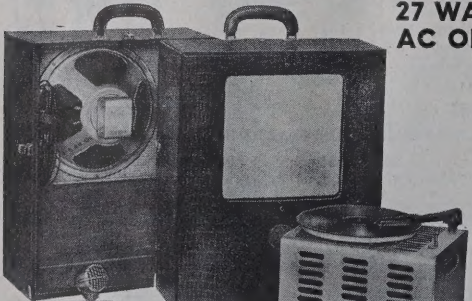
ME-18P

PRICES	List Price
ME-18 Amplifier with tubes, with streamline cover Shipping Weight 17 lbs.	$ 83.16
ME-18P Amplifier, with tubes, with phono top Shipping Weight 26 lbs.	113.40
MES-18 Complete portable system Shipping Weight 38 lbs.	167.40
MES-18P Complete portable system Shipping Weight 47 lbs.	$197.64

MES-18(P) Portable System Consists of:
- 1—ME-18 or ME-18P Amplifier, with tubes
- 2—12″ PM speakers
- 2—25-ft. Cable and plugs
- 1—Portable carrying case Model 3040
- 1—Astatic JT 30 microphone with 12-ft. cable and connectors

The models ME-18P amplifier and MES-18P system are available with a three-speed motor and all purpose pick-up with "turnover" cartridge. Add to List Price $10.00. Specify when ordering.

27 WATT MOBILE AMPLIFIER FOR 6 VOLT DC AND 115 VOLT AC OPERATION with SINGLE OR THREE SPEED PHONO TOP


MMS-27P

AMPLIFIER FEATURES: Peak power 40 watts • Self-contained power supplies • "Stand-by" battery saver switch • Extra heavy duty vibrator • Full output AC or DC operation • Ripple-free operation • Rugged construction • Supplied with Power Cables • U/L Approved.

AMPLIFIER SPECIFICATIONS FOR MM-27P

POWER OUTPUT	27 Watts
PEAK POWER	40 Watts
GAIN	Microphone 125 DB, Phono 78 DB
CONTROLS	Four: Two Microphones, Phono, Tone
INPUTS	3—Two Microphone, One Phono
TUBES	2-6SC7, 1-6SJ7, 2-6L6G. 1-5V4G (Rectifier)
OUTPUT	Tapped 2-4-8-15-125-250-500 Ohms
POWER CONSUMPTION	AC 130 Watts, 6 Volt DC, 25 Amps.
HUM LEVEL	AC, 55 DB below Output of 27 Watts; DC, Ripple-Free
FREQUENCY RESPONSE	50 to 10,000 CPS ± 2 DB
DIMENSIONS	12″ x 11″ x 8″ high

PRICES	List Price
MM-27P 27 watt mobile phono-top amplifier, with tubes, with single speed motor Shipping Weight 39 lbs.	$197.10
MMS-27P 27 watt mobile phono-top complete portable system with single speed motor Shipping Weight 62 lbs.	282.42
MMO-27P 27 watt mobile phono-top, complete outdoor system	332.10

MMO-27P Outdoor System Consists of:
- 1—MM-27P Phono top amplifier, with tubes
- 2—Masco-University Model MA-25 driver units
- 2—Masco-University Model PH reflex trumpets
- 2—25′ Cables and plugs
- 1—Astatic JT-30 microphone with cable and connectors

MMS-27P Portable System Consists of:
- 1—MM-27P Phono top amplifier, with tubes
- 2—12″ PM speakers
- 2—25′ Cables and plugs
- 1—Portable carrying case Model 3050
- 1—Astatic JT-30 microphone with cable and connectors

> To secure a LOW-IMPEDANCE INPUT for amplifiers, see PAGE B-20

The Models MM-27P amplifier, MMS-27P portable system, and MMO-27P outdoor system are available with a three-speed motor and all-purpose pickup with "turnover" cartridge. Add to List Price $10.00. Specify when ordering.

WEST OF ROCKIES ADD 5% TO ALL LIST PRICES

WRITE TO FACTORY FOR COMPLETE CATALOG

MASCO ELECTRONIC SALES CORP. • LONG ISLAND CITY 3, N. Y.

THE MASCO ECONOMY LINE

MASCO SOUND SYSTEMS

27 WATT SOUND EQUIPMENT

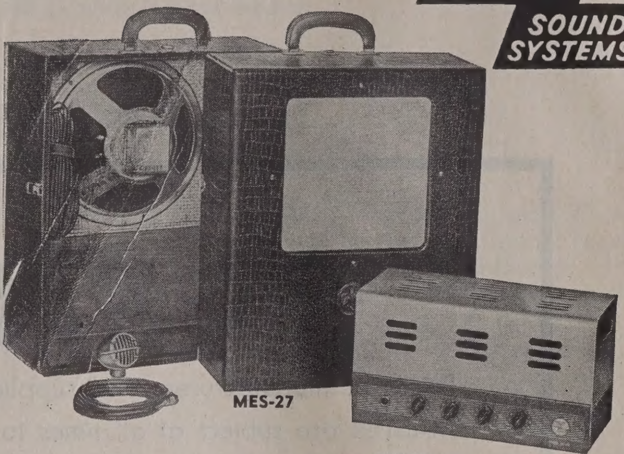
AMPLIFIER FEATURES: Output Tapped, 2-4-8-15-125-250-500 Ohms • Two Microphones and Phono • Electronic Mixing Overall • Beam Power 6L6 Output • Undistorted 27 Watts Output • Three Separate Inputs • U/L Approved.

AMPLIFIER SPECIFICATIONS FOR MODEL ME-27:

POWER OUTPUT	27 Watts
PEAK POWER	38 Watts
GAIN	Microphone 125 DB, Phono 78 DB
CONTROLS	Four—Two Microphones, Phono, Tone, with On-Off Switch
INPUTS	Three—Two Microphones, One Phono
TUBES	1-6SJ7, 1-6SC7, 2-6L6G. 1-5V4G (Rectifier)
OUTPUT	Tapped 2-4-8-15-125-250-500 Ohms
POWER CONSUMPTION	100 Watts, 117 Volts, 60 CPS
HUM LEVEL	55 DB below 27 Watts
FREQUENCY RESPONSE	50 to 10,000 Cycles ± 2 DB
DIMENSIONS	15" x 8" x 8"

PRICES	**List Price**
ME-27—Amplifier with tubes, with streamline cover Shipping Weight 30 lbs.	$106.92
MES-27—Complete portable system Shipping Weight 54 lbs.	192.24

MES-27 Portable System Consists of:
- 1—ME-27 Amplifier, with tubes
- 2—12" PM speakers
- 2—25-ft. Cables and plugs
- 1—Portable carrying case Model 3050
- 1—Astatic JT-30 microphone with cable and connectors


MES-27

ME-27

36 WATT SOUND EQUIPMENT

AMPLIFIER FEATURES: Three Input Channels • Bass and Treble Tone Equalizers • Electronic Mixing Overall • Peak Power 45 Watts • U/L Approved.

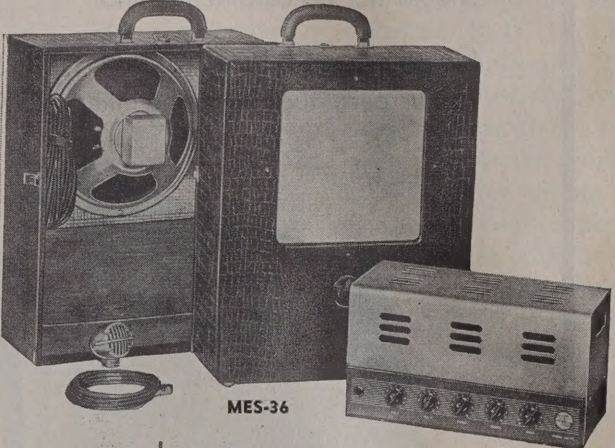
AMPLIFIER SPECIFICATIONS for ME-36 and ME-36R

POWER OUTPUT	36 watts
PEAK POWER	45 watts
GAIN	Microphone 125 DB, phono 78 DB
CONTROLS	Five—Two microphones, phono, 1-bass, 1-treble Separate On-Off Switch on Changer
INPUTS	Three—Two microphones, one phono
TUBES	2-6SJ7, 1-6SC7, 1-6SN7GT, 2-6L6G. 1-5U4G (Rectifier)
OUTPUT	Tapped 2-4-8-15-125-250-500 ohms
POWER CONSUMPTION (ME-36)	130 watts, 117 volts, 60 cps.
POWER CONSUMPTION (ME-36R)	150 watts, 117 volts, 60 cps.
HUM LEVEL	58 DB below 36 watts
FREQUENCY RESPONSE	50 to 10,000 cycles ± 2 DB
DIMENSIONS	(ME-36) 15" x 8" x 8" high
DIMENSIONS	(ME-36R) 15" x 15" x 9" high

PRICES	**List Price**
ME-36—Amplifier with tubes, with streamline cover Shipping Weight 30 lbs.	$135.00
MES-36—Complete portable system Shipping Weight 58 lbs.	220.86
ME-36R—Amplifier with tubes, with Webster Model 100 three-speed changer mounted on top of cover Shipping Weight 48 lbs.	253.80

MES-36 Portable System Consists of:
- 1—ME-36 Amplifier with tubes
- 2—12" PM Speakers
- 2—25' Cables and plugs
- 1—Astatic JT-30 microphone with cable and connectors
- 1—Portable carrying case Model 3050

The Model ME-36R cannot be supplied in a portable system


MES-36

ME-36

MODEL ME-36R
Featuring the Webster Model 100 Three-Speed Changer

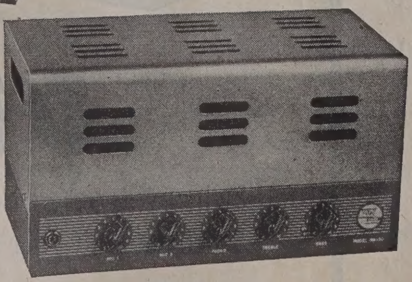
HI-POWER 60 WATT AMPLIFIER

FEATURES: Push-Pull 807 tubes • Separate bass and treble equalizers • Peak output 80 watts • Full electronic mixing • Two microphone inputs • Two-tone gray Hammertone finish • U/L approved.

AMPLIFIER SPECIFICATIONS FOR ME-60

POWER OUTPUT	60 Watts
PEAK POWER	80 Watts
SENSITIVITY	Microphone .007v, Phono 0.7v for full output
CONTROLS	Five: Two microphone, phono, bass, treble (with on-off switch)
TUBES	1-6SC7, 1-6SJ7, 2-6SN7GT, 2-807. 3-5Y3GT (Rectifiers)
INPUTS	Three—two microphone, one phono
OUTPUTS	4, 8, 16 ohms, 70 volt, 140 volt (constant voltage)
BOOSTER AMPLIFIER OUTPUT	1000 ohms, 3.5 volts
POWER CONSUMPTION	190 watts, 117 volts, 60 cps AC
HUM LEVEL	60 db below 60 watts
FREQUENCY RESPONSE	50 to 12,000 cps ±2 db
DIMENSIONS	17" x 10" x 8½" high

PRICE	**List Price**
ME-60 Amplifier with tubes—with streamline cover Shipping Weight: 40 lbs.	$197.50


ME-60

To secure a LOW-IMPEDANCE INPUT for amplifiers, see PAGE B-20

WEST OF ROCKIES ADD 5% TO ALL LIST PRICES

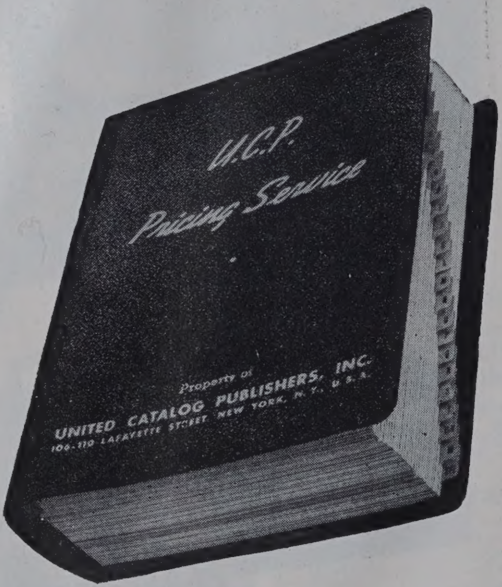
WRITE TO FACTORY FOR COMPLETE CATALOG

MASCO ELECTRONIC SALES CORP. • LONG ISLAND CITY 3, N. Y.

PRICES

Prices of manufacturers and suppliers' products listed in **RADIO'S MASTER** are subject at all times to change without notice — they should not be considered final.

Get quick on-the-spot quotations from your distributor who subscribes to our perpetual up-to-the-minute **PRICING SERVICE.**


U.C.P.
Pricing Service
Property of
UNITED CATALOG PUBLISHERS, INC.
106-110 LAFAYETTE STREET NEW YORK, N. Y., U. S. A.

Official Pricing System of radio - electronic - television parts and equipment. Supported by the industry: distributors, manufacturers, and their sales representatives.

•

Loose-leaf, flexible binder. Contains over 1100 pages.

•

Published by
UNITED CATALOG PUBLISHERS, INC.
106-110 Lafayette Street
New York 13, N. Y.

DELIVERY

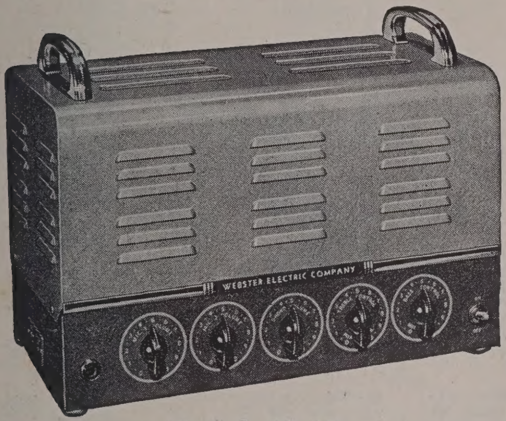
Delivery is often dependent on the availability of raw materials. So check with your distributor for delivery information.

WEBSTER ELECTRIC

Webster Electric Company, Racine, Wisconsin. Established 1909

AMPLIFIERS

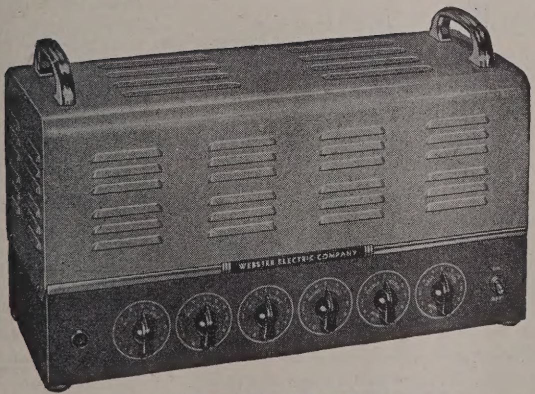
In auditoriums, churches, schools, restaurants, clubs, playgrounds, retail stores, parking lots and garages—wherever 15 or 25 watts of output is required, Webster Electric amplifiers are an exceptional buy. These units offer outstanding quality and performance and have the most features of importance to the user. These amplifiers are housed in sturdy, all-steel cases, equipped with metal carrying handles for ease in transportation. The finish is baked enamel, two-tone grey, with chrome trim.



Model 81-15

Model 81-15 is a 15 watt amplifier which offers a frequency response of 60 to 15,000 cycles, within 2 db. Separate bass and treble controls make it possible to adjust the amplifier to suit almost any acoustical or noise conditions. Separate gain controls are provided for each of the two high impedance microphone channels and for the high impedance phonograph channel. Selection of the output impedance desired is made by a convenient rotary tap switch. All input and output receptacles, the power cord and replaceable fuse are located on the back of the cabinet.

List Price $114.40



Model 82-25

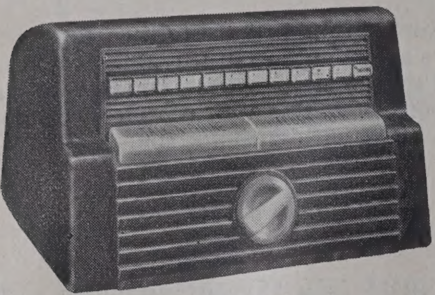
Model 82-25 is a 25 watt amplifier which provides for the mixing of 3 high impedance microphones and one high impedance phonograph pickup, with separate gain controls for each. Separate bass and treble controls permit adjustment of the amplifier for maximum clarity under a wide variety of operations. A complete range of output impedances are available and selection of the impedance desired is accomplished by means of a rotary tap switch. All output and input receptacles are placed on the back panel, together with the power cord and replaceable fuse. The 82-25 amplifier has a frequency response ranging from 30 to 15,000 cycles.

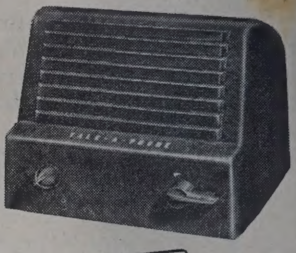
List Price $138.25

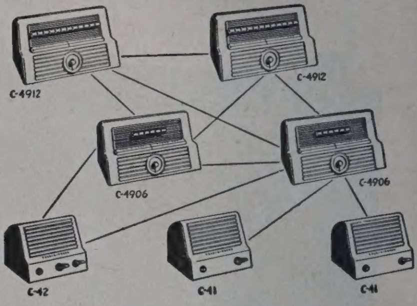
TALK-A-PHONE

INTER-COMMUNICATION SYSTEMS
FOR INDUSTRY • STORES • OFFICES • HOMES

Known wherever inter-communication is used as the World's finest system, TALK-A-PHONE is designed, developed, and precision-engineered by the leader in its field, with more than a quarter-century experience in electronics. TALK-A-PHONE stations are designed to withstand continuous day and night use; and are built to give you years of dependable service. The Armed Forces; Governmental Agencies; America's giant industrial firms, with highly complex and elaborate intercom needs depend on TALK-A-PHONE.







ONE MODEL DOES EVERYTHING

TALK-A-PHONE's patented, exclusive **"DYNASONIC"** features gives you one model that "Does Everything." The same unit can be used for every type of application, whether it be as all Master Stations, or a Master and Staff Stations, or a number of Masters inter-mixed with Staff Stations. The Master Stations may talk with any other Master in the system as well as with all Staff Stations. Six, twelve, twenty and thirty capacity Master Stations can be used within the same system. The Staff Station may answer Master Stations and originate calls to one, two or six Master Stations, depending on its capacity. Staff Stations converse with Master Stations only. Staff Stations are not connected to electrical outlet.

Through its **"DIFFERENTIAL STAFF"** feature, TALK-A-PHONE permits any Staff Station to be used as either "Private" or "Non-Private", and also permits some Staff Stations to be "Private" and others "Non-Private" in the same system. "Private" Staff Stations have complete privacy, and no other station can "listen-in". Persons at "Non-Private" Staff Stations can answer from a distance up to 50 feet from the unit without leaving work. All Master and Staff Stations are assured of privacy, except where by choice, Staff Stations are designated as "Non-Private", in which case the Master Station can "listen-in" on the "Non-Private" Staff Stations.

Now . . . Talk-A-Phone brings you **REDI-POWER**, The Master Station that automatically supplies the right amount of power needed (up to a full 20 watts) at any time, for any Station in the system. This prevents any volume weakness where a number of Stations are being called simultaneously, or where a high noise level exists. **REDI-POWER**, which does away with the need for special boosters in many cases, is available in 12, 20, and 30 Station capacity.

BEAUTIFULLY STYLED: The Bakelite walnut cabinet of the "CHIEF FORTY-NINER" is unsurpassed in simplicity of design and appearance.

TRANSLUCENT LIGHTING further enhances its beauty as well as indicating whether the unit is "on" or "off."

MULTI-MAGIC SELECTOR: A patented exclusive TALK-A-PHONE feature. Twelve, twenty, thirty station capacity in SAME BEAUTIFUL CABINET with only TWELVE PUSH BUTTONS. Six-station Master has six push buttons.

HOLD-A-MATIC CONFERENCE CONTROL: TALK-A-PHONE "HOLD-A-MATIC" feature ALLOWS CONFERENCE between THREE or a GROUP OF STATIONS by merely selecting desired buttons.

UNI-TRANS: Gives you "DICTATION CONTROL."

VOICE RANGE POWER: The powerful, rugged amplifier gives you amazing, brilliant "voice range" power. Stations may be up to 3000 feet apart.

DEPENDABILITY: PROVED IN BILLIONS OF HOURS OF ACTUAL USE.

PRIVACY EARPHONE: Optional equipment on Master Stations. Provides listening privacy; and conversation with other Masters without continuous operation of touch bar.

CRADLE PHONE: Optional equipment to provide completely private conversations.

BUSY SIGNAL: Talk-A-Phone "Busy Signal" functions as a visual indication that the Master Station being called is busy. Can be ordered as optional feature with any "Chief" Master Station.

All Master Stations and C-46 Staff Stations — 12" W x 9" D x 7" H.

C-41 and C-42 Staff Stations — 8¼" W x 7½" D x 6¼" H.

C-4906 Push button Master for six-station capacity. complete with tubes, junction box, and easy-to-follow instructions. Wt. 13 lbs. **List Price ea. $89.50**

6212 CABLE — For inter-connecting C-4906. **List Price per foot 30c**

C-4912 Push button Master for twelve-station capacity, complete with tubes, junction box, and easy-to-follow instructions. Wt. 14 lbs. **List Price ea. $106.00**

C-RP-5912 REDI-POWER push button master for 12 Station capacity, complete with tubes, junction box, and easy-to-follow instructions. Wt. 15 lbs. **List Price ea. $160.00**

6224 CABLE — For inter-connecting **C-4912; C-4920; C-RP-5912;** and **C-4930**........**List Price per foot 60c**

C-41 Staff Station for origination of call to one Master. Wt. 5 lbs.................**List Price ea. $22.00**

C-42 Staff Station for origination of calls to two Masters. Wt. 5 lbs...............**List Price ea. $29.00**

C-46 Push button Staff Station for origination of calls to six Masters. Wt. 9 lbs. **List Price ea. $65.00**

6204 CABLE — For connecting C-41, C-42 and C-46 Staff Stations________ **List Price per foot 12½c**

Master Stations also available in capacities up to 60 Stations. For cradle phone models add $45.00 to list price of unit. For earphone models add $20.00 to list price of unit. For "Busy Signal" add $12.00 to list price of Master. All models available in Executive Gray Cabinets at slightly additional cost. Write for full details.

HOW TO DETERMINE CABLE REQUIREMENTS: To interconnect Master Stations, measure from first Master to second Master only, from second to third Master only, etc., and total. For **C-4920** or **C-RP-5920** use two lengths of **6224** Cable, and for **C-4930** use three lengths of **6224** Cable. To connect **C-41** Staff Station, measure from Staff Station to the one Master to which Staff Station originates calls. To connect **C-42** and **C-46** Staff Stations, measure a separate length of cable from Staff Station to each Master Station to which Staff Station originates calls (for each **C-42** or **C-46**, follow same procedure).

Manufactured under exclusive **TALK-A-PHONE** *Patents. Licensed under U. S. Patents of A. T. & T. Co. and Western Electric Co. Inc.*

Prices and Specifications Subject to Change Without Notice

All prices 5% higher west of Rocky Mountains

CHICAGO *TALK-A-PHONE CO.* ILLINOIS

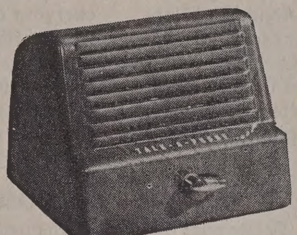
TALK-A-PHONE

INTER-COMMUNICATION SYSTEMS
FOR INDUSTRY • STORES • OFFICES • HOMES

Master Station

TALK-A-PHONE

Sub-Station



TALK-A-PHONE reaches every department with the speed of sound. Quick as you can flick a finger—Talk and Listen. For the Home, Farm, Professional Man, Office and Business. Eliminate time consuming trips, by-pass congested switchboards.

TALK-A-PHONE offers "private" or "non-private" inter-communication, provides utmost flexibility with true economy. Designed for continuous day and night use.

TALK-A-PHONE operates at but a fraction of a cent a day . . . and it can be installed by anyone. All units are complete, ready for installation. Walnut bakelite cabinets. All models Underwriters Laboratories Approved.

MASTER SELECTIVE SYSTEM

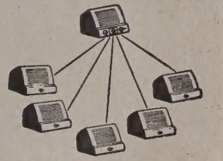
Designed for use where one Central Location is to converse with several outlying locations. Master Station, in Central Location, can be connected with one or more (up to 10) Sub-Stations. Start with a Master and only one or two Sub-Stations and then add later as necessary. Optional installation of system whereby user can connect Sub-Stations "privately" or "non-privately" and still originate calls to the Master. When system is "non-private," persons at Sub-Stations need operate no controls and can reply from a distance. When system is "private," Master unit cannot listen in on Sub-Stations; however, Sub-Stations can still answer and originate calls. Operates universally on 110-120 volts, AC-DC. Sturdy bakelite cabinets.

Model LM-5—Master Station for 5 Sub-Stations, complete with tubes and easy-to follow instructions. Weight 7 lbs. **List $45.00**

Model LM-10—Master Station for 10 Sub-Stations, complete with tubes and easy-to-follow instructions. Weight 7 lbs. **List $58.00**

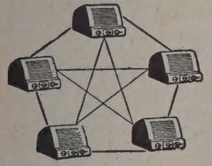
Model LR-3—Sub-Station for use with LM-5 or LM-10 Masters. Weight 5 lbs. **List $15.95**

No. 5303—Cable for connecting LR-3 to LM-5 or LM-10. **List, per 10' $ .75**



Master Station can talk with any Sub-Station or with all at once. Enables replies at a distance from unit without operation of controls.

SUPER SELECTIVE SYSTEM



Consists of all Master Stations. Any Station can call any other Station. Several completely private 2-way conversations possible at same time.

Here is a versatile low cost intercom system offering extreme flexibility to meet many requirements in industry, offices. homes, etc. Consists entirely of Master Stations so that several separate two-way conversations may be carried on simultaneously without interference to each other. Any Station can call and carry on a conversation with any other Station in the system with absolute "privacy." Stations cannot listen in on each other, nor can a third unit listen in on a conversation of two others. Have a visitor in your office and your mind is at ease that no one can eavesdrop on your conversation.. Variable volume, adjustable at each unit, controls incoming voice. You can begin with two Masters and add later as needed. Operates universally on 110-120 volts, AC-DC Sturdy bakelite cabinets.

Model LS-5—Master Station for 5 Masters, complete with tubes and easy-to-follow instructions. Weight 7 lbs. **List $45.00**

Model LS-10—Master Station for 10 Masters, complete with tubes and easy-to-follow instructions. Weight 7 lbs. **List $58.00**

No. 5506—Cable for connecting LS-5 Masters. **List, per 10' $1.70**

No. 9911—Cable for connecting LS-10 Masters. **List, per 10' $3.40**

COMBINATION SYSTEM

Personnel can answer incoming calls as far as 40 feet from their unit. Master Stations may talk to each other and with any Sub-Station selectively. Master Stations can switch themselves "private" or "non-private" at will. You can begin with 2 Stations (at least one must be a Master) and add other units as required. Model CL-5 Master has a total inter-connecting capacity of 5 Stations, including Masters and Sub-Stations; while Model CL-10 Master has a total capacity of 10 Stations. Sub-Stations do not consume electric current. Operates universally on 110-120 volts, AC-DC. Sturdy bakelite cabinets.

Model CL-5—Combination Master for 5 Station use, complete with tubes and easy-to-follow instructions. Weight 7 lbs. **List $55.00**

Model CL-10—Combination Master for 10 Station use, complete with tubes and easy-to-follow instructions. Weight 8½ lbs. **List $74.00**

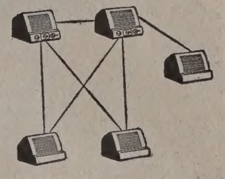
Model LR-2—Sub-Station for use with either of above Masters. Weight 5 lbs. **List $15.95**

Model LR-2M—Same operation as LR-2, but in brown metal cabinet suitable for wall or desk mounting. Weight 3 lbs. **List $15.95**

No. 6212—Cable for connecting CL-5 Masters. **List, per 10' $3.00**

No. 6224—Cable for connecting CL-10 Masters. **List, per 10' $6.00**

No. 6902—Cable for connecting LR-2 and LR-2M to CL-5 or CL-10 Masters. **List, per 10' $ .60**



For the more flexible type of system requiring operation of more than one Master Station, along with Sub-Stations which need not originate calls.

COMPLETE TWO-STATION SYSTEM

A complete low cost intercom system providing voice communication between any two points. Hundreds of uses . . . connects bedroom with nursery, keeps parents tuned in on baby's every move. Ties in home with garage, farmhouse with barn, etc. . . . Ideal, too, for offices, stores, small factories. Sub-Station can be connected for "private" or "non-private" use. When connected "privately," Master unit cannot listen in on Sub-Station, but both can originate calls to each other. When connected "non-privately," Master can listen in on Sub-Station, and persons can reply to Master from as far as 40 feet from the Sub-Station. Adjustable volume. Sturdy bakelite cabinets. Operates universally on 110-120 volts, AC-DC.

Model LC-2—Two-Station System, complete with Master, Sub-Station, 50' Cable, and easy-to-follow instuctions. Wt. 11 lbs. **List $51.00**

No. 5303—Additional cable for greater distance **List, per 10' $ .75**

HOW TO DETERMINE CABLE REQUIREMENTS

For LM-5, LM-10 MASTER SELECTIVE Systems, measure from each Sub-Station to the Master and order total. For LS-5, LS-10 SUPER SELECTIVE Systems, measure from first Master to second Master only; from second Master to third Master only; etc., and total. Cable between first and last Masters not necessary. For CL-5, CL-10 COMBINATION Systems, Master cable, measure from Master to Master as above. Sub-Station cable, measure from each Sub-Station to nearest Master only.

All units above available with "privacy" Earphone attachment at $20.00 per station list. Also in unusually attractive Pearl Gray cabinets at slightly additional cost.

Prices and Specifications Subject to Change Without Notice
All prices 5% higher west of Rocky Mountains

CHICAGO *TALK-A-PHONE CO.* ILLINOIS

AMPLIFIERS and SOUND SYSTEMS

DON McGOHAN, INC., 3700 W. Roosevelt Road, Chicago 24, Ill.

Amplifiers licensed under U. S. Patents of Western Electric Company, Inc., and American Telephone and Telegraph Company.

M-G Sound Equipment is a complete line of quality products for sound reinforcement and reproduction. Amplifiers and Sound Systems are designed to give exceptional performance but priced within the reach of all users of sound equipment. M-G Amplifiers include features found only in equipment offered usually at greatly increased prices. Components such as loudspeakers, microphones, record changers and players, projectors, speaker baffles and carrying cases are of equally high quality, all designed to work efficiently together as companion products. Performance ratings of M-G amplifiers are conservative and can be depended upon to deliver performance claimed. Altogether M-G Sound Equipment can be purchased with complete confidence in its value.

M-G
MICROPHONE
PHONOGRAPH
TREBLE
BASS

MODEL M-G 18 AMPLIFIER

Features: 18-watt undistorted output. Microphone and phonograph inputs. Bass and treble controls. Output impedance 4, 8, 16, 500 ohms.

SPECIFICATIONS

Power Output: 18 watts, less than 5% distortion. **Gain:** Microphone, 114 db; phonograph, 75 db. **Controls:** Microphone, phonograph, treble, bass with on-off switch. Bass range +10 db at 100 cps.; treble range −18 db at 10,000 cps. **Inputs:** Microphone, phonograph. **Tubes:** 1 6SC7, 1 6SJ7, 2 6L6G, 1 5U4G. **Output Impedance:** 4, 8, 16, 500 ohms. **Power Consumption:** 90 watts, 117 volts, 60 cps. **Hum Level:** 63 db below 10 watts. **Frequency Response:** ±2 db, 35 to 15,000 cps. **Dimensions:** 12″ x 7″ x 8¼″ high. **Finish:** Two-tone Midnight gray and slate Hammerloid.

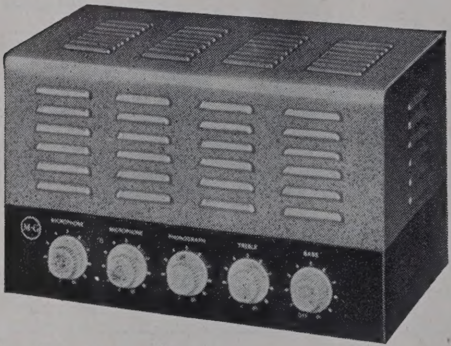
MODEL M-G 10B AMPLIFIER

Features: 10-watt undistorted output. Bass and treble controls. Output Impedance 4, 8, 16, 500 ohms. Can be used with reluctance pickup.

SPECIFICATIONS

Power Output: 10 watts, less than 5% distortion. **Gain:** Microphone, 120 db; phonograph, 80 db. **Controls:** 1 microphone, 1 phonograph, 1 treble, 1 bass with on-off switch. Bass range +14 db to −4 db at 100 cps.; treble range +10 db to −20 db at 10,000 cps. **Inputs:** 1 microphone (may be used with reluctance pickup), 1 phonograph. **Tubes:** 1 6SC7, 1 6SN7GT, 2 6V6GT, 1 5Y3GT. **Output Impedance:** 4, 8, 16, 500 ohms. **Power Consumption:** 65 watts, 117 volts, 60 cps. **Hum Level:** 65 db below 10 watts. **Frequency Response:** ±2 db, 35 to 15,000 cps. **Dimensions:** 11¼″ x 7″ x 6⅝″ high. **Finish:** Two-tone Midnight gray and slate Hammerloid.

M-G
MICROPHONE
PHONOGRAPH
TREBLE
BASS



MODEL M-G 20B AMPLIFIER

Features: 20-watt undistorted output. 2 microphone, 2 phonograph inputs. Bass and treble controls. Output impedance 2, 2.7, 4, 8, 16, 250, 500 ohms. Input for reluctance pickup.

SPECIFICATIONS

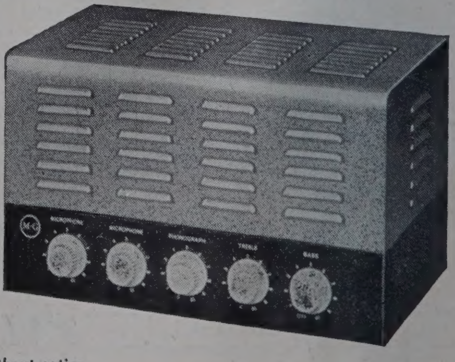
Power Output: 20 watts, less than 5% distortion. **Gain:** Microphone, 120 db; phonograph, 75 db. **Controls:** 2 microphone, 1 phonograph for crystal or reluctance, 1 treble, 1 bass with on-off switch. Bass range +9 db at 100 cps; treble range −18 db at 10,000 cps. **Inputs:** 2 microphone, 2 phonograph (1 crystal, 1 reluctance). **Tubes:** 2 6SC7, 1 6SQ7, 1 6SL7GT, 2 6L6G, 1 5V4G. **Output Impedance:** 2, 2.7, 4, 8, 16, 250, 500 ohms. **Power Consumption:** 90 watts, 117 volts, 60 cps. **Hum Level:** −60 db below 20 watts. **Frequency Response:** ±2 db, 40 to 15,000 cps. **Dimensions:** 14″ x 8″ x 8¼″ high. **Finish:** Two-tone Midnight gray and slate Hammerloid.

MODEL M-G 30B AMPLIFIER

Features: 30-watt undistorted output. 2 microphone, 2 phonograph inputs. Bass and treble controls. Output impedance 2, 2.7, 4, 8, 16, 250, 500 ohms. Input for reluctance pickup.

SPECIFICATIONS

Power Output: 30 watts, less than 5% distortion. **Gain:** Microphone, 120 db; phonograph, 75 db. **Controls:** 2 microphone, 1 phonograph for crystal or reluctance, 1 treble control, 1 bass control with on-off switch. Bass range +9 db at 100 cps; treble range −18 db at 10,000 cps. **Inputs:** 2 microphone, 2 phonograph (1 crystal, 1 reluctance). **Tubes:** 2 6SC7, 1 6SQ7, 1 6SL7GT, 2 6L6G, 1 5V4G. **Output Impedance:** 2, 2.7, 4, 8, 16, 250, 500 ohms. **Power Consumption:** 130 watts, 117 volts, 60 cps. **Hum Level:** 62 db below 30 watts. **Frequency Response:** ±2 db, 40 to 15,000 cps. **Dimensions:** 14″ x 8″ x 8¼″ high. **Finish:** Two-tone Midnight gray and slate Hammerloid.



All specifications and prices subject to change without notice.

AMPLIFIERS and SOUND SYSTEMS

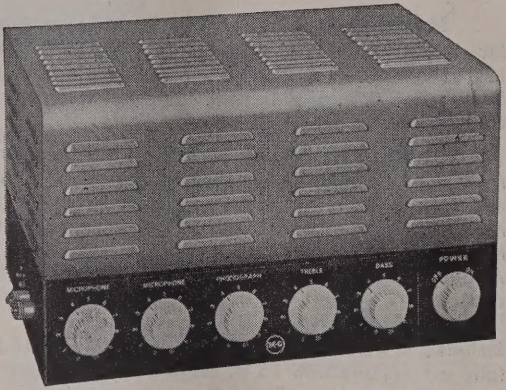
DON McGOHAN, INC., 3700 W. Roosevelt Road, Chicago 24, Ill.

MODEL M-G 60 AMPLIFIER

Features: 60-watt undistorted output. 2 microphone, 2 phonograph inputs. Bass and treble controls. Output Impedance 4, 8, 16, 250 ohms, 70 and 140 volts.

SPECIFICATIONS

Power Output: 60 watts, less than 5% distortion. **Gain:** Microphone, 124 db; phonograph, 80 db. **Controls:** 2 microphone, 1 phonograph, 1 bass, 1 treble, 1 on-off switch. **Inputs:** 2 microphone, 2 phonograph. **Tubes:** 2 6SJ7, 1 6SL7GT, 1 6V6GT, 2 807, 2 5U4G, 1 5Y3GT. **Output Impedance:** 4, 8, 16, 250 ohms, 70 and 140 volts. **Power Consumption:** 195 watts, 117 volts, 60 cps. **Hum Level:** 64 db below 60 watts. **Frequency Response:** ±2 db, 20 to 20,000 cps. **Dimensions:** 14″ x 10″ x 8¾″ high. **Finish:** Two-tone Midnight gray and slate Hammerloid.



MODEL M-G 60X BOOSTER AMPLIFIER

SPECIFICATIONS

Power Output: 60 watts, less than 5% distortion. **Gain:** 75 db. **Controls:** ½ megohm gain, separate power switch. **Tubes:** 1 6SJ7, 1 6V6GT, 2 807, 2 5U4G, 1 5Y3GT. **Output Impedance:** 4, 8, 16, 250 ohms, 70 and 140 volts. **Power Consumption:** 185 watts, 117 volts, 60 cps. **Hum Level:** 64 db below 60 watts. **Dimensions:** 14″ x 8″ x 8¾″ high. **Finish:** Two-tone Midnight gray and slate Hammerloid.

M-G
MIC. 1
MIC. 2
PHONO.
TONE
OFF
ON

M-G 25M, M-G 25

MODEL M-G 25M MOBILE AMPLIFIER

Features: 18 to 25 watt undistorted output. Tone control. Output impedance 2, 2.7, 4, 8, 16, 250, 500 ohms. Removable top can be replaced with 3-speed manual record player (shown) or 3-speed automatic record changer.

SPECIFICATIONS

Power Output: A.C. 25 watts, less than 5% distortion; D.C. 18 watts, less than 5% distortion. **Gain:** Microphone, 120 db; phonograph, 75 db. **Controls:** 2 microphone, 1 phonograph, 1 tone control, 1 separate on-off switch, 1 standby switch. Tone control range −21 db at 10,000 cps. **Inputs:** 2 microphone, 1 phonograph. **Tubes:** 1 6SC7, 1 6SQ7, 1 6SL7GT, 2 6L6G, 2 6X5GT. **Output Impedance:** 2, 2.7, 4, 8, 16, 250, 500 ohms. **Power Consumption:** A.C. 90 watts, 117 volts, 60 cps.; D.C. 18 amps., 6 volts. **Hum Level:** 60 db below 25 watts. **Frequency Response:** ±2 db, 40 to 15,000 cps. **Dimensions:** 13″ x 14½″ x 9″ high. **Finish:** Two-tone Midnight gray and slate Hammerloid.

NOTE: Automatic record changer and manual record player subject to excise tax.

MODEL M-G 25 AMPLIFIER

Features: 25-watt undistorted output. 2 microphone, 1 phonograph inputs. Tone control. Output impedance 2, 2.7, 4, 8, 16, 250, 500 ohms.

SPECIFICATIONS

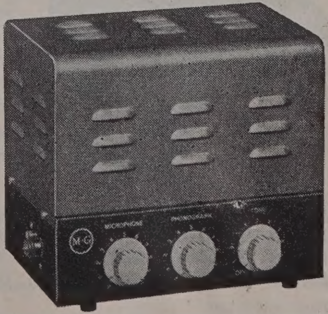
Power Output: 25 watts, less than 5% distortion. **Gain:** Microphone, 120 db; phonograph, 75 db. **Controls:** 2 microphone, 1 phonograph, 1 tone control, separate on-off switch. Tone control range −21 db at 10,000 cps. **Inputs:** 2 microphone, 1 phonograph. **Tubes:** 1 6SC7, 1 6SQ7, 1 6SL7GT, 2 6L6G, 1 5V4G. **Output Impedance:** 2, 2.7, 4, 8, 16, 250, 500 ohms. **Power Consumption:** 90 watts, 117 volts, 60 cps. **Hum Level:** 60 db below 25 watts. **Frequency Response:** ± 2 db, 40 to 15,000 cps. **Dimensions:** 13″ x 14½″ x 9″ high. **Finish:** Two-tone Midnight gray and slate Hammerloid.

MODEL M-G 7B AMPLIFIER

Features: 7 watts usable output. Microphone and phonograph inputs. Output impedance 4 and 8 ohms.

SPECIFICATIONS

Power Output: 7 watts. **Gain:** Microphone, 113 db; phonograph, 75 db. **Controls:** 1 microphone, 1 phonograph, 1 tone control with on-off switch. Tone control range −18 db at 10,000 cps. **Inputs:** 1 microphone, 1 phonograph. **Tubes:** 1 6SC7, 1 6L6G, 1 5Y3GT. **Output Impedance:** 4 and 8 ohms. **Power Consumption:** 60 watts, 117 volts, 60 cps. **Hum Level:** 61 db below 7 watts. **Frequency Response:** ±3 db, 80 to 10,000 cps. **Dimensions:** 9″ x 5½″ x 8¾″ high. **Finish:** Two-tone Midnight gray and slate Hammerloid.



All specifications and prices subject to change without notice.

AMPLIFIERS and SOUND SYSTEMS

DON McGOHAN, INC., 3700 W. Roosevelt Road, Chicago 24, Ill.

SOUND SYSTEMS

Model M-G 7S Portable Sound System

Includes: 1 Model M-G 7B Amplifier; 1 Model HR Astatic microphone with 15 ft. cable and connectors; 1 8″ Jensen heavy duty PM speaker with cable and plug; 1 Model CB-710 carrying case.

Model M-G 10S Portable Sound System

Includes: 1 Model M-G 10B Amplifier; 1 Model HR Astatic microphone with 15 ft. cable and connectors; 2 8″ Jensen heavy duty PM speakers with 25 ft. cables and plugs; 1 Model CB-10 carrying case. (Available with Model JT-30 Astatic microphone instead of Model HR at additional cost).

Model M-G 18S Sound System

Includes: 1 Model M-G 18 Amplifier, 1 Model JT-30 Astatic microphone with 15 ft. cable and connectors, 2 12″ Jensen PM Speakers with 25 ft. cables and plugs, 1 Model C-2230 Carrying Case.

Model M-G 20S Portable Sound System

Includes: 1 Model M-G 20B Amplifier; 1 Model JT-30 Astatic microphone with 15 ft. cable and connectors; 2 12″ Jensen PM speakers with 25 ft. cables and plugs; 1 Model C-2230 Carrying Case.

Model M-G 30S Portable Sound System

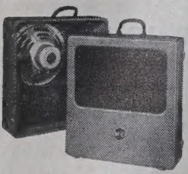
Includes: 1 model M-G 30B Amplifier; 1 Model JT-30 Astatic microphone with 15 ft. cable and connectors; 2 12″ Jensen PM speakers with 25 ft. cables and plugs; 1 Model C-2230 Carrying Case.

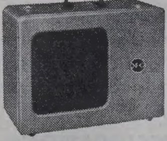
Model M-G 25S Portable Sound System

Includes: 1 Model M-G 25 Amplifier; 1 Model JT-30 Astatic microphone with 15 ft. cable and connectors; 2 12″ Jensen PM speakers with 25 ft. cables and plugs; 1 Model CB-201 speaker carrying case; 1 Model CB-25 amplifier carrying case. (Optional: 3-speed automatic record changer or manual record player at additional cost.)

Model M-G 25MS Portable Sound System

Includes: 1 Model M-G 25M Mobile Amplifier; 1 Model JT-30 Astatic microphone with 15 ft. cable and connectors; 2 12″ Jensen PM speakers with 25 ft. cables and plugs; 1 Model CB-201 speaker carrying case; 1 Model CB-25 amplifier carrying case. (Optional: 3-speed automatic record changer or manual record player at additional cost.)


C-2230
CB-10


CB-201

CB-710

CARRYING CASES

Smartly styled, air luggage type cases built of plywood with rounded corners and covered with durable gray linen weave fabric; black grille; leather handles; equipped with catches. Space within for speakers, microphone and cables.

Model No.	Speaker No. and Size	Width	Dimensions Height less Handles	Depth
C-2230	2—12″	20½″	19½″	11¾″
CB-201†	2—12″	20½″	15″	10″
CB-25*		16¾″	15″	15¼″
CB-10	2— 8″	16″	15″	10½″
CB-710	1— 8″	13½″	15″	9½″

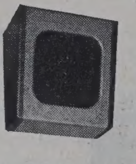
*Carrying Case for Models M-G 25 or M-G 25M Amplifiers.
†For Speakers only.

Model VH-24

PROJECTORS

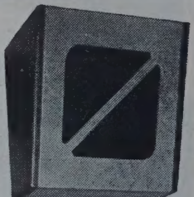
Suitable for sound reinforcement indoors or outdoors. Unaffected by weather. May be turned at any angle and locked in place. Rustproof, weatherproof terminal box. No soldering to connect. Furnished with brackets.

Model VH-24—25 watts, 16 ohms. Diameter 25″, length ww—⅜″.
Model VH-20—25 watts, 16 ohms. Diameter 21″, length 20¼″.
Model VH-15—15 watts, 8 ohms. Diameter 16″, length 15″.
Model VH-91—15 watts, 8 ohms. Diameter 8⅞″, length 7⅝″


B-105
B-106 B-108

SPEAKER BAFFLES

Designed for wall mounting. Two-tone fabric covered plywood. Tongue and groove construction. Non-resonant.


B-112

Model No.	Speaker Size	Width	Dimensions Height	Depth
B-105	5″	6½″	6¾″	4¼″
B-106	6″	7¾″	7¾″	4½″
B-108	8″	9½″	9½″	6½″
B-112	12″	14″	14″	9″

Model HR

ASTATIC MICROPHONES

Model JT-30

Model HR—Crystal microphone. Output level −52 db. Can be used on desk, in the hand, or on a floor stand. Furnished with 15′ shielded cable and connectors. On-off switch.

Model JT-30—Crystal microphone. Output level −52 db. Furnished with wood handle with interlocking metal base. May be used on floor stand.

Model M-G 500A

AUTOMATIC 3-SPEED RECORD CHANGER

Model M-G 500A — For use with Models M-G 25 and M-G 25M Amplifiers or Models M-G 25S and M-G 25MS Sound Systems.

MANUAL 3-SPEED RECORD PLAYER

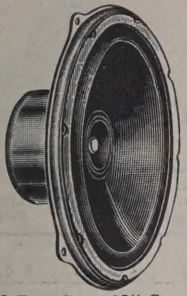
Model M-G P10A — For use with Models M-G 25 and M-G 25M Amplifiers or Models M-G 25S or M-G 25MS Sound Systems. Shown mounted on Model M-G 25 Amplifier.

Printed in U.S.A. *All specifications and prices subject to change without notice.* Form 200

RCA ELECTRONIC COMPONENTS

SPEAKERS — PICKUPS

QUALITY ENGINEERED TO INSURE DEPENDABLE PERFORMANCE



RCA Duo-Cone 15" Speaker

PM & EM LOUDSPEAKERS

- Mountings Designed to RTMA Standards.
- Dustproof, Rust-Resistant.
- Universal Transformer Mounting Bracket on All 4", 4" x 6", and 5" PM's.
- Rugged Mechanical Construction With Welded Housing Assembly.
- Moisture-Resistant Voice-Coil Suspension Assures High Efficiency and Dependability.
- Speaker Mounting Bracket Enclosed With All 4", 4" x 6", and 5" PM's.
- Rim Gaskets Supplied with all 12" Speakers.

RCA SPEAKER CHARACTERISTICS

Permanent-Magnet Types

SIZE	TYPE No.	RESONANT FREQUENCY (cps)	MAGNET WEIGHT (oz.)	VOICE-COIL IMPEDANCE	MAXIMUM POWER HANDL'G CAP. (WATTS)	SUGGST'D LIST PRICE
2" x 3"	214S1	230-340	1.0	11.8 ohms at 1000 cycles	0.125	$ 4.75
4" (shallow pot type)	304S2	175-225	1.0	3.2 ohms at 400 cycles	3	4.00
4"	404S2	170-225	1.47	3.2 ohms at 400 cycles	3	4.35
4" x 6"	246S2	150-200	0.68	3.2 ohms at 400 cycles	3	4.20
4" x 6"	446S2	150-200	1.47	3.2 ohms at 400 cycles	3	4.75
5"	205S2	150-200	0.68	3.2 ohms at 400 cycles	3	4.00
5"	405S2	150-200	1.47	3.2 ohms at 400 cycles	3	4.60
5" x 7"	257S1	120-140	1.47	3.2 ohms at 400 cycles	6	5.75
6"	306S1	100-140	1.47	3.2 ohms at 400 cycles	4	6.25
6" x 9"	269S1	95-120	2.4	3.2 ohms at 400 cycles	8	8.75
8"	208S2	75-95	2.15	3.2 ohms at 400 cycles	8	7.50
8"	208S4	75-95	2.15	6-8 ohms at 400 cycles	8	7.50
10"	410S1	75-125	6.8	6-8 ohms at 400 cycles	10	13.25
12"	112S1	65-90	2.15	3.2 ohms at 400 cycles	12	10.50
12"	202S1	65-90	.97	6-8 ohms at 400 cycles	12	9.90
12"	412S6	65-90	6.8	3.2 ohms at 400 cycles	12	13.75
12"	412S7	65-90	6.8	6-8 ohms at 400 cycles	12	15.00
15"	515S2	40-55	32	16 ohms at 400 cycles	25	82.50

Field-Coil Types

SIZE	TYPE No.	RESONANT FREQUENCY (cps)	FIELD RESISTANCE (ohms)	FIELD CURRENT	VOICE COIL IMPEDANCE	MAXIMUM POWER HANDL'G CAP. (WATTS)	SUGGST'D LIST PRICE
4" x 6"	746S1	150-200	450	65 ma.	3.2 ohms at 400 cycles	3	$ 6.00
5"	705S1	150-200	450	65 ma.	3.2 ohms at 400 cycles	3	6.00
6" x 9"	869S1	95-120	6	1 amp.	3.2 ohms at 400 cycles	8	8.25
12"	712S2	70-85	1000	70 ma.	3.2 ohms at 400 cycles	12	14.00

Transformers for Use with 15" Speaker (515S2)

TYPE No.	DESCRIPTION	PRIMARY IMPEDANCE	SECONDARY IMPEDANCE	POWER-HANDLING CAPABILITY	SUGGST'D LIST PRICE
213T1	Output Transformer (Line-to-Voice Coil)	250, 500, 1000, 1500, 2000 ohms	16 ohms	25 watts	$ 9.95
214T1	Output Transformer (Tube-to-Voice Coil)	4500, 7000, 10000, 14000 ohms	16 ohms	25 watts	10.95

CRYSTAL PICKUPS & STYLI

CRYSTAL PICK-UPS

Stock No.	Suggested List Price*
9890	$ 7.00
14820	11.00
31050	4.20
31156	4.75
34307	4.20
37158	4.75
38598	7.25
38610	5.55
39686	4.75
39919	7.25
70338	6.75
70338A	7.00

Stock No.	Suggested List Price*
70339	$ 7.00
72551	7.75
74067	6.00
74625	6.00
74984	7.40
75044	10.75
75475	9.75
75575	6.00
75976	6.75
76257	6.75
76297	7.40

STYLI

Stock No.	Suggested List Price*
39564	$ 1.40
70915	3.00
72345	3.00
74068	1.60
74818	1.60
74985	1.80
75045	1.50
75046	1.50
75496	1.50
75497	1.50
75770	2.50
76374	1.45

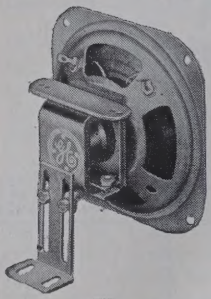
Note: Stock #72898 Adapter Kit (package quantity 10) List Price $.25 each can be used with Stock #70338 Crystal to replace Stock #71173 used in Models 55U and 55AU.

GENERAL ELECTRIC

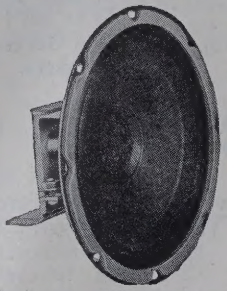
LOUDSPEAKERS

for FIDELITY · DURABILITY · DEPENDABILITY

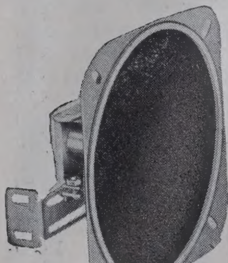
A Speaker for Every Application



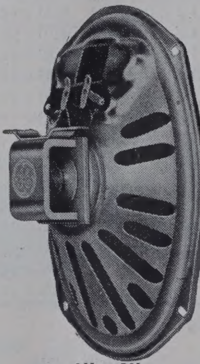
4"



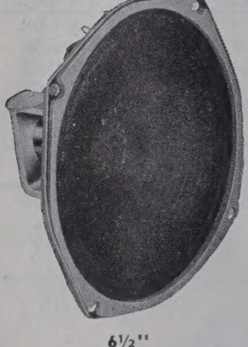
5"



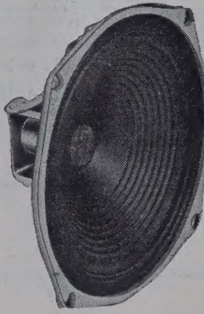
5¼"



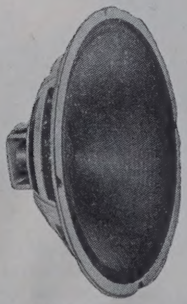
6" x 9"



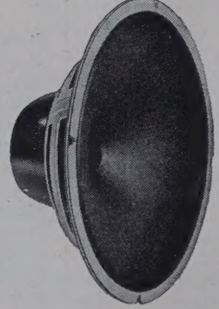
6½"



8"



10"



12"

Cat. Number	Size (Inches)	Magnet Weight (Ozs.)	Rating Power (Watts)	V.C. Imp. (Ohms)	Response (Cycles)	List Price★
400D	4	1.3	4	3.2	140 to 7,000	$ 4.90
402D	4	1.0	4	3.2	140 to 7,000	4.60
403D	4	.68	4	3.2	140 to 7,000	4.30
500D	5	1.3	4	3.2	125 to 8,000	5.20
503D	5	.68	4	3.2	125 to 8,000	4.55
525D	5¼	1.3	4	3.2	120 to 7,000	5.45
526D	5¼	1.0	4	3.2	120 to 7,000	5.00
527D	5¼	.68	4	3.2	120 to 7,000	4.60
625D	6½	1.3	4	3.2	110 to 9,000	6.35
626D	6½	1.0	4	3.2	110 to 9,000	5.75
650D	6½	2.98	8	3.2	110 to 10,000	7.75
703D	6x9	1.47	8	3.2	70 to 13,000	8.65
800D	8	2.98	8	3.2	80 to 11,000	10.30
810D	8	6.8	12	3.2	80 to 10,000	13.80
818D	8	6.8	12	8.0	80 to 10,000	14.40
1000D	10	6.8	12	3.2	60 to 7,000	17.55
1001D	10	14.5	25	8.0	60 to 8,000	28.45
1003D	10	9.0	25	8.0	60 to 8,000	21.30
1012D	10	3.16	12	3.2	60 to 7,000	11.80
1018D	10	6.8	12	8.0	60 to 7,000	18.10
1200D	12	6.8	12	3.2	60 to 8,000	19.00
1201D	12	14.5	25	8.0	50 to 13,000	33.95
1203D	12	9.0	25	8.0	50 to 13,000	23.60
1212D	12	3.16	12	3.2	60 to 8,000	12.95
1218D	12	6.8	12	8.0	60 to 8,000	19.55
400C22	4	1.3	4	3.2	160 to 7,000	4.30
525C18	5¼	1.3	4	3.2	120 to 7,000	4.60

speakers, cabinets multicellular horns

ALTEC
LANSING CORPORATION

9356 Santa Monica Blvd.
Beverly Hills, Calif.

161 Sixth Avenue
New York 13, N.Y.

604B DUPLEX SPEAKER

604B, with its associated dividing network (N-1000B) is the finest single loudspeaker on the market. Meets critical requirements of broadcast and recording monitoring, public address and music distribution systems. Separate units for high and low frequencies. Voice coils made of edge-wound ribbon. Multicellular horn provides uniform sound distribution (60° hor., 40° vert.). 1,000 cycle crossover. V. C. and network impedance 16 ohms. Speaker handles 30 watts. Frequency response from 30 to 16,000 cps. Wt. including network, 40 lbs. Dimensions: 15$\frac{3}{16}$″ dia.; 11½″ deep.
Net Price: $140.00

N-1000B Network must be ordered as separate item.
Net Price: $19.00

CABINETS

Engineered for high quality sound reproduction. Cabinets are made of heavy plywood. All joints are screwed and glued. Interiors padded to eliminate spurious rattles and reflections. Code letters show speaker size: A-15″; B-12″; C-8″.

605-A—Furniture Finish Walnut or Mahogany. Height 35¾″, Width 31″, Depth 17⅛″.
Net Price: $150.00

612-A, B—Hammertone Gray. Height 29½″, Width 25½″, Depth 17¾″.
Net Price $56.00

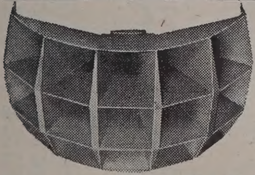
614-A, B, C—Portable, Hammertone Gray. Height 24¾″, Width 18¾″, Depth 14¼″.
Net Price: $47.50

618-B, C—Portable, Slanting Front, Hammertone Gray. Height 22″, Width 17″, Depth 13¼″.
Net Price: $38.00

31A HORN*

Shown with 720A Receiver and 27A Receiver Attachment. Handles 30 watts, speech or music. Width 23″, Height 9″, Depth 15″. Weight, 9½ lbs. Gray finish.
List Price: $61.05

*Distributed by Graybar Electric Co.

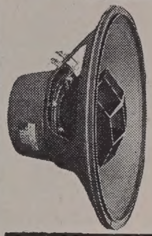


(SEE TABLE BELOW)

MULTICELLULAR HORNS

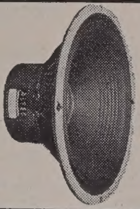
Altec Lansing multicellular horns are constructed from true exponential horn cells grouped in configurations to meet various sound distribution needs. The large multicellular horn is the best way to cover great distances and areas with high levels of acoustic power above 200-300 cps, and to direct this energy for maximum acoustic efficiency. Chart shows horns available. Throats must be ordered separately to type required.

(See Table Below)



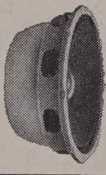
603B MULTICELL DIA-CONE SPEAKER

Offers high efficiency, broad distribution, wide frequency response, freedom from distortion. Dia-Cone principle provides extended frequency response. Multicellular horn loads high frequency diaphragm and distributes sound over 60° hor., 40° vert.: 15″ cone insures full bass reproduction and 25 watt power-handling capacity. Voice coil: 8 ohms. Weight: 18 lbs. Diameter: 15$\frac{3}{16}$″. Depth 7″. **Net Price: $75.00**



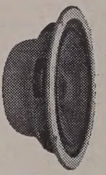
600B DIA-CONE SPEAKER

Efficiency, small space requirements, light weight and superior quality of reproduction, make the 600B an ideal unit in the lower priced speaker field. Utilizes Dia-Cone principle. Similar in construction to the 603B. V. C. 8 ohms. Power rating: 20 watts. Weight: 12 lbs. Diameter: 12¼″. Depth: 5¼″. **Net Price: $46.50**



400B DIA-CONE SPEAKER

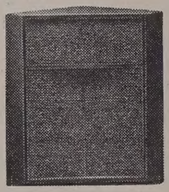
Designed for use where the benefits of large-speaker performance cannot be utilized because of space and weight limitations. An extremely efficient, high quality unit, it is ideal for use in portable devices, airplanes, busses, etc. V. C. imp. 8 ohms. Power rating: 12 watts. Weight: 4 lbs. Diameter: 8¼″. Depth: 3⅝″. **Net Price: $22.50**



755A SPEAKER*

Exceptional frequency response, small size and moderate power handling capacity provide an ideal combination for low level distribution systems where multiple speakers are used. Its small size makes wall installations practical and easy. 70-13,000 cps. Impedance, 4 ohms. 8 watts. Dimensions: 8⅜″ dia. x 3⅛″ deep. Weight: 4¾ lbs.
List Price: $24.60

*Distributed by Graybar Electric Co.

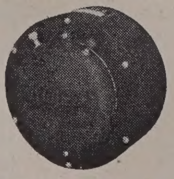


820A CORNER SPEAKER SYSTEM

The Concert Grand of the loudspeaker world—full two-way system built into an attractive mahogany corner cabinet—includes newly designed direct radiating horn in reflex cabinet, an 802B H.F. unit mounted on H-808 multicellular horn, two 803A L.F. units and an N-800D (800 cycle) network. Provides unsurpassed quality over the entire audio range for home music installations, small auditoriums, audition rooms, etc. Impedance 12 ohms—30 watts. Dimensions: height 47⅜″; maximum width 42½″; maximum depth 29″. Wt. 230 lbs. **Net Price: $525.00**

821A frame only—Net Price: $99.00

290 SPEAKER

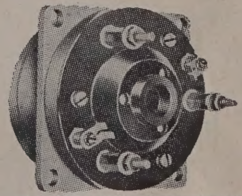


Designed to fit on throats of Altec Lansing multicellular horns. So used, 290 speaker will produce sound level of 98 db (ref. 10^{16} watts/cm^2) at 5′ with input of 0.1 watt at 1 kc. Mounted in cast bakelite ring, entire diaphragm and v.c. assembly is field replaceable. When used for all-range reproduction, attenuate frequencies below 300 cps. 30 watt capacity above 300 cps. 24 ohm v.c. under normal horn loading conditions. 6⅛″ dia. x 4⅞″ deep. Wt. 21 lbs.
Net Price: $159.00

720A RECEIVER*

500-6500 cps. 30 watts. 8 ohms. 4$\frac{1}{16}$″ x 4$\frac{1}{16}$″ x 3¼″. Weight, 4 lbs.
List Price: $67.50

*Distributed by Graybar Electric Co.



Horn Code #	Cell Configuration	Sound Distribution		Dimensions †L-W-H	Net Weight (Less Speakers)	NET PRICE	Code No. Throat Required		
		Horizontal	Vertical				1 Unit	2 Units	4 Units
H-803	2 x 4	70°	35°	36 x 32 x 18	86	$132.00	30162	30170	
H-1003	2 x 5	90°	35°	35 x 40 x 18	131	177.00	30210		
H-1504	3 x 5	105°	60°	34 x 40 x 24	160	249.00	No. 30166	No. 30172	(2)30170
H-1803	3 x 6	105°	53°	35 x 43 x 25	184	249.00			

Throat Code No.	NET PRICE
30162	$18.00
30166	21.00
30210	21.00
30170	36.00
30172	42.00

† Overall length of horn including throat and 288 unit (s).

ADJUST-A-CONE QUAM
A radio sounds only as good as it's loudspeaker

SPEAKERS

These speakers are engineered and manufactured solely for the replacement field for use in home receivers, auto sets, television sets and intercommunication systems. RTMA standard dimensions. Fully dust-proofed. Baked aluminum enamel finish. RTMA service guarantee. QUAM UNIVERSAL MOUNTING BRACKET comes with all 3½" to 6½" speakers and may be attached to any two of the FOUR mounting holes in the U shaped pot. Voice coil impedance of speakers listed below is 3.2 ohms ±10%.

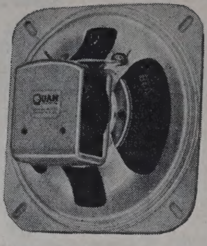
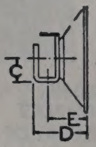


Figure A



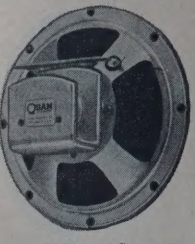


Figure B

ED — *Electro Dynamic Speakers*

PM — *Permanent Magnet Speakers*

TYPE	CAT. No.	SIZE	FIGURE	FIELD	MAX. WATTS INPUT (approx.)	DIMENSIONS IN INCHES			SHIP. WT., LBS.	LIST PRICE
						C	D	E		
ED	3E45	3½"	A	450 Ohms	2.5	1¼	1⅞	1¼	¾	$ 4.40
PM	3A07*	3½"	A	.68 oz. Alnico 5	2.5	¾	1 19/32	1 3/16	½	4.00
ED	4E45	4"	A	450 Ohms	3	1¼	2	1 7/16	1	4.40
	4E10	4"	A	1000 Ohms	3	1¼	2	1 7/16	1	4.40
	4E27	4"	A	2700 Ohms	3	1¼	2	1 7/16	1	4.40
PM	4A07*	4"	A	.68 oz. Alnico 5	3	¾	1 23/32	1 5/16	½	4.00
	4A1	4"	A	1.0 oz. Alnico 5	3	1	2 3/16	1 9/16	¾	4.25
	4A15	4"	A	1.47 oz. Alnico 5	3	1	2 3/16	1 9/16	¾	4.70
ED	5EV6	5"	B	6 Volt	3.5	1¼	2⅛	1 19/32	1¼	4.60
	5E45	5"	B	450 Ohms	3.5	1¼	2⅛	1 19/32	1	4.60
	5E10	5"	B	1000 Ohms	3.5	1¼	2⅛	1 19/32	1	4.60
	5E18	5"	B	1800 Ohms	3.5	1¼	2⅛	1 19/32	1¼	4.60
	5E27	5"	B	2700 Ohms	3.5	1¼	2⅛	1 19/32	1	4.60
PM	5A07*	5"	B	.68 oz. Alnico 5	3.5	¾	1⅞	1 7/16	¾	4.20
	5A1	5"	B	1.0 oz. Alnico 5	3.5	1	2 5/16	1 1/16	1	4.45
	5A15	5"	B	1.47 oz. Alnico 5	3.5	1	2 5/16	1 1/16	1	4.85
ED	52EV6	5¼"	A	6 Volt	4	1¼	2½	1 13/16	1½	5.00
	52E10	5¼"	A	1000 Ohms	4	1¼	2½	1 13/16	1¼	5.00
PM	52A1	5¼"	A	1.0 oz. Alnico 5	4	1	2 23/64	1¾	1	4.65
	52A21	5¼"	A	2.15 oz. Alnico 5	4	1⅛	2⅝	1⅞	1¼	5.70
ED	6EV6	6½"	D	6 Volt	5	1¼	2 23/32	2 1/32	1½	5.40
	6EHV6	6½"	D	6 Volt	6	1 31/64	2 25/32	2 1/16	1¾	6.10
	6E10	6½"	D	1000 Ohms	5	1¼	2 23/32	2 1/32	1½	5.40
	6E18	6½"	D	1800 Ohms	5	1¼	2 23/32	2 1/32	1½	5.40
	6E25	6½"	D	2500 Ohms	5	1¼	2 23/32	2 1/32	1½	5.40
	6E45	6½"	D	450 Ohms	5	1¼	2 23/32	2 1/32	1½	5.40
PM	6A1	6½"	D	1.0 oz. Alnico 5	5	1	2⅝	2	1	4.80
	6A15	6½"	D	1.47 oz. Alnico 5	5	1	2⅝	2	1	5.20
	6A21	6½"	D	2.15 oz. Alnico 5	5	1⅛	2⅞	2⅛	1¼	5.85
	6A31	6½"	D	3.16 oz. Alnico 5	6	1⅜	3 11/64	2 9/32	1½	6.75
ED	7EV6	7"	D	6 Volt	7	1 9/32	2¾	—	2	6.75
	7EV6A†	7"	D	6 Volt	7	1 9/32	2¾	—	2	6.75
PM	7A21*	7"	D	2.15 oz. Alnico 5	6	⅞	2 21/32	—	1	7.25
	7A31	7"	D	3.16 oz. Alnico 5	9	1¼	3 1/32	—	2	8.50
ED	8EV6	8"	D	6 Volt	7	1¼	3 9/32	—	1¾	6.75
	8E10	8"	D	1000 Ohms	7	1¼	3 9/32	—	1½	6.75
	8EH10	8"	D	1000 Ohms	9	1 11/32	3 13/16	—	2¼	7.75
	8E18	8"	D	1800 Ohms	7	1¼	3 9/32	—	1¾	6.75
	8EH18	8"	D	1800 Ohms	9	1 11/32	3 13/16	—	2¼	7.75
	8E25	8"	D	2500 Ohms	7	1¼	3 9/32	—	1¾	6.75
	8EH25	8"	D	2500 Ohms	9	1 11/32	3 13/16	—	2¼	7.75
PM	8A21	8"	D	2.15 oz. Alnico 5	7	1⅛	3 13/32	—	1½	7.20
	8A31	8"	D	3.16 oz. Alnico 5	9	1⅜	3 21/32	—	2¼	8.50

**Very shallow construction.* *†Rotated Pot* *3½" speakers — without Adjust-a-Cone suspension.*

TELEVISION SPEAKERS

ED	5E62	5"	B	62 Ohms	3.5	1-1/4	2-7/16	1-19/32	1-1/4	$4.60
	5E95	5"	B	95 Ohms	3.5	1-1/4	2-7/16	1-19/32	1-1/4	4.60
	46E62	4"x6"	C	62 Ohms	3.5	1-5/64	2-15/64	1-5/8	1-1/4	5.30
	46E95	4"x6"	C	95 Ohms	3.5	1-5/64	2-15/64	1-5/8	1-1/4	5.30
	6E62	6½"	D	62 Ohms	5	1-1/4	2-23/32	2-1/32	1-1/2	5.40
	6E95	6½"	D	95 Ohms	5	1-1/4	2-23/32	1-1/32	1-1/2	5.40

ADJUST-A-CONE
QUAM
A radio sounds only as good as it's loudspeaker

SPEAKERS

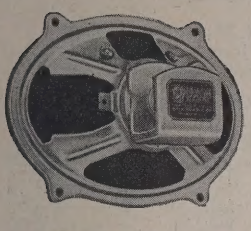
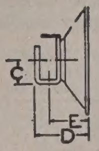


Figure C



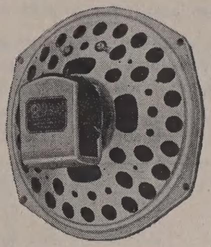


Figure D

QUAM speakers have been produced under the same management since 1923 and are used by leading set and sound equipment manufacturers throughout the world. They are nationally advertised, fully protected by patents—their use insures customer satisfaction. QUAM WEATHERPROOFED SPEAKERS are especially designed for OUTDOOR THEATRE installation. Quotations on request.

TYPE	CAT. No.	SIZE	FIGURE	FIELD	MAX. WATTS INPUT (approx.)	DIMENSIONS IN INCHES			SHIP. WT., LBS.	LIST PRICE
						C	D	E		
ED	**10E60**	10"	B	600 Ohms	10	1 3/4	5 1/16	—	4	**$10.50**
	10E10	10"	B	1000 Ohms	10	1 3/4	5 1/16	—	4	**10.50**
	10E15	10"	B	1500 Ohms	10	1 3/4	5 1/16	—	4	**10.50**
	10E25	10"	B	2500 Ohms	10	1 3/4	5 1/16	—	4	**10.50**
PM	**10A31**	10"	B	3.16 oz. Alnico 5	9	1 3/8	4 1/2	—	2 3/4	**10.50**
	10A4A	10"	B	4.64 oz Alnico 5	10	1 3/8	4 1/2	—	3 1/4	**11.70**
	10A6A	10"	B	6.8 oz Alnico 5	12	1 7/16	4 5/8	—	3 1/2	**13.60**
ED	**12E60**	12"	B	600 Ohms	12	1 3/4	5 5/8	—	5	**12.65**
	12E10	12"	B	1000 Ohms	12	1 3/4	5 5/8	—	5	**12.65**
	12E15	12"	B	1500 Ohms	12	1 3/4	5 5/8	—	5	**12.65**
	12E25	12"	B	2500 Ohms	12	1 3/4	5 5/8	—	5 1/4	**12.65**
PM	**12A31**	12"	B	3.2 oz. Alnico 5	10	1 1/4	4 19/32	—	3 3/4	**11.35**
	12A4A	12"	B	4.64 oz. Alnico 5	12	1 3/8	5 1/8	—	4	**12.65**
	12A6A	12"	B	6.8 oz. Alnico 5	14	1 7/16	5 1/4	—	4 3/4	**14.50**
ED	**46E45**	4" x 6"	C	450 Ohms	3.5	1 5/64	2 15/64	1 5/8	1 1/4	**5.30**
	46E10	4" x 6"	C	1000 Ohms	3.5	1 5/64	2 15/64	1 5/8	1 1/4	**5.30**
	46E15	4" x 6"	C	1500 Ohms	3.5	1 5/64	2 15/64	1 5/8	1 1/4	**5.30**
PM	**46A07***	4" x 6"	C	.68 oz. Alnico 5	3.5	3/4	1 15/16	1 27/64	3/4	**4.45**
	46A1	4" x 6"	C	1.0 oz. Alnico 5	3.5	1	2 1/4	1 9/16	1	**4.75**
	46A15	4" x 6"	C	1.47 oz. Alnico 5	3.5	1	2 1/4	1 9/16	1	**5.15**
ED	**57E45**	5" x 7"	C	450 Ohms	5	1 1/4	3 1/64	2 11/32	1 1/2	**6.00**
	57E10	5" x 7"	C	1000 Ohms	5	1 1/4	3 1/64	2 11/32	1 1/2	**6.00**
PM	**57A1**	5" x 7"	C	1.0 oz. Alnico 5	5	1	2 57/64	2 9/32	1	**5.40**
	57A15	5" x 7"	C	1.47 oz. Alnico 5	5	1	2 57/64	2 9/32	1	**5.80**
	57A21	5" x 7"	C	2.15 oz. Alnico 5	5	1 1/8	3 9/64	2 13/32	1 1/4	**6.45**
ED	**69EV6**	6" x 9"	C	6 Volt	8	1	3 13/16	—	2	**7.50**
	69E10	6" x 9"	C	1000 Ohms	8	1	3 13/16	—	2	**7.50**
PM	**69A2***	6" x 9"	C	1.4 oz. Alnico 5	8	7/8	2 15/16	—	1 1/2	**7.50**
	69A3	6" x 9"	C	3.2 oz. Alnico 5	10	1 1/4	3 5/16	—	1 3/4	**8.95**

*Very shallow construction.

Voice coil impedance of above speakers is 3.2 ohms ± 10%.

PUBLIC ADDRESS SPEAKERS

TYPE	CAT. No.	SIZE	FIGURE	FIELD	MAX. WATTS INPUT (approx.)	C	D	E	SHIP. WT., LBS.	LIST PRICE
PM	**8A4**	8"	B	4.64 oz. Alnico 5	12	1 3/8	3 3/4	—	2 1/2	**$10.20**
	8A6	8"	B	6.8 oz. Alnico 5	12	1 7/16	3 7/8	—	3	**12.10**
PM	**10A4**	10"	B	4.64 oz. Alnico 5	14	1 3/8	4 1/2	—	3 1/4	**11.70**
	10A6	10"	B	6.8 oz. Alnico 5	14	1 7/16	4 5/8	—	3 1/2	**13.60**
	10A10	10"	B	10 oz. Alnico 5	20	1 3/8	4 21/64	—	3 1/2	**18.00**
PM	**12A4**	12"	B	4.64 oz. Alnico 5	15	1 3/8	5 1/8	—	4	**12.65**
	12A6	12"	B	6.8 oz. Alnico 5	15	1 7/16	5 1/4	—	4 3/4	**14.50**
	12A10	12"	B	10 oz. Alnico 5	25	1 3/8	4 15/16	—	4 3/4	**19.00**
COAX	**12A6CO**	12" Co	B	6.8 oz. Alnico 5	14.0	2 1/4	6 1/16	—	10	**30.00**
	15A10CO	15" Co	B	10 oz. Alnico 5	20.0	2 5/16	8 3/8	—	15	**47.50**

Voice coil impedance of above speakers is 6-8 ohms.

QUAM ADJUST-A-CONE SUSPENSION

While in other speakers, the spider is cemented in place with no means of accurate final adjustment, the QUAM method permits precision centering of the voice coil in a final production operation.

QUAM U SHAPED COIL POT

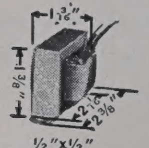
A patented feature used throughout the QUAM replacement line, provides an unbroken flux path of sufficient cross section to carry the full energy of the magnetic field.

ADJUST-A-CONE
Quam
A radio sounds only as good as it's loudspeaker.

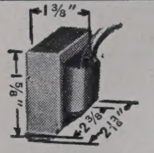
TRU-MATCH OUTPUT TRANSFORMERS

Designed by speaker engineers to give a true impedance match for a wide range undistorted sound.

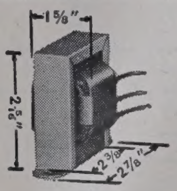
Spcifications of each unit include a full stack of best electrical steel, the maximum amount of copper, highest quality insulation and adhesives. Underwriters approved lead wire and complete vacuum impregnation. Individually packed in attractive boxes using the widely known QUAM descriptive part numbering system.



½"x½"



⅝"x⅝"



¾"x¾"

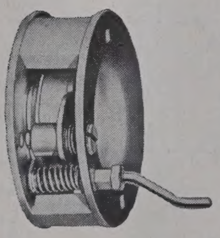
Catalog Number	Primary Impedance (Ohms)	Secondary Load (Ohms)	Core Size (Inches)	Power Rating (Watts)	Primary M.A. (Max.)	Shipping Weight (Oz.)	List Price
TA20	2000	3.2	½ x ½	5	60	6	$1.50
TA50	5000	3.2	½ x ½	5	40	6	1.75
TA75	7500	3.2	½ x ½	5	35	6	1.75
TA100	10000	3.2	½ x ½	5	30	6	1.75
TA100T	10000 CT_1	3.2	½ x ½	5	30	6	2.00
TA160	16000	3.2	½ x ½	5	10	6	1.75
TA250	25000	3.2	½ x ½	5	10	6	1.75
TAL	$LINE_2$	3.2	½ x ½	5	—	6	2.50
TC20	2000	3.2	⅝ x ⅝	8	60	10	$2.25
TC50	5000	3.2	⅝ x ⅝	8	50	10	2.25
TC70	7000	3.2	⅝ x ⅝	8	40	10	2.25
TC85	8500	3.2	⅝ x ⅝	8	40	10	2.25
TC100T	10000 CT_1	3.2	⅝ x ⅝	8	40	10	2.50
TC140T	14000 CT_1	3.2	⅝ x ⅝	8	40	10	2.50
TC160	16000	3.2	⅝ x ⅝	8	15	10	2.25
TC250	25000	3.2	⅝ x ⅝	8	40	10	2.25
TCL	$LINE_2$	6-8	⅝ x ⅝	8	—	10	3.00
TCU	$UNIV_3$	3.2	⅝ x ⅝	8	50	10	3.50
TD25	2500	3.2	¾ x ¾	12	70	17	$3.00
TD50T	5000 CT_1	3.2	¾ x ¾	18	150	17	3.25
TD70	7000	3.2	¾ x ¾	12	50	17	3.00
TD100T	10000 CT_1	3.2	¾ x ¾	12	50	17	3.25
TD140T	14000 CT_1	3.2	¾ x ¾	12	50	17	3.25
TDL	$LINE_2$	6-8	¾ x ¾	15	—	17	3.75
TDU	$UNIV_3$	3.2	¾ x ¾	12	50	17	4.00

1. TA10T, TC10T, TC14T, TD5T, TD10T & TD14T have center tapped primaries for push-pull output use. Plate to plate impedance is given.

2. TAL, TCL & TDL are for speaker to line use and have primary taps at 500, 1000, 1500 & 2000 ohms.

3. TCU & TDU are universal type output transformers and provide matching impedances of 2500, 4000, 7500, 10000 & 16000 ohms, also 7500 ohm CT, 10000 ohm CT & 16000 ohm CT.

QUAM FOCALIZER UNIT KITS



Each kit consists of a Focalizer* unit, a centering handle, an aluminum mounting plate, brass mounting screws and nuts and instruction sheet.

- **Provides sharper focus of the Television picture.**
- **Unaffected by temperature and voltage fluctuations.**
- **Easy to install.**
- **Ideal for replacement or rebuilding Television sets for larger tubes.**
- **Used as original equipment in many leading sets.**

Q F 1—for use with most picture tubes anode voltages up to 12 KV. **List Price $4.75**
Dimensions: O.D. 3⅜" Thickness: 1 5/32" Weight: 1¼ lbs.

Q F 2—for use with picture tubes operating at anode voltages of 12 KV and up. **List Price $5.95**
Dimensions: O.D. 3⅜" Thickness: 1¼" Weight: 1½ lbs.

QUAM ION TRAPS

Quam Ion traps can be used on any picture tube where a trap was used as original equipment. Traps are equipped with wing nut and binding screw for easy installation and positive placement. Individually packed with instruction sheet.

I T 1—Double field for tubes up to 10" in diameter. Field strength of 38 Gauss. Generally used with straight gun tubes. **List Price $1.50**

I T 2—Double field for tubes from 10" in diameter up. Field strength of 46 Gauss. Generally used with straight gun tubes ....**List Price $1.50**

I T 3—Single field or 14", 16", 17" and 19" tubes. Field strength of 42 Gauss. Generally used with tubes having a bent gun ....**List Price $1.00**

QUAM REAR SEAT AUTO SPEAKERS

AS-1

Catalogue #AS-1 6½" PM

Economy model: Kit includes Quam 6½" PM Adjust-A-Cone speaker with capacity to handle full output of any single-ended auto set; 1.47 oz. Alnico V Magnet; rugged 3-position switch for dash mounting, ample cable for any installation, flocked grill screen, baffle plate, miscellaneous hardware, and installation instructions.

Shipping wt. 2¾ lbs. ....**List Price $9.95**

Catalogue #AS-2 6"x9" PM

Deluxe model: Kit includes Quam heavy duty 6" x 9" PM Adjust-A-Cone speaker with ample capacity to handle full output of the most powerful auto set; 2.15 oz. Alnico V Magnet; rugged 3-position switch for dash mounting, sufficient cable for any installation, flocked grill screen, baffle plate, sponge rubber gasket for easy and trouble-free installation, miscellaneous hardware, and installation instructions.

Shipping wt. 4 lbs. ....**List Price $13.95**

AS-2

WRIGHT *Verified Speakers*

WRIGHT INC established in 1939 by D. H. Wright (former president of Wright-DeCoster, Inc.) inaugurated some new principles which have proven very beneficial to this growing business.

PERMANENT REPLACEMENT SPEAKERS

Model Number	Speaker Size	Watts Output	Alnico 5 Magnet Wt.	V. C. Impd.	List Price
NP-468	4″	4	.68 oz.	3.5 ohms	$4.00
NP-510	5″	5	1.00 ″	3.5 ″	4.45
NP-515	5″	6	1.47 ″	3.5 ″	4.85
NP-610	6″	6	1.00 ″	3.5 ″	5.05
NP-615	6″	6	1.47 ″	3.5 ″	5.40

NP-832	8″	8	3.16 oz.	3.5 ohms	$ 8.50
NP-8680	8″	12	6.8 ″	8 ″	12.00

These 8″ speakers are exceptional units, as tests will prove. Used with the 10-P Flush Mounting Grille or the B-1965 Harmonic Baffle they insure a splendid, satisfactory installation that will always be a good advertisement for additional business. The NP-832 also makes a fine replacement speaker for a full-console radio or TV set.

NP-1068	10″	12	6.8 oz.	8 ohms	$13.50

Wherever a 10″ speaker is to be used, whether Television, Radio, or Sound, this speaker has the specifications for fine results.

NP-1232	12″	8	3.16 oz.	3.5 ohms	$11.50

A perfect replacement speaker for a Full-console Radio or Television Receiver where a 12″ unit is used.

NP-1268	12″	14	6.8 oz.	8 ohms	$14.50

The many years that this 12″ speaker has been used in all types of installations shows what the sound engineers think of it.

NOP-631	6 x 9	9	3.16 oz.	3.5 ohms	$9.00
NOP-521	5 x 7	6	2.15 ″	3.5 ″	6.50

Model M Cabinet — Outside diameter 6¾″ — Depth 3¼″. Inside diameter at front 6⅝″. Four holes for mounting 6″ speaker. Made of strong aluminum it can be used indoors or outside. Louvers front and back make it suitable for two way paging. Gives sufficient baffle for music. Can be used as is or painted.......... **List Price $6.25**

Model B-1965 Harmonic Baffle — These Dome like ceiling baffles with their silvery finish are pleasing to the eye. They are excellent for Paging, Singing, or Orchestral reproduction. For the best results use the NP-8680 8″ speakers.......... **List Price $10.95**

Model 10-PC Flush Mounting Grille — Chrome Plated.

Model 10-PB Flush Mounting Grille — Bonderized and Prime Coated for Painting. These Grilles are an item that the Sound Engineers have wanted for a long time as they mount flush they used the entire wall or ceiling as a baffle. Used with either the NP-832 or NP-86808 speakers these grilles will make a satisfactory, well finished sound installation.......... **List price $4.00**

TRANSFORMERS

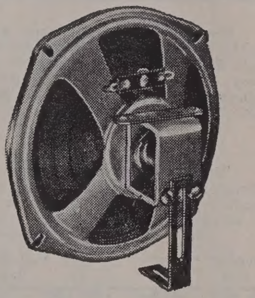
Model 4063 ½ x ½ Universal or Line — 5 Watts 3.5 Secondary List Price.......... $2.00

Model 1580 ⅝ x ⅝ Universal or Line — 5 Watts 3.5 Secondary List Price.......... 3.00

Model L-1848 ⅞ x ⅞ Line — 18 Watts 4 and 8 ohm Secondary List Price.......... 5.00

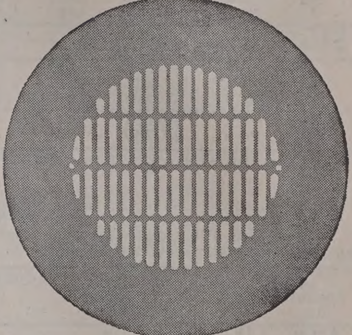
Model 5112 1 x 1 Line — 40 Watts 4 — 8 & 16 ohm Secondary List Price.......... 6.00

For Full Detailed Information Write for Catalog PC-No. 6

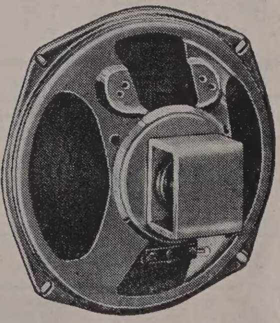


NP-610

The above illustration shows how versatile our adjustable mounting bracket really is. It will mount the speaker in practically any position. All 4, 5, and 6-inch speakers come complete with these brackets at no additional cost.



MODEL 10-P
Flush Mounting Grille

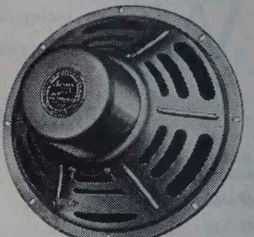


MODEL NP-832
8″ PM Speaker

The 10-P Flush Mounting Grille and the NP-832 8″ Speaker combination is being used extensively by particular Sound Engineers.

Jensen

Standard Series speakers, although moderately priced, are exceptionally good in performance and are highly recommended for use in radio and television receivers, recorders, public address equipment, intercommunication systems and similar applications. Models listed on this page have been completely redesigned in every detail. Magnetic structures have been designed to achieve maximum gap energy, cones selected for uniformity of response, and all speakers are completely dust-proof. Models listed are standard fidelity response only. Standard Series speakers are finished in aluminum.

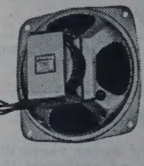


ALNICO 5 PM MODELS

These PM speakers embody the highly efficient Alnico 5 magnets which insure long life and highest efficiency. Because Alnico 5 magnets are many times more powerful, ounce for ounce, than their predecessors, speakers so equipped offer obvious advantages: lighter weight, for savings in shipping costs; and smaller size, for savings in space in cabinet installations.

Nominal Size	Model No.	Stock No.	†Gap Energy Level	DIMENSIONS, Inches			VOICE COIL			*Transformer Size	List Price
				O.D.	Depth	Baffle Openg.	Diam., In.	Imped., Ohms	Power Watts		
12″	P12-S	ST-102	1.5	12⅛	6 1/16	10½	1	6-8	10.0	⅞ x ⅞″	$18.85
	P12-T	ST-101	1.1	12⅛	6 1/16	10½	1	6-8	9.0	¾ x ¾″	14.50
10″	P10-S	ST-120	1.5	10⅛	5¼	8¾	1	6-8	9.0	¾ x ¾″	16.30
	P10-T	ST-119	1.1	10⅛	5¼	8¾	1	6-8	8.0	¾ x ¾″	12.75
6x9″	P69-S	ST-812	1.5	6⅜ x 9¼	3 11/16	5⅜ x 8⅛	1	3-4	8.0	¾ x ¾″§	14.00
	P69-T	ST-811	1.1	6⅜ x 9¼	3 11/16	5⅜ x 8⅛	1	3-4	7.5	¾ x ¾″§	11.85
	P69-V	ST-810	.51	6⅜ x 9¼	3¼	5⅜ x 8⅛	¾	3-4	5.0	⅝ x ⅝″§	9.75
8″	P8-S	ST-104	1.5	8⅛	3 13/16	6¾	1	6-8	8.0	¾ x ¾″	13.70
	P8-T	ST-117	1.1	8⅛	3⅝	6¾	¾	3-4	7.0	¾ x ¾″	11.50
	P8-U	ST-116	.74	8⅛	3½	6¾	¾	3-4	6.0	⅝ x ⅝″	10.20
	P8-V	ST-115	.51	8⅛	3⅜	6¾	¾	3-4	5.0	⅝ x ⅝″	8.70
7″	P7-T	ST-807	1.1	7⅝	3¼	6	¾	3-4	6.5	¾ x ¾″§	9.85
	P7-U	ST-806	.74	7⅝	3¼	6	¾	3-4	5.5	⅝ x ⅝″§	8.65
6″	P6-T	ST-112	1.1	6 11/16	3 3/16	5¼	¾	3-4	6.0	⅝ x ⅝″	9.65
	P6-V	ST-110	.51	6 11/16	2 15/16	5¼	9/16	3-4	4.0	⅝ x ⅝″	7.40
	P6-W	ST-109	.36	6 11/16	2⅞	5¼	9/16	3-4	3.5	½ x ½″	6.40
	P6-X	ST-108	.25	6 11/16	2¾	5¼	9/16	3-4	3.0	½ x ½″	5.70
5¼″	P525-V	ST-803	.51	5¼	2½	4½	9/16	3-4	4.0	⅝ x ⅝″§	6.65
5″	P5-V	ST-107	.51	5	2 7/16	4	9/16	3-4	3.5	½ x ½″	6.70
	P5-X	ST-105	.25	5	2¼	4	9/16	3-4	2.5	½ x ½″	5.30
	P5-X	ST-740	.25	5	2¼	4	9/16	45-50	2.5	½ x ½″	5.55
4″	P4-X	ST-113	.25	5	2	3½	9/16	3-4	2.0	½ x ½″	5.00
	P4-X	ST-739	.25	5	2	3½	9/16	45-50	2.0	½ x ½″	5.40

*Size recommended. See Transformer listing. †Millions of ergs. §No transformer mounting facilities.

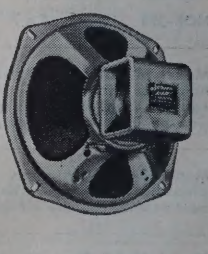


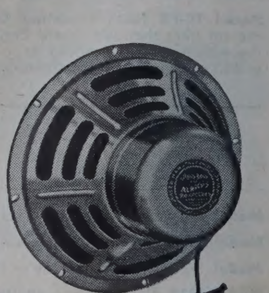
FIELD COIL MODELS

Like their PM counterparts, Standard Series field coil models have been completely redesigned and are equipped with hum neutralizing coils. Finish is aluminum. Models listed on this page are standard fidelity.

Nominal Size	Model No.	Stock No.	†Gap Energy Level	DIMENSIONS, Inches			VOICE COIL			FIELD		*Transformer Size	List Price
				O.D.	Depth	Baffle Opening	Diam., In.	Imped., Ohms	Pwr. Watts	Resist., Ohms	Power Watts		
12″	F12-S	ST-744	1.5	12⅛	6 7/16	10½	1	3-4	10.0	1000	8.5	⅞ x ⅞″	$18.52
	F12-S	ST-173	1.5	12⅛	6 7/16	10½	1	3-4	10.0	1500	8.5	⅞ x ⅞″	18.46
10″	F10-S	ST-745	1.5	10⅛	5⅝	8¾	1	3-4	9.0	750	8.5	¾ x ¾″	15.53
	F10-S	ST-175	1.5	10⅛	5⅝	8¾	1	3-4	9.0	1500	8.5	¾ x ¾″	16.04
6x9″	F69-T	ST-814	1.1	6⅜ x 9¼	4 1/16	5⅜ x 8⅛	1	3-4	7.5	4	6-volt	¾ x ¾″§	11.73
	F69-U	ST-813	.74	6⅜ x 9¼	3½	5⅜ x 8⅛	¾	3-4	6.0	4	6-volt	⅝ x ⅝″§	10.06
8″	F8-S	ST-746	1.5	8⅛	4 9/16	6¾	1	3-4	8.0	750	8.5	¾ x ¾″	13.46
	F8-S	ST-177	1.5	8⅛	4 9/16	6¾	1	3-4	8.0	1500	8.5	¾ x ¾″	14.03
	F8-T	ST-179	1.1	8⅛	4⅛	6¾	¾	3-4	7.0	1000	7.0	¾ x ¾″	11.21
	F8-T	ST-180	1.1	8⅛	4⅛	6¾	¾	3-4	7.0	‡1800	7.0	¾ x ¾″	11.33
	F8-W	ST-736	.36	8⅛	3⅜	6¾	¾	3-4	4.0	1000	5.0	⅝ x ⅝″	8.40
	F8-W	ST-737	.36	8⅛	3⅜	6¾	¾	3-4	4.0	‡1800	5.0	⅝ x ⅝″	8.86
7″	F7-T	ST-809	1.1	7⅝	3 3/16	6	1	3-4	7.0	4	6-volt	¾ x ¾″§	10.93
	F7-U	ST-808	.74	7⅝	3¼	6	¾	3-4	5.5	4	6-volt	⅝ x ⅝″§	9.43
6″	F6-U	ST-186	.74	6 11/16	3⅜	5¼	¾	3-4	5.0	1000	6.0	⅝ x ⅝″	8.57
	F6-U	ST-187	.74	6 11/16	3⅜	5¼	¾	3-4	5.0	‡1800	6.0	⅝ x ⅝″	8.57
	F6-X	ST-189	.25	6 11/16	2 15/16	5¼	9/16	3-4	3.0	450	4.5	½ x ½″	7.02
	F6-X	ST-166	.25	6 11/16	2 15/16	5¼	9/16	3-4	3.0	1000	4.5	½ x ½″	7.13
	F6-X	ST-168	.25	6 11/16	2 15/16	5¼	9/16	3-4	3.0	‡1800	4.5	½ x ½″	7.48
5″	F5-X	ST-194	.25	5	2 7/16	4	9/16	3-4	2.5	450	4.5	½ x ½″	6.79
	F5-X	ST-165	.25	5	2 7/16	4	9/16	3-4	2.5	1000	4.5	½ x ½″	6.84
	F5-X	ST-167	.25	5	2 7/16	4	9/16	3-4	2.5	‡1800	4.5	½ x ½″	7.13
4″	F4-X	ST-196	.25	5	2¼	3½	9/16	3-4	2.0	450	4.5	½ x ½″	6.50
	F4-X	ST-164	.25	5	2¼	3½	9/16	3-4	2.0	1000	4.5	½ x ½″	6.56
	F4-X	ST-198	.25	5	2¼	3½	9/16	3-4	2.0	2800	4.5	½ x ½″	6.84

*Size recommended. See Transformer listing. †Millions of ergs. ‡Tapped at 300 ohms. 1500-ohm section can be used at full power excitation. Field resistance for full excitation will rise approximately 20%. §No transformer mounting facilities.





VOLUME AND RANGE CONTROLS

These "L Pad" type volume controls are highly satisfactory for use in voice coil circuits. Complete with pointer knob and escutcheons.

ST-276—Level Control, 6-8 ohms, 5 watts	$2.50
ST-411—Level Control, 6-8 ohms, 15 watts	3.30
ST-606—Range Control, 16 ohms, 15 watts	3.80
ST-760—Level Control, 3-4 ohms, 5 watts	2.75
ST-761—Level Control, 500-600 ohms, 15 watts	4.60

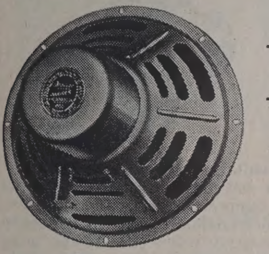
Jensen

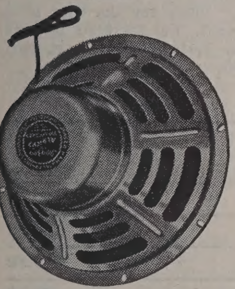
FINE ACOUSTIC EQUIPMENT

Concert SPEAKERS

JENSEN Concert Series speakers have long been known and acclaimed by the trade and by users for their plus performance. From the earliest days, Concert speakers have been recognized by such familiar designations as A12-PM, PM8-C and others and have been known as the finest speakers anywhere available for heavy-duty applications. Now, in greatly improved design, they are highly recommended for any purpose where exceptional power handling ability and high-quality performance are essential. Standard fidelity models are listed on this page.

Concert speakers are attractively finished in blue-gray lacquer and completely dustproofed. Field coil models are equipped with hum neutralizing coils.





ALNICO 5 PM MODELS

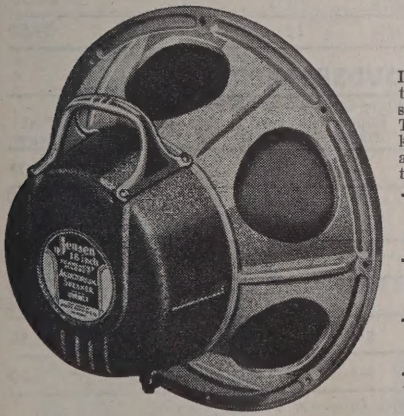
Nominal Size	Model No.	Stock No.	†Gap Energy Level	DIMENSIONS, Inches O.D.	Depth	Baffle Opening	VOICE COIL Diam., In.	Imped., Ohms	Power Watts	*Transformer Size	List Price
15″	P15-N	ST-654	6.6	15⅛	8	13¼	1½	8	20.0	1x1″	$70.50
	P15-P	ST-655	4.6	15⅛	8	13¼	1½	8	18.0	1x1″	54.75
	P15-Q	ST-678	3.2	15⅛	8	13¼	1¼	8	16.0	⅞x⅞″	44.25
12″	P12-N	ST-656	6.6	12 1/16	7	10½	1½	8	18.0	1x1″	56.50
	P12-P	ST-657	4.6	12⅛	6 7/16	10½	1½	8	16.0	⅞x⅞″	39.20
	P12-Q	ST-673	3.2	12⅛	6 1/16	10½	1¼	8	14.0	⅞x⅞″	32.90
	P12-R	ST-103	2.2	12⅛	6 1/16	10½	1	6-8	12.0	⅞x⅞″	21.20
10″	P10-Q	ST-676	3.2	10⅛	5¼	8¾	1¼	8	12.0	⅞x⅞″	29.00
	P10-R	ST-121	2.2	10⅛	5¼	8¾	1	6-8	10.0	⅞x⅞″	18.70
8″	P8-Q	ST-677	3.2	8⅛	4 15/16	6¾	1¼	8	10.0	⅞x⅞″	29.45
	P8-R	ST-169	2.2	8⅛	4	6¾	1	6-8	9.0	¾x¾″	16.40

Model P8-Q weatherproof design. No transformer mounting facilities.

FIELD COIL MODELS

Nominal Size	Model No.	Stock No.	†Gap Energy Level	DIMENSIONS, Inches O.D.	Depth	Baffle Opening	VOICE COIL Diam., In.	Imped., Ohms	Pwr. Watts	FIELD Resist., Ohms	Power Watts	*Transformer Size	List Price
15″	F15-N	ST-661	6.6	15⅛	8⅜	12⅛	1½	8	20.0	4000	17.5	1x1″	$55.66
	F15-N	ST-662	6.6	15⅛	8⅜	12⅛	1½	8	20.0	5300	17.5	1x1″	55.66
	F15-Q	ST-663	3.2	15⅛	8⅜	12⅛	1¼	8	16.0	1000	12.0	⅞x⅞″	36.05
12″	F12-N	ST-666	6.6	12 1/16	7 13/16	10½	1½	8	18.0	4000	17.5	1x1″	46.17
	F12-N	ST-667	6.6	12 1/16	7 13/16	10½	1½	8	18.0	5300	17.5	1x1″	46.17
	F12-Q	ST-668	3.2	12⅛	7 13/16	10½	1¼	8	14.0	1000	12.0	⅞x⅞″	26.57

*Size recommended. See Transformer listing. †Millions of ergs. Field resistance for full excitation will rise approximately 20%.



AUDITORIUM SPEAKERS

The first highly-efficient large-size speaker was designed and produced by JENSEN in 1928. It was named the "Auditorium" and never were critics more consistent in its endorsement as the utmost in heavy-duty speakers. For more than 20 years JENSEN Auditorium speakers have set the highest standards for efficiency, response characteristics and faithful performance. Today, the Auditorium line has been completely redesigned and comprises undeniably the best known and most highly respected speakers available, second only to JENSEN Coaxials. They are recommended for theatres, public address systems, fine electronic musical instruments, where the utmost in quality reproduction and power handling ability are required.

Nominal Size	Model No.	Stock No.	†Gap Energy Levels	DIMENSIONS, Inches O.D.	Depth	Baffle Opening	VOICE COIL Diam., In.	Imped., Ohms	Pwr. Watts	*Transformer Size	List Price
18″	PMJ-18	ST-541	28.1	18	9¾	15¾	2½	8	30	1x1¼″	$340.00
15″	P15-L	ST-758	13.6	15⅛	8	13¼	2	8	25	1x1¼″	122.50

*Size recommended. See Tranformer listing. †Millions of ergs.

VIKING
LOUDSPEAKERS
by
Jensen

MOST PERFORMANCE AT LOWEST COST FOR RADIO AND TV REPLACEMENTS & UTILITY APPLICATIONS

JENSEN has designed these VIKING loudspeakers to give you the most performance at low cost for radio and TV replacements and utility applications. A complete range of sizes from 3½ inch to 12 inch, with three oval types—all with Alnico 5 magnets. Designs are especially compact, an evident advantage in the servicing of compact and portable sets. CTM Bracket Set available separately contains parts and hardware for mounting speaker on chassis and ½ x ½ transformer on speaker if necessary.

Nominal Size	Model No.	DIMENSIONS Overall	Depth	V. C. Imped. Ohms	Price**
3½''	35J4	3 7/16	1⅜	3.2	$1.89
4''	4J4	4⅛	1 9/16	3.2	1.87
5''	5J4	5 1/16	1¾	3.2	2.05
5¼''	525J4	5 5/16	1⅞	3.2	2.12
6''	6J4	6 1/16	2⅛	3.2	2.26
7''	7J9	6⅞	2 13/16	3.2	3.04
8''	8J9	7 11/16	2 15/16	3.2	3.25
10''	10J11	10⅛	3⅝	3.2	5.54
12''	12J11	12⅛	4⅜	3.2	6.01
4x6''	46J6	6 3/16x4⅛	1⅞	3.2	2.49
5x7''	57J9	7¼x5	2⅝	3.2	3.17
6x9''	69J9	9¼x6⅜	3	3.2	3.51
6x9''	69J10*	9¼x6⅜	3 1/16	3.2	4.28

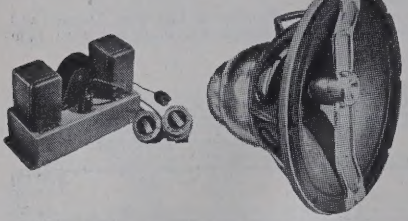
*Especially recommended for automotive replacement use.

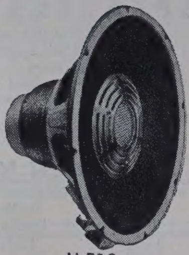
CTM Bracket Set contains necessary parts and hardware for mounting ½″ x ½″ transformer on speaker and speaker on receiver chassis. Fits 3½″, 4″, 5″, 5¼″ and 6″ speakers. **Dealer Net $0.25****

**Net

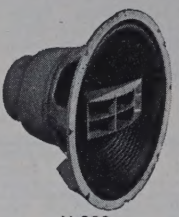
Jensen

G-610 TRIAXIAL
3-WAY LOUDSPEAKER
SYSTEM

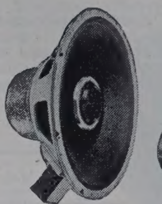




H-510
COAXIAL



H-222
COAXIAL



K-310
COAXIAL

K-210
COAXIAL

Genuine Jensen Wide Range

GENUINE JENSEN WIDE RANGE is the designation given to a distinguished series of loudspeakers, each designed to give the finest possible reproduction for the particular type and size. A selection of a high fidelity loudspeaker from this series thus insures a maximum of reproduction quality at any cost level. Particular attention has been given to the 7 Performance Points essential to thrilling, realistic reproduction: (1) Wide Frequency Range, (2) Balanced Frequency Response, (3) Smooth Response, (4) Wide Angle Distribution, (5) Low Distortion, (6) Good Efficiency, and (7) Adequate Power-Handling Capacity.

The G-610 Triaxial, world's finest unitary system loudspeaker, reproduces everything the ear can hear and provides true transport to the original. Model H-510, with compression-driver horn loaded "tweeter" and Acoustic Lens, is the outstanding speaker of the times in the 15 inch coaxial class. New coaxial Model H-222, also with horn-loaded compression-driver "tweeter," offers for the first time, "big speaker" performance in a 12-inch unit. **For complete information on these and other Jensen speaker systems and components, write for free High Fidelity Catalog 1020.**

TRIAXIAL AND COAXIAL SPEAKERS

Nominal Size	Model No.	Type	Stock No.	Input Imped. Ohms	Power Watts	Freq. Range Rating‡	Baffle Opening In.	O.D. In.	Depth In.	List Price
15"	G-610	Triaxial	ST-900	16	35	+8 LIM	13¼	15⅜	10¾	$382.50
15"	H-510	Coaxial	ST-828	16	25	+7 LIM	13¼	15⅛	9 9/16	154.50
12"	H-222	Coaxial	ST-875	16	25	+7 LIM	10½	12⅛	8¼	79.50
15"	K-310	Coaxial	ST-830	16	16	+7 LIM	13¼	15⅛	8⅛	65.50
12"	K-210	Coaxial	ST-831	8	12	+7 LIM	10½	12⅛	6 5/16	39.50

EXTENDED-RANGE SINGLE-UNIT DIRECT-RADIATOR LOUDSPEAKERS (+6 LIM)‡

Nominal Size	Model No.	Stock No.	*Gap Energy Level	Dimensions, Inches O.D.	Depth	Baffle Open	Voice Coil Diam. In.	Imped. Ohms	Pwr. Watts	Transformer Size†	List Price
15"	P15-NX	ST-817	6.6	15⅛	8	13¼	1½	8	18.0	1"x1"	$76.75
12"	P12-NX	ST-819	6.6	12 1/16	7	10½	1½	8	16.0	1"x1"	61.50
	P12-RX	ST-885	2.2	12⅛	6 1/16	10½	1	6-8	11.0	⅞"x⅞"	23.80
	P12-SX	ST-821	1.5	12⅛	6 1/16	10½	1	6-8	9.0	⅞"x⅞"	21.20
10"	P10-RX	ST-886	2.2	10⅛	5¼	8¾	1	6-8	9.0	⅞"x⅞"	21.00
	P10-SX	ST-823	1.5	10⅛	5¼	8¾	1	6-8	8.0	¾"x¾"	18.55
8"	P8-RX	ST-887	2.2	8⅛	4	6¾	1	6-8	8.0	¾"x¾"	18.20
	P8-SX	ST-825	1.5	8⅛	3 13/16	6¾	1	6-8	7.0	¾"x¾"	15.20
6"	P6-TX	ST-826	1.1	6 11/16	3 3/16	5¼	¾	3-4	5.0	⅝"x⅝"	10.35
5"	P5-TX	ST-827	1.1	5 1/16	2⅝	4 5/16	¾	3-4	4.0	½"x½"	9.50

*Millions of ergs. †Size recommended. ‡See page C-11 for explanation. #Complete with Crossover Control Network.

RP-302 H-F UNIT

Improve the realism of your sound reproduction . . . make a 3-way system from your present coaxial, or a 2-way from a single speaker by adding this new compact "super-tweeter" from the famous G-610 Triaxial. Makes an unexcelled top end for custom built multi-channel systems. Unit sits atop cabinet or mounts flush on baffle. Provides smooth, clean "highs" from 4000 cycles to limits of audibility. Impedance, 16 ohms. Useful coverage angle, 120 degrees. Maximum power, 30-40 watts speech and music with A-402 Crossover Network. A-402 recommended for best results, but can be used with 2 mfd condenser. Satin brass finish. OD, 2¾"; length 3⅝". Specify ST-899. List Price **$56.00**

A-402 Crossover Network. Full 180° constant-resistance type. RP-302 connects to hi-channel, present speaker or system to low channel. Crossover at 4000 cycles. Impedance, 16 ohms input and each channel. Screw terminals for easy connections. In metal case, 4⅜" high, 3½" wide, 3¼" deep. Specify ST-898. List Price **$11.25**

IMPEDANCE-ADJUSTING TRANSFORMERS

Provide alternative input impedances for 15" Triaxial and Coaxial speakers. Mount directly on speaker or network chassis. No wiring—plugs into socket on speaker or network chassis.

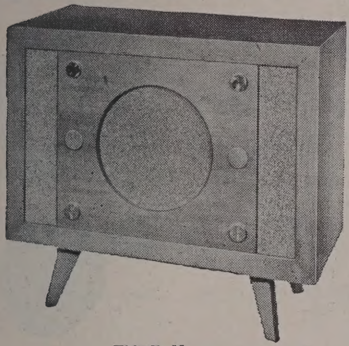
Model	Stock No.	For Speakers	Impedance	List
T-201	ST-846	G-610 Triaxial	4 and 8 ohms	$20.60
T-202	ST-847	G-610 Triaxial	500/600 ohms	20.60
T-101	ST-833	H-510; K-310	4 and 8 ohms	13.25
T-102	ST-834	H-510; K-310	500/600; 250	13.25

A-110 Control Network. For H-510 and K-310 Coaxials. Mounts on speaker; plug-in connections. Impedance, 16 ohms. Complete with Level Control and H-F Range Control with 30" cables, satin brass flush escutcheons and bar knobs. ST-832. List.................... **$31.50**

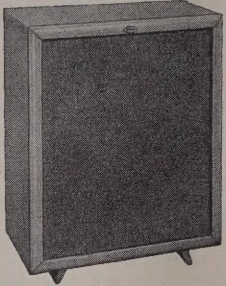
ST-901 H-F Control. For RP-302 and K-210 h-f response control. 16-ohm L pad, complete with satin-brass escutcheon and bar knob. List Price **$5.75**

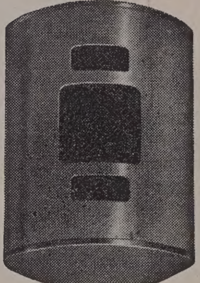
Jensen

BASS REFLEX CABINETS


TYPE M

TYPE D


TYPE C


TYPE H

TYPE M CUSTOMODE IMPERIAL CABINET is an outstanding example of fine modern design with the outstanding performance of JENSEN Bass Reflex. Accommodates any 15″ speaker. May be placed on side or end as desired. Front panel easily, quickly removed for installation or replacement by unscrewing four brass discs. Speaker is held in place by means of machine screws and anchor nuts set into back of panel. Concealed cut-outs for H-F Range and Level Controls. Furnished complete with removable grille cloth-screen and two wedge foot rails. (Note: Leg Assembly illustrated not furnished and must be ordered separately. See below.)

LEG ASSEMBLY FOR M CABINET. Modern leg assembly for "low-boy" effect with Type M cabinet as illustrated above. Raises cabinet 8″ above floor. Not furnished with cabinet; must be ordered separately. Shipping wt., 15 lbs. Specify ST-843 for Blonde; ST-863 for Cordovan.
List Price $15.75

TYPE B UTILITY CABINET is designed for those who desire inexpensive but durably built enclosures. Well constructed of impregnated composition board and finished in hammered brown lacquer. For 12-inch speakers. Feet unmounted are furnished.

TYPE D IMPERIAL CABINET is handsomely styled, suitable for any environment, and is well constructed of beautifully striped satin finish veneered walnut, with interlaced bronze strip grille over matching fabric. They are available in two sizes; for 15-inch and for 12-inch speakers.

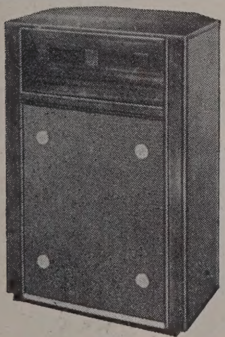
TYPE C CABINETS. Here at last is a cabinet for low-budget high-fidelity audio systems. Features include attractive tapered foot design, sturdy baffle with Bass Reflex concealed under grille cloth, in choice of blonde or mahogany finishes. Lacquer easily applied to blonde for other finish colors if desired. Concealed cut-outs in Model C-151 for easy installation of flush H-F and Level Controls used with Jensen Triaxial and Coaxial speakers.

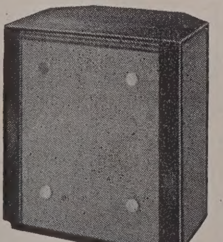
TYPE H SECTOR CABINET is especially designed for public entertainment or paging. With front curved to a 14¼″ radius, they fit anywhere—in corners, on walls, at intersection of ceiling and wall, or on posts. May be mounted in pairs or clusters for wide-angle sound distribution. Finished in brown lacquer; covering colors may be applied to match installation.

Jensen No.	Stock No.	Speaker Size	Finish	DIMENSIONS, Inches Height	Width	Depth	Shipping Weight, Lbs.	List Price
M-253	ST-838	15″	Blonde Mahogany	36	24	18	80	$164.27
M-353	ST-858	15″	Cordovan Mahogany	36	24	18	80	164.27
D-151	ST-157	15″	Regular Walnut	31	27¾	13⅜	50	77,50
C-151	ST-868	15″	Blonde	32	28	15	53	62.00
C-151	ST-869	15″	Mahogany	32	28	15	53	62.00
D-121	ST-156	12″	Regular Walnut	31	27¾	13⅜	50	77.50
C-121	ST-866	12″	Blonde	29	25	13½	42	49.75
C-121	ST-867	12″	Mahogany	29	25	13½	42	49.75
B-121	ST-742	12″	Brown Lacquer	28½	23¾	11⅞	34	36.00
C-81	ST-864	8″	Blonde	23½	20	9	26	37.50
C-81	ST-865	8″	Mahogany	23½	20	9	26	37.50
H-81	ST-141	8″	Brown Lacquer	22¾	17¾	8½	14	24.75

NEW Type BL Cabinets

Back-Loading Folded-Horn Design

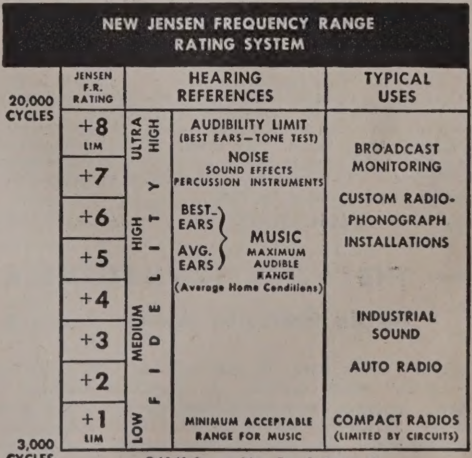

←BL-151


BL-121→

Outstanding Performance . . . In Corner or on Sidewall

Jensen acoustic research now brings you these new back-loading folded-horn cabinets for better bass response. Ideal for corner where walls give horn extension, but may be used against sidewall with excellent results. Reduces resonance, lowers distortion. Baffle easily, quickly removed from front for access to speaker. Fine furniture treatment throughout, with selected hardwood veneers, hand rubbed.

BL-151. For 15″ Speakers. Recommended for Coaxial and Triaxial units. Removable front panel covering compartment for controls, h-f unit, etc. Three 1$\frac{11}{16}$″ holes in panel covered by matching wood squares. 38¾″ H; 25½″ W; 18¾″ D. Shipping wt., 106 lbs.
BL-151. Cabinet. Mahogany. ST-877. List Price $175.00
BL-151. Cabinet. Blonde Korina. ST-876. List Price $180.00
BL-121. For 12″ Speakers. Has one concealed cut-out under grille cloth for control. 28¾″ H; 25½″ W; 18¼″ D. Shpg. wt., 65 lbs.
BL-121. Cabinet. Mahogany. ST-879. List Price $96.75
BL-121. Cabinet. Blonde Korina. ST-878. List Price $102.00



©1949 Jensen Mfg. Co., Chicago, Ill.

Instead of the former practice of stating frequency limits of loudspeakers in cycles, the r-f region between the minimum useful limit for music and maximum limit for hearing has been divided into eight steps, each of which is just distinguishable from the next as an audible difference for music. The rating of a speaker is determined from the highest interval in which loudness is maintained at a significantly high percentage of normal. The table above relates the ratings to hearing and typical applications.

Jensen

JENSEN HYPEX PROJECTORS

VH-24
VH-20
VH-15

VH-91

V-21

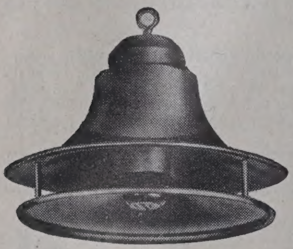
Because of the Hypex formula (Patent 2,338,262) giving wider sound distribution and greatly improved acoustical performance, JENSEN Hypex projectors are superior to the usual "exponential" type horns. The Alnico 5 unit is entirely enclosed within the one-piece rigid horn yet easily removed and replaced. Stainless steel and other corrosion-resistant materials and specially treated steel parts insure against weather exposure. **Models VH-24, VH-20** and **VH-15** have mounting brackets with clutch-type heavy "U" trunnions which afford complete flexibility of adjustment with positive locking into desired position. Weatherproof terminal boxes provide easy, solderless connections with no exposed terminals. **Model VH-91** has a universal mounting bracket which permits pointing in any direction and secure locking by a single wing nut.

SPECIFICATIONS

Model No.	Stock No.	Cut-Off, CPS	Acoust. Path, In.	Coverage Angle Degrees	Power Rating Watts	Voice Coil Imped. Ohms	Diam. In.	Length, In.	Trans.* Core Size	List Price
VH-24	**ST-685**	110	58	75	25	16	25	22⅜	1x1¼	**$89.50**
VH-20	**ST-684**	140	52	80	25	16	21	20¼	1x1¼	**76.00**
VH-15	**ST-757**	180	36	90	15	8	16	15	¾x¾	**56.50**
VH-91	**ST-171**	300	16	100	15	8	8⅞	7⅝	⅝x⅝	**35.80**

*Not included.

HYPEX "*Three-sixty*" PROJECTORS



VR-11

VR-241

Designed for the reproduction of speech and music signals at high efficiency where high noise levels exist. The Hypex formula, made famous by JENSEN Hypex projectors, is incorporated in their design giving greatly improved acoustical performance. With the sound distributed over a circle, they are especially suitable for installations where coverage of relatively large areas and suspension from the ceiling are desired. **Model VR-11** is recommended for speech reproduction while **Model VR-241**, of larger size, is intended for speech and music reinforcement. Driver unit has phenolic diaphragm; **VR-241** uses same diaphragm as VH-24 and VH-20; **VR-11** uses same diaphragm as VH-15 and VH-91. **VR-241** is equipped with weatherproof terminal box with connecting cable passing through rubber grommet and leads attached to screw terminals provided. VR-11 has two-conductor rubber-covered cable for connections. Both equipped with heavy eyebolt at top for suspension.

SPECIFICATIONS

Model No.	Stock No.	Cut-Off, CPS	Acoust. Path, In.	Coverage Angle Degrees	Power Rating Watts	Voice Coil Imped. Ohms	Diam. In.	Length, In.	Trans.* Core Size	List Price
VR-241	**ST-789**	140	54	360	25	16	25	22	1x1¼	**$98.50**
VR-11	**ST-791**	280	18	360	15	8	11	10⅜	¾x¾	**46.50**

*Not included.

MODEL V-21 DRIVER UNIT

This driver unit incorporates the driver element used in the new Hypex projectors and is electrically and mechanically interchangeable with the former U-20 ST-630 and U-201 ST-732 Driver units. It is designed for replacement service on former Models H-20 ST-726, H-201 ST-733 and H-24 ST-727 Hypex horns. Unit is PM type and equipped with internal screw terminals. Flange is deisgned for ¼" bolt attachment, with three 11/64" holes spaced 120 degrees apart on a radius of 2¾". Voice coil input 16 ohms and power rating 25 watts.

Model V-21 Driver Unit, ST-787....................................List Price $36.25

THE "HYPEX" HORN FORMULA

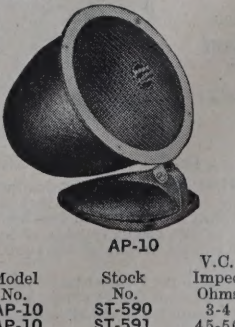
— *An Exclusive Jensen Feature*

"Hypex" comes from the mathematical term "hyperbolic exponential," which describes the important difference between Jensen projectors and those based on the simple exponential theory. Jensen research discovered a better, more efficient horn formula which maintains effective acoustic loading right down to acoustic cut-off and all Jensen Hypex* Projectors have this exclusive feature for better performance. For the facts on this development and a complete description of horn behavior, write for Technical Monograph No. 5, "Horn-Type Loudspeakers."

Price 25c.

SPEECH MASTER PROJECTORS

Sturdy construction, overall mechanical protection, double dust-proofing, streamline design and exceptional acoustical performance recommend these projectors for paging and intercommunication. PM design. Good talk-back performance in PA systems. Hammered gray finsh; chrome trim. RC 36" cord. Space within case for ½" x ½" transformer.



AP-10

AR-10

Model No.	Stock No.	V.C. Imped. Ohms	Power Watts	Diam. In.	Depth In.	List Price
AP-10	**ST-590**	3-4	5	5	4½	**$19.30**
AP-10	**ST-591**	45-50	5	5	4½	**20.30**
AP-11	**ST-592**	3-4	5	5	4½	**15.75**
AP-11	**ST-593**	45-50	5	5	4½	**16.75**
AR-10	**ST-643**	3-4	6	10	8	**23.50**
AR-10	**ST-644**	45-50	6	10	8	**24.50**

Jensen

IMPEDANCE MATCHING TRANSFORMERS

Loudspeakers are relatively low-impedance devices with voice coil impedance values ranging from 3 to 50 ohms. Vacuum tube power output stages on the other hand, are high-impedance devices with impedance load rated anywhere from 1,000 to 14,000 ohms. To reconcile these widely differing impedances, output or impedance matching transformers must be inserted between the signal output and the loudspeaker voice coil. To determine which transformer is to be used in any given case, first of all find out the impedance of the loudspeaker in question and then locate for that speaker the transformer which will match nearest the impedance of the signal source. Differences of the order of 10% are usually of no importance but if a close match cannot be obtained, it is best to select an impedance value which will present a higher rather than lower-than-rated impedance to the output tubes. Thus where a 5,000-to-16 ohm transformer is needed, it would be better to select a 6,000-to-16 ohm unit than a 4,000-to-16 ohm unit. For full and complete treatise on impedance matching, consult Jensen Technical Monograph No. 2. (Price 25c).

ADJUSTABLE IMPEDANCE

Type "ZX"

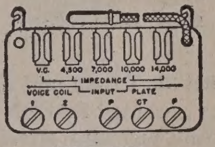
For matching conventional "plate" impedance values. Adjustments are easily made with flexible lead and pin-tip jack. Impedance values: voice coil, 4,500, 7,000, 10,000 and 14,000 ohms. All except voice coil are center-taped for push-pull tubes.

Cased Type. Pin-Tip Adjustment. Not Mountable on Speaker.

Stock No.	Core Size	Impedance	Mtg. Ctrs., Inches	Power Watts	For Use With:	List Price
ZX-3000	1x1¼"	8	1 11/16x3 15/16	35.0	PLJ-18, PMJ-18, P15-L, P15-LL	$20.58
ZX-3001	1x1¼"	16	1 11/16x3 15/16	35.0	VH-20, VH-24, VR-241, H-510	20.58

Uncased Type. Pin-Tip Adjustment. Mountable on Speaker.

Stock No.	Core Size	Impedance	Mtg. Ctrs., Inches	Power Watts	For Use With:	List Price
ZX-1002	¾x¾"	6-8	2 13/16	10.0	P12-T, P10-S, P10-SX, P10-T, P8-R, P8-S, P8-SX, P8-RX, VH-15, VR-11	6.00
ZX-1005	⅞x⅞"	6-8	3⅛	16.0	P15-Q, P12-P, P12-Q, P12-R, P12-RX, P12-S, P12-SX, P10-Q, P10-R, P10-RX, P8-P, P8-Q, P8-RX, K-210	8.64
ZX-1007	1x1"	8	3⅛	25.0	P15-N, P15-NX, P15-P, P12-N, P12-NX	11.70



TYPE "ZX"

Type "ZY"

Same as Type "ZX" except for matching "line" impedance values. Impedances: 500, 1,000, 1,500, 2,000 and voice coil. No center tap available.

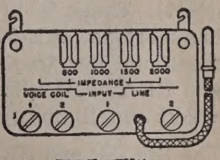
Cased Type. Pin-Tip Adjustment. Not Mounted on Speaker.

Stock No.	Core Size	Impedance	Mtg. Ctrs., Inches	Power Watts	For Use With:	List Price
ZY-4000	1x1¼"	8	1 11/16x3 15/16	35.0	PLJ-18, PMJ-18, P15-L, P15-LL	20.58
ZY-4001	1x1¼"	16	1 11/16x3 15/16	35.0	VH-20, VH-24, VR-241, H-510	20.58

Type "ZY"

Pin-Tip Adjustment. Mountable on Speaker.

Stock No.	Core Size	Impedance	Mtg. Ctrs., Inches	Power Watts	For Use With:	List Price
ZY-2005	1x1"	8	3⅛	25.0	P15-N, P15-NX, P15-P, P12-N, P12-NX	11.70
ZY-2003	⅞x⅞"	6-8	3⅛	16.0	P15-Q, P12-P, P12-Q, P12-R, P12-S, P12-SX, P10-Q, P10-R, P8-P, P8-Q, K-210	8.64
ZY-4004	¾x¾"	3-4	2 13/16	10.0	P8-T	6.00
ZY-2002	¾x¾"	6-8	2 13/16	10.0	P12-T, P10-S, P10-SX, P10-T, P8-R, P8-S, P8-SX, VH-15, VR-11	6.00
ZY-4002	⅝x⅝"	3-4	2⅜	6.5	P8-U, P8-V, P6-T, P6-X, P6-V	4.02
ZY-4005	⅝x⅝"	6-8	2⅜	6.5	VH-91	4.02



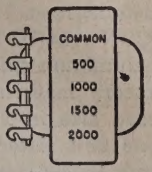
TYPE "ZY"

Types "ZP" and "ZL"

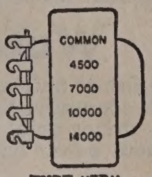
Lower priced than "ZX" or "ZY" Types but perfectly satisfactory when used in proper application. Soldering iron required for making adjustments on terminal block. "ZP" for "plate," "ZL" for line.

Solder Lug Terminals. Mountable on Speaker.

Stock No.	Core Size	Impedance	Mtg. Ctrs., Inches	Power Watts	For Use With:	List Price
ZP-1023	½x½"	4500/3-4 7000/3-4 10000/3-4 14000/3-4	2	3.5	P6-X, P5-V, P5-X, P4-X, P5-TX	2.58
ZP-1025	½x½"	1500/3-4 2000/3-4 2500/3-4	2	3.5	P6-X, P5-V, P5-X, P4-X, P5-TX	2.58
ZL-2021	½x½"	500/3-4 1000/3-4 1500/3-4 2000/3-4	2	3.5	P6-X, P5-V, P5-X, P4-X, P5-TX	2.58
*ZP-1024	⅝x⅝"	4500/3-4 7000/3-4 10000/3-4 14000/3-4	2⅜	6.5	P8-U, P8-V, P6-T, P6-TX, P6-V	3.00
*ZP-1026	⅝x⅝"	4500/6-8 7000/6-8 10000/6-8 14000/6-8	2⅜	6.5	VH-91	3.00
ZL-2022	⅝x⅝"	500/6-8 1000/6-8 1500/6-8 2000/6-8	2⅜	6.5	VH-91	3.00



TYPE "ZL"



TYPE "ZP"

Type "Z"

FIXED IMPEDANCE

Cased Type, Screw Terminals. Not Mountable on Speaker.

Stock No.	Impedance	For Use With:	List Price
Z-2731	500/16 or 8	PLJ-18, PMJ-18, P15-L, P15-LL, P15-NL, VH-20, VH-24	$25.68
Z-2732	16/8	PLJ-18, PMJ-18, P15-L, P15-NL, VH-20, VH-24	24.30
Z-2733	16/8	XP-101	14.40

Cased Type, Solder Lug Terminals. Not Mountable on Speaker.

Stock No.	Impedance	For Use With.	List Price
Z-3344	500/8 or 4	PMJ-18, P15-L, P15-N, P15-NX	$16.20
Z-3342	500/16 or 8	P15-N, P15-NX, P15-P, P12-N,	12.30
Z-3343	500/8 or 4	P12-NX, VH-20, VH-24, VR-241	12.30

Uncased, Pig-tail Leads. Mountable on Speaker.

Stock No.	Impedance	For Use With:	List Price
Z-1888 Z-2386 Z-2387 Z-3341 Z-1891 Z-2241	500/6-8 *3000/6-8 *5000/6-8 *6000/6-8 *10000/6-8 *14000/6-8	P15-N, P15-NX, P15-P, P12-N, P12-NX, F15-N, F12-N	7.20
Z-3346	500/16	VH-20, VH-24, VR-241	7.20
Z-3319 Z-3320 Z-3321 Z-3318 Z-3322 Z-3323	500/6-8 *3000/6-8 *5000/6-8 *6000/6-8 *10000/6-8 *14000/6-8	P15-QX, P12-P, P12-SX, P12-R, P12-S, P12-SX, P10-Q, P10-R, P10-RX, P8-Q, P8-RX, F15-Q, F12-Q, P12-R, P12-RX, K-210	4.80
Z-3329 Z-3330 Z-3331 Z-3332 Z-3333 Z-3334	500/3-4 *3000/3-4 *5000/3-4 *6000/3-4 *10000/3-4 *14000/3-4	F12-S	4.80
Z-3324 Z-3325 Z-3326 Z-3309 Z-3327 Z-3328	500/6-8 *3000/6-8 *4500/6-8 *7000/6-8 *10000/6-8 *14000/6-8	P12-T, P10-S, P10-SX, P10-RX, P10-T, P8-R, P8-S, P8-SX, VH-15, VR-11	3.30

Stock No.	Impedance	For Use With.	List Price
Z-3335 Z-3336 Z-3337 Z-3338 Z-3339 Z-3340	500/3-4 *3000/3-4 *4500/3-4 *7000/3-4 *10000/3-4 *14000/3-4	P8-T, F10-S, F8-S, F8-T	3.30
Z-3310 Z-3311 Z-3312 Z-3313 Z-3314 Z-3315 Z-3316 Z-3317	500/3-4 1500/3-4 2000/3-4 2500/3-4 *4500/3-4 *7000/3-4 *10000/3-4 *14000/3-4	P8-U, P8-V, P6-T, P6-TX, P6-V, F8-W, F6-U	2.28
Z-3345	45-50/6-8	VH-91, VR-11	2.52
Z-3300 Z-3301 Z-3302 Z-3303 Z-3304 Z-3305 Z-3306 Z-3307	500/3-4 1500/3-4 2000/3-4 2500/3-4 4500/3-4 *7500/3-4 *10000/3-4 *12000/3-4	AP-10, AP-11, AR-10, P6-X, P5-TX, P5-V, P5-X, P4-X, F6-X, F6-W, F5-W, F5-X, F4-X, RK-51	1.80
Z-3308	3-4 grid	All 3-4 ohm V.C. speakers	2.04

*Center-tapped

SINCE 1922 **RACON** ACOUSTICAL EXCELLENCE

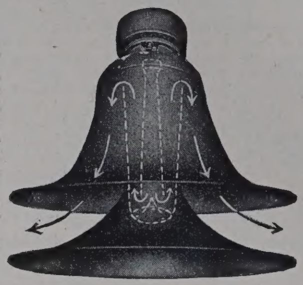
RE-ENTRANT TRUMPETS
RADIAL HORNS and SPEAKERS
PM DRIVER UNITS

Re-Entrant Trumpets, Radial Horns and Speakers

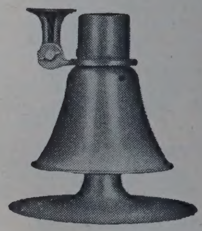
RE-35 RE-50 RE-60

RACON re-entrant horns and speakers are designed to deliver highly concentrated sound with great efficiency over long distances. This is due to true exponential design throughout and the elimination of all vibratory members and sound dissipating devices. The base and inside tone arms are husky aluminum castings and bell is a heavy gauge aluminum spinning. The RE-35, RE-50 and RE-60 incorporate reflectors made of patented RACON ACOUSTIC MATERIAL to prevent resonant effects. All models are supplied with "U"-bracket mounting (ratchet swivel type on request). Finish is in weatherproof hard baked gray hammertone. RE-60 & RE-50 recommended for maximum low frequency music reproduction. RE-35 and RE-25 best suited for incidental music and high speech intelligibility.

The SR-35R and SR-60R are weatherproof radial re-entrant horns designed to project sound over an area of 360 degrees. The centre reflectors are of patented RACON ACOUSTIC MATERIAL and the deflectors are aluminum spinnings covered with this same non-vibratory material. Standard "U" bracket supplied. Thread size is 1⅜"-18, permitting the use of any driver unit listed below. The SR-60R is ideal for church tower sound installations and the SR-35 for incidental music and speech.



SR-35R SR-60R



SR-15R SR-12R

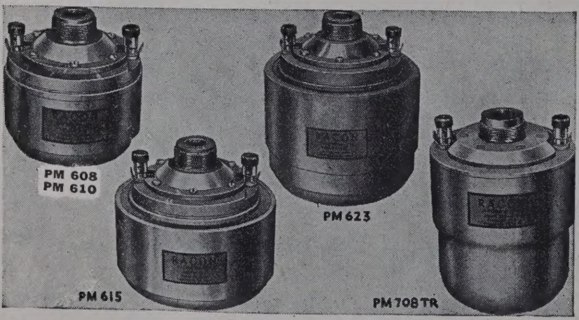
The SR-15R and SR-12R are rated at 25 and 10 watts respectively and are supplied complete with built-in 15 ohm* driver units. These models are intended primarily for speech in paging and "talk back" systems and are completely weatherproof. Supplied with cast swivel ratchet and wall bracket.

Model No.	Acoustic Length	Bell Diam.	Over-all Length	Cut-off (cycles)	Distrib. Angle	Ship. Wt. lb.	Code	List Price
**RE-60	6′	26″	28″	112	45°	21	REMOL	$70.00
**RE-50	4½′	25¼″	23½″	140	50°	19	REMOY	49.50
**RE-35	3½′	20½″	16¼″	175	55°	12½	REMOX	35.50
**RE-25	2½′	13½″	11″	225	60°	9	REMOD	26.50
**SR-60R	6½′	36″	34½″	115	360°	47	RADAL	90.00
**SR-35R	4′	17″	16″	175	360°	16	RADAK	47.50
SR-15R	20″	9″	12″	350	360°	7	RADAS	39.25
SR-12R	15″	7″	9″	450	360°	4	RADAB	29.50

* 8 or 45 ohms on request at same price.
** horn only

Waterproof Permanent Magnet Driver Units

The driver unit is the most important single element in a successful public address system. In these five new driver units, primary emphasis is on: high continuous power handling capacity with ample reserve for overload peaks up to 100%, maximum conversion efficiency, response ranges suitable for every type sound system, and waterproof construction.



These five units employ Alnico V magnets and Armco magnetic iron throughout. All soft steel parts are doubly plated to prevent corrosion. An automatic electromagnetic cut-out switch is used in the magnetizing process, assuring maximum flux density in the gap and high uniformity. Units are individually measured for flux density. Each unit is tested with special equipment for power handling capacity as well as a 350-volt ground test.

Long life plastic diaphragms and formers are supplied with aluminum wound voice coils to increase efficiency. Voice coil leads are non-fatiguing beryllium copper, insuring lifetime performance. All units are completely waterproof, yet permit ready replacement of diaphragm where needed.

NEW SUPER X UNITS USING LATEST ALNICO V MAGNETS

Model No.	Net	Weight Ship.	Flux Density per sq. cm.	Frequency Range	Imp.	Diam.	Ht.	Thread	Capacity (watts) Peak	Capacity (watts) Oper.	Code	List Price
PM-623	8½ lbs.	9½ lbs.	15,500 gausses	80-7000	15	5¼″	4½″	1⅜″-18	65	35	RETIX	$52.50
PM-615	8 lbs.	9 lbs.	13,500 gausses	90-7000	15	4¼″	4½″	1⅜″-18	60	30	RETIN	38.50
PM-610	3.5 lbs.	4 lbs.	12,000 gausses	90-7000	15	4⅛″	3½″	1⅜″-18	60	30	REPIX	34.00
PM-608	5 lbs.	5½ lbs.	11,000 gausses	90-6500	15	4″	3¼″	1⅜″-18	50	25	RETIP	29.00
PM-708TR*	6 lbs.	6½ lbs.	11,000 gausses	90-6500	15	4½″	5½″	1⅜″-18	50	25	RETIR	42.75

*NOTE: Contains built-in 25-watt line matching transformer, primary tapped at 500, 1000, 1500, 2000; secondary 8 and 15 ohms.

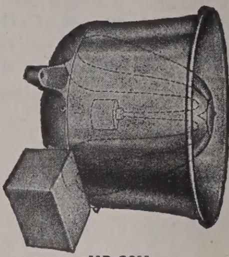
RACON SINCE 1922 **ACOUSTICAL EXCELLENCE**

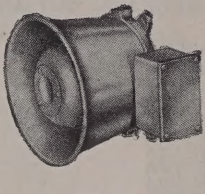
DOUBLE RE-ENTRANT MARINE SPEAKERS
RE-ENTRANT PAGING SPEAKERS
CONE SPEAKER ENCLOSURES

DOUBLE RE-ENTRANT MARINE SPEAKERS

The regular (model MR-30M), midget (model MG-21J), and miniature (model MN-15B) marine speakers are approved by the U. S. Coast Guard for all Emergency Loudspeaker Systems on ships.

The driver unit and connecting leads are all enclosed, resulting in a completely waterproof speaker. Heavy aluminum spinnings are used throughout and back base is a husky, non-corrosive aluminum casting. A baked chromatic undercoat plus an outside lacquer finish is assurance of lasting service under severe conditions of humidity and temperature. Designed for three legged flush rear mounting. All models provided with cast aluminum transformer housing. Model MN-15B supplied with "U" bracket; "U" bracket for other models on request at slight additional cost.


MR-30M

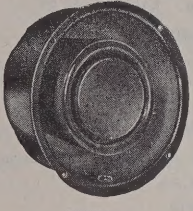

MG-21J

Model No.	Frequency Range	Distribution Angle	Bell Diam.	Capacity (watts) Oper.	Peak	Imp.	No. Driver Units	Over-all Length	Ship. Wt. lb.	Code	List Price
MR-30-M	250-6000	50°	14″	30	60	15	1	10″	29¼	REDIX	$150.00
MR-32M	250-6000	50°	14″	60	120	8	2	18½″	43	REDIT	208.50
MG-21J	350-6000	55°	9½″	25	50	15	1	6¾″	14	RASOM	61.00
MG-21-B	350-6000	55°	9½″	20	35	15	1	6¾″	9½	RASOB	49.75
MN-15B	450-6000	65°	6¼″	20	35	15*	1	4¾″	6¼	REDUP	39.35
MN-15C	(same as MN-15B, but less "U" bracket)									REDUT	38.50
MN-15D	(same as MN-15B, but less "U" bracket and less transformer box)									REDUZ	36.75

* 8 or 45 ohms on request at same price.

RE-ENTRANT PAGING SPEAKERS

RE-15 RE-12


DW-9R

These weatherproof re-entrant paging speakers are capable of high intelligibility in locations where high noise levels prevail. Construction is non-vibratory throughout and consists of heavy aluminum spinnings and castings. Voice coils are wound with aluminum wire to provide a high degree of efficiency when these speakers are also used as microphones in "talk-back" systems. Ideal for replacing conventional cone speakers. RE-12 and RE-15 provided with heavy cast aluminum ratchet bracket. DW-9R is supplied with flange for flush mounting.

Model No.	Frequency Range	Distribution Angle	Operating Capacity	Imp.	Bell Diam.	Over-all Length	Ship. Wt. lb.	Code	List Price
RE-15	350-11,000	60°	25 watts	*15 ohms	9″	9¾″	6	REMAC	$36.00
RE-12	450-10,000	65°	10 watts	*15 ohms	7″	6½″	3¼	REMAB	27.80
DW-9R	750-10,000	70°	8 watts	*15 ohms	5″	2½″	2	REDOX	29.00

* 8 or 45 ohms on request at same price.

CONE SPEAKER ENCLOSURE

These enclosures are strongly constructed and incorporate an acoustically damped steel back and an aluminum bell. A watertight overlap seal permits use indoors or outdoors. Cone opening is protected by screening and fine cloth mesh. Provided with two offset mounting hooks.

MODEL CP-12AW

Cone Size ....12″

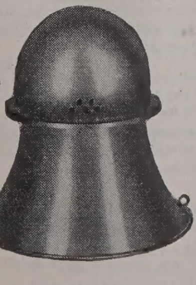
BELL DIA. ....17″

LENGTH ....20″

SHIPPING WT...8 lbs.

CODE ....ROBOT

LIST PRICE $17.50


CP-12AW

EXPLOSION PROOF DRIVER UNITS

The model XP-1 and XP-2 explosionproof driver units are listed under REEAXMINATION SERVICE of Underwriter's Laboratories, file E 17959.

Model XP-1 is specifically approved for use in Class I, group C & D locations where vapors present an explosion hazard. Model XP-2 is specifically approved for use in Class II, group E, F & G locations where explosive dusts are present.

Both units incorporate a husky non-corrosive aluminum casting, with access to the driver unit by means of a removable cast back cover plate. Ample room internally for line-matching transformers up to 30 watts where required. A serrated mounting bracket permits easy installation. For use with any straight or re-entrant horn. The casting is tapped for standard ½″ conduit.

Power: 30 watts continuously. with peaks up to 60 watts. High sensitivity permits use as a microphone-speaker in "talk-back" systems. Finish is in hard baked gray over a zinc chromate primer.

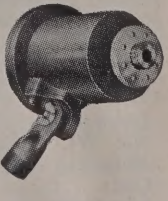
See Racon bulletin XP for more detailed specifications.

SPECIFICATIONS

	XP-1	XP-2
Power	30 w	30 w
Peak Power	60 w	60 w
Response	90-7000 cps	90-7000 cps
Impedance	15 ohms	15 ohms
***Thread**	1⅜″-18	1⅜″-18
****Sensitivity**	96.6 db	92.6 db
Mounting	1¼″ pipe	1¼″ pipe
Cable Entrance	½″ conduit	½″ conduit
Dimensions	8¾″ H x 7″ Dia.	8¾″ H x 7″ Dia.
Net Weight	15 lbs.	16.5 lbs.
Shipping Wt.	16 lbs.	17.5 lbs.
Code	RODAX	RODAY

*1-7/16″-16 on special order

**4′—1 watt—1000 cycles



RACON ACOUSTICAL EXCELLENCE

SINCE 1922

STRAIGHT EXPONENTIAL TRUMPETS • COBRA-TYPE HORN
CELLULAR HORN TWEETERS • CROSSOVER NETWORKS

STRAIGHT EXPONENTIAL TRUMPETS

Output from any straight trumpet is approximately 2 DB higher than corresponding re-entrant type because it lacks the attenuation inherent in all re-entrant horns. **"Stormproof"** Trumpets are made of non-vibratory **RACON ACOUSTIC CLOTH.** Weather-treated for indoor or outdoor use. **"All Aluminum"** Trumpets are made of heavy gauge aluminum spinnings with rolled beaded edge and cast aluminum throat sections. **"Unbreakable"** Trumpets are made of heavy gauge aluminum spinnings reinforced and damped with Patented **RACON ACOUSTIC MATERIAL.** Large sizes are useful for church chime systems, C-D systems, airports and stadiums, parks, playgrounds, music festivals, for both speech and music. Smaller sizes for railroad and bus terminals, waiting rooms, factories.

Model No.	Air Column (length)	Units Required	Cut-off (cycles)	Distribution Angle	Bell Diam.	Material	Ship. Weight	Code	List Price
*ST-415A	6′	1	115	45°	30″	Unbreakable	37 lb.	REGON	$135.00
**ST-414A	6′	1	115	45°	30″	Stormproof	39 lb.	RIDER	100.00
*ST-417A	6′	1	115	45°	30″	All Aluminum	35 lb.	RHINO	99.00
**ST-412A	4½′	1	145	50°	25″	Stormproof	34 lb.	RACEY	76.00
*ST-413A	4½′	1	145	50°	25″	All Aluminum	27 lb.	RIANT	73.50
**ST-411A	3½′	1	195	50°	22″	Stormproof	28 lb.	RENEW	52.50
*ST-410A	3½′	1	195	50°	22″	All Aluminum	23 lb.	REPEX	36.75
**ST-251A	2′	1	250	55°	12″	Stormproof	6 lb.	RISAT	18.35
**ST-251B	2′	1	250	55°	12″	All Aluminum	5 lb.	RIMAD	17.50

* Delivery, 4 weeks. ** Delivery, 1-2 weeks.

NOTE: Models with 2, 4 and 8 unit throats available. Prices on request.

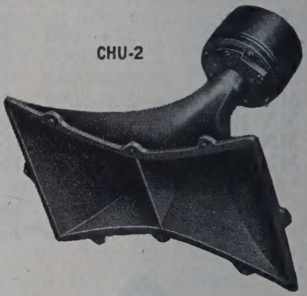
CELLULAR HORN TWEETERS

Response is essentially flat to 12,000 cycles, with excellent usable output to 15,000 cycles. Cellular horn design permits wide angle distribution. Designed for a 1000-cycle crossover to assure optimum cone response. The CHU-2 must be used with a crossover network. The networks listed below are recommended and when employed, tweeter model CHU-2 may be used with amplifiers having an output rating to 25-30 watts.

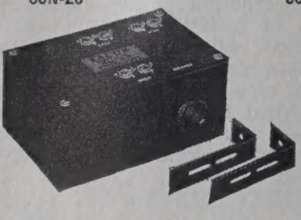
NOTE: Instructions are packed with each tweeter, providing an easy method of home building a professional type 1000-cycle crossover network.

Model No.	Impedance	Freq. Range	Dispersion Angle Horiz.	Dispersion Angle Vert.	Material	Ship. Wt.	Code	List Price
CHU-2	15 Ohms	750-15000	100°	50°	Alum. Cast.	6 lbs.	RALUX	$40.25

CHU-2



CON-20



CON-15R

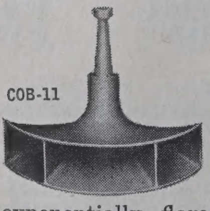
CROSSOVER NETWORKS

Both models CON-20 and CON-15R have a crossover of 1000 cycles. The CON-20 is an L/C network and the CON-15R is of the high pass filter type. Cone speaker impedance may vary from 4-15 ohms.

Model No.	CON-15R	CON-20
Description	Var. Audio Taper R-C Network	Var. Audio Taper R-C-L Network
Ship. Wt.	2½ lbs.	3½ lbs.
Code	RAFIR	RADUX
List Price	$11.80	$24.00

COBRA TYPE HORN

COB-11



The RACON COB-11 "cobra" type horn is designed for public address systems requiring high clarity reproduction with maximum concentration of sound in a horizontal plane. It is of "straight" horn design and exponentially flared for maximum transfer of energy. The low cutoff of 250 cycles results in crisp, highly articulate quality without a trace of boominess. The horn consists of a heavy two-piece non-vibratory aluminum casting and is provided with a two-section serrated mounting bracket. Finish is baked gray hammertone over a zinc chromate primer.

Cut-off	250 cycles
Dispersion	120° H, 40° V
***Thread**	1⅜″—18
Dimensions	17⅝″ H, 22¼″ W, 13⅜″ D
Net Wt.	12 lbs.
Shipping Wt.	17 lbs.
Code	ROBON
List Price	$72.50

* 1-7/16″-16 on request at same price.

ACCESSORIES

DC-302A

DC-2U

RB-150A

TB-150

Steel Swivel Brackets for Cone Projectors

For wall or truck mounting. Has tooth ratchet swivel and pipe connection to give 180° angular movement. Can be used on any Racon Cone Projector.

Model No.	Description	Cone Size	Code	List Price
RB-150	Without Base	8″ or 12″	RAMIS	$3.90
RB-150A	With Base	8″ or 12″	RAMIT	5.50

Bronze Swivel Bracket for Re-entrant Trumpets

A cast bronze three-legged base and ratchet connection. May be used when specifying ratchet mounted trumpets. Over-all height 9″.

Model No.	Code	List Price
TB-150	RAMUG	$6.50

Multiple Horn and Unit Connectors

Model No.	Description	Material	Code	List
DC-302A	2 St. Trumpet Connector 75° Dispersion Angle	Bronze	RADIX	$18.35
DC-2U	Dual Unit Connector for all standard thread horns to permit the use of two driver units on one horn	Bronze	RADAX	15.75

JIM LANSING

JAMES B. LANSING SOUND, Inc.
LOS ANGELES 39, CALIFORNIA

GENERAL PURPOSE SPEAKER SPECIFICATIONS

	D-130—15″	D-131—12″	D-208—8″
POWER INPUT	25 Watts	20 Watts	12 Watts
IMPEDANCE (Nominal)	16 Ohms	16 Ohms	8 Ohms
OUTSIDE DIAMETER	15 3/16″	12⅛″	8¼″
DEPTH	5⅝″	5″	2⅞″
FIELD	Perm. Mag.	Perm. Mag.	Perm. Mag.
V. C. DIAMETER	4″	4″	2″
SHIPPING WEIGHT	23 pounds	22 pounds	6 pounds
PRICE	$110.00	$105.00	$38.00

Jim Lansing general purpose speakers have large Alnico V Permanent Magnets, edge wound ribbon voice coils, aluminum high frequency center diaphragm vented to the rear to eliminate nonlinear compression effects, heavy, rigid aluminum frames, and 4″ diameter voice coils.

SPEAKER SYSTEM COMPONENTS

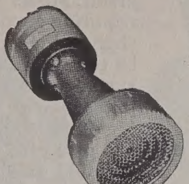
Low frequency unit—15″

130A used with **D1001 system**—Voice coil impedance 16 ohms

130B used with **D1050 system**—Voice coil impedance 32 ohms

Power input	25 watts
Voice coil diameter	4″
Outside diameter	15 3/16″
Depth	5⅝″
Shipping weight	23 pounds

LIST PRICE $112.50

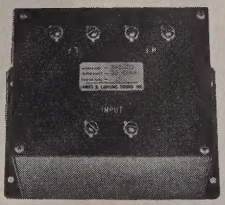


Complete high frequency driver, horn and lens assembly
175 DLH

175 DLH used with both **D1001** and **D1050** systems

Power input	25 watts above 1200 c.p.s.
Nominal impedance	16 ohms
Field	permanent magnet
Distribution	90° solid angle
Index of refraction	1.3
Horn throat	1″ diameter
Mounting hole diameter	5⅜″
Overall length	11½″
Shipping weight	12 pounds

LIST PRICE $190.00



Dividing network

N1200 used with both **D1001** and **D1050 systems**

Input impedance	16 ohms
Output impedance	16 ohms
Cross over	1200 c.p.s.
Attenuation	18 DB per octave
Shipping weight	6 pounds

LIST PRICE $55.00

Complete Two-Way System Kits

The **D1001** and **D1050** speaker systems can be purchased as a kit for installation in your own cabinet or for built-in installations.

D1001 system includes:

1 130A—15″ low frequency unit
1-175 DLH—high frequency driver and horn-lens assembly
1 N1200—dividing network
Shipping weight 41 pounds

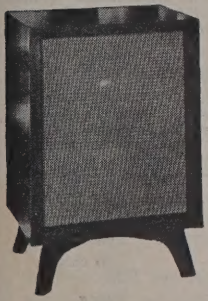
LIST PRICE $357.50

D1050 system includes:

2 130 B—15″ low frequency units
1-175 DLH—high frequency driver and horn-lens assembly
1 N1200 dividing network
Shipping weight 62 pounds

LIST PRICE $470.00

D208 Speaker Enclosure

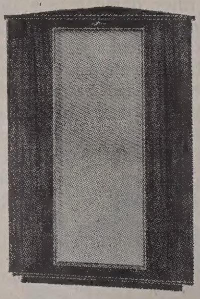


Height 29½″
Width 19⅜″
Depth 15-13/16″
Shipping Weight 52 pounds

This enclosure with the D208 speaker provides exceptionally fine, wide range reproduction. Speaker and enclosure must be ordered separately and will be shipped separately.

D208 Speaker Enclosure Available in:

		List Price
C508	Utility Gray	$70.50
C509	Dark Mahogany	70.50
C510	Primavera Blonde	70.50



System Corner Enclosure

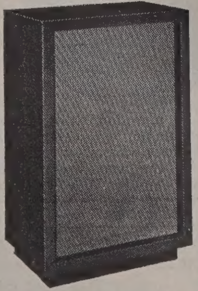
Height 50″ . . . Front width 34″
Depth 17″
Shipping Weight 73 Pounds

With the **D1050 system** installed available in:

		List Price
D1004	Dark Mahogany	$650.00
D1005	Primavera Blonde	660.00
D1006	Utility Gray	645.00

The corner enclosure is also furnished with the **D1001 speaker system installed.** Available in:

		List Price
D1007	Dark Mahogany	$537.50
D1008	Primavera Blonde	547.50
D1009	Utility Gray	532.50



Console Enclosure

Height 38½″ . . . Width 29″
Depth 16″
Shipping Weight 110 Pounds

With the **D1001 speaker system** installed available in:

		List Price
D1000	Utility Gray	$492.50
D1002	Dark Mahogany	507.50
D1003	Primavera Blonde	517.50

The console enclosure can also be used to install the **D130—15″** or **D131—12″** general purpose speakers. Speaker and enclosure must be ordered separately and will be shipped separately. Available in:

		List Price
C500	Utility Gray for D130	$135.00
C501	Utility Gray for D131	135.00
C502	Dark Mahogany for D130	150.00
C503	Dark Mahogany for D131	150.00
C504	Primavera Blonde for D130	160.00
C505	Primavera Blonde for D131	160.00

FIRST IN FINE SOUND

University LOUDSPEAKERS AND REPRODUCER EQUIPMENT

REFLEX TRUMPETS

MODEL PH with Model PA-30 DRIVER UNIT

The reflex trumpet, pioneered by University represents the most efficient modern method of converting electrical power into acoustic energy. Conversion efficiencies as high as 30-40% are achieved, as compared with 2-10% ordinarily obtained with cone speakers.

University Trumpets are completely weatherproof for any location, any climate. They receive meticulous attention during fabrication, right down to the rust-proofed hardware. All castings and exponentially spun air column members must conform, uniformly, to the time-tested, performance-proven University formula of flare rate.

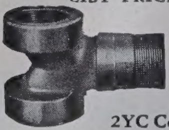
The four trumpet sizes available cover every public address requirement. Model GH has a very low frequency cut-off especially suited for reproduction of finest musical programs. Model LH is recommended for general applications requiring good music and speech characteristics. PH, with slightly higher cut-off, is suggested where economy must be considered in planning the system. Model SMH is designed primarily for voice reproduction where a heavy duty 25 watt speaker must be relied on for continuous, highly intelligible speech reinforcement. Models SMH and PH give excellent coverage of wide-angled areas; the LH and GH provide greater distance penetration.

MODEL	GH	LH	PH	SMH
LOW FREQUENCY CUTOFF	85 cps.	120 cps.	150 cps.	200 cps.
SOUND DISTRIBUTION	65°	75°	85°	95°
AIR COLUMN LENGTH	6½ ft.	4½ ft.	3½ ft.	2½ ft.
BELL DIAMETER	30⅞"	25⅝"	20¼"	16¼"
HORN LENGTH (less driver unit)	27⅞"	19"	15¾"	12"
SHIPPING WEIGHT (less driver unit)	25 lbs.	20 lbs.	11 lbs.	9 lbs.
LIST PRICE	**$60.00**	**$44.50**	**$29.00**	**$24.50**

MODEL PMA ADAPTER

For mounting University "U" bracket speakers on standard ½" pipe.

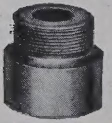
LIST PRICE $1.50



2YC Connector

Used with two driver units, provides to 60 watts for any trumpet or projector.

LIST PRICE $10.00



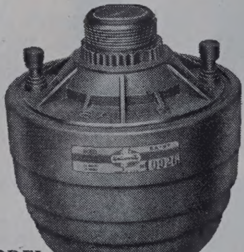
WEA Adapter

Adapts WE and RCA Horns for use with any University driver.

List Price $2.50

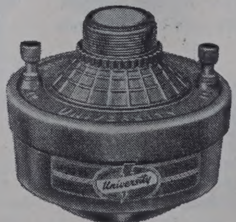
BREAKDOWN-PROOF DRIVER UNITS

University Drivers incorporate exclusive built-in features that guarantee finer performance, long trouble-free service. W-shaped Alnico 5 magnet assembly reduces reluctance losses, avoids surface leakage. Waterproof, multi-impedance line matching transformers are included in some models. University drivers give full-rated performance at both extremes of the spectrum. Special bi-sectional mechanism automatically centers diaphragm/voice coil assembly in the voice coil gap on magnet top plate. This "rim-centering" results in permanent voice coil concentricity and greater conversion efficiency.



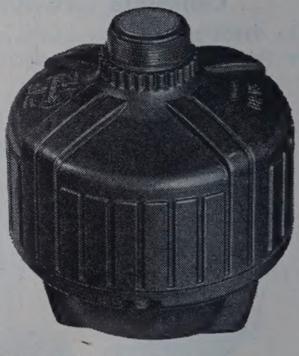
MODEL PA-30

Recommended for reproduction of chimes, carillons, organ music. Ideal for rental work, high efficiency, maximum distance penetration. Built-in transformer with various impedances and for 70 V. systems.



MODEL SA-HF

Meets all PA and industrial requirements. For heavy noise areas, speech or quality music.



MODEL MA-25

Fills low cost requirements without compromising quality. Rugged, weatherproof. Highly efficient to 6000 cycles.

MODEL SA-30

Completely die-cast aluminum housing makes it a "must" in hazardous locations or rough service. Built-in transformer with various impedances and for 70 V. systems.

MODEL	PA-30	SA-30	SA-HF	MA-25
CONTINUOUS POWER	30 watts	30 watts	25 watts	25 watts
FREQUENCY RESPONSE	80-10,000 cps.	90-10,000 cps.	90-10,000 cps.	90-6000 cps.
VOICE COIL IMPEDANCE	16 ohms	16 ohms	16 ohms	16 ohms
TRANSFORMER IMPEDANCES	165/250/500/1000/2000 ohms	45/165/250/1000/2000 ohms		
DIAMETER, OVERALL	6¾"	5"	4½"	4⅛"
LENGTH, OVERALL	6¾"	6¾"	5"	3¾"
SHIPPING WEIGHT	6 lbs.	5 lbs.	4 lbs.	3½ lbs.
LIST PRICE	**$50.00**	**$45.00**	**$37.00**	**$25.00**

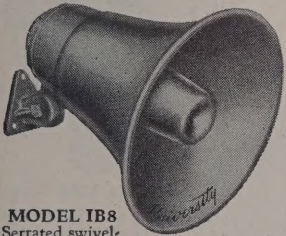
University LOUDSPEAKERS AND REPRODUCER EQUIPMENT

PAGING AND INTERCOM SPEAKERS

Recommended for general purpose paging and talk-back applications, these speakers reproduce with crisp clarity for maximum penetration through areas with high noise intensity. Offer high efficiency, wide frequency range, small size, high power handling capacity and waterproof breakdown-proof construction.

Employing the famous University reflex design and hermetically sealed driver units, these speakers are conservatively rated, and capable of lifetime, trouble-free operation. Specially controlled rising frequency characteristic results in exceptional penetration of high ambient noise levels with unusually high intelligibility. Remarkable sensitivity make them ideal for talk-back, and for conversion of simple intercom sets into excellent paging and talk-back systems.

DIRECTIONAL AND RADIAL TYPE SPEAKERS



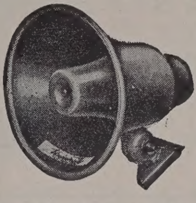
MODEL IB8
Serrated swivel-mounting bracket permits complete vertical or horizontal adjustment. Die cast triangular base fits University Model CTR-20 line matching transformer. Model SPA adapter may be used for mounting to ½" pipe.

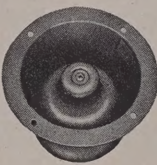
MODEL MIL — For installations requiring concentrated power to cover small areas. High conversion efficiency conserves amplifier power, ideal for low level systems.

MODEL MIS—Designed for flange or flush mounting in cabinets, walls, ceilings, bulkheads, etc. Ideal for replacement of cone speakers to increase output.

MODEL CR—Reflex speaker conservatively rated at 20 watts continuous duty, and featuring built-in driver unit. For speech system requiring high efficiency and intelligibility.

MODEL IBR—Small radial speakers, complete with built-in driver unit. Affords 360° horizontal dispersion resulting in wide coverage with a minimum of speakers.





MODEL	IB8	MIL	MIS	IBR	CR
CONT. POWER	12 watts	3 watts	3 watts	12 watts	20 watts
IMPEDANCES	8 ohms	8 ohms (45 ohms on order)	8 ohms (45 ohms on order)	8 ohms	16 ohms
DISPERSION	90°	120°	150°	360°	90°
FREQUENCY	300-10,000	400-9000	500-9000	300-10,000	250-6000
DIMENSIONS	8½" dia., 9" high	6⅜" dia., 7" high	3⅞" deep, 5½" O.D. 4⅞" mount. dia.	9¾" dia., 11" high	11½" dia.
SHIPPING WEIGHT	5 lbs.	4 lbs.	3 lbs.	5 lbs.	9 lbs.
LIST PRICE	**$32.50**	**$25.00***	**$20.00***	**$39.00**	**$42.00**

*45 ohms slight additional charge

WIDE ANGLE SPEAKERS

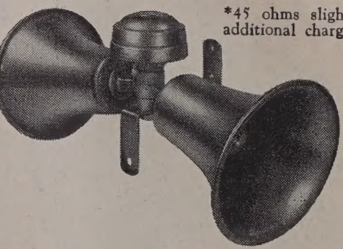
LIST PRICE $35.00

COBREFLEX-2 WIDE ANGLE SPEAKER—By popular demand, a new heavy duty wide angle paging speaker designed to be used with any of the University screw-in heavy duty driver units, and designed to withstand the most gruelling climatic and mechanical abuses. Horn employs a new principle of dual exponential reflex expansion which produces a remarkably uniform 120° x 60° field pattern. Low frequency cut-off is 250 cycles. The speaker is of heavy die-cast aluminum construction, versatile "U" bracket mounting with serrated swivel joints for positive locking. All parts, including the hardware, double-treated against corrosion.

The perfect answer for covering wide areas with a minimum of speakers. Very effective in coping with reverberation problems since the sound can be controlled in the vertical, horizontal and axial planes. Ideal as well for use as wide angle mid-range reproducer in multiple speaker hi-fi systems. Supplied less driver.

MODEL 2W-25 TWO-WAY PAGING SPEAKER

The economical and practical means of covering two opposite areas effectively and efficiently. A single 25 watt driver serves both reflexed horns through a carefully designed "T" acoustic coupler. Each horn has a wide 120° sound projection pattern. Clever mounting bracket permits sound projection 10° downward or outward. No energy is lost in unoccupied space. Driver included.



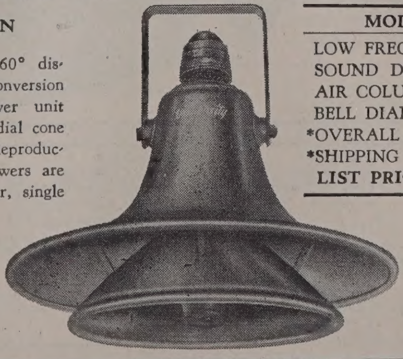
MODEL	2W-25
CONT. POWER	25 watts
IMPEDANCE	16 ohms
DISPERSION	120° each horn
FREQUENCY	350-6000 cps
DIMENSIONS	20½" lg. bell 8" dia. mouth
SHIPPING WEIGHT	9 lbs.
LIST PRICE	**$48.00**

RADIAL REFLEX PROJECTORS

FOR 360° HORIZONTAL DISPERSION

The answer for applications requiring uniform 360° dispersion with a minimum of speakers. Higher conversion efficiency of radial reflex projectors using driver unit mechanisms has increased their popularity over radial cone speakers, especially in industrial applications. Reproduction of chime and liturgical music in church towers are also natural applications. Using a 2YC connector, single projectors can operate from 50-60 watt amplifiers.

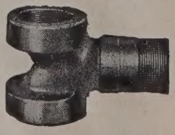
MODEL RLH has longest air column and is recommended for maximum low frequency response; RPH for both music and speech and RSH where reproduction of speech is most important.



MODEL	RLH	RPH	RSH
LOW FREQ. CUTOFF	120 cps.	140 cps.	180 cps.
SOUND DISTRIB.	360°	360°	360°
AIR COLUMN LGTH.	5 ft.	4 ft.	3 ft.
BELL DIAMETER	28⅛"	25⅛"	18⅞"
*OVERALL HEIGHT	18½"	14"	11"
*SHIPPING WEIGHT	27 lbs.	21 lbs.	18 lbs.
LIST PRICE	**$59.00**	**$45.00**	**$38.50**

2YC CONNECTOR

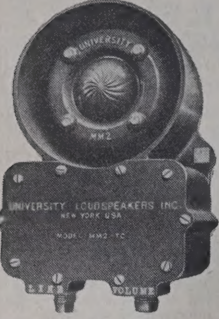
Permits use of two University driver units on a single trumpet or radial projector for double power output.



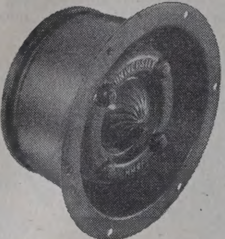
University LOUDSPEAKERS
AND REPRODUCER EQUIPMENT

SUBMERGENCE-PROOF SPEAKERS

University "submergence-proof" speakers go beyond the normal requirements of commercial and industrial speakers. They are built for applications demanding the utmost ruggedness and immunity to salt spray, gasses, live steam, and specially harmful dusts and fungus. Designed originally to U. S. Navy "submergence" specs, all models shown will continue to function even when under water, drain automatically, and will provide reliable, uninterrupted service with negligible maintenance under the most gruelling conditions.

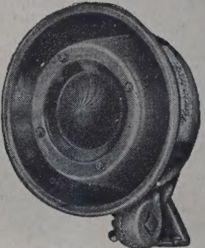


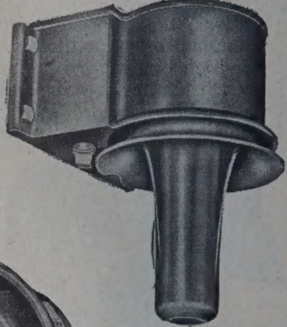
MODEL MM-2TC — Bulkhead-mounted, directional speaker providing a dispersion of 120°. Includes provision for a transformer and attenuator. Accessible from front, with cable entrance and control at bottom. (Also available complete with 5420 transformer and T-pad, Model MM2TC-T.)



MODEL MM-2F—Similar to Model MM-2 but designed for flange mounting. Permits flush mounting in wall, ceiling, bulkheads, dashboards or wherever appearance is important, or projecting objects might suffer damage.

MODEL MM-2 — A compact speaker with reflex air column and hermetically sealed, built-in driver. Adjustable serrated swivel mounting bracket allows easy installation. Base fits Model CTR-20 weatherproof line matching transformers.



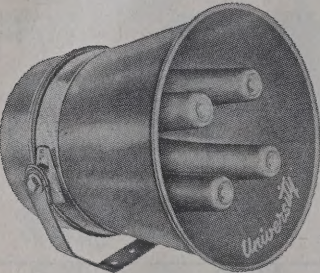


MODEL MSR — Reflexed air column horn for 360° horizontal dispersion. Features completely die-cast aluminum housing and horn, hermetically sealed driver unit. Provides for both line matching transformer and volume control within housing. For wall or bulkhead mounting. (Model MSR-T includes 5420 transformer & T-pad.)

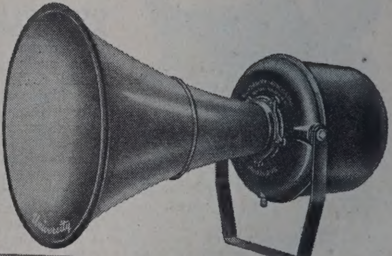
MODEL	MM-2TC	MM-2F	MSR	MM-2
CONT. POWER	15 watts	15 watts	15 watts	15 watts
IMPEDANCE	16 ohms	16 ohms	16 ohms	16 ohms
DISPERSION	120°	150°	360°	150°
FREQUENCY	300-6000 cycles	300-6000 cycles	250-6000 cycles	300-6000 cycles
DIMENSIONS	10″ high 4⅛″ depth 6¼ wide	7¼″ O.D. 3¾″ depth 6⅝″ mount. hole dia.	10¾″ high 8¼″ depth 7¾″ wide	6″ O.D. 4¾″ depth
SHIPPING WEIGHT	9 lbs.	5 lbs.	11 lbs.	5 lbs.
LIST PRICE	**$65.00**	**$40.00**	**$65.00**	**$42.00**

SUPER POWER SPEAKERS

— FOR LONG RANGE, ALL-WEATHER SOUND CASTING

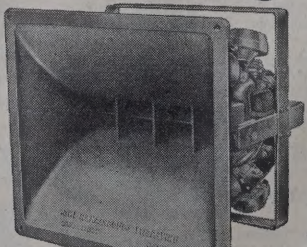


In contrast to other speakers, these handle tremendous powers—up to 720 watts. Lightweight projectors concentrate powerful force capable of penetrating terrific noise levels. Rugged in construction, simple to install, foolproof in operation and immune to weather conditions. Ideally suited for stadiums, racetracks, airplane sound casting. Popular for the transmission of chime and organ music from church towers. University Super-power Speakers are also the answer for civil defense in connection with air raid alert and "panic control" systems.



MODEL 4A4 projector uses four 25 watt driver units, each feeding into separate reflexed air columns which combine into a concentrated beam of high intensity sound. Supplied less driver units; use MA-25 or SA-HF.

MODEL B-6 is powered by six driver units feeding into a phase-corrected mixing chamber, and coupled to an exponential horn. Driver units supplied, unwired.



MODEL B-12—Uses 12 special drivers. Ideal for high noise areas and transmitting great distances from a central point. Weather-proof and rugged. "U" mounting bracket and wired driver units included.

MODEL B-24—Newly designed, for super power sound-casting. Compact design and small dimensions permit its use either singly or in clusters to form any desired power or sound distribution pattern. Uses 24 special driver units, which are supplied completely wired.

MODEL	4A4	B-6	B-12	B-24
POWER, CONT.	100 watts	150 watts	300 watts	720 watts
FREQUENCY	200-10,000 cps.*	100-10,000 cps.	100-10,000 cps.	250-6000 cps.***
IMPEDANCE	Can be wired for 4, 16, 64 ohms	Supplied unwired; single and multiple inputs from 2 to 125 ohms possible.	Double input 90 ohms each; single input 45-50 ohms total	Supplied completely wired for 10 ohms
DISPERSION	80°	80°	80°	90° x 45°
DIMENSIONS (Overall)	18¼″ high 20½″ depth 16⅞″ width	31⅜″ high 56⅝″ depth 31⅜″ (bell diam.)	31⅜″ high 47″ depth 31⅜″ (bell diam.)	22″ high 18⅝″ depth 24″ width
SHIPPING WEIGHT	30 lbs.	60 lbs.	90 lbs.	120 lbs.
LIST PRICE	**$93.00**	**$542.50**	**$972.50**	**On request**

*When used with SA-HF Driver Units. May be used with MA-25.

**10,000 cps. drivers available on request at extra cost.

***Available with SA-30 Driver Units on request at extra cost.

University LOUDSPEAKERS AND REPRODUCER EQUIPMENT

EXPLOSION-PROOF SPEAKERS

Introduction of the new University Models 7101 and 7102 Explosion-Proof Speakers makes it possible to install loudspeaker system in locations where flammable liquids, gasses, dust and other combustibles are present. Approved by the Underwriters' Laboratories for Class I and Class II locations, Models 7101 and 7102 permit industries previously denied the advantages of sound, paging and intercom to proceed immediately with 100% safe installations. In addition to approved explosion-proof construction, these speakers represent the last word in rugged design and are complete with multi-tap built-in line matching transformers. For specific applications and architects' and engineers' specifications, consult the University Technilog.

CONT. POWER	25 watts
VOICE COIL IMPEDANCE	16 ohms
TRANSFORMER IMPEDANCES	45, 500, 1000, 1500, 2,000 ohms
FREQUENCY	200-10,000 cps.
DISPERSION	95°
DIMENSIONS	19" length 15¾" height
SHIPPING WEIGHT	25 lbs.
LIST PRICE	**7101 $125.00** **7102 $150.00**

MODEL 7101 is Underwriters' Laboratories approved for Class I, Groups C and D.

MODEL 7102 is approved for Class I, Groups C and D and Class II, Groups E, F and G.

UNIVERSITY POWRMIKE SOUND SYSTEM

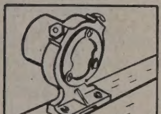
A COMPLETE SYSTEM REQUIRING NO AMPLIFIER
PORTABLE • NO TUBES • NO A.C. PLUG-IN

UNIVERSITY POWRMIKE
PRESS THE BUTTON AND TALK

Capable of a maximum of 1½ watts output, POWRMIKE is intended for speech reinforcement where modest coverage is required. Distances to 100 feet or over, depending upon noise and wind conditions, can be bridged with clear, highly intelligible voice reproduction. Completely portable, the entire POWRMIKE System is comprised of a special close-talking microphone, super-efficient loudspeaker, and adapter plate for standard "hot-shot" 6 volt battery. Has built-in volume control. Ideal for announcing, directing, speaking, supervising — indoors, outdoors, mobile, police, fire, marine, commercial and industrial applications.

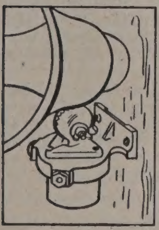
MODEL	DESCRIPTION	LIST PRICE
PC-66	Complete system comprising PC-2 microphone, PS-4 speaker, "Hot-Shot" battery adapter plate with volume control. Completely wired and assembled—less battery.	**$66.00**
PC-2	Powrmike microphone, with 12 ft. cable.	**$30.00**
PC-4	Powrmike speaker, 4 ohms, with carrying handle.	**$32.50**

WEATHERPROOF LINE MATCHING TRANSFORMERS

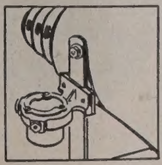


←— The CTR-20 may be mounted to wall, ceiling, or any other flat surface by means of screws, using the heavy bracket which is an integral part of the one-piece casting.

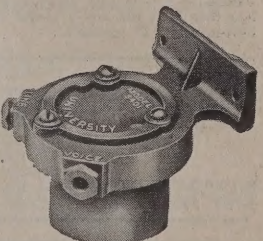
For mounting to University Paging speakers, the triangular base of the speaker if fastened to the top of the CTR-20 where three screws have been provided for this purpose. The CTR-20 mounting bracket then supports both the transformer and the ←— speaker.



The CTR-20 —→ may also be clamped to the "U" type mounting bracket used on trumpets and radial projectors. The clamp bar is supplied with all CTR-20 transformers.



MODEL CTR-20—Designed to afford maximum utility in application and utmost convenience of installation. Since most University loudspeakers and drivers are capable of response to 10,000 cycles and beyond, these transformers have been designed to assure perfect performance throughout the entire audio spectrum. Only highest grade audio silicon metal is used. Insulation withstands 1000 breakdown tests. Efficiency is exceptionally high. Versatile and rugged, CTR-20 has multi-tap primary and secondary windings, water tight construction with gland nut entrances and durable heavy, cast aluminum case.



MODEL CTR-20		**$15.00**
PRIMARY IMP.	45, 500, 1000, 1500, 2000 ohms	
SECONDARY IMP.	4-8-16 ohms	
POWER HANDLING	Capacity 25 watts	
SHIPPING WEIGHT	3 lbs.	
MODEL 5420	Same as above but for indoor use; strap mounting	**$5.00**

A Compilation of Useful Information That Simplifies Speaker Application —

UNIVERSITY 28-PAGE TECHNILOG

University Loudspeakers
TECHNILOG

— CONTAINS BOTH TECHNICAL AND PRODCT DATA

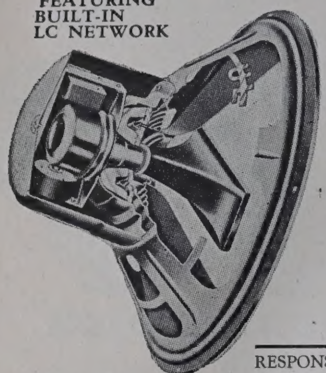
Written by sound experts to simplify the work of installation and servicemen, makes possible for dealers and salesmen to easily select the proper equipment for specific applications. Technilog is a valuable addition to any technical library and it's available to the trade at no cost.

— REQUEST YOUR COPY FROM YOUR DISTRIBUTOR TODAY!

University LOUDSPEAKERS AND REPRODUCER EQUIPMENT

HIGH FIDELITY CONE SPEAKERS

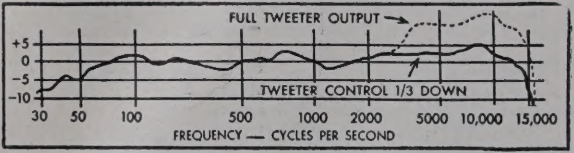
FEATURING BUILT-IN LC NETWORK



Heavy University W-shape gold dot Alnico V magnet treated one - piece diaphragm in woofer prevents erratic reproduction of transients, eliminates harmonic distortion of fundamental tones.

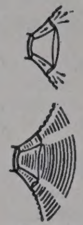
MODEL 6201 DUAL RANGE COAXIAL SPEAKER — One of the few true coaxial systems. Complete with horn type tweeter, driven by a separate high efficiency driver. Has built-in inductance-capacitance type crossover network complete with variable balance control and supplied with 36″ of connecting cable, fully wired. Model 6201 is an engineered package requiring only connection of the two free wires to the amplifier for instant operation.

RESPONSE	45-15,000 cps.
POWER CAPACITY	25 watts continuous
SOURCE IMPED.	8 ohms
DIMENSIONS	12⅛″ dia. 8¼″ depth RMA Stand. 12″ mounting
SHIPPING WGT.	10½ lbs.
LIST PRICE	**$75.00**



THE DIFFUSICONE 8 and 12—These extended range speakers prevent loss of the "highs" at listening points progressively off speaker axis. The University Diffusicone Models bring within every music lovers' grasp the endless pleasures of true Concert Hall Quality reproduction—at amazingly low cost—and with no need for undue concern over the location of the speaker. Diffusicone is the answer to the long needed basic improvement in the performance of ordinary extended range speakers. Ideal for flush ceiling installations.

Dual horn arrangement produces radial pattern

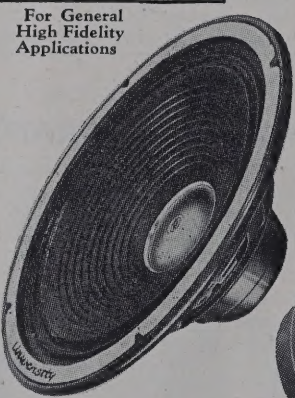


Exclusive dual horn arrangement sets up two distinct sound wave paths. High audio frequency sound waves are directive—tend to propagate along speaker axis. This is overcome by splitting energy into 2 paths, along path of both inner and outer horns. Diffraction then occurs to the more stubborn very high frequencies by passing the wavefront of the radial or outer horn through small orifices which terminate this radial projector. Diffraction takes place as a consequence of the relationship between the aperture diameter and the wave lengths of the frequencies in question. Result is exceptional uniform response.

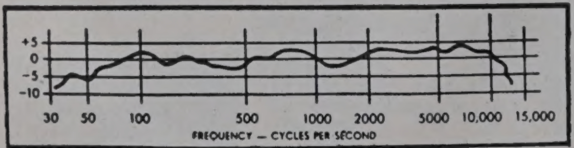
MODEL	DIFFUSICONE 8	DIFFUSICONE 12
FREQ. RESPONSE	70-13,000 cps. uniform field pattern	45-13,000 cps. uniform field pattern
POWER CAPACITY	25 watts, cont. duty	30 watts, cont. duty
IMPEDANCE	8 ohms	8 ohms
DIA. OVER.	8$\frac{7}{32}$″	12⅛″
DEPTH. OVER.	3⅜″	4¼″
MTG. CIRCLE DIA.	7⅝., 8 mtg. holes, 8 punched	11$\frac{13}{32}$″, 8 mtg. holes, 4 punched
SHIPPING WGT.	3½ lbs.	5½ lbs.
LIST PRICE	**$45.00**	**$35.00**

MODEL 6200 EXTENDED RANGE SPEAKER—A highly efficient, extended range PM loudspeaker with full-bodied response to 10,000 cycles. Ideal for the improvement of commercial radio and phono combinations, for high quality PA and for sound reinforcement in clubs, churches, schools, hospitals and stores. Requires less than half the audio power needed by ordinary 12″ speakers.

For General High Fidelity Applications



RESPONSE	45-10,000 cps.
POWER CAPACITY	30 watts
NOMINAL IMPED.	6-12 ohms
DIMENSIONS	12⅛″ diameter 4$\frac{15}{64}$″ depth RMA Stand. 12″ mounting
SHIPPING WGT.	5¼ lbs.
LIST PRICE	**$35.00**



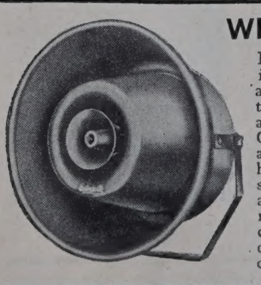
C-15W SUPER 15″ WOOFER
At last, a 15″ loudspeaker designed not only to provide the acme of attainable perfection in the specific reproduction of low frequencies, but one which defies obsolescence due to impedance matching requirements as speaker systems are altered or expanded.

- DUAL IMPEDANCE RANGE VOICE COIL—4-8 ohms and 10-16 ohms available at speaker terminals.
- LONGEST VOICE COIL AXIAL DEPTH—Coil remains in gap, results in superior conversion efficiency and transient response.

The C-15W may be used in any 2, 3, or 4-way speaker system utilizing woofer crossover up to 2000 cycles. Amplifiers rated to 50 watts may be employed.

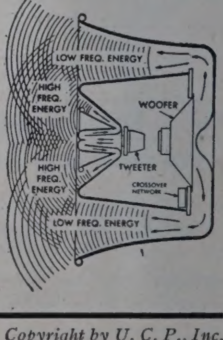
LIST PRICE $115.00

WIDE RANGE WEATHERPROOF COAXIAL SPEAKERS



Model WLC is the new improved, all-weather coaxial speaker system designed to simplify indoor and outdoor "high quality" sound installations. A complete system comprising a low frequency cone speaker, driver type high frequency reproducer and a 1000 cycle LC crossover network. Completely wired and contained in a compact, heavy gauge all-metal dual horn assembly. Affords remarkable smooth overall response and is capable of 30 watts input and life-like reproduction from 50 to 15,000 cycles. Recommended for bandshells, outdoor movies, auditoriums and dance halls.

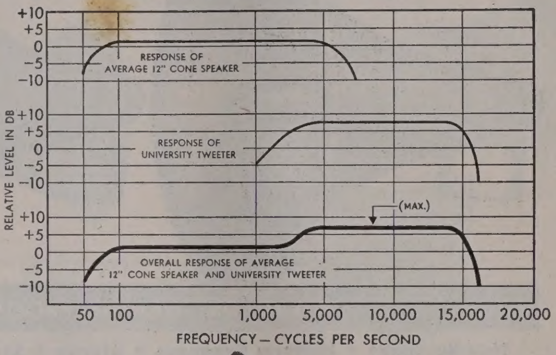
POWER CAPACITY	30 watts
IMPEDANCE	8 ohms
RESPONSE	50-15,000 cps.
DISPERSION	90°
DIAMETER	33½″
DEPTH	20″
SHIPPING WEIGHT	80 lbs.
LIST PRICE	**$200.00**

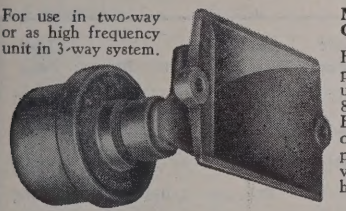


University LOUDSPEAKERS AND REPRODUCER EQUIPMENT

HIGH FREQUENCY TWEETER SPEAKERS

Featuring new "reciprocating flares" principle, the greatest advance in wide angle horn design! Eliminates poor uniformity of response caused by variations in intensity and resultant dips and peaks. Also prevents shifts in energy level between vertical and horizontal planes and production of unequal amounts of sound in the two planes. University engineers have perfected these properly loaded exponential high frequency horns which provide maximum efficiency without detrimental spatial distribution defects. Only University tweeters offer these highly important performance advantages. Exclusive "reciprocating flares" formula of horn expansion is positive assurance of superior reproduction.



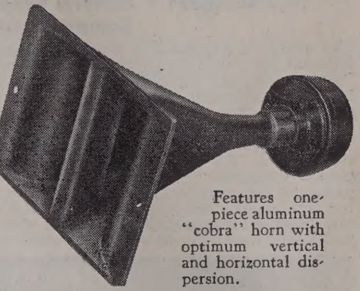


For use in two-way or as high frequency unit in 3-way system.

MODEL 4401 2000 CYCLE TWEETER

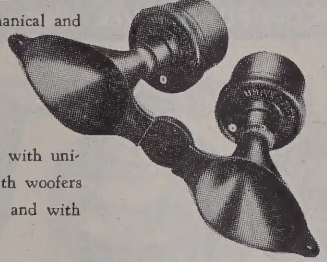
Handles the output of amplifiers up to 25 watts when used with PM or field excited 8-15 inch cone speakers. Features "reciprocating flares" one piece horn, breakdown proof diaphragm, light weight voice coil suspension and heavy Alnico V magnet.

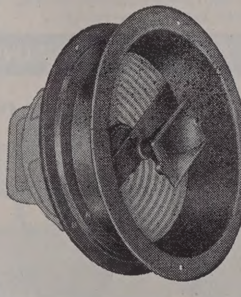
MODEL 4408-4409 COBRA HORN TWEETER — New models designed for wide range reproduction requiring a crossover down to as low as 600 cycles. Recommended for two and three way speaker systems, for the high fidelity enthusiast who seeks highest quality, and for professional reproduction



Features one-piece aluminum "cobra" horn with optimum vertical and horizontal dispersion.

MODEL 4402 WIDE ANGLE DUAL TWEETER—Has electrical, mechanical and acoustical characteristics which make it the most versatile high frequency tweeter available. Essentially flat response from 2000 to 15,000 cycles with uniform dispersion. May be used with woofers of from 4 to 16 ohms impedance, and with amplifiers rated up to 50 watts.





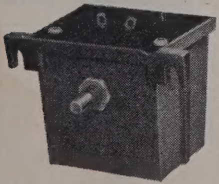
MODEL 4407 CO-AXIAL TWEETER ADAPTER—Used with conventional 12" cone speaker, it adds brilliant highs frequently lost by single element reproducers. Model 4407 is the "wide range answer" wherever performance, easy installation and economy are important. Includes 4401 single tweeter, aluminum adapter ring, tweeter mounting strap and hardware.

MODEL	4407	4401	4402	4408	4409
RESPONSE	2000-15,000 cycles	2000-15,000 cycles	2000-15,000 cycles	600-15,000 cycles	600-15,000 cycles
IMPEDANCE	For 6-16 ohm woofers	For 6-16 ohm woofers	4-8 ohms and 10-16 ohms	Use with woofer from 6-16 ohms	For 6-16 ohm woofers
POWER	Amplifiers up to 25 watts	Amplifiers up to 25 watts	Amplifiers up to 50 watts	Amplifiers up to 15-20 watts	Amplifiers up to 25-40 watts
DISPERSION	90° Horizontal 45° Vertical	90° Horizontal 45° Vertical	120° Horizontal 50° Vertical	120° Horizontal 60° Vertical	120° Horizontal 60° Vertical
WIDTH (Overall)	—	4½"	9½"	7⅜"	7⅜"
DEPTH (Overall)	—	5 7/64"	5 3/16"	11⅛"	10½"
HEIGHT (Overall)	—	2⅝"	2⅝"	5 13/16"	5 13/16"
SHIPPING WEIGHT	5 lbs.	2 lbs.	4 lbs.	5 lbs.	5 lbs.
LIST PRICE	**$25.00**	**$20.00**	**$40.00**	**$27.50**	**$40.00**

UNIVERSITY CROSSOVER NETWORKS

MODEL 4405 HIGH PASS FILTER—Offers a simple, economical method of preventing entry of low frequencies into the tweeter circuit. Only frequencies above 2000 cycles are permitted to actuate tweeter. Frequencies below 2000 cycles are shunted to the cone speaker. Features die-cast aluminum case and high frequency volume control. Use with 4401, 4402 and 4407.

MODEL 4410 and 4420 FILTERS—Inductance/capacitance networks which prevent low frequencies from entering tweeter and also eliminate high frequencies from the woofer circuit. Results in clearer reproduction since the woofer is not required to reproduce higher frequencies. Both models include external high frequency antennuator.



MODEL	4405	4410	4420
CROSSOVER	2000 cycles	600 cycles	2000 cycles
INPUT IMP.	6-16 ohms	6-16 ohms	6-16 ohms
HEIGHT	2 23/32"	4⅛"	3⅜"
LENGTH	3½"	9¼"	7 7/16"
DEPTH	2¼"	3 5/16"	2 3/16"
ANTENNUATOR	Built-in, Variable	Built-in, Variable	Built-in, Variable
SHIPPING WGT.	2 lbs.	4 lbs.	3 lbs.
LIST PRICE	**$10.00**	**$35.00**	**$20.00**

IN
MODEL 4410
600 CYCLE CROSSOVER NETWORK
University
LOUDSPEAKERS, INC.
COM
WOOFER
TWEETER

For use with any University tweeter in accordance with crossover frequency requirement.

ATLAS SOUND CORP.

the complete line for every public address need!

DR-72
DR-54
DR-42
DR-32

ATLAS 'DR' WEATHERPROOF DOUBLE-REENTRANT PROJECTORS

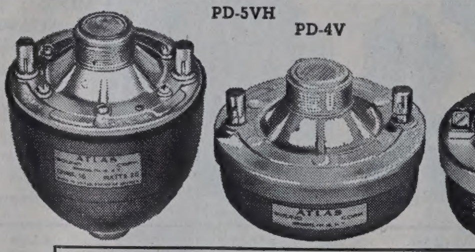
Non-Resonant • Uniform Response • Sturdy • Stormproof Compact • Demountable

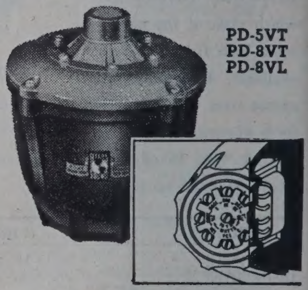
The modified exponential taper developed in Atlas projectors has proved most efficient for overall performance. All acoustical paths are clean and uniform. Reflex turns are smooth and flowing. These important features eliminate turbulence, frequency cancellation and resultant signal distortion. Ruggedly constructed of heavy castings, precision stampings, accurate die castings and uniform metal spinnings. All metal-to-metal surfaces insulated with non-vibratory material. Bell rim dampened and mechanically protected with formed rubber rim. All metals specially processed by chemical and electro-chemical means to impart complete weather-protection. Heavy "U" bracket mountings, securely fastened to main body casting of each model, do not fail even under extreme stress, strain or vibration. 1⅜"-18 thread. For greatest efficiency and low frequency response, the larger size horns are recommended. The smaller horns are excellent where space and cost limitations pertain.

Model	Air Column	Low Frequency	Lgth.	Diam.	List Price
DR-32	2½ ft.	175 c.p.s.	12 in.	14 in.	$26.00
DR-42	3½ ft.	135 c.p.s.	15 in.	21 in.	31.00
DR-54	4½ ft.	105 s.p.s.	18 in.	23 in.	43.00
DR-72	6 ft.	85 c.p.s.	25 in.	31 in.	65.00

ATLAS SUPER-POWER ALNICO-V-PLUS DRIVER UNITS

All models include Atlas "Alnico-V-Plus" super-efficient magnetic circuit — magnetically shielded, hermetically sealed. One-piece unbreakable, high temperature and fatigue-proof phenolic diaphragm. Deluxe PD-5VT and PD-8VT include built-in "Uni-Match" transformer for universal matching to constant impedance and constant voltage systems. All transformer taps and direct voice coil connections are brought out to waterproof "terminal window" on rear of phenolic unit housing. 1⅜" - 18 thread.



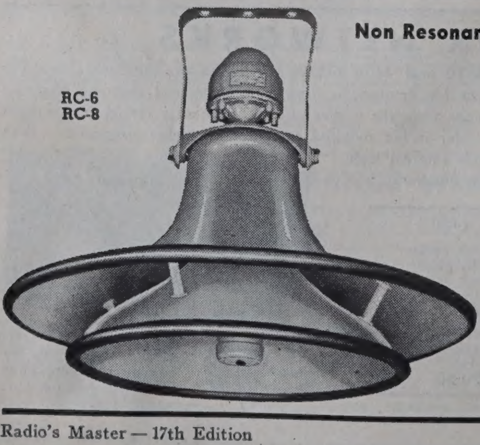


Model	Power	Impedance	Frequency	List
PD-3V	12 watts	8 ohms	100-7000	$24.75
PD-4V	25 watts	16 ohms	90-6000	27.50
PD-5VH	25 watts	16 ohms	80-9000	35.50
PD-5VT	25 watts	16 ohms*	80-9000	45.00
PD-8VT	30 watts	16 ohms*	80-10,000	50.00
PD-8VL**	30 watts	16 ohms	80-10,000	42.50

*Actual voice coil impedance. "Uni-Match" transformer offers 150, 250, 1000, 2000 ohms and variable 70-volt line connections.

**Identical to Model PD-8VT, but supplied less transformer.

ATLAS RADIAL DRIVER UNIT PROJECTORS



Non Resonant • Dual Rubber Rims • Uniform 360° Coverage • 100% Stormproof

One of these projects often is more efficient for large and high noise level areas than several ordinary projectors. Both models suited for general speech and music. Improved all-aluminum construction provides smooth, uniform response. Completely stormproof, finished in durable neutral gray enamel. Thread 1⅜"-18. Use of H-2U two-unit adapter doubles power output for single projector high power application.

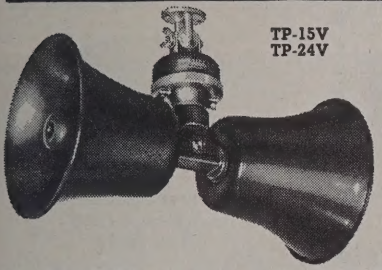
	RC-8	RC-6
Air Column	5 feet	4 feet
Bell Diameter	29"	25"
Overall Ht. (incl. bracket)	26"	21½"
Low Freq. Cutoff	120	150
List (horn only)	$53.50	$43.00

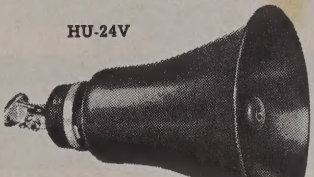
ATLAS SOUND CORP.

ATLAS
HEARD 'ROUND THE WORLD
SOUND

the complete line for every public address need!

ATLAS NEW ALNICO-V-PLUS PAGING AND TALK-BACK SPEAKERS


TP-15V
TP-24V


HU-24V

HU-12
HU-15V

Model	HU-12	HU-15V	HU-24V	TP-15V	TP-24V
Power*	3 watts	12 watts	12 watts	12 watts	12 watts
Impedance	8 ohms#	8 ohms †	8 ohms †	8 ohms †	8 ohms †
Frequency	375-9000 c.p.s.	300-7000 c.p.s.	200-7000 c.p.s.	250-7000 c.p.s.	190-7000 c.p.s.
Length	7½ in.	11 in.	14½ in.	15½ in.	22 in.
Diameter	6¼ in.	8½ in.	10 in.	8½ in.	10 in.
Air Column	13½ in.	16½ in.	24 in. ea. side	19½ in. ea. side	27 in. ea. side
List	**$25.00**	**$32.50**	**$35.75**	**$47.50**	**$52.00**

* Given power ratings are conservative and are for continuous input. Peak power ratings may safely exceed this amount by 25%.
# Model HU-12 available in 45 ohms.
† Available in 16 ohms.

These speakers include the newly developed, unbreakable, hermetically sealed driver units using the Alnico V-Plus magnetic circuit. As reproducers, and as microphones in talk-back circuits, they provide a maximum of efficiency. The new ball swivel mounting bracket permits quick and simple directional adjustment in every position, horizontal and vertical. All-chromium construction, finished in high lustre gray enamel over electrochemically treated surfaces.

Model HU-12—Subminiature speaker with high intelligibility at minimum input power.

Model HU-15V—Medium-size speaker that withstands considerable input power. Large diaphragm and magnetic assembly similar to those used in the larger Atlas reproducers.

Model HU-24V—Oversize speaker with obvious advantage of longer air column, so that it also reproduces music with excellent results.

Model TP-15V—Dual speaker ideal for industrial and talk-back uses, often producing two-speaker results from a single unit.

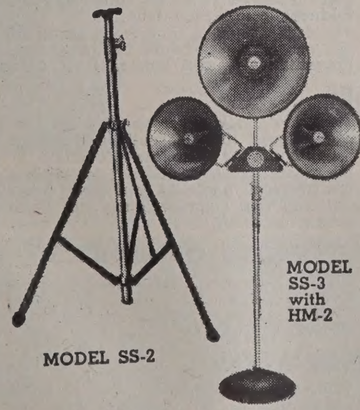
Model TP-24V—Oversize dual speaker with longer air column for added efficiency, especially at the lower frequencies.

SPEAKER SUPPORT STANDS

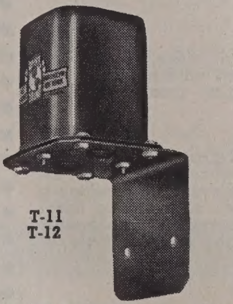
SS-2 — Collapsible type for outdoor use. Supports cluster of speakers under adverse wind conditions. Comes complete with special top swivel bracket for simple removal of horn from stand. Ht. extension 5-10 ft.
List $38.00

SS-3—Same as SS-2 above, but with round iron base.
List $34.25

HM-2 Horn Mounting Accessory—Permits 3 speakers on SS-2 or SS-3 Stand. Supplied with 2 PS-1 fittings and hardware for attachment to DR projectors.
List $16.50


MODEL SS-2
MODEL SS-3 with HM-2

NEW WEATHERPROOF LINE MATCHING TRANSFORMER

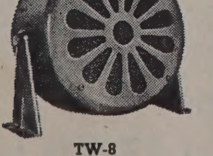

T-11
T-12

Specifically designed for high efficiency and ease of installation, these new transformers enable the matching of the popular Atlas "TP" and "HU" paging and talk-back speakers to either constant voltage (70-volt line) or constant impedance systems. The transformer taps eliminate the need for complex computations. Protective housings are heavy steel. Double rubber grommets and gaskets protect cable connections entering the housing. Convenient transformer bracket is easily integrated with speaker mounting bracket—no extra fastenings needed. Frequency response assures efficiency over entire range required, with a minimum insertion loss. Power-handling capacity of both models is 12 watts. Finish is in durable gray enamel.

Model T-11—Primary: 500, 1000, 1500, 2000 ohms. Secondary: 4 and 8 ohms. **List Price $8.50**

Model T-12—Primary: 45 ohms. Secondary: 4 and 8 ohms, for matching 40-60 ohm intercom line to 8 ohm speaker. **List Price $8.00**

TWO-WAY ENCLOSURE for 8" Cone Speaker


TW-8

Speaker's front and back wave are used for good coverage in long corridors and central locations. Adjustable wall or ceiling mounting brackets and speaker mounting screws supplied. Outside diam. 10", depth 5".

Model TW-8 **List Price $9.00**

TWO UNIT TO ONE PROJECTOR

H-2U

When it is necessary to obtain the greatest possible power output from a single projector, the H-2U is recommended. It permits the use of 2 driver units with any type of projector. Cast aluminum construction. Threads 1⅜"-18.
List $11.00

PIPE STANCHION FITTING

PS-1

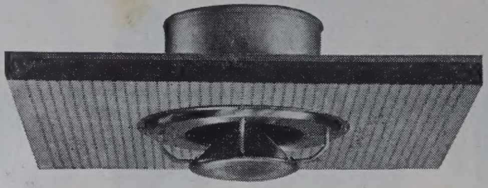
"DR" reentrant or "RC" radial "U" brackets adapted to ¾" pipe fittings. This steel adapter has holes properly located to match holes in "U" bracket. All mounting bolts supplied. Female ¾" pipe thread. **List $1.50**

"Heard Everywhere"

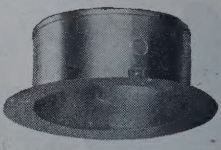
BACK COVER SPEAKER CAN

and Plaster Ring Assembly

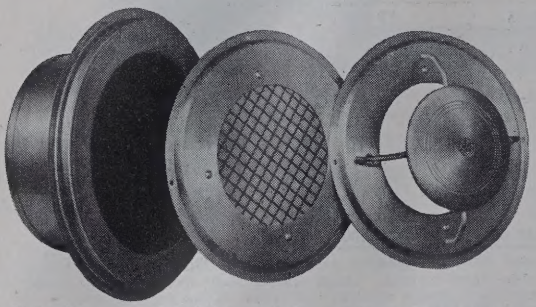
Back Cover Speaker Can and Plaster Ring Assembly



Sectional View of Completed Assembly



Back Cover Speaker Can and Plaster Ring Assembly



Side View of Models as Mounted to Assembly

FOR NEW CONSTRUCTION ONLY

Model No.	List Price	
CP6	$ 6.85	for use with Model AL6 and RS6
CP8	8.50	for use with Model AL8 and RS8
CP8TL	9.50	for use with Model ATL and RGL
CP1012	11.50	for use with Model AL10, AL12, and RS12

FEATURES

Reduces installation time.
Furnished with ¾" knock-outs on all sides.
All mounting hardware including speed nuts furnished.
Prevents dust and mortar from damaging speaker cone.

USES

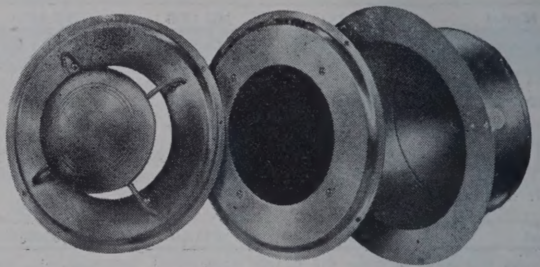
This steel back cover speaker can and plaster ring assembly is used for recessed speakers in new construction or remodeling for complete protection of speaker. It provides a quick and time saving installation, since all mounting hardware to baffle is furnished. Evenly spaced ¾" knock-outs, so that speaker leads can be brought into assembly at any location.

DIMENSIONS OF MODELS

CP6	7" I.D.	x 4"	deep x 12"	O.D.
CP8	8½" I.D.	x 4¼"	deep x 12¾"	O.D.
CP8TL	8½" I.D.	x 4¼"	deep x 16"	O.D.
CP1012	12½" I.D.	x 7"	deep x 17⅜"	O.D.

DESCRIPTION

The steel back speaker can is made of 22 gauge steel. Knock-outs of ¾" diameter are evenly spaced for convenience in installation work. A 22 gauge steel plaster ring is spot welded to can, and has 90° spaced speaker baffle mounting holes. Plastic roughing compound applied throughout inside of speaker can assembly to prevent metallic resonance. Assembly has also sufficient mounting holes to wall or ceiling.



Side View of Models as Mounted to Assembly

FOR EXISTING CONSTRUCTION AND REMODELING

Model No.	List Price	
CP6X	$ 6.00	for use with Model AL6 and RS6
CP8X	7.50	for use with Model AL8, CE8L and RS8
CP8TLX	8.00	for use with Model ATL and RGL
CP1012X	10.00	for use with Model AL10, AL12, RS10 and RS12

FEATURES

Self aligning screw clips and positive screw locking.
Reduces installation time.
Furnished with ¾ in. knock-outs on all sides.
All mounting hardware including speed nuts furnished.
Prevents dust and mortar from damaging speaker cone.

USES

This steel back cover speaker can and plaster ring assembly is used for recessed speakers in new construction or remodeling for complete protection of speaker. It provides a quick and cost saving installation since all mounting hardware to baffle is furnished. Evenly spaced ¾" knock-outs, so that speaker leads can be brought into assembly at any location.

DIMENSIONS OF MODELS

CP6X	7"	in diameter x 4"	deep
CP8X	8½"	in diameter x 4¼"	deep
CP8TLX	15"	in diameter x 4¼"	deep
CP1012X	16½"	in diameter x 7"	deep

DESCRIPTION

The steel back speaker can is made of 22 gauge steel. Knock-outs of ¾" diameter are evenly spaced for convenience in installation work. A 22 gauge steel plaster ring is spot welded to can, and has 90° spaced speaker baffle mounting holes. Plastic roughing compound applied throughout inside of speaker can assembly to prevent metallic resonance. Assembly has also sufficient mounting holes to wall or ceiling.

STEEL PLASTER RINGS

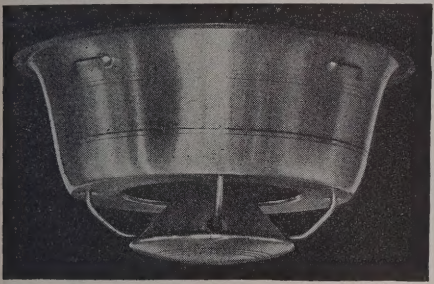
Model No.	List Price	Model No.	List Price
PR6	$2.00	PR8	$2.65

LOWELL MANUFACTURING CO. ST. LOUIS 17, MO. U.S.A.

"Heard Everywhere"

LOWELL FLUSH MOUNTING CEILING BAFFLES

with "floating conical action"



Model Nos.

BL6-A
BL8-A
BL12-A

PATENTED
IN THE U.S.A.
AND CANADA

DESCRIPTION OF BAFFLE

The flush mounting ceiling baffle is designed to mount flush to the ceiling quickly by inserting 4 toggle bolts, completely sealing back of housing to the ceiling. This baffle is recommended for normal ceilings. Uniform sound reproduction at 360° giving CONTROLLED SOUND evenly in all directions. Baffle is made of spun metal, of 18 gauge aluminum. Heavy ¾" jute lines interior with louvres on sides for proper pressure relief.

ARCHITECTS' SPECIFICATIONS

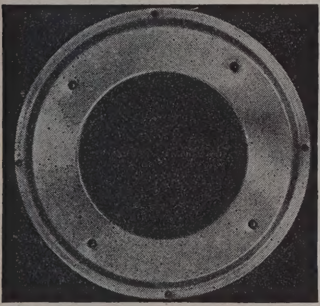
This speaker baffle housing contains a half inch flange at top with 4 holes evenly placed for proper mounting to the ceiling. The lower metal cone is mounted to the housing by 4 one-quarter inch formed metal rods having 4 hard rubber grommets preventing metallic resonance. The upper part of the rods are threaded and mount through speaker housing. All hardware furnished complete with each baffle.

DIMENSIONS OF VARIOUS MODEL BAFFLES

6" models — 9¾" at top x 4¼" deep.
8" models — 13½" at top x 4⅞" deep.
12" models — 18⅜" at top x 8 " deep.

Model No.	Type	Spkr. Size for Baffle	Material	Finish	List Price
BL6 - A	Flush Mounting	6"	Aluminum	Satin	**$13.00**
BL8 - A	Flush Mounting	8"	Aluminum	Satin	**22.00**
BL12-A	Flush Mounting	12"	Aluminum	Satin	**27.00**

recessed wall type directional speaker baffles



Model Nos.

RS6-A
RS8-A
RS12-A

FEATURES

Concealment of speakers. Easily installed.

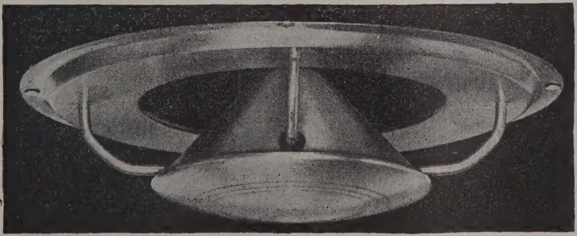
Finished to match surroundings.

DESCRIPTION

This speaker trim ring is made of spun metal, 18 gauge aluminum. Flocked metal color grille cloth protects speaker cone — 4 round head screws mounts through housing for mounting speaker. Housing has a depth of ½" and a half inch flange for mounting housing to wall.

Model No.	Type	Spkr. Size for Baffle	Material	Finish	List Price
RS6 - A	Recessed Wall	6"	Aluminum	Satin	**$5.00**
RS8 - A	Recessed Wall	8"	Aluminum	Satin	**5.55**
RS12-A	Recessed Wall	12"	Aluminum	Satin	**7.60**

for low ceilings



Model Nos: AL6-A AL8-A AL12-A

DIMENSIONS OF VARIOUS MODEL BAFFLES

The overall diameter at top of housing flange:
6" model — 9⅝" in diameter, depth ½"
8" model — 11¾" in diameter, depth ½"
12" model — 16½" in diameter, depth 1 "

DESCRIPTION

The false ceiling speaker housing is made of 18 gauge aluminum. Housing is spun metal, having a depth of ½" and a half inch flange for mounting housing to ceiling. The lower metal cone is mounted to the housing by 4 one-quarter inch formed metal rods having 4 hard rubber grommets preventing metallic resonance. The upper part of the rods are threaded and mount through speaker housing. All hardware furnished complete with each baffle. The sound coverage of this baffle is approximately 360°.

Model No.	Type	Spkr. Size for Baffle	Material	Finish	Price
AL6 - A	False Ceiling	6"	Aluminum	Satin	**$7.50**
AL8 - A	False Ceiling	8"	Aluminum	Satin	**12.15**
AL12-A	False Ceiling	12"	Aluminum	Satin	**15.30**

WRITE FOR FURTHER DETAILS ON VARIOUS COLORED LACQUERS AVAILABLE

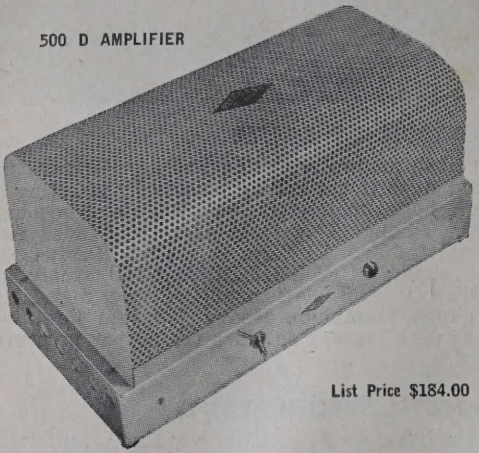
LOWELL MANUFACTURING CO. ST. LOUIS 17, MO. U.S.A.

TRU SONIC

Speaker Systems for Theatre and Home

500-D DIRECT DRIVE AMPLIFIER

FINEST AMPLIFIER BUILT — REQUIRES NO TRANSFORMER


500 D AMPLIFIER

List Price $184.00

- Frequency response ±¼ db 20-70,000 c.p.s.
- Distortion is less than ½ of one per cent
- Phase shift—less than 15° at 20 c.p.s.
- Full 20 watts of audio

(Above figures are a true picture at full output of 20 watts.)

Here's the first amplifier to successfully eliminate the output transformer. All distortion introduced by transformers is eliminated. Great clarity of tone is noticeable at once. Hum and noise are at a minimum. Frequency response is ±¼ db 20-70,000 c.p.s., achieved with far less phase shift than can be obtained with a transformer . . . especially on the low end. Matching Stephens Tru Sonic speakers with 500 ohm v.c. impedance designed as companion units for the 500 D Amplifier are shown on adjoining page.

CHARACTERISTICS — ELECTRICAL

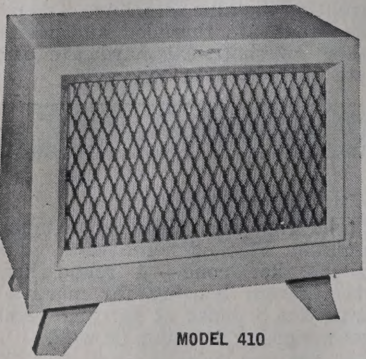
POWER SUPPLY: 117 V. AC 50-60 c.p.s. 1.2 amps. 140 va full output.
INPUT: 0.1 megohm. One side ground.
VOLTAGE GAIN: 47 db
OUTPUT:
Impedance: 500 ohms nominal. One side ground.
5 ohms at 1000 c.p.s. (apparent)
100 ohms at 20 c.p.s. (apparent).
Level: 100 V. rms across 500 ohms, 20 watts.

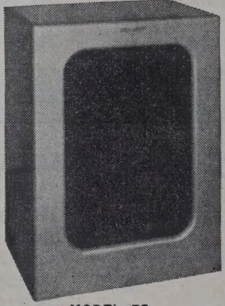
(All figures quoted are a true picture at full output of 20 watts.)

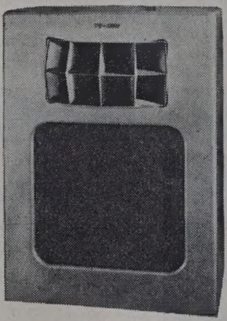
CHARACTERISTICS — PHYSICAL

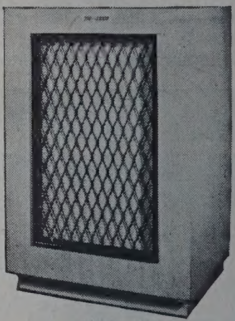
DIMENSIONS: 7¾″ wide by 15¼″ long by 7″ high.
WEIGHT: 27 lbs.
INPUT: XL3-14 3-pin Cannon Connector #1 Pin Ground.
OUTPUT: XL-3-13 Cannon Connector #1 Pin Ground.
POWER: Permanently attached 6-foot cord.

CABINETS & SYSTEMS

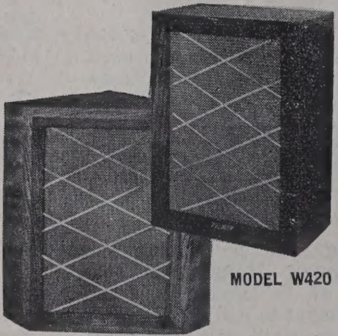

MODEL 410


MODEL 52


MODEL 411


MODEL 412

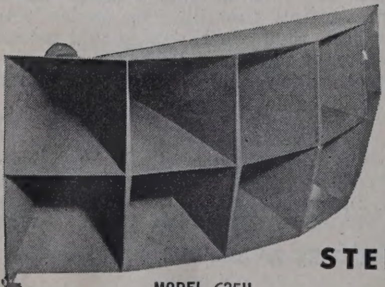
MODEL 410 800 CYCLE TWO-WAY SYSTEM. Model 814H 1x4 horn. Model 800X-2 high pass filter network, Model P-52LX low-frequency driver, and Model 108A high-frequency driver, mounted in lowboy blonde or mahogany cabinet. 20″ deep x 36″ wide x 30″ high ....**List Price, $372.00**
MODEL 411 800 CYCLE TWO-WAY SYSTEM. Model 824H 2x4 horn. Model 800X crossover, Model P-52LX low-frequency driver and Model 108A high-frequency driver. Silver hammertone finish or unfinished hardwood cabinet. 16¾″ deep x 26″ wide x 36″ high................................**List Price, $342.00**
MODEL 417 Same as Model 411, except with Model 103LX low-frequency driver. **List Price, $361.00**
MODEL 412 800 CYCLE TWO-WAY SYSTEM. Contains Model 409 System as described on adjoining page. Blonde or mahogany cabinet. 17″ deep x 24″ wide x 34½″ high................**List Price, $346.00**
MODEL W420 12″ FULL RANGE SYSTEM. Contains Model 112FR speaker. 8 to 16 ohms. Blonde or mahogany wall cabinet. 14″ deep x 21″ wide x 29½″ high. Weight: 58 lbs.....**List Price, $146.00**
MODEL C422 12″ FULL RANGE SYSTEM. Contains Model 112FR speaker. 8 to 16 ohms. Blonde or mahobany corner cabinet. 18″ deep x 27½″ wide x 29½ high. Weight: 64 lbs.....**List Price, $146.00**
MODEL 52 CABINET—Silver hammertone finish or unfinished with wine flocked grille. ¾″ hardwood plywood cabinet. 16½″ deep x 23¾″ wide x 32″ high. Weight: 65 lbs. 6 cu. ft., 42 cycles, 15″ baffle standard. (Please specify if 12″ required.) ....**List Price, $79.00**
MODEL 52P PORTABLE CABINET—In black leatherette, with chromium hardware. Cabinet 12″ deep x 18″ wide x 24″ high. Weight: 30 lbs. 15″ baffle standard. (Please specify if 12″ required.) **List Price, $69.00**


MODEL W420

MODEL C422

STANDARD HORNS

MODEL 814H 1x4 HORN. 800 c.p.s cutoff. Takes Model 108A high frequency driver. **List Price, $28.00**
MODEL 824H 2x4 HORN. 800 c.p.s. cutoff. Takes Model 108A high frequency driver. **List Price, $49.00**
MODEL 825H 2x5 HORN. 800 c.p.s. cutoff. Takes Model 108A high frequency driver. **List Price, $62.00**
MODEL 826H 2x6 HORN. 800 c.p.s. cutoff. Takes Model 108A high-frequency driver. **List Price, $68.00**
MODEL 625H 2x5 HORN. 600 c.p.s. cutoff. Takes Model P-35 high-frequency driver **List Price, $101.00**
MODEL 425H 2x5 HORN. 400 c.p.s. cutoff. Takes Model P-35 high-frequency driver **List Price, $182.00**
MODEL 436H 3x6 HORN. 400 c.p.s. cutoff. Y throat to accommodate two Model P-35 high-frequency drivers ....**List Price, $308.00**

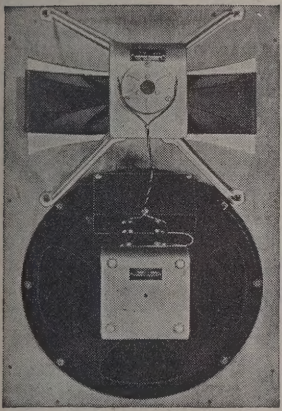

MODEL 625H

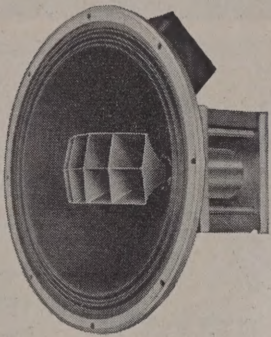
STEPHENS MANUFACTURING CORPORATION
CULVER CITY, CALIFORNIA

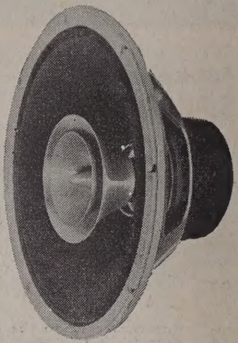
TRU SONIC

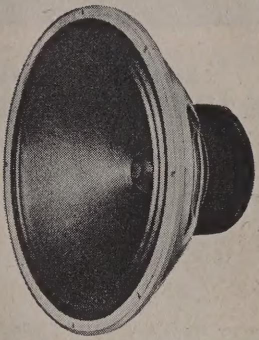
Speaker Systems for Theatre and Home

SPEAKERS


MODEL 409

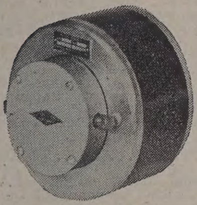

MODEL 106AX

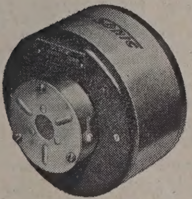

MODEL 112FR
MODEL 102FR


MODEL 103LX

These and additional items in the STEPHENS TRU SONIC line are more completely illustrated and described in company catalog, free on request.

HIGH FREQUENCY DRIVERS


MODEL 108A

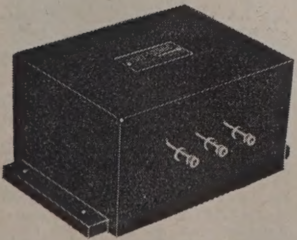

MODEL P35

SPEAKERS

16 OHM		500 OHM					OVERALL DIMEN.		
TYPE	LIST PRICE	TYPE	LIST PRICE	VOICE COIL DIAMETER	*SPEAKER TYPE	MAGNET WEIGHT	DIAMETER	DEPTH	NET WEIGHT
112FR	42.00	5112FR	50.00	2"	FR	1½ lbs.	12¼"	5½"	8 lbs.
120LX	42.00	5120LX	50.00	2"	LF	1½ lbs.	12¼"	5½"	8 lbs.
102FR	94.00	5102FR	102.00	2"	FR	4¼ lbs.	15¼"	8½"	29 lbs.
103LX	90.00	5103LX	98.00	2"	LF	4¼ lbs.	15¼"	8½"	29 lbs.
P52LX	78.00	......	.....	2"	LF	4¼ lbs.	15¼"	8½"	26 lbs.
108A	62.00	5108A	67.00	1½"	HF	1½ lbs.	5"	3¾"	10 lbs.
P35	130.00	P535	138.00	2½"	HF	4¼ lbs.	7"	4⅝"	20 lbs.
SYSTEMS									
106AX	166.00	5106AX	179.00	2" LF 1½" HF	Coaxial	6 lbs.	15¼"	10"	29 lbs.
107	56.00	High Frequency Horn, and 3500 c.p.s. High Pass Filter included.		1"	HF	14 oz.	6⅛"x 3¼"	7¼"	9 lbs. complete
409	212.00	800 cycle Two-way System. Model 814H Horn, Model 800X-2 High Pass Filter, Model P52LX Low Frequency Driver and Model 108A High Frequency Driver mounted on flat board baffle.							

***SPEAKER TYPES:** Full Range—FR; Low Frequency—LF; High Frequency—HF.

CROSSOVER NETWORKS


MODEL 400X

	List Price
MODEL 800X CROSSOVER 800 c.p.s. 16 ohm input and output	$40.00
MODEL 5800X CROSSOVER 800 c.p.s. 500 ohm input and output	40.00
MODEL 600X CROSSOVER 600 c.p.s. 16 ohm input and output	60.00
MODEL 5600X CROSSOVER 600 c.p.s. 500 ohm input and ouput	60.00
MODEL 400X CROSSOVER 400 c.p.s. 16 ohm input and output	84.00
MODEL 5400X CROSSOVER 400 c.p.s. 500 ohm input and output	84.00
MODEL 800X-2 HIGH PASS FILTER NETWORK, 800 c.p.s. 16 ohm input and output	28.00

STEPHENS MANUFACTURING CORPORATION
CULVER CITY, CALIFORNIA

NO FINER CHOICE THAN

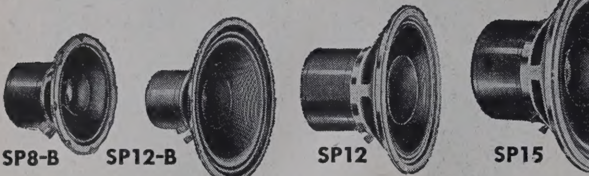
Electro-Voice HIGH-FIDELITY SPEAKERS

DRIVERS • HORNS • CROSSOVERS

New, modern concepts in 2, 3 and 4-way high fidelity speaker systems bring true *Dynamic Realism* within reach of all! Unique new *E-V RADAX* principle of high-frequency propagation and dispersion . . . heavier "pound rated" magnets for more driving power and generous distortion damping factors . . . separate 2, 3 and 4-way reproducing systems for the home . . . acoustically-correct Klipsch licensed* folded corner horn speaker enclosures with authentic furniture styling . . . these and other E-V exclusives create a totally new experience in the enjoyment of sound reproduction!

Research-Engineered Wide-Range

RADAX COAXIAL SPEAKERS



Discovery of the *E-V RADAX* Principle provides an *economical* and *super-efficient* method of utilizing two disparate coaxially mounted cones to divide the audio spectrum . . . while both operate from only a single voice coil. *Built-in* mechanical crossover from the low-frequency cone to the high-frequency propagator ("*Whizzer*") permits design of each cone for optimum response. This provides a true coaxial two-way speaker system that assures clean, sparkling wide-range reproduction.

Frames are extra sturdy. Both speaker cones are moisture inhibited.

Model SP8-B. Radax Super-Eight. 8-inch coaxial speaker. 15-20 watts. Response 35-13,000 c.p.s. ±6 db. 8 ohms impedance. Crossover, 6000 c.p.s. 1 lb. Alnico V magnet. 8¼" diam., 7" baffle opening, 5⅛" depth behind mtg. panel. Shpg. wt. 8½ lbs.

List Price........................$42.50

Model SP12-B. Radax Twelve. 12-inch coaxial speaker. 15-20 watts. Response 30-13,000 c.p.s. ±6 db. 8 ohms impedance. Crossover, 4500 c.p.s. 1 lb. Alnico V magnet. 12⅛" diam., 11" baffle opening, 6⅜" depth behind mtg. panel. Shpg. wt. 9½ lbs.

List Price........................$45.00

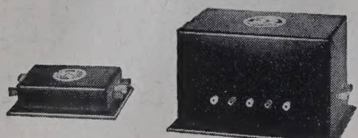
Model SP12. Radax Super-Twelve. 12-inch coaxial speaker. 25 watts. Response 30-13,000 c.p.s. ±5 db. 16 ohms impedance. Crossover, 4000 c.p.s. 3 lb. Alnico V magnet. 12½" diam., 11" baffle opening, 7½" depth behind mtg. panel. Shpg. wt. 26 lbs.

List Price........................$90.00

Model SP15. Radax Super-Fifteen. 15-inch coaxial speaker. 30 watts. Response 30-13,000 c.p.s. ±5 db. 16 ohms impedance. Crossover, 3000 c.p.s. 5¼ lb. Alnico V magnet. 15⅛" diam., 13½" baffle opening, 8⅞" depth behind mtg. panel. Shpg. wt. 44 lbs.

List Price........................$120.00

CROSSOVERS



All E-V Crossovers use high Q air cored coils. Insertion loss less than ½ db, phase rotation 270° (135° in X-35-1 and X-825-1). Non-metallic containers eliminate distortion with varying load and frequency. Attenuation 12 db per octave.

Model X-35-1. Crossover. Full M-Derived ¼ section. 3 db loss point, 3500 c.p.s. Impedances: 16 ohms. 5" x 7" x 2". Shpg. wt. 2½ lbs.

List Price........................$20.00

X-15-1. Crossover. Full M-derived ½ section, 3 db loss point, 1500 c.p.s. Impedances: 16 ohms. 5" x 7" x 2". Shpg. wt. 4 lbs.

List Price........................$35.00

X-825-1. Crossover. Full M-derived ¼ section. 3 db loss point, 800 c.p.s. Impedances: 16 ohms. 5" x 7" x 2". Shpg. wt. 3 lbs.

List Price........................$30.00

Model X-8-1. Crossover. Full ½ section, M-derived. 3 db loss point, 800 c.p.s. Impedances: 16 ohms. 8" x 5½" x 4½". Shpg. wt. 6 lbs.

List Price........................$50.00

X-8-2. Crossover. Same as X-8-1 but 32 ohms.

List Price........................$50.00

Model X-6-1. Crossover. Full M-derived ½ section. 3 db loss point, 600 c.p.s. Impedances: 16 ohms. 9" x 6" x 5". Shpg. wt. 7 lbs.

List Price........................$60.00

X-6-2. Crossover. Same as X-6-1 but 32 ohms.

List Price........................$60.00

Model X-4-1. Crossover. Full M-derived ½ section. 3 db loss point, 400 c.p.s. Impedances: 16 ohms. 9½" x 8" x 6". Shpg. wt. 10½ lbs.

List Price........................$75.00

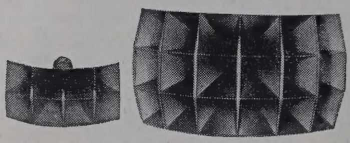
X-4-2. Crossover. Same as X-4-1 but 32 ohms.

List Price........................$75.00

Model X-2635-1. 4-Way Crossover. Full M-derived half sections. 3 db loss points, 200, 600 and 3500 c.p.s. Impedances: 16 ohms. 11½" x 8" x 7½". Shpg. wt. 11 lbs.

List Price........................$110.00

H. F. HORNS



Each cell of E-V horns is truly exponential permitting full range spherical wave shape. Individual cell intercepts solid angle of 20°. Horns operate one full octave below recommended crossover point without serious unloading.

Model 15-2x3 Horn. 1500 cycle. 40° x 60°. 4" h, 6" w, 4½" d. Shpg. wt. 2½ lbs. Takes T-10 or T-25 driver. **List Price..$15.00**

Model 8-1x4 Horn. 800 cycle. 20° x 80°. 4" h, 15" w, 12½" d. Shpg. wt. 8½ lbs. Takes T-10 or T-25 driver. **List Price............$40.00**

Model 8-2x4 Horn. 800 cycle. 40° x 80°. 8" h, 15" w, 12½" d. Shpg. wt. 13 lbs. Takes T-10 or T-25 driver. **List Price............$55.00**

Model 8-2x6 Horn. 800 cycle. 40° x 120°. 8" h, 18" w, 12½" d. Shpg. wt. 17 lbs. Takes T-10 or T-25 driver. **List Price............$75.00**

Model 6-2x5 Horn. 600 cycle. 40° x 100°. 11" h, 21" w, 15" d. Shpg. wt. 28 lbs. Takes T-25 or T-40 driver. **List Price............$120.00**

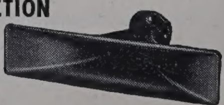
Model 4-2x5-1 Horn. 400 cycle. 40° x 100°. 18" h, 38" w, 31" d. Single throat. Shpg. wt. 160 lbs. Takes T-25 or T-40 driver. **List Price........................$180.00**

Model 4-2x5-2 Horn. Same as 4-2x5-1 but double throat. **List Price............$180.00**

Model 4-3x6-1 Horn. 400 cycle. 60° x 120°. 28" h, 43" w, 34" d. Shpg. wt. 244 lbs. Single throat. Takes T-25 or T-40 driver. **List Price........................$300.00**

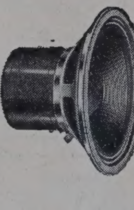
Model 4-3x6-2 Horn. Same as 4-3x6-1 but double throat. **List Price............$300.00**

H. F. DIFFRACTION HORN



Model 8-HD Diffraction Horn. New principle provides perfect dispersion of high frequencies through a 180° solid angle. Actual cutoff 600 c.p.s., crossover 800 c.p.s., eliminating cutoff disturbances. Made of Fiberglas. For T-10 or T-25 driver. 3¼" h, 14¼" w, 7¾" d. Shpg. wt. 2 lbs. **List Price................$15.00**

LOW FREQUENCY DRIVERS

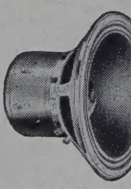


Model 12W-1. 12-inch L. F. Driver. Resonance 57 c.p.s. 3 lb. Alnico V magnet. 15-20 watts. 16 ohms impedance. 12⅛" diam., 11" max. baffle opening, 7" depth behind mounting panel. Shpg. wt. 26 lbs.

List Price............$90.00

Model 12W-2. Same as 12W-1 but with 8 ohms impedance.

Model 12WK. 3.2 ohms DC (for Klipsch "K" type baffles). 16 ohms nominal impedance.



Model 12BW-1. 12-inch L. F. Driver. 1 lb. Alnico V magnet. 15-20 watts. 16 ohms impedance. 12⅛" diam., 11" baffle opening, 6⅜" depth behind mtg. panel. Shpg. wt. 9½ lbs.

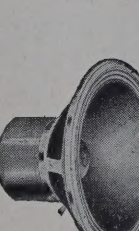
List Price............$45.00

Model 15W-1. 15-inch L. F. Driver. Resonance 37 c.p.s. 5¼ lb. Alnico V magnet. 20-30 watts. 16 ohms impedance. 15⅛" diam., 13½" max. baffle opening. 9" depth behind mounting panel. Shpg. wt. 44 lbs.

List Price...........$120.00

Model 15W-2. Same as 15W-1 but with 8 ohms impedance.

Model 15WK. 3.2 ohms DC, 32 c.p.s. resonance (for Klipsch "K" type baffles). 16 ohms nominal impedance.



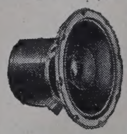
Model 18W-1. 18-inch L. F. Driver. Resonance 27-30 c.p.s. 5¼ lb. Alnico V magnet. 20-30 watts. 16 ohms impedance. 18¼" diam., 16½" max. baffle opening, 10" depth behind mtg. panel. Shpg. wt. 45 lbs.

List Price...........$135.00

Model 18W-2. Same as 18W-1 but with 8 ohms impedance.

Model 18WK. 3.2 ohms DC, 22-24 c.p.s. resonance (for Klipsch "K" type baffles). 16 ohms nominal impedance.

HIGH FREQUENCY DRIVERS



Model SP8-BT. Super Tweeter. 15-20 watts. Frequency range ±6 db. to 17,000 c.p.s. 8 ohms impedance. 1 lb. Alnico V magnet. 8¼" diam., 7" baffle opening, 5⅛" behind mtg. panel. Shpg. wt. 8½ lbs.

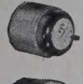
List Price..................$42.50

Model T-10. H-F Driver. 20 watts. Response, ±5 db. 800-13,000 c.p.s. Impedance 16 ohms. 1 lb. Alnico V magnet. 4½" diam., 3½" deep. Throat diam. 1". Shpg. wt. 13 lbs.

List Price, without Horn.......$60.00

Model T-10H. T-10 H. F. Driver with 15-2 x 3 Horn.

List Price..................$75.00



Model T-25. H-F Driver. 20-30 watts. Response ±5 db 400-13,000 c.p.s. Impedance 16 ohms. 1¾ lb. Alnico V magnet. 5" diam., 6" deep. Throat diam. 1". Shpg. wt. 15½ lbs.

List Price..................$90.00

Model T-40. H-F Driver. 40 w. max. Response ±5 db 200-10,000 c.p.s. 16 ohms impedance. 3 lb. Alnico V magnet. 7" deep, 8" diam. Throat diam. 1¼". Shpg. wt. 32½ lbs.

List Price................$180.00

*Klipsch licensed Pat. No. 2310243 and No. 2373692.

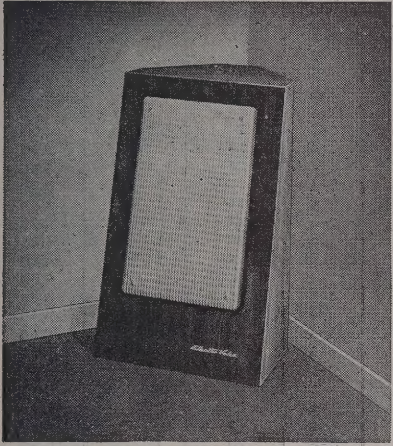
NO FINER CHOICE THAN

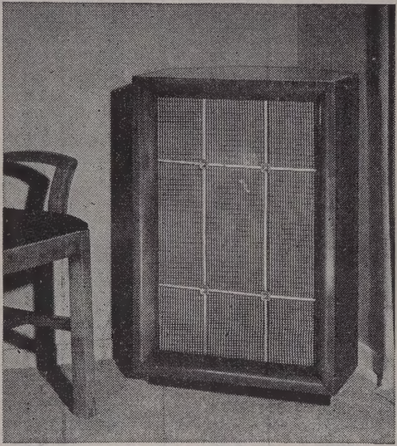
Electro-Voice

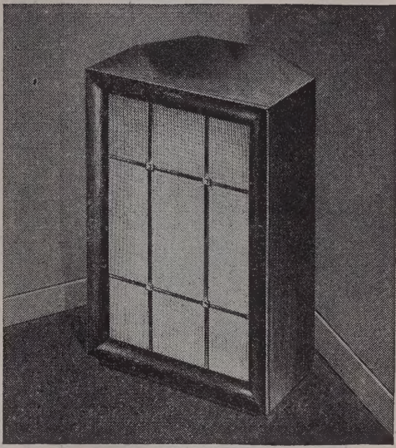
HI-FI FOLDED CORNER HORN

ENCLOSURES

AND SPEAKER SYSTEMS


THE BARONET


THE ARISTOCRAT


THE ROYAL

KLIPSCH-LICENSED FOLDED-HORN CORNER ENCLOSURES

New Concepts in Compact Corner Cabinets Provide Extended Bass Range with Remarkable Purity and Efficiency!

Utilizing the Klipsch principle, E-V design extends the lows, enhances the highs. Employs the walls of the room as an extension of the exponential horn air load—assures at least one full octave of added bass range with unprecedented efficiency—no boominess. Provides direct front radiation of higher frequencies. Gives smoother, cleaner over-all musical balance. Increases power handling capacity of any speaker. Authentically styled in fine veneers with lustrous hand-rubbed finish. Fits beautifully in any room.

The BARONET. Designed for E-V or other 8″ speaker. Response down to 35 cps. Conservatively modern, with graceful sloping front. Hand-rubbed hardwood veneers. Attractive Lumite grille. 23½″ high, 14½″ wide, 10½″ deep at top, 14″ deep at bottom. Easily portable—can be used anywhere. Shpg. wt. 22 lbs.

Mahogany. Cabinet only. List Price............**$59.50**

Blonde. Cabinet only. List Price...............**$63.00**

The ARISTOCRAT. Designed for E-V or any 12″ full range speaker or E-V 800 cps separate 2-way systems, without modification. Unusually smooth reproduction down to 35 cps. Selected mahogany veneers. Grille in brushed brass finish. 29½″ high, 19″ wide, 16½″ deep. Shpg. wt. 43 lbs.

Mahogany. Cabinet only. List Price........... **$99.50**

Blonde. Cabinet only. List Price..............**$106.00**

The ROYAL. For E-V or other 15″ coaxial speaker or E-V 800 cps separate 2-way and 3-way systems without modification. Laboratory flatness ±5 db down to 30 cps. Selected mahogany veneers. Grille in brushed brass finish. 37″ high, 20½″ deep, 23¾″ wide. Shpg. wt. 76 lbs.

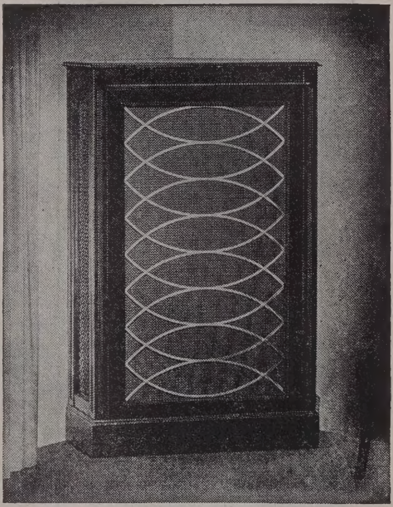
Mahogany. Cabinet only. List Price...........**$180.00**

Blonde. Cabinet only. List Price..............**$190.00**

4-WAY SPEAKER SYSTEM

The PATRICIAN. Complete 4-way speaker system in custom-crafted corner cabinet . . . for the very finest reproduction. The 4-way system divides the reproduced spectrum between disparate drivers . . . each specifically designed to reproduce its own band with optimum, distortion-free fidelity. The crossover frequencies are 200, 600 and 3500 cycles. Elegant cabinet design of selected woods, and beautiful inlays, with Heirloom Finish in exquisite hand-rubbed mahogany. Includes E-V model 18WK 18″ L-F driver, 12W-1 12″ L-F driver, SP8-BT 8″ super tweeter, T-10 H-F driver, 15-2X3 H-F horn, T-25 H-F driver, 6-2X5 H-F horn, and X-2635-1 four-way crossover, completely wired and installed in cabinet. Size: 60″ high x 41″ wide x 30″ deep. Shpg. wt. 500 lbs.

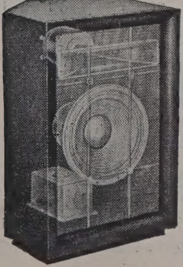
List Price...............**$1212.50**

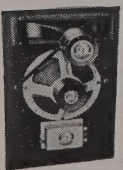

THE PATRICIAN

COMPACT 800 CPS SEPARATE 2-WAY SPEAKER SYSTEMS

(CROSSOVER)

Super-Efficient Bass Combined with New Principle of High Frequency Sound Dispersion*





MOUNTED IN CABINET

ARISTOCRAT I. Includes E-V Model 108 Standard 800 cps Separate 2-Way Speaker System, completely wired and installed in ARISTOCRAT folded-horn corner cabinet enclosure. 29½″ high, 19″ wide, 16½″ deep. Shpg. wt. 61 lbs.

Complete, in Mahogany. List....................**$265.00**

Complete, in Blonde. List.......................**$271.50**

ARISTOCRAT II. Includes E-V Model 111 Deluxe 800 cps Separate 2-Way Speaker System, completely wired and installed in ARISTOCRAT folded-horn corner cabinet enclosure. 29½″ high, 19″ wide, 16½″ deep. Shpg. wt. 80 lbs.

Complete, in Mahogany. List...................**$359.50**

Complete, in Blonde. List......................**$366.00**

ROYAL II. Includes E-V Model 114 Super 800 cps Separate 2-Way Speaker System completely wired and installed in ROYAL folded-horn corner cabinet enclosure. 37″ high, 23¾″ wide, 20½″ deep. Shpg. wt. 127 lbs.

Complete, in Mahogany. List...................**$465.00**

Complete, in Blonde. List.......................**$475.00**

*Combines superb bass response, new principle of high frequency sound dispersion and a low crossover point. New E-V 8-HD Diffraction Horn provides perfect dispersion of high frequencies through a 180° solid angle.

UNMOUNTED SYSTEMS

Model 108 Standard 800 cps Separate 2-Way Speaker System. It consists of 12BW-1 L-F Driver, T-10 H-F Driver, 8-HD Diffraction Horn, X-825-1 Crossover Network, flat baffle board and AK-1 Accessory Kit of mounting hardware. 27″ high, 18″ wide, 12½″ deep. Shpg. wt. 72 lbs.

List Price, less cabinet.........................**$160.00**

Model 111 Deluxe 800 cps Separate 2-Way Speaker System. Consists of 12W-1 L-F Driver, T-25 H-F Driver, 8-HD Diffraction Horn, X-8-1 Crossover Network, flat baffle board and AK-1 Accessory Kit of mounting hardware. 27″ high, 18″ wide, 13½″ deep. Shpg. wt. 94 lbs.

List Price, less cabinet.........................**$255.00**

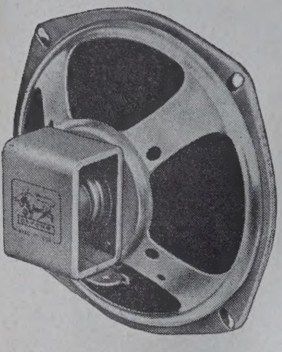
Model 114 Super 800 cps Separate 2-Way Speaker System. Consists of 15-W-1 L-F Driver, T-25 H-F Driver, 8-HD Diffraction Horn, X-8-1 Crossover Network, AK-1 Accessory Kit of mounting hardware, and flat baffle board. 33⅝″ high, 22¼″ wide, 13½″ deep. Shpg. wt. 115 lbs.

List Price, less cabinet.........................**$285.00**

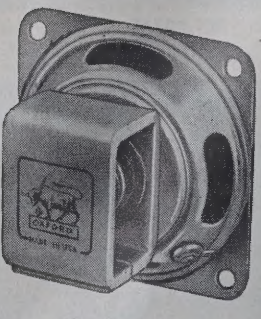
Model AK-1 Accessory Mounting Kit. Includes two brackets and necessary hardware for installing Driver and 8-HD Horn in E-V cabinets.

List Price.......................................**$5.00**

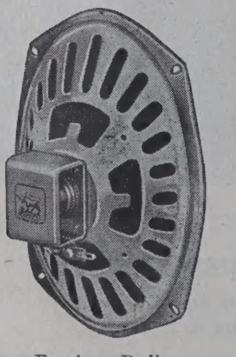
OXFORD Speakers—



For Radio & Television



For Portables



For Auto Radios

Permanent Magnet Speakers — Standard Replacement Line

SIZE	MODEL NO.	MAG. WT.	V. C. SIZE	V. C. IMP.	WATTS	STANDARD PACK	SHIPPING WT. EACH	LIST PRICE
2"	2AMS	.68 oz.	9/16"	3.2 Ohm	1-2	36	½ Lbs.	$ 3.75
2"	2CMS	1.47	9/16"	3.2	1-2	36	½	4.35
3"	3AMS	.68	9/16"	3.2	2-3	36	½	3.75
3"	3CMS	1.47	9/16"	3.2	2-3	36	½	4.35
4"	4AMS	.68	9/16"	3.2	2-3	24	½	4.00
4"	4BMS	1.00	9/16"	3.2	2-3	24	¾	4.25
4"	4CMS	1.47	9/16"	3.2	2-3	24	¾	4.60
5"	5AMS	.68	9/16"	3.2	2-4	24	¾	4.25
5"	5BMS	1.00	9/16"	3.2	2-4	24	1	4.50
5"	5CMS	1.47	9/16"	3.2	2-4	24	1	4.85
5"	5ECS	2.15	9/16"	3.2	2-4	24	1¼	5.35
5¼"	52AMS	.68	9/16"	3.2	2-4	24	1	4.35
5¼"	52BMS	1.00	9/16"	3.2	2-4	24	1	4.60
5¼"	52CMS	1.47	9/16"	3.2	2-4	24	1	5.00
6"	6AMS	.68	9/16"	3.2	3-5	20	1	4.85
6"	6BMS	1.00	9/16"	3.2	3-5	20	1	5.10
6"	6CMS	1.47	9/16"	3.2	3-5	20	1	5.50
6"	6EVS	2.15	¾"	3.2	4-6	20	1¼	6.00
6"	6FOS	3.16	¾"	3.2	4-6	20	1½	6.85
8"	8CMS	1.47	9/16"	3.2	3-5	20	1½	6.85
8"	8EVS	2.15	¾"	3.2	4-6	20	1¾	7.35
8"	8FOS	3.16	¾"	3.2	4-6	20	2¼	8.50
8"	8HBS	4.64	1"	3.2	6-8	20	2½	10.00
8"	8JBS	6.80	1"	3.2	6-8	20	3	12.00
10"	10EVS	2.15	¾"	3.2	4-6	8	2¼	9.50
10"	10FOS	3.16	¾"	3.2	4-6	8	2½	10.50
10"	10HBS	4.64	1"	3.2	8-10	8	3¼	12.00
10"	10JBS	6.80	1"	3.2	8-10	8	3¾	13.50
12"	12EVS	2.15	¾"	3.2	4-6	6	3	10.50
12"	12FOS	3.16	¾"	3.2	4-6	6	3½	11.50
12"	12HBS	4.64	1"	3.2	8-10	6	4¼	13.00
12"	12JBS	6.80	1"	3.2	8-10	6	4¾	14.50
12"	12XMS	22.50	1½"	3.2	20-30	4	10	37.50
15"	15XMS	22.50	1½"	3.2	20-30	1	13	45.00
4"x6"	46AMS	.68	9/16"	3.2	2-4	24	¾	4.50
4"x6"	46BMS	1.00	9/16"	3.2	2-4	24	1	4.75
4"x6"	46CMS	1.47	9/16"	3.2	2-4	24	1	5.25
5"x7"	57CMS	1.47	9/16"	3.2	3-5	24	1	5.75
5"x7"	57EVS	2.15	¾"	3.2	4-6	24	1¼	6.50
5"x7"	57FOS	3.16	¾"	3.2	4-6	24	1½	7.85
6"x9"	69CVS	1.47	¾"	3.2	4-6	24	1¼	7.10
6"x9"	69EVS	2.15	¾"	3.2	4-6	24	1½	7.85
6"x9"	69FOS	3.16	1"	3.2	6-8	24	1¾	9.25

Electro Dynamic Speakers — Standard Replacement Line

SIZE	MODEL NO.	FIELD	V. C. SIZE	V. C. IMP.	WATTS	STANDARD PACK	SHIPPING WT. EACH	LIST PRICE
4"	4V45S	450 Ohm	9/16"	3.2 Ohm	2-4	24	1 Lbs.	$ 4.75
5"	5V45S	450	9/16"	3.2	2-4	24	1¼	5.00
5"	5V100S	1000	9/16"	3.2	2-4	24	1¼	5.00
5"	5V180S	1800	9/16"	3.2	2-4	24	1¼	5.00
6"	60A100S	1000	¾"	3.2	4-6	20	1¾	6.00
6"	60A180S	1800	¾"	3.2	4-6	20	1¾	6.00
6"	60A250S	2500	¾"	3.2	4-6	20	1¾	6.00
8"	80A100S	1000	¾"	3.2	4-6	20	2¼	7.50
8"	80A180S	1800	¾"	3.2	4-6	20	2¼	7.50
8"	80A250S	2500	¾"	3.2	4-6	20	2¼	7.50
10"	10E100S	1000	1"	3.2	8-10	8	4¼	11.00
10"	10E250S	2500	1"	3.2	8-10	8	4¼	11.00
12"	12E100S	1000	1"	3.2	8-10	6	5½	13.50
12"	12E250S	2500	1"	3.2	8-10	6	5½	13.50
4"x6"	46V45S	450	9/16"	3.2	2-4	24	1½	5.50

OXFORD SPEAKERS, backed by over twenty-six years of experience and research, are precision-made to the most exacting specifications.

There is an **OXFORD SPEAKER** for every need . . . TV, FM, AM, Auto, Public Address, High Fidelity, and Outdoor Applications . . from 2" to 15" units.

OXFORD ELECTRIC CORPORATION
Chicago 15, Illinois
EXPORT: ROBURN AGENCIES, NEW YORK CITY

There is an OXFORD Speaker to meet each requirement.

OXFORD Speakers—

High-Fidelity Speakers

SIZE	MODEL NO.	MAG. WT.	V. C. SIZE	V. C. IMP.	WATTS	STANDARD PACK	SHIPPING WT. EACH	LIST PRICE
8″	HF8JB	6.8 oz.	1″	8 Ohm	10	4	3¼ Lbs.	$15.00
10″	HF10JB	6.8 oz.	1″	8	10	4	4	17.50
12″	HF12JB	6.8 oz.	1″	8	10	4	5	20.00
12″	HF12LN	14.0 oz.	1½″	8	25	4	9½	35.00
12″	CO12JB	6.8 oz.	1″	8	12	4	5	35.00

TV Replacement Speakers

SIZE	MODEL NO.	FIELD	V. C. SIZE	V. C. IMP.	WATTS	STANDARD PACK	SHIPPING WT. EACH	LIST PRICE
5″	5V8S	85	9⁄16″	3.2 Ohm	2-4	24	1¼ Lbs.	$ 5.00
6″	60A8S	85	¾″	3.2	4-6	20	1¾	6.00
8″	80A8S	85	¾″	3.2	4-6	20	2¼	7.50
4″x6″	46V8S	85	9⁄16″	3.2	2-4	24	1½	5.50

Auto Replacement Speakers

SIZE	MODEL NO.	MAG. WT. or FIELD	V. C. SIZE	V. C. IMP.	WATTS	STANDARD PACK	SHIPPING WT. EACH	LIST PRICE
5″	5CMS	1.47 oz.	9⁄16″	3.2 Ohm	2-4	24	1 Lbs.	$ 4.85
5¼″	52CMS	1.47 oz.	9⁄16″	3.2	2-4	24	1	5.00
6″	6EVS	2.15 oz.	¾″	3.2	4-6	20	1¼	6.00
7″	7EVS	2.15 oz.	¾″	3.2	4-6	20	1½	7.10
7″	7FOS	3.16 oz.	¾″	3.2	4-6	20	2	8.00
8″	82EVS	2.15 oz.	¾″	3.2	4-6	20	1¾	7.50
6″x9″	69EVS	2.15 oz.	¾″	3.2	4-6	24	1½	7.85
6″x9″	69FOS	3.16 oz.	1″	3.2	6-8	24	1¾	9.25
5″	5VO4S	4 Ohm	9⁄16″	3.2	2-4	24	1¼	5.00
5¼″	52VO4S	4 Ohm	9⁄16″	3.2	2-4	24	1½	5.25
6″	60AO4S	4 Ohm	¾″	3.2	4-6	20	1¾	6.00
7″	70AO4S.	4 Ohm	¾″	3.2	4-6	20	2	7.25
6″x9″	690AO4S	4 Ohm	¾″	3.2	4-6	24	2¼	8.00

Public Address Speakers

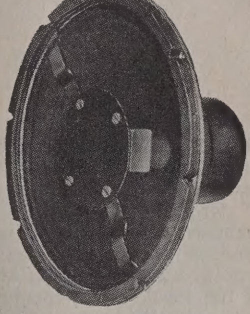
SIZE	MODEL NO.	MAG. WT.	V. C. SIZE	V. C. IMP.	WATTS	STANDARD PACK	SHIPPING WT. EACH	LIST PRICE
8″	8JBS-7	6.80 oz.	1″	6-8 Ohm	6-8	12	3 Lbs.	$12.50
10″	10JBS-7	6.80	1″	6-8	8-10	6	3¾	14.00
12″	12JBS-7	6.80	1″	6-8	8-10	4	4¾	15.00
12″	12XMS-7	22.50	1½″	6-8	20-30	4	10	37.50
15″	15XMS-7	22.50	1½″	6-8	20-30	1	13	45.00

Intercom Speakers

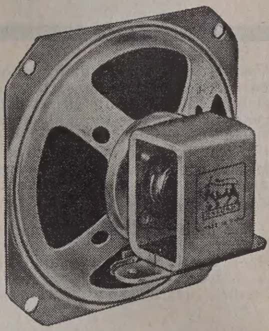
SIZE	MODEL NO.	MAG. WT.	V. C. SIZE	V. C. IMP.	WATTS	STANDARD PACK	SHIPPING WT. EACH	LIST PRICE
3″	3BMXS	1.00 oz.	9⁄16″	45 Ohm	2-3	36	½ Lbs.	$ 4.75
4″	4BMXS	1.00	9⁄16″	45	2-3	24	¾	5.00
5″	5BMXS	1.00	9⁄16″	45	2-4	24	1	5.25

Weatherproof Speakers

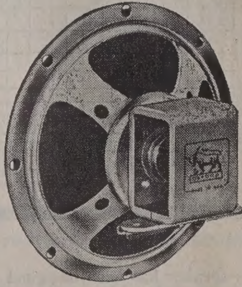
SIZE	MODEL NO.	MAG. WT	V. C. SIZE	V. C. IMP.	WATTS	STANDARD PACK	SHIPPING WT. EACH	LIST PRICE
3″	3CMWS	1.47 oz.	9⁄16″	3.2 Ohm	2-3	36	½ Lbs.	$ 4.85
4″	4CMWS	1.47	9⁄16″	3.2	2-4	24	¾	5.25
5″	5CMWS	1.47	9⁄16″	3.2	2-4	24	1	5.50
6″	6CMWS	1.47	9⁄16″	3.2	3-5	20	1	6.15



Coaxial for Hi-Fidelity



For Intercoms



For Outdoor Applications

Our products are nationally advertised.
All speakers are fully dustproofed.
Rustproof cadmium plating used thru-out.
R.T.M.A. standard dimensions on all models.
All Electro-Dynamic speakers equipped with hum neutralizing coils.

All small speakers 2″ to 6″ will have transformer mounting brackets. All large speakers over 6″ will have transformer mounting facilities on basket. All 4″, 5″, 6″, and 4″ x 6″ P.M. speakers will have holes drilled in pot for easy mounting and will be supplied with Universal mounting brackets and self tapping screws.

Preferred for
Original Equipment

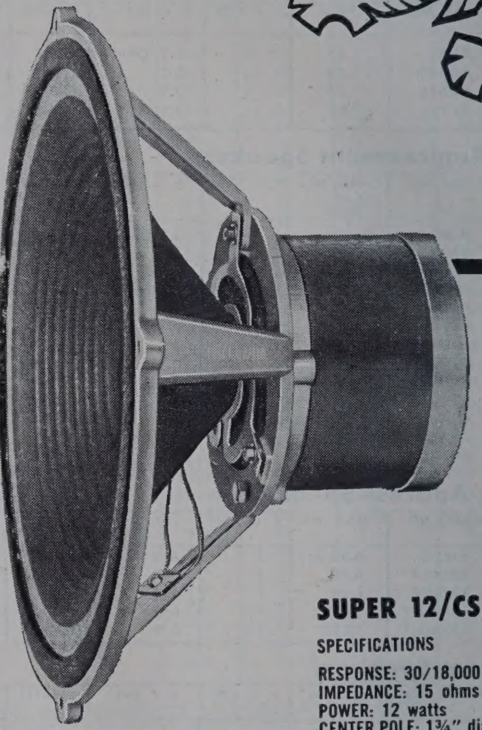
Proven for
Replacement!

OXFORD ELECTRIC CORPORATION
Chicago 15, Illinois
EXPORT: ROBURN AGENCIES, NEW YORK CITY

Britain's Finest Loudspeakers

Wharfedale

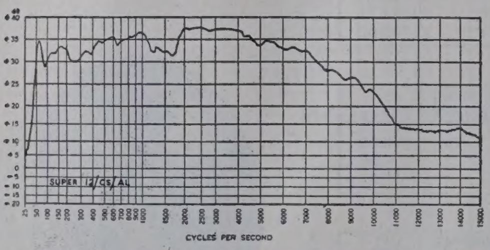
Despite their modest price, all Wharfedale Speakers are fitted with cast chassis resulting in greater rigidity,less resonance and better air loading. All models except the 8″ Bronze have cloth suspension cones which improve transient response by adding dissipation to the edge of the cone, with reduced reflection of the flexural waves. This type of cone suspension also reduces the bass resonances of the speaker unit, resulting in a more level impedance curve and improves the transient or decay element. Such refined quality of reproduction is only available with Wharfedale cloth suspension.



Warmly received by quality enthusiasts, the Super 12/CS/AL has a remarkably level response between 30 and 18,000 cycles when adequately baffled. Cloth suspension and low cone resonance reduces transient distortion to an absolute minimum and eliminates irritating "boom" associated with stiffly suspended cones. Critical listeners will hear the true bass which is so seldom heard. Wharfedale's exclusive cone and carefully wound aluminum voice coil achieve amazingly clean highs, without introducing peaks in the upper middle register.

The high quality of this speaker is uniformly maintained in production since it does not rely on subsidiary diaphragm resonances, which can cause intermodulation distortion. The Super 12/CS/AL *has proved superior to many more expensive* combinations in general listening quality and pleasing sound.

SUPER 12/CS/AL RESPONSE CURVE

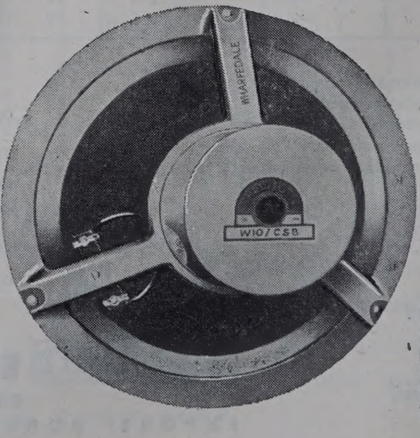


SUPER 12/CS/AL

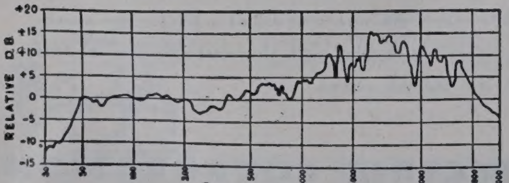
SPECIFICATIONS

RESPONSE: 30/18,000 c.p.s.
IMPEDANCE: 15 ohms
POWER: 12 watts
CENTER POLE: 1¾″ dia.
CONE RESONANCE: 35/45 c.p.s.
WEIGHT: 18¼ lbs.
FLUX DENSITY: 17.000 lines
TOTAL FLUX: 190,000 lines

This speaker has been designed specially for the average sized room where loud volume is often irritating. It requires little power to give the refined quality of which it is capable. The cloth suspended cone of the W10/CSB has truly remarkable ability to reach maximum quality at low levels. This speaker also makes an excellent tweeter in a two-way speaker system and maintains highs that are clean and brilliant without being penetrating.



W10/C.S.B. RESPONSE CURVE



Axial Response Curve of W10/CSB.
Level 1 Volt at 400~

W10/CSB

SPECIFICATIONS

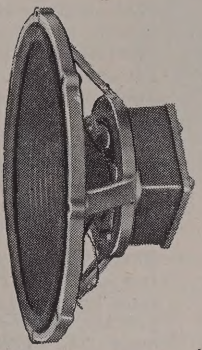
RESPONSE: 30/18,000 c.p.s
IMPEDANCE: 15 ohms
POWER: 8 watts
CONE RESONANCE: 50/60 c.p.s.
WEIGHT: 9 lbs.
FLUX DENSITY: 14,000 lines
TOTAL FLUX: 74,000 lines

BRITISH INDUSTRIES CORPORATION • NEW YORK 13, N. Y.

Wharfedale

Built by Wharfedale Wireless Works under the direction of G. A. Briggs, world-renowned sound engineer.

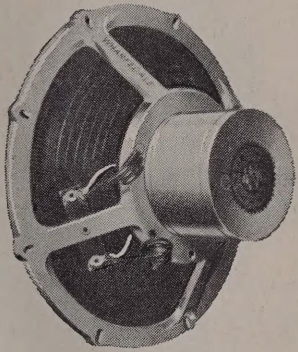
8" BRONZE



SPECIFICATIONS
IMPEDANCE: 15 ohms
POWER: 5 watts
WEIGHT: 3¼ lbs.
FLUX DENSITY: 10,000 lines
TOTAL FLUX: 39,500 lines

This is the finest 8" speaker available in its price range and good enough for use in acoustic chambers. High quality performance is due to the high flux and open, die cast chassis.

SUPER 8/CS/AL

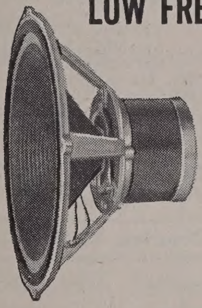


SPECIFICATIONS
RESPONSE:
50/15,000 c.p.s.
IMPEDANCE: 15 ohms
POWER: 5 watts
CONE RESONANCE:
60/65 c.p.s.
FLUX DENSITY: 13,000 lines
TOTAL FLUX: 54,000 lines

Suitable for bass reflex cabinets, or for use as a treble unit in a two-way speaker system. This cloth suspended cone has a bakelized apex for wide response and achieves a refined quality that would not normally be associated with a speaker of this size.

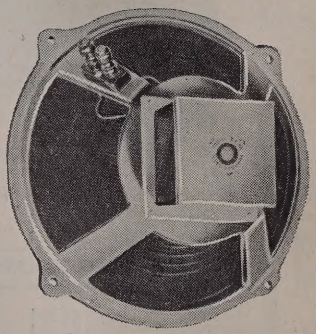
LOW FREQUENCY DRIVERS

W12/CS



SPECIFICATIONS
IMPEDANCE: 15 ohms
POWER: 10 watts
WEIGHT: 12 lbs.
CONE RESONANCE: 40/50 c.p.s.
FLUX DENSITY: 13,000 lines
TOTAL FLUX: 145,000 lines

W15/CS



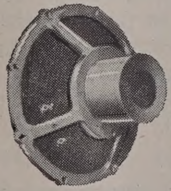
SPECIFICATIONS
IMPEDANCE: 15 ohms
POWER: 20 watts
WEIGHT: 17 lbs.
CONE RESONANCE:
30/35 c.p.s.
FLUX DENSITY: 13,500 lines
TOTAL FLUX: 180,000

These units give clean bass down to 25/35 cycles without frequency doubling, with reasonable air loading. Ideal speakers for two-way systems. Again, low transient distortion and smooth response are made possible only by exclusive Wharfedale cloth suspension.

New!

G. A. BRIGGS' LATEST ACHIEVEMENT:

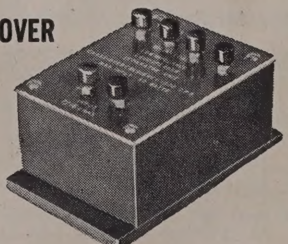
THE SUPER 5 TREBLE SPEAKER



This efficient tweeter features a small, bakelized cone for wide diffusion; and a high flux magnet for high frequency reproduction. Flux density, 13,000 lines. Aluminum voice coil, 10 ohms, suitable for use with a 15 ohm bass unit and a 3,000 cycle crossover network. Die cast chassis. Cloth suspension. Effective range 3,000 to 20,000 c.p.s. The chassis is supplied with plywood mounting board 8" x 8" with the correct 3½" diameter, aperture, which is the effective cone diameter.

May be used with an existing two-speaker system with 1,000 cycle crossover network by connecting in parallel with the existing treble unit, with 0.5 mfd. condenser in series with the voice coil of the Super 5 Treble Speaker.

1000 CYCLE CROSSOVER



SPECIFICATIONS
SIZE: 8" x 5" x 4"
CROSSOVER AT 1000 c.p.s.
WEIGHT: 3¼ lbs.
MAXIMUM INPUT: 30 watts
IMPEDANCE: 15 ohms
ATTENUATION:
6 to 9 db per octave

Used to divide the bass and treble between two loudspeakers at low impedance and thus eliminate distortion of the treble by modulation from the bass.

3,000 Cycle Crossover for use with 5" tweeter, also available.

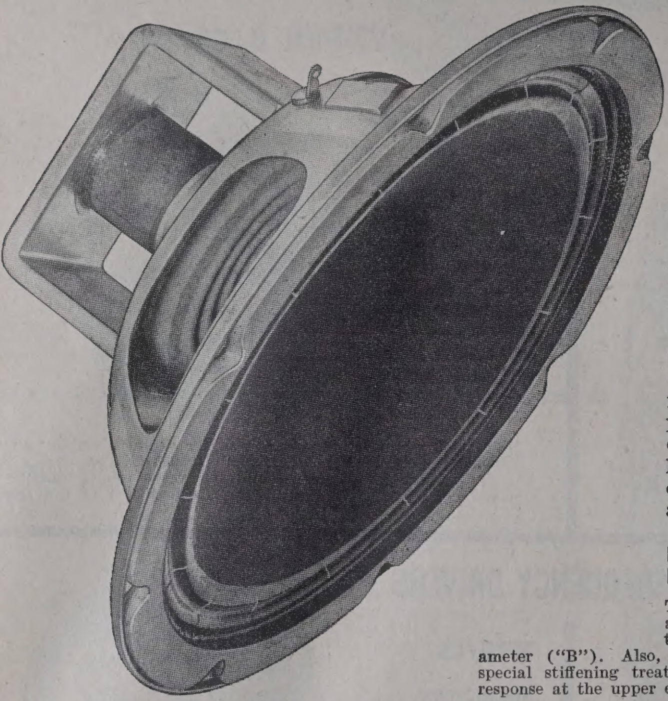
BRITISH INDUSTRIES CORPORATION • NEW YORK 13, N. Y.

Permoflux

ROYAL

High-Fidelity Speakers

"SOUND IN DESIGN"

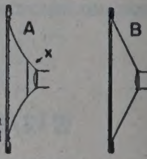


THE SPEAKERS WITH THE "ROYAL BLUE" CONE

New engineering advances in cone design are among the important reasons the Permoflux ROYAL BLUE CONE SPEAKERS compare in acoustical performance with the finest speakers — regardless of size or price. Laboratory tests prove that Permoflux Royal Speakers produce a smooth, faultless flow of tone over an unusually large band of frequencies — 12,000 cycles in width. It's the **new improved cone** that provides this outstanding performance.

Slots on the edge of the cone (an exclusive Permoflux development) and an extra large spider provide super-soft suspension of cone. This greatly increases the low-frequency response. Slotted edge of cone is treated to give it additional strength.

EXTRA HIGH-FREQUENCY RESPONSE



The cone of the "Royal Eight" (See "A" at right) is curvilinear and deeper than the regular speaker cone of the same diameter ("B"). Also, the throat of the cone (X) is given a special stiffening treatment. The result is a highly increased response at the upper end of the audio frequency scale.

SIZE	MODEL	APPROX. MAGNET WEIGHT	VOICE COIL		SHIPPING WT. EA., LBS.	LIST PRICE
			IMP.—OHMS	WATTS		
ROYAL LINE—With Royal Blue Cones (Treated, Slotted Cone Edge)						
6″	6K-1	1.5 oz.	3.2	5	1.50	$10.00
8″	8T-8-1	4.7 oz.	8.	8	3.00	22.50
12″	12T-8-1	4.7 oz.	8.	10	4.25	27.50
DELUXE ROYAL LINE—With Royal Blue Cone (Treated, Slotted Cone Edge) With Pot Covers						
8″	8UP-8-1	6.8 oz.	8.	10	4.00	$30.00
12″	12UP-8-1	6.8 oz.	8.	12	5.25	35.00
15″	15WP-8-1	6.8 oz.	8.	15	7.3	49.50

PERMOFLUX CORNER HORN ENCLOSURE FOR ROYAL 8″ SPEAKER

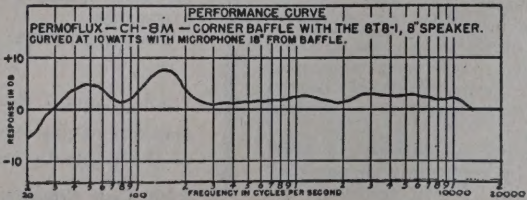
Special Features Include:

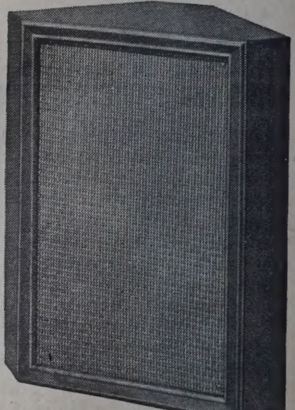
- Produces true low frequency response — rather than "one note" bass.
- Decreased distortion.
- Corner placement — long recognized by experts as best.
- High efficiency.
- Size: 25″ high by 20″ wide, by 11″ deep.
- Available in Blonde or Mahogany finish.
- Shipping weight 20 lbs. (less speaker).

TRADE MARK
PERM-O-FLUX®
"SOUND IN DESIGN"

This new design is the optimum size corner horn enclosure intended to most nearly satisfy performance and economy considerations for proper baffling of an eight-inch speaker.

MODEL CH-8M	(Mahg.)	$76.45 LIST
MODEL CH-8B	(Blonde)	$84.50 LIST



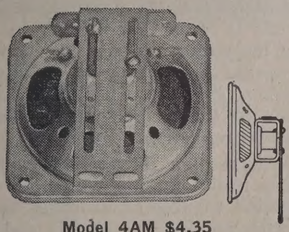


PERMOFLUX CORPORATION

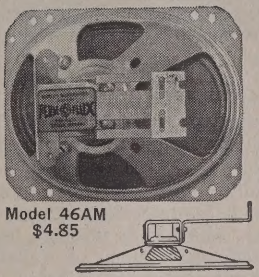
CHICAGO 39, U.S.A.
GLENDALE 5, CALIF.

Permoflux CHAMPION SPEAKERS

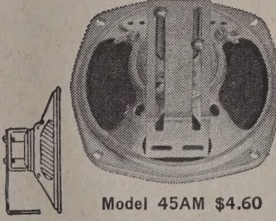
"SOUND IN DESIGN"



Model 4AM $4.35



Model 46AM
$4.85



Model 45AM $4.60

The Permoflux "CHAMPION" Line of permanent magnet type loudspeakers is the most compact line of replacement speakers on the market today. The Champion line is designed to provide a speaker for every replacement need without the necessity of stocking a great number of sizes and models. The universal mounting bracket (above) provides the utmost in versatility.

Following are some of the outstanding features that make these speakers a typical high quality Permoflux product.

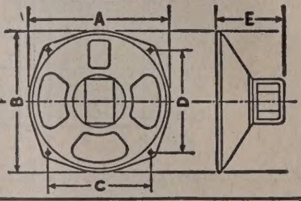
(1) Magnets are wedge mounted and cemented to yoke assembly thereby eliminating possibility of molecular change in magnet metal such as may be occasioned when magnet is spot welded. Result is higher efficiency.

(2) Unique voice coil construction maintains constant air gap, reducing possibility of rubbing.

(3) Impregnation of non-metal parts to insure resistance to high humidity conditions.

Highest quality magnetic material and optimum design for flux path used in yoke and pole stem assembly, thereby providing low reluctance flux path, permitting higher efficiency with a smaller magnet.

DIMENSION CHART



PERMOFLUX "CHAMPION LINE" *Permanent Magnet Speakers*

Size	Model No.	Approx. Magnet Wt.	Watts Input	Dimensions A	B	C	D	E	Shipping Wt. Each	Standard Package	List Price
2½" Square	25AM	.68 oz.	1-2	2½	2½	2 1/16	2 1/16	1 5/32	7 oz.	12*	$ 4.35
3" Square	3AM	.68 oz.	2-4	3⅛	3⅛	2⅜	2⅜	1 17/32	7 oz.	12*	4.35
4" Square	4AM	.68 oz.	2-4	4 3/32	4 3/32	3 5/16	3 5/16	1¾	8 oz.	12*	4.35
4" Square	4CM	1.0 oz.	2-4	4 3/32	4 3/32	3 5/16	3 5/16	1 31/32	8.5 oz.	12*	4.65
4x6" Ellip.	46AM	.68 oz.	2-4	6⅛	4 3/32	4⅝	3⅝	1 29/32	9 oz.	8*	4.85
5" Round	45ARM	.68 oz.	2-4	5 1/32	5 1/32	4 11/16	4 11/16	1 29/32	9 oz.	8*	4.60
5" P. C.	45AM	.68 oz.	2-4	4 19/32	4 19/32	3 5/16	3 5/16	1 15/16	9 oz.	12*	4.60
5" P. C.	45CM	1.0 oz.	4-6	4 19/32	4 19/32	3 5/16	3 5/16	2 5/32	10 oz.	12*	4.85
5x7" Ellip.	57J	1.0 oz.	4-6	7¼	5	4 11/32	4 11/32	2 31/32	17 oz.	6*	5.90
6" P. C.	6AM	.68 oz.	4-6	6 3/32	6 3/32	4 11/32	4 11/32	2 11/32	14 oz.	8*	5.25
6" Auto	6J	1.00 oz.	4-6	6 3/32	6 3/32	4 11/32	4 11/32	2 11/16	15 oz.	8*	5.75
6x9" Auto	69K	1.47 oz.	5-7	9 9/32	6 13/32	6 17/32	4 19/32	3 11/32	27 oz.	6*	8.25
7" Auto	7K	1.47 oz.	6-8	7 1/16	7 1/16	5¾	4¼	3⅛	21 oz.	6	7.95
8" P. C.	75K	1.47 oz.	6-8	7½	7½	5⅜	5⅜	3 1/32	23 oz.	6*	7.90
10" Round	10K	1.47 oz.	8-10	10 11/32	10 11/32	6⅞	6⅞	4	44 oz.	4*	10.35
12" Round	12R	2.15 oz.	9-12	12 7/32	12 7/32	8¼	8¼	4 25/32	56 oz.	3*	11.65
**12" Round	12R8	2.15 oz.	9-12	12 7/32	12 7/32	8¼	8¼	4 25/32	56 oz.	3*	12.60
4x6" Ellip.	RS46A		Universal Rear Seat Auto Extension Speaker						40 oz.	1*	13.50
6x9" Ellip.	RS69J		Universal Rear Seat Auto Extension Speaker						48 oz.	1*	17.50

NOTE: Letter "M" designates speaker equipped with universal mounting bracket and tapped yoke. All Permoflux speakers have R.T.M.A. standard mounting holes, and transformer mountings.

*Ordering in standard package quantities will expedite handling.

**Speaker has 8 ohm voice coil. All others, 3.2 ohm.

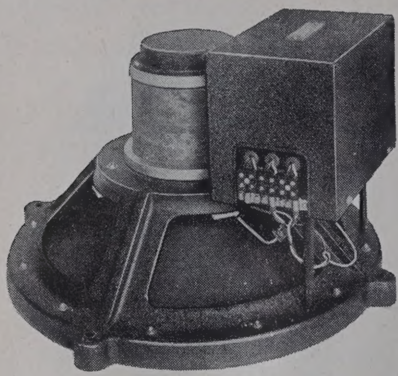
PERM-O-FLUX®
"SOUND IN DESIGN"

Write for More Complete Information

PERMOFLUX CORPORATION
CHICAGO 39, U.S.A.
GLENDALE 5, CALIF.

TANNOY AUDIO THRU BEAM INSTRUMENTS

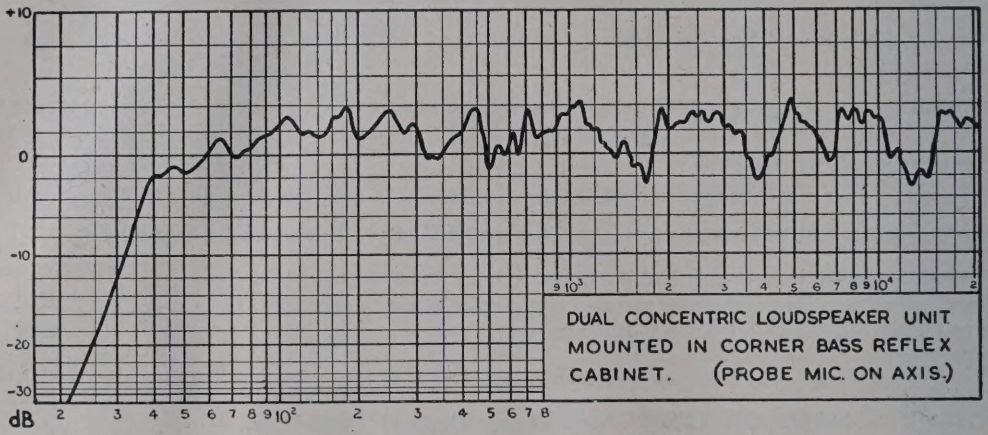
TANNOY
DUAL CONCENTRIC
LOUDSPEAKER SYSTEM



This twin Loudspeaker system consists of a direct radiator low frequency unit mounted concentrically with a horn-loaded high frequency unit. The voice coils of both Loudspeaker systems are fed through a specially designed cross-over network. The frequency response of both units is intrinsically level and the wide frequency response is not obtained by trick effects, such as cone break-up or diaphragm resonance. The design of the low frequency cone, which forms the final section of the high frequency horn, is such that even distribution of high frequencies is obtained over a wide angle and in order that the low frequency diaphragm shall move as a true piston, the body thickness has been increased and the surround is specially treated to prevent the setting up of subsidiary resonances. In the design of this Loudspeaker, great care has been taken to ensure that the entire system is truly aperiodic which, together with its wide frequency range result in really outstanding reproduction.

This Loudspeaker unit is available in two forms — a 15″ version, capable of handling up to 25 watts which is particularly useful for use with high quality Sound Reinforcement systems and a 12″ version capable of handling up to 15 watts, which finds its main application in high quality Phonograph and Radio reproducing systems. A suitable Cabinet design for these applications is the corner mounting Bass Reflex type of Cabinet.

There is no doubt that where the input source is of sufficiently high quality, the "TANNOY" Dual Concentric Loudspeaker system is well in advance of any type of Loudspeaker hitherto commercially available.



The above response curve relates to a 15″ dual concentric, the response of a 12″ unit is substantially the same in all respects.

TECHNICAL SPECIFICATION

	12″ Dual Concentric Loudspeaker	15″ Dual Concentric Loudspeaker
H.F. Voice coil diameter	2″	2″
L.F. " " "	2″	2″
H.F. " " impedance	14 ohms. at 3000 c.p.s.	12 ohms. at 2000 c.p.s.
L.F. " " "	18 ohms. at 400 c.p.s.	12 ohms. at 400 c.p.s.
Flux density L.F. Gap	10,000 gauss, $B_2 L_2$ 6·3 x 10_{14}	12,000 gauss, $B_2 L_2$ 7·7 x 10_{14}
" " H.F. Gap	15,000 gauss, $B_2 L_2$ 1·1 x 10_{14}	18,000 gauss, $B_2 L_2$ 1·39 x 10_{14}
Power handling capacity	15 watts.	25 watts peak
Impedance via crossover network	18 ohms.	15 ohms
Polar distribution—	3dB at 10,000 c.p.s. for 60° inc. angle	4dB at 10,000 c.p.s. for 60° inc. angle
Intermodulation produces	less than 2 per cent.	less than 2 per cent
Bass resonance	35 c.p.s.	40 c.p.s.
Crossover frequency	1,700 c.p.s.	1000 c.p.s.
Overall Diameter of Frame	12⅜″	15¼″
Overall Depth	7½″	11″
Fixing Holes p.c.d.	11¾	15½″
Weight	10 lbs. (Crossover network on separate chassis.)	30 lbs.
Finish	Black Anodised and Cadmium plate.	Cadmium plate and Stove Enamel.

Send for full descriptive literature to:

BEAM INSTRUMENTS CORPORATION

350 Fifth Avenue, New York 1, N. Y.

THE SPEAKER THAT SPEAKS FOR ITSELF

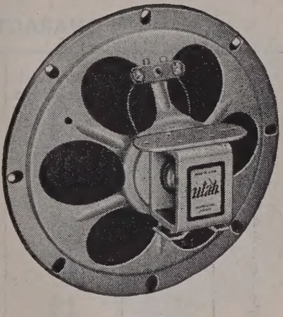
UTAH RADIO PRODUCTS CO., INC.

HUNTINGTON, INDIANA

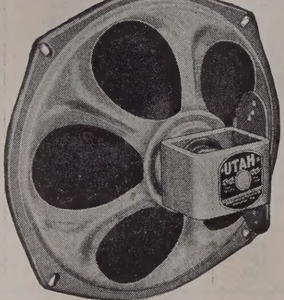
A WHOLLY OWNED SUBSIDIARY OF NEWPORT STEEL CORPORATION

CHARACTERISTICS — STANDARD PM GROUP

Group Size	Utah Catalog Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Alnico V Weight Ounces	Shipping Weight Pounds	Standard Pack	List Price
2″	SP2A	3-4	9/16	1-2	.68	¾	12	$4.20
3″	SP3A	3-4	9/16	2-4	.68	¾	12	4.25
3″	SP3B	3-4	9/16	2-4	1.00	¾	12	4.30
3″	SP3C	3-4	9/16	2-4	1.47	¾	12	4.85
4″	SP4A	3-4	9/16	2-4	.68	¾	12	4.30
4″	SP4B	3-4	9/16	2-4	1.00	¾	12	4.60
4″	SP4C	3-4	9/16	2-4	1.47	1	12	4.95
5″	SP5A	3-4	9/16	2-4	.68	¾	12	4.60
5″	SP5B	3-4	9/16	2-4	1.00	¾	12	4.95
5″	SP5C	3-4	9/16	2-4	1.47	1	12	5.30
6″	SP6B	3-4	9/16	2-4	1.00	1 ½	8	5.40
6″	SP6C	3-4	9/16	2-4	1.47	1 ⅛	8	6.05
6″	SP6D	3-4	¾	4-9	1.47	1 ½	8	6.25
6″	SP6E	3-4	¾	4-9	2.15	1 ½	8	6.85
6″	SP6F	3-4	¾	4-9	3.16	1 ½	8	7.65
7 ½″	SP8D	3-4	¾	4-9	1.47	1 ¾	6	7.70
7 ½″	SP8E	3-4	¾	4-9	2.15	1 ¾	6	8.10
7 ½″	SP8F	3-4	¾	4-9	3.16	2	6	9.80
8″	SP8G	3-4	1	6-12	3.16	2 ½	6	10.00
8″	SP8H	3-4	1	6-12	4.64	2 ½	6	11.45
7 ½″	SP8J	3-4	1	6-12	6.80	2 ¾	6	14.65
8″	SP8K	8	1 ¼	12-20	6.80	3 ¼	6	16.20
8″	SP8L	8	1 ¼	12-20	10.00	4	6	18.75
10″	SP10D	3-4	¾	4-9	1.47	3 ¾	1	9.00
10″	SP10F	3-4	¾	4-9	3.16	3 ¾	1	11.00
10″	SP10G	3-4	1	6-12	3.16	4	1	11.55
10″	SP10H	3-4	1	6-12	4.64	4	1	12.50
10″	SP10J	3-4	1	6-12	6.80	4 ¼	1	17.00
10″	SP10L	8	1 ¼	12-20	10.00	5 ¼	1	20.05
12″	SP12G	3-4	1	6-12	3.16	4 ¾	1	13.00
12″	SP12H	3-4	1	6-12	4.64	4 ¾	1	14.25
12″	SP12J	3-4	1	6-12	6.80	4 ¾	1	18.00
12″	SP12K	8	1 ¼	12-20	6.80	5 ½	1	19.25
12″	SP12L	8	1 ¼	12-20	10.00	6	1	23.25



SP6B



SP8E

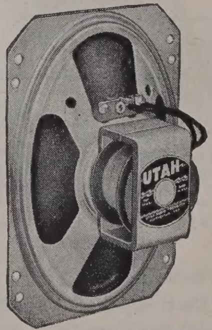
CHARACTERISTICS — OVAL GROUP

PM SPEAKERS

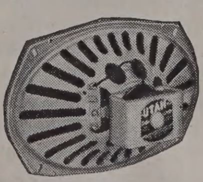
Group Size	Utah Catalog Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Alnico V Weight Ounces	Shipping Weight Pounds	Standard Pack	List Price
4″ x 6″	SP46B	3-4	9/16	2-4	1.00	1 ¼	8	$5.20
4″ x 6″	SP46C	3-4	9/16	2-4	1.47	1 ¼	8	6.25
5″ x 7″	SP57C	3-4	9/16	2-4	1.47	1 ¼	6	6.75
5″ x 7″	SP57E	3-4	¾	4-9	2.15	1 ½	6	8.15
5″ x 7″	SP57F	3-4	¾	4-9	3.16	1 ½	6	9.35
6″ x 9″	SP69D	3-4	¾	4-9	1.47	1 ¾	6	8.65
6″ x 9″	SP69E	3-4	¾	4-9	2.15	1 ¾	6	9.25
6″ x 9″	SP69F	3-4	¾	4-9	3.16	2	6	10.90
6″ x 9″	SP69H	3-4	1	6-12	4.64	2	6	12.65

EM SPEAKERS

Group Size	Utah Catalog Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Field Resistance Ohms	Shipping Weight Pounds	Standard Pack	List Price
4″ x 6″	SE4645	3-4	9/16	2-4	450	1 ½	8	$6.25
4″ x 6″	SE4610	3-4	9/16	2-4	1000	1 ½	8	6.30
4″ x 6″	SE4618	3-4	9/16	2-4	1800	1 ½	8	6.35
4″ x 6″	SE4625	3-4	9/16	2-4	2500	1 ½	8	6.40
5″ x 7″	SE5745	3-4	¾	4-9	450	2	6	7.20
5″ x 7″	SE5710	3-4	¾	4-9	1000	2	6	7.50
5″ x 7″	SE5718	3-4	¾	4-9	1800	2	6	7.50
5″ x 7″	SE5725	3-4	¾	4-9	2500	2	6	7.60
6″ x 9″	SE6945	3-4	¾	4-9	450	2	6	8.35
6″ x 9″	SE6910	3-4	¾	4-9	1000	2	6	8.50
6″ x 9″	SE6918	3-4	¾	4-9	1800	2	6	8.65
6″ x 9″	SE6925	3-4	¾	4-9	2500	2	6	8.65



SE4645



SE6945

utah

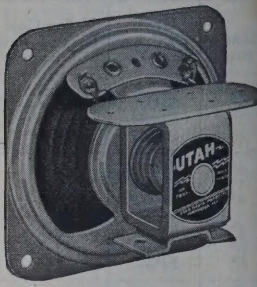
THE SPEAKER THAT SPEAKS FOR ITSEL

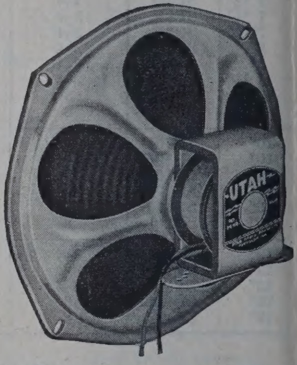
RADIO PRODUCTS CO., INC.
HUNTINGTON, INDIANA
A WHOLLY OWNED SUBSIDIARY OF NEWPORT STEEL CORPORATION

CHARACTERISTICS — STANDARD EM GROUP

Group Size	Utah Catalog Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Field Resistance Ohms	Shipping Weight Pounds	Standard Pack	List Price
3″	SE345	3-4	9/16	2-4	450	1	12	$5.40
3″	SE310	3-4	9/16	2-4	1000	1	12	5.45
3″	SE318	3-4	9/16	2-4	1800 #	1	12	5.45
3″	SE325	3-4	9/16	2-4	2500	1	12	5.45
4″	SE445	3-4	9/16	2-4	450	1	12	5.60
4″	SE410	3-4	9/16	2-4	1000	1	12	5.65
4″	SE418	3-4	9/16	2-4	1800 #	1	12	5.65
4″	SE425	3-4	9/16	2-4	2500	1	12	5.70
5″	SE545	3-4	9/16	2-4	450	1 ¼	12	5.65
5″	SE510	3-4	9/16	2-4	1000	1 ¼	12	5.75
5″	SE518	3-4	9/16	2-4	1800 #	1 ¼	12	5.80
5″	SE525	3-4	9/16	2-4	2500	1 ¼	12	5.85
6″	SE645	3-4	¾	4-9	450	2	8	6.75
6″	SE610	3-4	¾	4-9	1000	2	8	6.90
6″	SE618	3-4	¾	4-9	1800 #	2	8	6.90
6″	SE625	3-4	¾	4-9	2500	2	8	6.90
7 ½″	SE810	3-4	¾	4-9	1000	2 ¼	6	8.40
7 ½″	SE818	3-4	¾	4-9	1800 #	2 ¼	6	8.65
7 ½″	SE825	3-4	¾	4-9	2500	2 ¼	6	8.70
10″	SE1010	3-4	1	6-12	1000	4 ½	1	13.80
10″	SE1015	3-4	1	6-12	1500	4 ½	1	14.10
10″	SE1025	3-4	1	6-12	2500	4 ½	1	14.20
12″	SE1210	3-4	1	6-12	1000	6	1	16.10
12″	SE1215	3-4	1	6-12	1500	6	1	16.35
12″	SE1225	3-4	1	6-12	2500	6	1	17.00
15″	SE1510	8	1 ½	20-30	1000	15 ¾	1	32.00
15″	SE1515	8	1 ½	20-30	1500	15 ¾	1	32.25
15″	SE1525	8	1 ½	20-30	2500	15 ¾	1	32.50

Note: # tapped at 300 ohms.

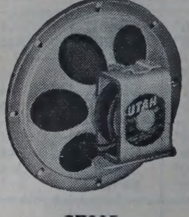

SE345


SE810

CHARACTERISTICS — TELEVISION GROUP

Group Size Inches	Utah Catalog Number	VOICE COIL			FIELD COIL		Shipping Weight Lbs.	Standard Pack	List Price
		Impedance	Dia.	Watts	Impedance	Watts			
5	SE5T6*	3.2	9/16	2-4	62 ohms	8	1 ¼	12	$5.60
5	SE5T10*	3.2	9/16	2-4	100 ohms	8	1 ¼	12	5.60
6	SE6T6	3.2	¾	5-7	62 ohms	8	2	8	7.35
6	SE6T10	3.2	¾	5-7	100 ohms	8	2	8	7.50
4 x 6	SE46T6	3.2	9/16	2-4	62 ohms	8	1 ¼	8	6.65
4 x 6	SE46T10	3.2	9/16	2-4	100 ohms	8	1 ¼	8	6.65

*SE5T6 and SE5T10 available in Round or Pin Cushion housing, specify.


SE625

1. Write for catalog.
2. Utah member R.T.M.A.
3. All Utah speakers manufactured within limits of the R.T.M.A. code.
4. Each speaker completely dustproofed.
5. Each speaker cadmium plated.
6. Outdoor speakers cadmium plated AND finished in Royal Blue Enamel.
7. Wide range, public address, and co-axial models cadmium plated AND finished in gold hammered lacquer.
8. Pot covers standard on all FM, PA, WR and co-axial models.
9. Immediate delivery on all models.
10. International distribution (Rocke). Jobbers in each major city.
11. 2″, 3″, 4″, 5″, and 6″ speakers equipped with universal mounting brackets.
12. Each EM speaker complete with hum-bucking coil.

Nationally advertised—all speakers have transformer mounting facilities.

SE46T6

THE SPEAKER THAT SPEAKS FOR ITSELF

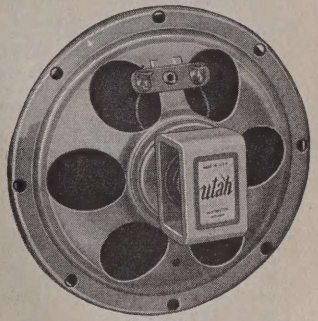
utah RADIO PRODUCTS CO., INC.

HUNTINGTON, INDIANA

A WHOLLY OWNED SUBSIDIARY OF NEWPORT STEEL CORPORATION

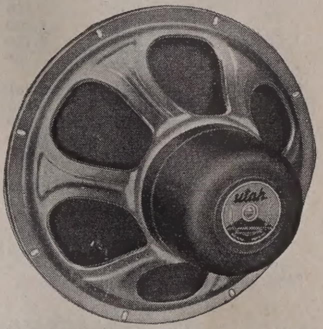
CHARACTERISTICS — OUTDOOR GROUP

Group Size Inches	Utah Catalog Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Alnico V Weight Ounces	Shipping Weight Pounds	Standard Pack	List Price
4	SP4CO	3-4	9/16	2-4	1.47	1	12	$5.75
5	SP5CO	3-4	9/16	2-4	1.47	1	12	6.10
6	SP6EO	3-4	1	4-9	2.15	1 ¾	8	8.95


SP5A1

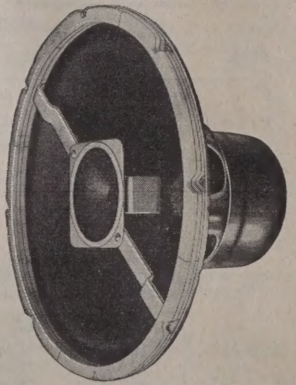
CHARACTERISTICS — AUTO SPEAKERS

Group Size Inches	Utah Catalog Number	Voice Coil Impedance Ohms	Voice Coil Diam. Inches	Optimum Audio Watts	Field Resistance Ohms	Alnico V Weight Ounces	Ship. Wt. Lbs.	Standard Pack	List Price
5	SE5Y6	3-4	9/16	2-4	4		1 ¼	12	$5.85
5 ¼	SE5S6	3-4	¾	2-4	4		2	12	6.25
6 ¼	SE6S6	3-4	¾	4-9	4		2	8	6.95
7	SE7Y6	3-4	¾	4-9	4		2	6	8.55
7	SE7Y6A**	3-4	¾	4-9	4		2	6	8.55
7 ½	SE7Z6	3-4	¾	4-9	4		2	6	8.90
6 x 9	SE69Y6	3-4	¾	4-9	4		2 ½	6	9.15
6 x 9	SP69D	3-4	¾	4-9		1.47	1 ¾	6	8.65
5 ¼	SP5DA	3-4	¾	2-4		1.47	1 ½	12	6.20
6 ¼	SP6EA	3-4	¾	4-9		2.15	1 ¾	8	7.60
7	SP7EA*	3-4	¾	4-9		2.15	1 ¾	6	8.95


SP15P

CHARACTERISTICS — WIDE RANGE AND PA GROUP

Goup Size	Utah Catalog Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Alnico V Weight Ounces	Shipping Weight Pounds	Standard Pack	List Price
8″	SP8JW	8	1	6-12	6.80	3	6	$16.60
12″	SP12JW	8	1	6-12	6.8003	6	1	20.50
12″	SP12LW	8	1 ¼	12-20	10.00	6 ¼	1	27.50
12″	SP12M	8	1 ¼	15-25	14.70	7	1	32.45
12″	SP12P	8	1 ½	20-30	21.50	7 ½	1	40.00
15″	SP15P	8	1 ½	20-30	21.50	10	1	50.00
15″	SP15R	8	2	30-40	31.80	10 ½	1	72.00


SP12J3

CHARACTERISTICS — CO-AXIALS

Group Size Inches	Utah Catalog Number	Input Impedance	Optimum Audio Watts	Alnico V (Woofer)	Shipping Weight Lbs.	Standard Pack	List Price
12	SP12J-3	8 ohms	10	6.80 oz.	10	1	$35.00
15	SP15P-5	8 ohms	15	21.5 oz.	15	1	55.00

EXPORT DEPT. ROCKE INTERNATIONAL CORPORATION, N. Y. C.

SE6S6

Cinaudagraph Speakers

CINAUDAGRAPH CO., 7334 N. CLARK ST., CHICAGO 26, ILL.

FIELD COIL MODELS

A complete line of high quality speakers for every use requiring a field coil unit. Each model listed is dustproof, of all-welded construction, and equipped with hum bucking coils or slugs. Suitable for both professional and amateur use, these Cinaudagraph speakers have splendid tone and long-life characteristics. Matching transformers listed below. New Cinaudagraph Universal Mounting Bracket supplied at no charge with each speaker 6″ and under, permits easy installation in all receivers.

REPLACEMENT SPEAKERS

SIZE	MODEL	FIELD COIL Resist.	FIELD COIL Watts	VOICE COIL Imped.	VOICE COIL Dia.	VOICE COIL Watts
3½″	F3B2	450	3	3.2	9/16″	1.5
4″	F4B2	450	3	3.2	9/16″	2.
	F4B3	1,000	3	3.2	9/16″	2.
	F4B4	1,800†	3	3.2	9/16″	2.
	F4B6	2,750	3	3.2	9/16″	2.
	F4B60	60	3	3.2	9/16″	2.
4″ x 6″	F46B2	450	3	3.2	9/16″	2.5
	F46B60	60	3	3.2	9/16″	2.5
	F46B100	100	3	3.2	9/16″	2.5
	F46B3	1,000	3	3.2	9/16″	2.5
	F46B24	1,800	3	3.2	9/16″	2.5
5″ Round	F5B1	6-volt	3	3.2	9/16″	2.5
	F5B2	450	3	3.2	9/16″	2.5
	F5B3	1,000	3	3.2	9/16″	2.5
	F5B6	2,750	3	3.2	9/16″	2.5
	F5B60	60	3	3.2	9/16″	2.5
5″ Pin Cush.	F51B1	6-volt	3	3.2	9/16″	2.5
	F51B2	450	3	3.2	9/16″	2.5
	F51B3	1,000	3	3.2	9/16″	2.5
	F51B24	1,800	3	3.2	9/16″	2.5
	F51B6	2,750	3	3.2	9/16″	2.5
5¼″ Pin Cush.	F53B1	6-volt	3	3.2	9/16″	3.
5″ x 7″	F57D2	450	4	3.2	¾″	5.
	F57D3	1,000	4	3.2	¾″	5.
	F57D4	1,800†	4	3.2	¾″	5.

SIZE	MODEL	FIELD COIL Resist.	FIELD COIL Watts	VOICE COIL Imped.	VOICE COIL Diam.	VOICE COIL Watts
6″	F6B1	6-volt	3	3.2	9/16″	3.
	F6B2	450	3	3.2	9/16″	3.
	F6B3	1,000	3	3.2	9/16″	3.
	F6B24	1,800	3	3.2	9/16″	3.
	F6B6	2,750	3	3.2	9/16″	3.
6″ x 9″	F69D11	6-volt	4	3.2	¾″	6.
	F69D2	450	4	3.2	¾″	6.
	F69D3	1,000	4	3.2	¾″	6.
	F69D4	1,800†	4	3.2	¾″	6.
7″	F7D11	6-volt	4	3.2	¾″	6.
	*F7D11A	6-volt	4	3.2	¾″	6.
7½″	F75D1	6-volt	4	3.2	¾″	6.
8″	F8D3	1,000	4	3.2	¾″	6.
	F8D4	1,800†	4	3.2	¾″	6.
	F8D5	2,500	4	3.2	¾″	6.
	F8H8	600	8	8.	1″	8.
	F8H3	1,000	8	8.	1″	8.
	F8H24	1,800	8	8.	1″	8.
	F8H5	2,500	8	8.	1″	8.
10″	F10H8	600	8	8.	1″	9.
	F10H3	1,000	8	8.	1″	9.
	F10H24	1,800	8	8.	1″	9.
	F10H5	2,500	8	8.	1″	9.
12″	F12H8	600	8	8.	1″	10.
	F12H3	1,000	8	8.	1″	10.
	F12H24	1,800	8	8.	1″	10.
	F12H5	2,500	8	8.	1″	10.

*Pot rotated 90 degrees. †T300.

TV REPLACEMENT SPEAKERS

SIZE	MODEL	FIELD COIL Resist.	FIELD COIL Watts	VOICE COIL Imped.	VOICE COIL Dia.	VOICE COIL Watts
4″	F4B60 TV	60	3	3.2	9/16″	2.
4″ x 6″	F46B60 TV	60	3	3.2	9/16″	2.5
	F46B100 TV	100	3	3.2	9/16″	2.5
5″	F5B60 TV	60	3	3.2	9/16″	2.5

AUTO REPLACEMENT SPEAKERS

SIZE	MODEL	FIELD COIL Resist.	FIELD COIL Watts	VOICE COIL Imped.	VOICE COIL Dia.	VOICE COIL Watts
5″ Round	F5B1	6-volt	3	3.2	9/16″	2.5
5″ Pin Cush.	F51B1	6-volt	3	3.2	9/16″	2.5
5¼″ Pin Cush.	F53B1	6-volt	3	3.2	9/16″	3.
6″ Pin Cush.	F6B1	6-volt	3	3.2	9/16″	3.
6″ x 9″	F69D11	6-volt	4	3.2	¾″	6.
7″ Pin Cush.	F7D11	6-volt	4	3.2	¾″	6.
	*F7D11A	6-volt	4	3.2	¾″	6.
7½″ Pin Cush.	F75D1	6-volt	4	3.2	¾″	6.

TRANSFORMERS

These transformers are conservatively rated, efficient, and match tubes most commonly used.

Transformers are not included in the list price of Cinaudagraph speakers, and must be ordered separately. All Cinaudagraph speakers, however, have provision for easy transformer installation.

ADJUSTABLE IMPEDANCE

½″ x ½″	12A3UL	***Line to 3.2 ohm V.C.
	12A3U	*Plate to 3.2 ohm V.C.
⅝″ x ⅝″	58A3U	*Plate to 3.2 ohm V.C.
¾″ x ¾″	34A8U	**Plate to 8. ohm V.C.
	34A8UL	***Line to 8. ohm V.C.
⅞″ x ⅞″	78A8UL	***Line to 8. ohm V.C.

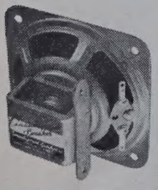
*Plate impedances of 2000, 4500, 7000 and 10,000 ohms (No C.T.).

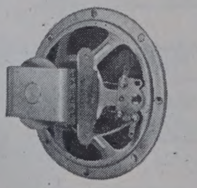
**Plate impedances of 3000, 5000, 6600, 7000, 10,000 ohms (All C.T.).

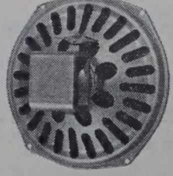
***Line impedances of 2000, 1500, 1000 and 500 ohms (No C.T.).

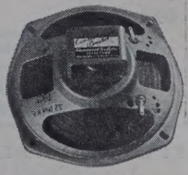
FIXED IMPEDANCE

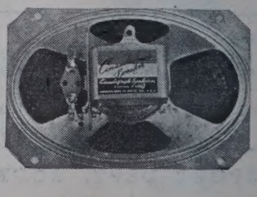
½″ x ½″	12A73	7000 ohms to 3.2 ohm V.C.
	12A43	4000 ohms to 3.2 ohm V.C.
	12A23	2000 ohms to 3.2 ohm V.C.
	12A53L	500 ohms to 3.2 ohm V.C.
⅝″ x ⅝″	58A83	8000 ohms to 3.2 ohm V.C.
¾″ x ¾″	34C53C	5000 ohms C.T. to 3.2 ohm V.C.
	34A53	5000 ohms to 3.2 ohm V.C.











Cinaudagraph Speakers

CINAUDAGRAPH CO., 7334 N. CLARK ST., CHICAGO 26, ILL.

PERMANENT MAGNET MODELS

Use Alnico 5 magnets for greatly improved performance without size or weight increase. Magnets soldered in place for long, trouble-free service. Speakers dust-proof and of all-welded construction; voice coil forms are not affected by moisture or temperature variation. Matching transformers listed on next page. Universal Mounting Bracket supplied with each speaker 6″ and under.

REPLACEMENT SPEAKERS

SIZE	MODEL	Magnet Alnico 5	VOICE COIL Imped.	VOICE COIL Diam.	VOICE COIL Watts
2″	P2A1	.68 oz.	3.2	9/16″	1.
	P2C1	1.47	3.2	9/16″	1.5
3½″	P3A1	.68	3.2	9/16″	2.
	P3C2	1.47	3.2	9/16″	2.5
4″	P4A1	.68	3.2	9/16″	3.
	P4C1	1.47	3.2	9/16″	3.5
4″ x 6″	P46A1	.68	3.2	9/16″	3.5
	P46C1	1.47	3.2	9/16″	4.
5″	P5A1	.68	3.2	9/16″	3.5
	*P51A1	.68	3.2	9/16″	3.5
	P5C1	1.47	3.2	9/16″	4.
	*P51C1	1.47	3.2	9/16″	4.
	P52F1	3.16	3.2	¾″	5.
5¼″	P53A1	.68	3.2	9/16″	4.
	P53C1	1.47	3.2	9/16″	4.5
5″ x 7″	P57C1	1.47	3.2	9/16″	5.
	P57F1	3.16	3.2	¾″	6.
6″	P6A1	.68	3.2	9/16″	4.
	P6C1	1.47	3.2	9/16″	4.5
	P6F1	3.16	3.2	¾″	5.
6″ x 9″	P69F2	3.16	3.2	¾″	8.
	P69H2	4.64	3.2	1″	9.
7″	P7E2	2.15	3.2	¾″	6.
	**P7E2A	2.15	3.2	¾″	6.
	P7G2	3.16	3.2	1″	8.
	P7H2	4.64	3.2	1″	9.
7½″	P75F1	3.16	3.2	¾″	7.
	P75H1	4.64	3.2	1″	9.
8″	P8D1	1.47	3.2	¾″	7.
	P8G1	3.16	8.	1″	8.
	P8G2	3.16	3.2	1″	8.
	P8H1	4.64	8.	1″	10.
10″	P10G1	3.16	8.	1″	9.
	P10H1	4.64	8.	1″	10.
	P10J1	6.8	8.	1″	12.
12″	P12G1	3.16	8.	1″	10.
	P12H1	4.64	8.	1″	12.
	P12J1	6.8	8.	1″	14.

*Pincushion basket.
**Pot rotated 90 degrees.

PUBLIC ADDRESS SPEAKERS

SIZE	MODEL	Magnet Alnico 5	Imped.	Diam.	Watts
6″	P6F1	3.16	3.2	¾″	5-8
	P6H1	4.64	3.2	1″	6-9
	P6J1	6.8	8.	1″	8-10
8″	P8H1	4.64	8.	1″	8-11
	P8J1	6.8	8.	1″	9-12
	*P8L1	10.	8.	1¼″	10-14
10″	P10H1	4.64	8.	1″	9-11
	P10J1	6.8	8.	1″	10-12
	P10L1	10.	8.	1¼″	12-18
12″	P12L1	10.	8.	1¼″	14-20
	P12P1	21.5	8.	1½″	20-30
	P12R1	35.	8.	2″	25-35
15″	P15L1	10.	8.	1¼″	16-20
	P15P1	21.5	8.	1½″	20-30
	P15R1	35.	8.	2″	25-35

*Waterproofed cone and voice coil.

AUTO REPLACEMENT SPEAKERS

SIZE	MODEL	Magnet Alnico 5	Imped.	Diam.	Watts
5″ Round	P5C1	1.47	3.2	9/16″	3.5
	P52F1	3.16	3.2	¾″	5.
5¼″ Pin Cush.	P53C1	1.47	3.2	9/16″	4.
6½″ Pin Cush.	P6F1	3.16	3.2	¾″	5.
6″ x 9″	P69F2	3.16	3.2	¾″	6.
7″ Pin Cush.	P7E2	2.15	3.2	¾″	5.
	*P7E2A	2.15	3.2	¾″	5.
7½″ Pin Cush.	P75F1	3.16	3.2	¾″	6.

*Pot rotated 90 degrees.

INTERCOMMUNICATION SPEAKERS

SIZE	MODEL	Magnet Alnico 5	Imped.	Diam.	Watts
3½″ Square	P3A21	.68	45.	9/16″	1.5
4″ Square	P4A21	.68	45.	9/16″	2.
5″ Pin Cush.	P51A21	.68	45.	9/16″	3.

CINAXIAL SPEAKERS

SIZE	MODEL	Magnet Alnico 5	Imped.	Diam.	Watts
12″	CIN-12A	4.64	8.	1″	10.
15″	CIN-15B	10.	8.	1¼″	15.
	CIN-15C	21.5	8.	1½″	18.
3″	*TW3C1	1.47	8.	9/16″	2.
5″	†TW52F1	3.16	16.	¾″	5.

*High frequency speaker only, as used in CIN-12A (requires 2 mfd. paper condenser in series with voice coil).

†High frequency speaker only, as used in CIN-15B and CIN-15C (requires 2 mfd. paper condenser in series with voice coil).

ALL-WEATHER SPEAKERS

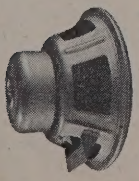
SIZE	MODEL	Magnet Alnico 5	Imped.	Diam.	Watts
4″	P4CO	1.47	3.2	9/16″	2.5
5″	P5CO	1.47	3.2	9/16″	3.5

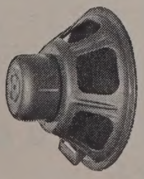
TV REPLACEMENT SPEAKERS

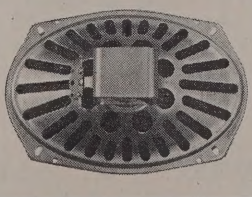
SIZE	MODEL	Magnet Alnico 5	Imped.	Diam.	Watts
5″ x 7″	P57FTV	3.16	3.2	¾″	6.
6″ x 9″	P69FTV	3.16	3.2	¾″	6.

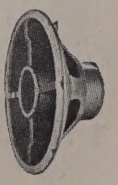
EXTENDED RANGE SPEAKERS

SIZE	MODEL	Magnet Alnico 5	Imped.	Diam.	Watts
8″	P8JHF1	6.8 oz.	8.	1″	7.
12″	P12JHF1	6.8	8.	1″	10.









Smith-Nathaniel BALDWIN SPEAKERS

Smith-Baldwin speakers are critically engineered. They are built of the finest and best material that is humanly possible to procure. They are individually packaged in colorful and attractive cartons and together with their high quality will spell bigger speaker-dollar sales for you.

PERMANENT MAGNET MODELS

This series will be found to be suited for replacements for home-constructors and inter-communication systems where costs and trouble-free operation are a serious consideration.

REPLACEMENT SPEAKERS

Size	Model	Magnet Alnico V	Imped.	Voice Coil Diam.	Watts
3″	P3AR1	.68 oz.	3-4	½″	1.5
3½″	P3AR1	.68	3-4	½″	1.5
3½″	P3AS2	1.00	45	½″	1.5
3½″	P3AS3	1.47	3-4	9/16″	2.
4″	P4AR1	.68	3-4	½″	1.5
4″	P4AS2	1.00	45	½″	2.
4″	P4AS3	1.47	3-4	9/16″	2.5
5″	P5AR1	.68	3-4	½″	3.
5″	P5AS2	1.00	45	½″	3.
5″	P5AS3	1.47	3-4	9/16″	3.5
5¼″ Pin Cush.	P5QAS3	1.47	3-4	9/16″	3.5
6½″ Pin Cush.	P6AR1	.68	3-4	½″	3.
6½″ Pin Cush.	P6AS2	1.00	3-4	9/16″	3.25
6½″ Pin Cush.	P6AS3	1.47	3-4	9/16″	3.5
6½″ Pin Cush.	P6CR5	2.15	3-4	¾″	4.
6½″ Pin Cush.	P6R6	3.16	3-4	¾″	5.
6½″ Pin Cush.	P60X8	4.64	3-4	1″	6.
6½″ Pin Cush.	P6Sun9	6.8	6-8	1″	8.
8″	P8CR5	2.15	3-4	¾″	6.
8″	P8R6	3.16	3-4	¾″	7.
8″	P80X8	4.64	6-8	1″	8.
8″	P8Sun9	6.8	6-8	1″	10.
10″	P10R6	3.16	6-8	¾″	8.
10″	P100X8	4.64	6-8	1″	9.
10″	P10Sun9	6.8	6-8	1″	10.
12″	P12R6	3.16	6-8	¾″	9.
12″	P120X8	4.64	6-8	1″	10.
12″	P12Sun9	6.8	6-8	1″	12.

HIGH FIDELITY SPEAKERS

Size	Model	Magnet Alnico V	Imped.	Voice Coil Diam.	Watts
8″	P8Sun10	10 oz.	6-8	1″	9.
10″	P10Sun10	10	6-8	1″	10.
12″	P12Sun10	10	6-8	1″	12.
15″	P15Sun10	10	6-8	1″	15.
12″	P12RM15	15 oz.	6-8	1¼″	14.
15″	P15RM15	15	6-8	1¼″	16.
12″	P12RM26	26.6 oz.	6-8	1½″	16.
15″	P15RM26	26.6	6-8	1½″	18.

OVALS

Size	Model	Magnet Alnico V	Imped.	Voice Coil Diam.	Watts
4″ x 6″	P46AS1	.68 oz.	3-4	½″	3.
4″ x 6″	P46AS3	1.47	3-4	9/16″	3.5
5″ x 7″	P57AS3	1.47	3-4	9/16″	4.
5″ x 7″	P57CR5	2.15	3-4	¾″	5.
6″ x 9″	P69R5	2.15	3-4	¾″	6.
6″ x 9″	P690X6	3.16	3-4	¾″	7.

RING MAGNET ALNICO III

Size	Model	Magnet	Imped.	Voice Coil Diam.	Watts
8″	P8-32	32 oz.	6-8	1″	8.
10″	P10-32	32	6-8	1″	10.
12″	P12-32	32	6-8	1″	12.

COAXIAL SPEAKERS

Size	Model	Magnet Alnico V	Imped.	Voice Coil Diam.	Watts
12″	P12C08	4.64 oz.	8	1″	10.
12″	P12C09	10.	8	1″	12.
15″	P15C09	10.	8	1½″	14.
15″	P15CORM26	26.	8	1½″	22.

WEATHEROID SPEAKERS

Size	Model	Magnet Alnico V	Imped.	Voice Coil Diam.	Watts
4″	P4AS3W	1.47 oz.	3-4	9/16″	2.5
5″	P5AS3W	1.47	3-4	9/16″	2.5
6½″ Pin Cush.	P6CRJW	2.15	3-4	¾″	4.
4″ x 6″	P46AS3W	1.47	3-4	9/16″	3.5

FIELD COIL MODELS

ALL SPEAKERS ARE DUST-PROOFED

ALL FIELD COIL MODELS ARE EQUIPPED WITH BUCKING COILS OR "HUM SLUGS"

REPLACEMENT SPEAKERS

Size	Model	Field Coil Resistance	Field Coil Watts	Imped.	Voice Coil Diam.	Voice Coil Watts
3½″	E3NT45	450	4.	3-4	9/16″	2.
4″	E4NT45	450	4.	3-4	9/16″	2.
4″	E4NT10	1000	4.	3-4	9/16″	2.
4″	E4NT18	1800	4.	3-4	9/16″	2.
4″	E4NT27	2750	4.	3-4	9/16″	2.
4″ x 6″	E46NT45	450	4.	3-4	9/16″	2.5
4″ x 6″	E46NT10	1000	4.	3-4	9/16″	2.5
4″ x 6″	E46NT18	1800	4.	3-4	9/16″	2.5
5″	E5V6NT	6 Volt	4.	3-4	9/16″	2.5
5″	E5NT45	450	4.	3-4	9/16″	2.5
5″	E5NT10	1000	4.	3-4	9/16″	2.5
5″	E5NT18	1800	4.	3-4	9/16″	2.5
5″	E5NT27	2750	4.	3-4	9/16″	2.5
6″ pin	E6V6NT	6 Volt	4.	3-4	9/16″	3.
6″ pin	E6NT45	450	4.	3-4	9/16″	3.
6″ pin	E6NT10	1000	4.	3-4	9/16″	3.
6″ pin	E6NT18	1800	4.	3-4	9/16″	3.
6″ pin	E6NT27	2750	4.	3-4	9/16″	3.
6″ x 9″	E69V6CR	6 Volt	4.5	3-4	¾″	6.
6″ x 9″	E69CR18	1800	4.5	3-4	¾″	6.
8″	E8RP10	1000	4.5	3-4	¾″	6.
8″	E8RP18	1800	4.5	3-4	¾″	6.
8″	E8RP25	2500	4.5	3-4	¾″	6.
8″	E80X10	1000	8.5	6-8	1″	8.
8″	E80X25	2500	8.5	6-8	1″	8.
10″	E100X75	750	8.5	6-8	1″	9.
10″	E100X18	1800	8.5	6-8	1″	9.
10″	E100X25	2500	8.5	6-8	1″	9.
12″	E120X10	1000	8.5	6-8	1″	10.
12″	E120X18	1800	8.5	6-8	1″	10.
12″	E120X25	2500	8.5	6-8	1″	10.

CONSOLIDATED RADIO PRODUCTS CO.
CHICAGO 10, ILLINOIS

microphones

ALTEC
LANSING CORPORATION

9356 Santa Monica Blvd.
Beverly Hills, Calif.

161 Sixth Avenue
New York 13, N.Y.

21B MICROPHONE

The 21B Microphone provides a new standard for frequency response and dynamic range in quality microphones. The 21B is a condenser microphone and, in addition to its miniature size and superb quality, is **omnidirectional**, shock proof, blast proof, and free from angular discrimination. Frequency response: 20 through 15,000 cps. Output level: —48 db re 1 milliwatt for a sound field of 10 dynes/cm^2.

21B and 150A BASE

The 21B is used on the 150A Base as a stand, suspension, or hand microphone. Small size makes it ideal for stage, TV, and motion pictures.

Customer Net Price: **$83.00**

152A CABLE SET

This cable set is designed for stand mounting of the 21B and 150A Base. It is equipped with 8 pin Cannon connectors. Connector at 150A Base has ⅝″-27 thread. Length with connectors: 25 ft.

Customer Net Price: **$25.00**

P-518A POWER SUPPLY

The P-518A Power Supply provides the necessary voltage for the 21B microphone and the impedance matching tube in the 150A Base, or the 155A Chestplate. This power supply is necessary to operate the microphone into an amplifier not specifically designed to receive it. The P-518A is a portable unit. Output impedance: 30, 250, 500 ohms. Power requirements: 117 V, 60 cycles A.C. Dimensions: 7½″ x 8¼″ x 6″.

Customer Net Price: **$90.00**

155A CHESTPLATE and 21B

The 21B on the 155A Chestplate is the ideal instrument for the active lecturer or announcer. It hangs around the neck and places the microphone near the lips, leaving the hands free. 25 feet of cable is permanently attached to the 155A Chestplate.

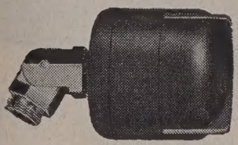
Customer Net Price: **$108.00**

CARDIOID MICROPHONE*
639A and 639B

Ideal for broadcast or public address, these cardioid microphones with ribbon and dynamic elements provide the best possible pick-up under varying, difficult conditions. High quality three-way (639A) and six-way (639B) directivity patterns are quickly selected by turning a screw. Each embodies a dynamic moving coil type pressure element. Impedance average 40 ohms. Power output level: —76 dbm. Frequency response: 40-10,000 cps.

LIST PRICE	
639A	$158.70
639B	$169.95

*Distributed by Graybar Electric Co.



DYNAMIC MICROPHONE*
632C

An exceptional, close-talking microphone for announcing and public address systems. Rugged, quiet-operating, unaffected by temperature, humidity or breath condensation.

Frequency response: 150 to 5000 cps.
Impedance: 30 ohms.
Power output level: —80 db.

List Price $70.95

*Distributed by Graybar Electric Co.

DYNAMIC MICROPHONE*
633A and 633C

This rugged, dependable high-quality microphone for public address, sound distribution system, or broadcasting, affords both non-directional and semi-directional performance.

Frequency response: 40-15,000 cps.
(633A) Impedance: 30 ohms.
(633C) Impedance: 30, 150-250 ohms.
Power output level: —79 dbm.

LIST PRICE	
633A	$83.10
633C	$91.50

*Distributed by Graybar Electric Co.

Microphone Accessories*

Items	List Price
8B Attachment	$10.65
9A Attachment	6.45
11A Attachment	18.15
22C Floor Stand	20.70
23A Desk Stand	6.90
24A Desk Stand	7.65
311A Plug	11.55
422A Jack	8.70
712A Adapter	3.30
713A Adapter	2.85
10994 Adapter	4.50

*Distributed by Graybar Electric Co.

ASTATIC

TV BOOSTERS and MICROPHONES

Astatic

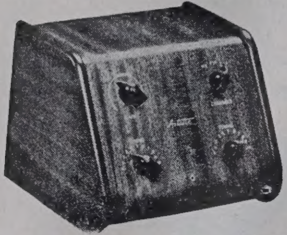
KNOWN THE WORLD OVER

CONNEAUT, OHIO

TELEVISION BOOSTERS

MODELS AT-1 and AT-1B

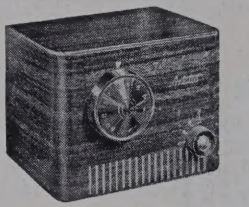
● A superior type of television booster. Ability to improve reception more effectively than ordinary boosters starts with the principle of "more tubes, stronger signal." A variable gain control knob permits reduction of signal strength to prevent picture distortion when the signal input is greater than that required. The failing of many boosters—showing a "peak" on some channels and "fall-off" on others—has been eliminated. These units provide extremely high gain, and do it throughout the television spectrum. Dual tuning controls allow separate tuning for picture and sound. Available in handsome furniture-finish mahogany or blond cabinets. The letter "B" in model number designates blond cabinet.



Model	Code	List Price
AT-1	ASAMI	$54.50
AT-1B	ASAMH	56.50

"SCANAFAR" MODEL CT-1

● Newest booster development on the market that matches the notable improvements in new receiver front-ends. Results are a new minimum noise figure with maximum gain. Band width (over 7 megacycles on all channels) and picture definition characteristics are excellent. The new Scanafar employs a balanced, cascaded circuit with a neutralized 6J6 tube driving a 6BQ7, the highly touted "quiet tube." **Both tubes are used over the entire TV frequency range.** Test this new Astatic unit where other boosters cause picture deterioration and/or fail to improve reception. By your own comparison, you will see the vast difference and superiority of advanced booster design.



Model	Code	List Price
CT-1	ASAMC	$32.50

CARBON MODEL 10M5

● For mobile applications, ship-to-shore communication, multitude of other uses. Unparalleled high sensitivity among carbon mikes, designed for greater ruggedness and convenience in use. Ideal response for speech clarity: 100 to 4500 c.p.s. range. Double-pole, single-throw switch, with relay and microphone circuits normally open (press-to-talk), adapts easily to wide variety of circuits. Four-conductor, self-coiling cable: retracted length, 12 inches; extended length, five feet. Coiled spring cable protector. Surface mounting wall, panel or dash hang-up bracket. Grey Hammerlin finish, die-cast housing.

Model	Code	List Price
10M5	ASUNM	$29.50

CRYSTAL MODEL D-104

● For close talking applications, such as radio amateur communications and similar uses. With high output level approximately —45 db, it possesses definitely reduced R.F. feed-back tendencies. Yoke-driven, bridge-mounted Graphoil crystal element with METALSEAL protection against moisture or dryness, shock-proof mounting and barometric compensation. Speech range frequency response from 30 to 7,500, rising 500 to 4,000 c.p.s. Chrome finish. Standard equipment includes interchangeable plug and connector, spring cable protector, 5' shielded cable.

	List Price
D-104—Code ASUPA	$24.60
G-D-104—Code ASVAX, with G-Stand	37.65
D-104-S—Code ASUPB, with S-Switch	27.35

CERAMIC MODEL D-104-C

● Duplicate of Crystal Model except for employment of ceramic element, which is immune to extremes of temperature and humidity. Performance comparable except for slightly lower output of approximately —58 db.

	List Price
D-104-C —Code ASUPC	$24.60
G-D-104-C—Code ASVAW	37.65
D-104-C-S—Code ASUQZ, with S-Switch	27.35

"SYNABAR" UNIDIRECTIONAL CARDIOID CRYSTAL

● Altogether professional in performance . . . performance to please the most exacting speakers and entertainers. Newly perfected unit employing special sintered metal which cancels out 15 db front to back, making it, for practical purposes, dead to sound from rear. Has truly excellent frequency range for its type and price class, 50 to 10,000 c.p.s., PLUS a Response Selector switch to provide choice of ideal pick-up characteristics for either crisp voice or general voice and music. Crystal element has special METALSEAL protection against moisture or dryness. Output level is —54 db, high impedance. Satin chrome finish. 18' single conductor shielded cable, with or without off-on switch. Recommended, without reservation, for highest quality reproduction and elimination of extraneous noise, in the widest variety of modern applications.

Model	Code	List Price
DR-10	ASVFL	$37.25
DR-10-S*	ASVFK	39.95

*With off-on switch.

Astatic Crystal Devices manufactured under Brush Development Co. patents.

NOTE: All microphone output ratings based on a reference level of one volt per microbar.

Astatic

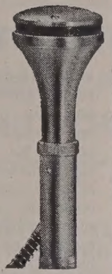
KNOWN THE WORLD OVER

CONNEAUT, OHIO

ASTATIC

MICROPHONES

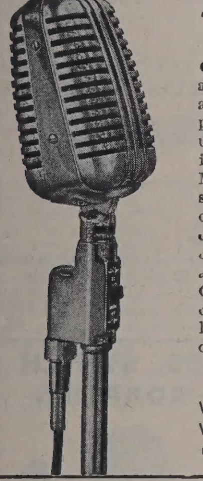
CRYSTAL MODEL DK-1



● New non-directional unit for studio and public address, featuring reduced size and design established primarily to allow unobstructed, least detracting view of performer. Brushed chrome finish contributes to this purpose by reducing distracting light reflections and glare. Excellent frequency range, with rising characteristics between 2,000 and 5,000 c.p.s. Output level is approximately —55 db. Crystal element has moisture-proof coating. Includes 10 ft. rubber covered, shielded single conductor cable. Available with off-on switch (SC-11) at $2.70 extra.

	List Price
DK-1—Code ASURV	**$22.00**

The WR-SERIES



● The WR-Series, Multi-Unit Microphones, are highly recommended for studio, public address and high quality recording purposes. Substantially flat frequency response up to 10,000 cycles. Due to their special interior assembly design, the WR-Series Microphones are practically transparent to sound waves and cannot be acoustically overloaded Model WR-20 may be used on cable up to 100 ft. with negligible loss of output and Model WR-40 is more than able to handle cable twice this length. Output level —56 db. Finish, bright chrome with satin chrome grille. Cable length, 15 ft. Add **$2.70** for models with off-on switch, as shown.

	List Price
WR-20—Code ASVGZ	**$32.30**
WR-40—Code ASVAL	**43.25**

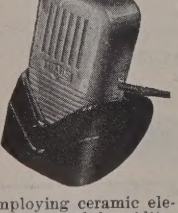
(Available with Off-On Switch or G-Stand)

"CARDINAL" CRYSTAL

● A sparkling gold finish, low-cost beauty with performance comparable to high-priced units. All-purpose microphone (see accessory list). Lifts from its streamlined, dark brown plastic desk stand for hand use. Wide range response, adaptable to standard AC or DC circuits, with 10′ cable Output level approximately —52 db.

	List Price
CX —Substantially flat—(Microphone only) Code ASAOA	**$9.75**
CX-1—Rising characteristics— Code ASAPZ	**9.75**

"CARDINAL" DYNAMIC



● Duplicate of Model CX in appearance, but equipped with dynamic unit.

	List Price (Microphone only)
CDH—(High Impedance) Code ASAOF	**$24.50**

"CARDINAL" CERAMIC

● Duplicate of Model CX in appearance, but employing ceramic element, which is immune to extremes of temperature and humidity. Equipped with 5′ cable. Output approximately —62 db.

	List Price (Microphone only)
CC —Substantially flat—Code ASAPU	**$8.95**
CC-1—Rising characteristics—Code ASAPT	**8.95**

"CARDINAL" ACCESSORIES

● "Cardinal" plastic desk base, **$1.00**; any model available with off-on switch, **$1.50** extra; hang-up hook, **$0.25**; stand adapter, **$0.35**.

"VELVET VOICE" CRYSTAL

● Here is a convertible type Crystal Microphone, providing ultra-smooth, velvety soft, wide range response, that may be used as desk, hand or floor stand microphone, to meet practically every microphone need. Beautiful gold finish housing and handle; bright chrome grille; brown baked enamel, detachable base; 10′ shielded cable. Output level approximately —52 db. Two models: Model 200 with smooth, even frequency response characteristics from 30 to 10,000 c.p.s.; Model 241, with similar range but rising characteristics between 1500 and 5500 c.p.s. for added brilliance in speech range.

(Without Switch)	List Price
200—Code ASUVA	**$13.95**
241—Code ASUVC	**13.95**
(With **Off-On** Switch)	
200-S—Code ASUVB	**15.00**
241-S—Code ASUVD	**15.00**

"VELVET VOICE" DYNAMIC

● This microphone is identical with Model 200, in appearance, but is equipped with a dynamic unit. Semi-directional. Exceptionally high output level of High Impedance Model, approximately —50 db. Frequency response, 30 to 10,000 c.p.s.

(Without Switch)	List Price
VDL —(50 ohms)—Code ASANA	**$19.95**
VDH*—(High Impedance)—Code ASAND	**27.50**

*High impedance model only available with **ON-OFF** switch, **$1.40** extra.

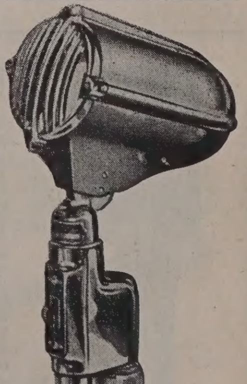
"VELVET VOICE" CERAMIC

● Also identical in appearance with Model 200, but employing the amazing, new piezoelectric ceramic element. Recommended where high temperatures and humidity are service factors. Equipped with 5′ cable. Output level approximately —62 db. Frequency response 30 to 10,000 c.p.s.

	List Price
VC —(5 Meg.)—Substantially flat—Code ASAQR	**$13.15**
VC1—(5 Meg.)—Rising characteristics—Code ASAQP	**13.15**

Available with On-Off switch at $1.05 extra

The DYNAMIC



● Three models—50 ohm impedance, high impedance or multi-impedance, the latter having a multi-impedance transformer and impedance selector switch to provide choice of 50, 200 and 500 ohms or high impedances. A semi-directional, all purpose dynamic microphone incorporating a unitary moving coil system, and carefully proportioned acoustic circuit to highly damp the natural resonance of the moving system and provide a response characteristic substantially flat from 50 to 7,000 cycles. Output level DN-HZ approximately —55 db. The "DN" design employs all features necessary for wide applicability, including Astatic's tilting-head, swivel mount, permitting semi- or non-directional positions. Opalescent gray and bright chrome finish. High- or multi-impedance models only are available with Type SC-11 Off-On Switch (as illustrated) at $2.75 extra. 10-ft. shielded cable.

	List Price
DN-50—(50 ohms)—Code ASVNJ	**$21.90**
DN-HZ—(High impedance)—Code ASVNG	**29.50**
DN-MZ—(Multi-impedance)—Code ASVNL	**39.75**

(All models available with G-Stand at $13.00 extra.)

Astatic Crystal Devices manufactured under Brush Development Co. patents.

ASTATIC MICROPHONES AND STANDS

Astatic
KNOWN THE WORLD OVER
CONNEAUT, OHIO

The JT-SERIES CRYSTAL & CERAMIC

● Because of their wide range of usefulness, excellent performance and low price, Astatic JT-Series Microphones are used extensively for amateur, public address and home recording. JT-Series Microphones are available in both wide and voice range models and, in addition to standard equipment, are furnished complete with concentric cable connector, convenient wood handle, interlocking metal base. Crystal model has 10′ cable; ceramic, 5′. Wood handle may be removed and microphone used on floor stand. Crystal models' output level, —52 db, provides ample reserve for use with high gain amplifiers. Ceramic models' output approximately —62 db. Opalescent gray with bright chrome grille.

		List Price
JT-30	—Substantially flat—Code ASVLG	**$16.95**
JT-40	—Rising characteristics—Code ASVLD	**16.95**
***JT-30-C**	—Substantially flat—Code ASVLF	**16.15**
***JT-40-C**	—Rising characteristics—Code ASVLC	**16.15**

*Ceramic Models.

LAPEL TYPE MODEL L-1

● This very small dual-diaphragm crystal microphone was developed to meet especially difficult pickup conditions. Equipment includes lapel-type spring clip and over-shoulder cord to permit wide latitude of movement. Output level —62 db. Frequency response uniform from 30 to 10,000 c.p.s. Finish, black, oxidized. Furnished with 15′ cable.

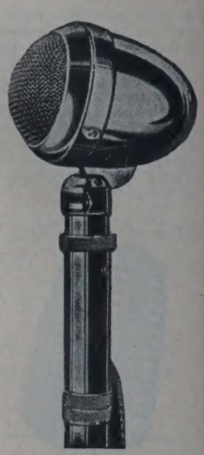
	List Price
Model L-1—Code ASUSN	**$27.35**

MODEL K-2

● Because of its smooth, undistorted reproduction and the fact that it cannot be acoustically overloaded, Astatic Model K-2 Crystal Microphone is favored and extensively used. In this model, Astatic provides a small size, dual-diaphragm type crystal microphone for studio use, recording, dance bands, public address installations and general applications where quality performance is required. With dual crystal unit design, Model K-2 has twice the capacitance of the usual crystal microphone and correspondingly longer cable lengths may be used. Standard equipment includes plug and socket connector and 15′ cable. Output level —62 db. Bright chrome finish.

		List Price
K-2	—Code ASURX	**$30.10**
K-2-S	—Code ASURW, with S-Switch	**32.85**
GK-2	—Code ASUZA, with G-Stand	**43.10**

CRYSTAL MODEL T-3



● Definitely established by long and continued popularity, Model T-3 Crystal Microphone is highly practical for many and varied applications. Its use is suggested for studio set-ups, with amateur rigs, intercommunicating systems, public address installations and for high-class recording purposes. Crystal element has special METALSEAL protection against moisture or dryness. Microphone head may be tilted with ease on unique swivel mounting and pickup pattern made semi- or non-directional, as desired. Output level —52 db. Frequency response substantially uniform from 30 to 10,000 cycles. Equipped with interchangeable plug and socket connector and 15 ft. cable. All chrome finish.

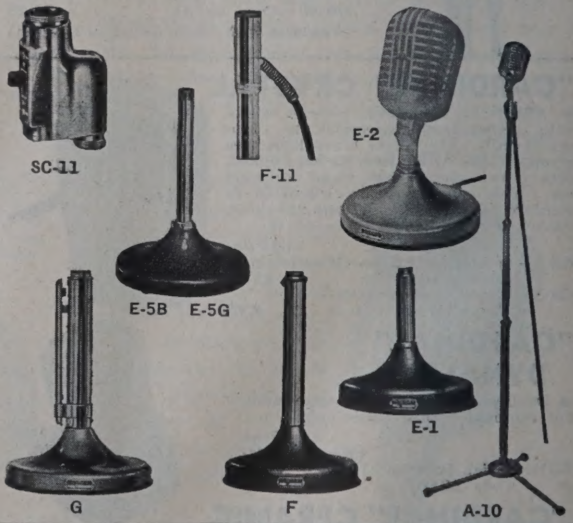
		List Price
T-3	—Code ASVCX	**$27.35**
T-3-S	—Code ASVCW, with S-Switch	**30.10**
GT-3	—Code ASUZD, with G-Stand	**40.40**

CERAMIC MODEL T-3-C

● Duplicate of Model T-3 except for employment of heat and moisture-immune ceramic element. Output level —62 db with 5′ cable.

		List Price
T-3-C	—Code ASVCU	**$25.55**
T-3-C-S	—Code ASVCT, with S Switch	**28.30**

MICROPHONE STANDS, SWITCH CONNECTORS AND ADAPTERS



MODEL	FINISH	HEIGHT	LIST PRICE
A-10—Floor	Chrome & Gray	2′ to 6′	**$10.00**
G—(Grip-to-Talk)	Chrome & Gray	8¼″	**18.50**
F—Desk	Chrome & Gray	8¼″	**10.00**
E-1—Desk	Chrome & Gray	5½″	**5.40**
E-5B—Desk	Chrome & Brown	8″	**5.40**
F-5G—Desk	Chrome & Gray	8″	**5.40**
F-11—Adapter	Chrome		**4.75**
SC-11—Switch Connector	Chrome		**6.00**
E-2—Desk Stand	Chrome & Gray	2⅝″	**7.00**

Astatic Crystal Devices manufactured under Brush Development Co. patents.

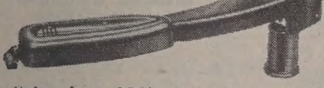
Astatic

KNOWN THE WORLD OVER
CONNEAUT, OHIO

ASTATIC

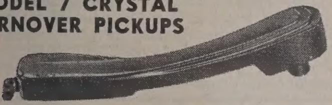
PICKUPS FOR SLOW SPEED AND STANDARD 78 RPM RECORDS

MODEL 6-D CRYSTAL TURNOVER PICKUP



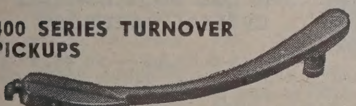
- Switches from 33⅓ or 45 RPM records to standard 78 with turnover knob at front. Plays both types of records at only eight-gram needle pressure, thus has no extra mechanism to change pressure when knob is turned, eliminating a potential source of trouble and varying reproduction quality. Employs LQD-1 Double-Needle Cartridge. Mounts seven inches from turn-table center, die-cast curved arm finished in dark brown Hammerlin.

MODEL 7 CRYSTAL TURNOVER PICKUPS



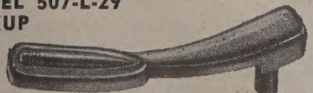
- Model 7-CAC-D employs revolutionary new Astatic "Twin CAC" turnover cartridge, two complete cartridge assemblies back to back on a common plate. See cartridge description, following page, for sensational performance qualities. Pickup model 7-D employs Astatic's popular "smooth response cartridge," the tiny ACD turnover. Cast aluminum arm design affords minimum tracking error and balanced groove sidewall pressure, resulting in reduced tracking distortion and longer record and needle life. Cartridge rotates in improved snap-action turnover mechanism. Light brown Hammerlin finish.

400 SERIES TURNOVER PICKUPS



- Transcription pickups adapted from famous Astatic Studio Master "400." Notable tracking excellence, low needle talk. Gracefully curved, cast aluminum arm in light brown Hammerlin finish. Model 400-CAC-D employs revolutionary new Astatic "Twin CAC" turnover cartridge, two complete cartridge assemblies back to back on a common plate. Model 400-D employs Astatic's popular "smooth response cartridge," the tiny ACD turnover.

MODEL 507-L-29 PICKUP



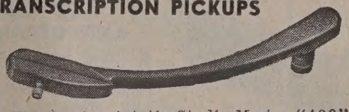
- Bedrock price, with full professional performance standards retained. The new L-29 Crystal Cartridge employed is notable for high output, which affords excellent results in use with standard phonograph amplifiers, where other lower output cartridges are not satisfactory. Has universal, screw-type needle chuck to receive standard needles. Plays 33⅓, 45 or 78 RPM records simply by using proper needle. Pickup is furnished without needle. Die-cast arm finished in opalescent grey Hammerlin. New, anti-friction swivel base.

FOR COMPLETE SPECIFICATIONS SEE CHART ON PAGE D-7

510 SERIES—CRYSTAL, MAGNETIC AND CERAMIC PICKUPS

- Add Astatic's new anti-resonance swivel base, and newly developed crystal, ceramic and magnetic cartridges with special one mil or All-Groove tip, precious metal or jeweled stylus, to the popular Astatic Model 510 Pickup—and you have these new slow-speed models, the finest performers in their price class. Permanently adjusted to low needle pressures, short mounting centers make them ideal for a host of long-playing applications. Outstanding characteristics are high uniform output and low needle point impedance. Die-cast arm, finished in Hammerlin opalescent grey. Specify **Model 510-CAC** for unit employing tiny new CAC-J Crystal Cartridge, the closest thing to perfection for the most discriminating lover of serious music. **Model 510-AC** has the newest miniature Astatic crystal cartridge, the sensationally smooth response AC Cartridge with type "A" Needle for slow speed records. For quality reproduction altogether out of proportion to low cost in a crystal unit, specify **Model 510-LT-4AG**, employing LT Cartridge with special All-Groove stylus tip for all record types. **Model 510-MI-2-33** offers on slow speed records highest quality reproduction to please the most discriminating—troublefree and stable through continuous service—thanks to its improved type magnetic cartridge. **Model 510-GC** has Astatic's GC Ceramic Cartridge, immune to extremes of temperature and humidity, and provides truly splendid quality of reproduction on slow speed records with its one-mil replaceable needle.

MODELS 400-CAC AND 400-MI-2-33 TRANSCRIPTION PICKUPS



- The famous Astatic Studio Master "400" conventional transcription arm, adapted for slow-speed transcriptions. Incorporates the improved base mounting assembly that eliminates arm resonances and assures perfect tracking, and the CAC-J Crystal Cartridge with sapphire stylus of one mil tip-radius. Impartial experts have singled out the CAC-J as the ultimate for long-playing transcription performance. Cast aluminum arm, permanently adjusted at six-gram needle pressure. Light brown Hammerlin finish. Specify Model 400-MI-2-33 for the same arm, except for employment of Astatic's Magnetic Cartridge.

FOR SPECIAL APPLICATIONS CAC-W-J & CAC-78W-J CRYSTAL CARTRIDGES

- The CAC-W-J is the same cartridge as the CAC-J, except furnished with special terminals and fittings for quick installation in record changer tone arms with plug-in heads. The CAC-78W-J offers the same new quality of reproduction installed in plug-in heads for standard 78 RPM records. Available with diamond as well as sapphire stylus tip.

REFER TO CARTRIDGE TABLES FOR:

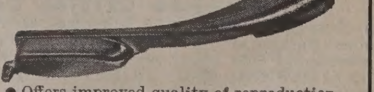
ASTATIC CARTRIDGE	APPLICATION
MD Series	Markel Record Changers (Slow speed and standard 78 RPM)
401-A	RCA Replacement (Standard 78 RPM)
L-78	Seeburg Record Changers (Standard 78 RPM)
PT	Replaces Philco parts 35-2671, 35-2671-1
402-M	Replaces Admiral 78 RPM Snap-in Cartridge—Part No. A1372
403-J	Replaces RCA Part 70338, and 70339 and 72551 silent sapphire cartridges

PICKUPS FOR SPECIAL APPLICATIONS

MODEL 9-D—TURNOVER ASSEMBLY AND "TWIN CAC" CARTRIDGE, MOUNTED IN V-M STYLE TONE ARM

- Replaces the entire tone arm—easily, quickly, with only a screwdriver—for thrilling perfection in quality of reproduction on all record types. Simple instructions with each unit. Sapphire needle on slow-speed side, osmium on 78 RPM side. For V-M Models 920, 950, 955, 970, 971, 975, 980, 985.

MODEL 8-D—TURNOVER ASSEMBLY AND DOUBLE-NEEDLE CARTRIDGE, MOUNTED IN WEBSTER-CHICAGO TONE-ARM



- Offers improved quality of reproduction for all record types. Installation is the easiest and speediest job of its type . . . you replace entire tone arm. No alterations to record changer . . . all you need is a screwdriver. Simple instructions with each unit. FOR WEBSTER-CHICAGO CHANGER MODELS: 246, 256, 255, 262, 264, 346, 356, 355, 362, 357, 364.

Astatic Crystal Devices manufactured under Brush Development Co. patents.

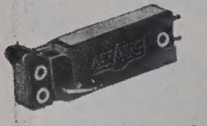
ASTATIC

CARTRIDGES FOR SLOW SPEED AND STANDARD 78 RPM RECORDS

Astatic

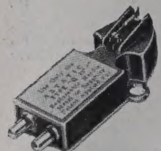
KNOWN THE WORLD OVER CONNEAUT, OHIO

FOR COMPLETE SPECIFICATIONS SEE CHART ON PAGE D-7



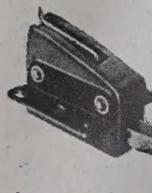
AC SERIES CRYSTAL AND CERAMIC CARTRIDGES

● New mechanical drive system affords new low in inertia, for extraordinary smooth response, new tracking excellence, low needle talk. Miniature size belies BIG full-throated performance. Weighs approximately five grams. Has easily replaceable Type "A" Needle with one-mil sapphire tip for slow speed records or special All-Groove tip for all record types. Models available with ceramic elements, immune to severe climates, as well as crystal. Model AC-J has correct mounting brackets to fit RCA and similar 45 RPM changers as well as other slow-speed units. AC-RJ has special brackets to fit special RCA 45 RPM changer (replaces RCA 76257 Cartridge).



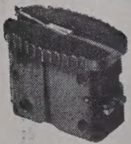
THE CAC SERIES CRYSTAL CARTRIDGES

● The tiny new unit which has won the praise of experts as the "ultimate" for slow speed records. Internally equalized to follow Columbia Records Inc. ideal frequency response for the recording characteristics of LP records. Aluminum housing with standard ½" mounting holes to fit most tone arms, has adapter plate to mount in RCA and similar 45 RPM changers. Uses Q-33 needle, easily replaceable without tools, and with one-mil sapphire or diamond tipped needle for slow speed records, or special All-Groove sapphire tip for all record types.



THE GC CERAMIC CARTRIDGE

● First major stride in cartridges employing ceramic elements since Astatic pioneered in this type unit. The first with replaceable needle. Takes "Type G" needle—with either one-mil sapphire tip radius or special All-Groove tip for all record types—which slips from its rubber chuck with a quarter turn sideways. Resistance to high temperatures and humidity is not the only additional advantage. Output has been increased over that of any ceramic cartridge available. Light weight and low needle pressure make it ideal for a great variety of modern applications. Fits standard ½" mounting and RCA 45 RPM record changers.



THE U-J CRYSTAL CARTRIDGE

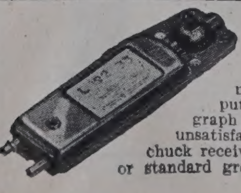
● The record player owner slips out this cartridge in a second and slips in the U-78-J (below) when he wants to change from 33⅓ or 45 to 78 RPM records. Replaces Philco part 45-1609, fits Columbia Model 101 player, and Astatic FL Series pickups. Gives stellar performance. Secures itself in the pickup on slip-in principle, the same as barrel and cap of some modern fountain pens. No changing of needle pressure, nothing else to be done. Five-gram needle pressure. Replaceable sapphire stylus with one-mil tip radius. The U-J replaces, and is interchangeable with, the discontinued Astatic LP-33.

THE U-78-J CRYSTAL CARTRIDGE

● Interchangeable with U-J Cartridge (above), to play 78 RPM records. Five gram needle pressure. Has three-mil tip radius replaceable sapphire needle. The U-78-J replaces the discontinued Astatic LP-78.

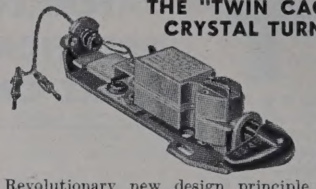
THE LT-5-AG CRYSTAL CARTRIDGE

● New high compliance in a low-cost cartridge. The greatly improved tracking ability allows reduced needle pressure and subsequent extension of both record and needle life. Employs D-AG Osmium Tipped All-Groove Needle for all record types. Stamped aluminum housing.



L-29 CRYSTAL CARTRIDGE

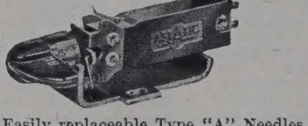
● High performance quality in a new, low-cost unit. Notably high output permits use with standard phonograph amplifiers, where other cartridges prove unsatisfactory. Universal screw type needle chuck receives any standard needle for microgrove or standard groove records. Stylus not furnished.



THE "TWIN CAC" MODEL CAC-D-J CRYSTAL TURNOVER CARTRIDGE

● The first major advancement in turnover cartridges. Unlimited in reproduction clarity, fidelity and brilliance of tone. It is equal to the finest in single-needle types, the Astatic CAC-J, and surpasses all others. Revolutionary new design principle combines two complete CAC cartridge assemblies, back to back, on a common plate. Output and response characteristics of each side established independently of the other and, thus, for the first time, ideal for each side: 0.8 volt at 1 kc. on Audiotone 78-1 test record and 0.7 volt on RCA 12-5-31-V test record. Frequency range, 30 to 11,000 cycles. Needles independent of each other, free of interaction. Needle pressure, 10 grams. Unique but simple switching device in turnover mechanism connects only the cartridge or side being used to amplifier phonograph input. Furnished complete with turnover bracket and knob assembly, with standard ½" mounting holes. Wiring terminating in pin connectors, graduated for two dimensions now standard on lead wire connectors. Easily installed without soldering. Equipped with Type Q (3-mil) and Type Q-33 (1-mil) sapphire tipped needles.

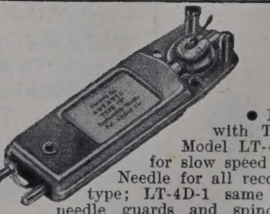
THE ACD-J DOUBLE-NEEDLE CRYSTAL AND CERAMIC CARTRIDGES



● Newest Astatic double-needle, turnover cartridge — featuring smooth response, tiny size and light weight. Extraordinary performance made possible by a mechanical drive system with a new low in inertia. Total weight approximately 5 grams. Easily replaceable Type "A" Needles. Model ACD-1J replacement cartridge for ACD-2J assembly. Model ACD-2J complete with turnover assembly and knob, as illustrated. All are available with ceramic instead of crystal elements, for immunity to extremes of climate. (See table for details.)

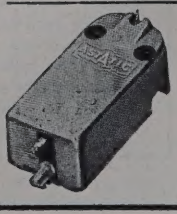
THE LQD DOUBLE-NEEDLE CRYSTAL CARTRIDGE

● The LQD Cartridge — for 45, 33⅓ and 78 RPM Records — quickly became the first choice of many of the nation's largest users, on the basis of comparative listening tests, and is, today, the PROVED TOP PERFORMER for turnover type pickups. Outstanding for excellence of frequency response, particularly at low frequencies. A gentle pry with penknife removes ONE "Q" needle for replacement . . . without disturbing the other needle, without removing cartridge from tone arm. Gentle pressure snaps new needle into place. Stamped aluminum housing. Model LQD-1J, illustrated, complete with needle guards and spindle for turnover knob. Model LQD-1JB complete with entire turnover assembly and knob.



THE LT-4 DOUBLE AND SINGLE-NEEDLE CRYSTAL CARTRIDGES

● New high output, low-cost cartridge with Type "D" precious metal needles. Model LT-4M, illustrated, with single needle for slow speed records; LT-4-AG with All-Groove Needle for all records, LT-4D double-needle turnover type; LT-4D-1 same as LT-4D except equipped with needle guards and spindle for turnover knob. Stamped aluminum housing.



MI-2J-33 MAGNETIC CARTRIDGE

● Peak fidelity of reproduction that LASTS, even under the most consistent service or adverse climatic conditions. Troublesome, costly armature balancing problems eliminated. Mumetal housing provides increased shielding effect for maximum reduction of hum. Fixed needle with one-mil sapphire stylus tip.

Astatic

KNOWN THE WORLD OVER

CONNEAUT, OHIO

ASTATIC

SLOW SPEED PICKUPS AND CARTRIDGES SPECIFICATIONS

PICKUPS FOR SLOW-SPEED AND STANDARD 78 RPM RECORDS

Model	List Price	Finish	Cartridge Used*	Element Type	Stylus	For Record		Cable Length**	Shipping Weight	Code
						Size	Speed			
6-D	$15.90	Dark Brown Hammerlin	LQD-1	Crystal	Precious Metal† Sapphire†	7-10-12"	All	13"	2 lbs.	ASXHU
7-CAC-D	16.40	Light Brown Hammerlin	CAC-D-J	Crystal	Precious Metal† Sapphire†	7-10-12"		13"	2 lbs.	ASXHT
7-D	15.90		ACD	Crystal	Precious Metal† Sapphire†	7-10-12"		13"	12 ozs.	ASXHV
8-D	11.50	Brown Plastic	(Special for Webster-Chicago Record Changers)			7-10-12"		2"	12 ozs.	ASXHW
9-D	11.50	Brown Plastic	CAC-D-J	(Special for V-M Record Changers)		7-10-12"		2"	12 ozs.	ASXHX
400-CAC-D	25.50	Light Brown Hammerlin	CAC-D-J	Crystal	Precious Metal† Sapphire†	10-12-16"		24"	1 lb. 8 ozs.	ASBCU
400-D	25.00		ACD-2	Crystal	Precious Metal† Sapphire†	10-12-16"		24"	1 lb. 8 ozs.	ASDCN
510-CAC	10.75	Opalescent Grey Hammerlin	CAC-J	Crystal	Sapphire	7-10-12"	Slow	13"	1 lb. 2 ozs.	ASAXD
510-MI-2-33	9.35		MI-2J-33	Magnetic	Sapphire			13"	1 lb. 2 ozs.	ASAYQ
510-GC	8.75		GC-J	Ceramic	Sapphire			13"	1 lb. 2 ozs.	ASAYR
510-AC	10.75		AC-J	Crystal	Sapphire			13"	1 lb. 2 ozs.	ASAYS
510-LT-4AG	8.35	Dark Brown Hammerlin	LT-4AG	Crystal	Precious Metal	7-10-12"	All	13"	1 lb. 2 ozs.	ASWTW
507-L-29	8.00	Opalescent Grey Hammerlin	L-29	Crystal	Not included	7-10-12"	All	13"	1 lb. 2 ozs.	ASWTT
400-CAC	25.00	Opalescent Grey Hammerlin	CAC-J	Crystal	Sapphire	10-12-16"	Slow	24"	1 lb. 8 ozs.	ASBCT
400-MI-2-33	23.60		MI-2J-33	Magnetic	Sapphire			24"	1 lb. 8 ozs.	ASBCM

†Precious metal stylus tip on 3-mil 78 RPM side. Sapphire stylus tip on 1-mil 45 and 33-1/3 RPM side.

*FOR PERFORMANCE DATA SEE CARTRIDGE CHART

**Super-Flexible, Single Conductor, Shielded

CARTRIDGES FOR SLOW-SPEED AND STANDARD 78 RPM RECORDS

Model	Element Type	List Price	Minimum Needle Pressure	Output Voltage 1000 c.p.s. 1.0 Meg. Load	Frequency Range c.p.s.	Needle Type*	For Record	Approx. Net Wt. in Grams	Code
CAC-J	Crystal	$7.50***	6 gr.	1.0†	30-11,000	Q-33 (J)	33-1/3 and 45 RPM	5	ASWZZ
CAC-W-J	Crystal	7.50***	(Same as CAC-J except equipped with special terminals and fittings for easy installation in record changer tone arms with plug-in heads.)					5	ASWYB
CAC-AG-J	Crystal	7.50	10 gr.	1.35††	30-11,000	Q-AG (J)**	33-1/3, 45 and 78 RPM	5	ASWZX
AC-J	Crystal	8.90	5 gr.	1.0†	50-10,000	A-1 (J)	33-1/3 and 45 RPM	5	ASWYJ
AC-R-J	Crystal	8.90	(Same as AC-J except equipped with special mounting bracket with .456" mounting hole centers.) Replacement for RCA Part 76257.					5	ASWYO
AC-C-J	Ceramic	8.90	5 gr.	0.4†	50-6,000	A-1 (J)	33-1/3 and 45 RPM	5	ASWTN
AC-AG-J	Crystal	8.90	6 gr.	1.0††	50-10,000	A-AG (J)**	33-1/3, 45 and 78 RPM	5	ASWYH
AC-C-AG-J	Ceramic	8.90	6 gr.	0.4††	50-6,000	A-AG (J)**	33-1/3, 45 and 78 RPM	5	ASWTL
U-J	Crystal	8.90	5 gr.	0.5†	30-10,000	U (J)	33-1/3 and 45 RPM	4	ASXAT
GC-J	Ceramic	7.40	6 gr.	0.55†	50-10,000	G (J)	33-1/3 and 45 RPM	5	ASWZK
GC-AG-J	Ceramic	7.40	8 gr.	0.7††	50-10,000	G-AG (J)**	33-1/3, 45 and 78 RPM	5	ASWZM
MI-2J-33	Magnetic	7.50	6 gr.	0.028†	50-12,000	Fixed (J)	33-1/3 and 45 RPM	22	ASALW
LT-4AG	Crystal	7.00	8 gr.	2.0††	50-5,000	D-AG (M)**	33-1/3, 45 and 78 RPM	8	ASXBX
LT-4M	Crystal	7.00	6 gr.	1.9†	50-5,000	D-33 (M)	33-1/3 and 45 RPM	8	ASXBW
LT-5-AG	Crystal	7.00	8 gr.	1.4††	50-4,500	D-AG (M)	33-1/3, 45 and 78 RPM	8	ASXDD
L-29	Crystal	6.00	10 gr.	3.0††	50-5,000	Not included	33-1/3, 45 and 78 RPM	8	ASWTS
DOUBLE NEEDLE TURN-OVER MODELS: 1 mil tip needle for LP 33-1/3 and 45 RPM records. 3 mil tip needle for standard 78 RPM records.									
ACD-J	Crystal	9.50	6 gr.	1.0† 1.0††	50-6,000	A-1 (J) A-3 (J)	(Dual Needle) 33-1/3, 45 and 78 RPM	5	ASWYL
ACD-C-J	Ceramic	9.50	6 gr.	0.4† 0.4††	50-5,000	A-1 (J) A-3 (J)	(Dual Needle) 33-1/3, 45 and 78 RPM	5	ASWTK
ACD-1J	Crystal	9.50	(Same as ACD-J except equipped with spindle for turnover knob. Replacement cartridge for ACD-2J assembly.)					7	ASWYF
ACD-C-1J	Ceramic	9.50	(Same as ACD-C-J except equipped with spindle for turnover knob. Replacement cartridge for ACD-C-2J assembly.)					7	ASWTJ
ACD-2J	Crystal	10.00	(Same as ACD-J except equipped with turnover bracket and knob.)					16	ASWYE
ACD-C-2J	Ceramic	10.00	(Same as ACD-C-J except equipped with complete assembly turnover and knob.)					16	ASWTI
CAC-D-J	Crystal	10.50	10 gr.	0.7† 0.8††	30-11,000	Q-33 (J) Q (J)	33-1/3, 45 and 78 RPM	28	ASXDJ
LQD-J	Crystal	9.50	8 gr.	1.0† 1.0††	50-7000 Roll-off at 3,500	Q-33 (J) Q (J)	(Dual Needle) 33-1/3, 45 and 78 RPM	8	ASXAL
LQD-1J	Crystal	9.50	(Same as LQD-J except equipped with needle guards and spindle for turnover knob.)					9	ASXAM
LQD-1JB	Crystal	10.00	(Same as LQD-J except equipped with complete turnover assembly and knob.)					22	ASWYR
LT-4D	Crystal	8.50	8 gr.	2.0† 2.0††	50-7,000	D (M) D-33 (M)	(Dual Needle) 33-1/3, 45 and 78 RPM	10	ASXAJ
LT-4D-1	Crystal	8.50	(Same as LT-4D except equipped with spindle for turnover knob.)					11	ASWZW

*"J" stands for Sapphire Tip, "M" for Precious Metal Tip.

**ALL-GROOVE needle tip of special design and size to play 33-1/3, 45 and 78 RPM Records.

***With Diamond Stylus at $31.00.

†RCA 12-5-31-V Test Record or Equivalent.

††Audio-tone 78-1 Test Record.

NOTE: ALL ASTATIC CARTRIDGES ARE NOW SHIPPED IN RUGGED, TRANSPARENT PLASTIC BOXES.

ASTATIC

STANDARD 78 RPM PICKUPS AND ACCESSORIES, RECORDING HEADS

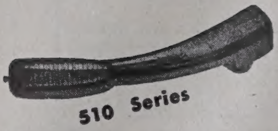
Astatic

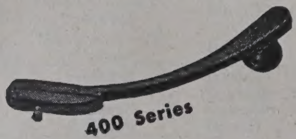
KNOWN THE WORLD OVER

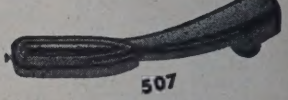
CONNEAUT, OHIO

NOTICE

Pickup Models 510-MI-2 and 400-MI-2 are magnetic type units employing Astatic's revolutionary Magnetic Cartridge. Two Equalizer-Amplifier Models, for use in conjunction with these pickups, are shown below.


510 Series


400 Series


507

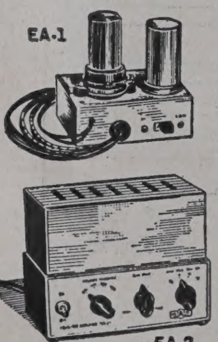
PICKUPS FOR STANDARD 78 RPM RECORDS

Model	List Price	Finish	Cartridge Used*	Element Type	Stylus	For Record		Cable Length**	Shipping Weight	Code
						Size	Speed			
510-QT	9.75	Smooth Light Brown Enamel	QT3-J	Crystal	Sapphire	10 - 12"	78 RPM	13"	1 lb. 2 oz.	ASAYL
510-L-72	7.50		L-72-A	Crystal	Optional	10 - 12"		13"	1 lb. 2 oz.	ASAYK
510-MI-2	8.35		MI-2J	Magnetic	Sapphire	10 - 12"		13"	1 lb. 2 oz.	ASALH
507-L-82	6.50	Smooth Light Brown Enamel	L-82-A	Crystal	Optional	10 - 12"	78 RPM	13"	1 lb. 2 oz.	ASAYG
507-L-40	5.50		L-40-A	Crystal	Optional	10 - 12"	78 RPM	13"	1 lb. 2 oz.	ASAYH
400-QT	25.00	Light Brown Hammerlin	QT3-J	Crystal	Sapphire	All Lateral Transcriptions	78 RPM	24"	1 lb. 8 oz.	ASBCH
400-QT-M	24.50		QT3-M	Crystal	Precious Metal			24"	1 lb. 8 oz.	ASBCI
400-LT-M	23.10		LT1-M	Crystal	Precious Metal			24"	1 lb. 8 oz.	ASBCJ
400-MI-2	23.60		MI-2J	Magnetic	Sapphire			24"	1 lb. 8 oz.	ASALF

*FOR PERFORMANCE DATA SEE CARTRIDGE CHART.

**Super-flexible, Single Conductor, Shielded.

EA-1 AND EA-2 EQUALIZER AMPLIFIERS



- The Model EA-1 is a compact unit designed for installation in radio sets and audio amplifiers, and provides the necessary equalization and preamplification to adapt the MI-2J-33 and MI-2 Cartridges to standard phonograph input circuits. Provides "bass-boost." The Model EA-2, self-powered, provides adjustable "bass-boost," adjustable treble "roll-off," and selection of "turnover frequency."

	Code	List Price
EA-1	ASAMP	$ 9.90
EA-2	ASAMO	39.50

E4P TONE EQUALIZER

- Model E4P is an adjustable tone compensation network for use between crystal pickup and amplifier. Recommended for use with all crystal pickups. Complete instructions supplied.

E4P—Code ASVHD........List Price $3.30

RECORDING HEADS

MODELS X-26 and X-29A

MODEL M-41

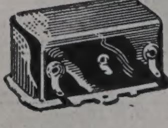
Model	Type	Maximum Recording Voltage	Useful Upper Limit	Finish	Dimensions	Net Weight	Code	List Price
X-26	Crystal	150 V. RMS	6,000 c.p.s.	Dark Brown Enamel	1⅜"x⅝"x3¼"	5½ oz.	ASXMI	$12.80
X-29A	Crystal	150 V. RMS	9,000 c.p.s.		1⅜"x⅝"x3¼"	5½ oz.	ASXMH	12.80
M-41-8 (8 Ohms)	Magnetic	3 V. RMS	7,000 c.p.s.		1⅜"x11/16"x3¾"	3½ oz.	ASXMF	12.80
M-41-500 (500 ohms)	Magnetic	30 V. RMS	7,000 c.p.s.		1⅜"x11/16"x3¾"	3½ oz.	ASXME	12.80

THE FT FILTER-TRANSFORMER

- For broadcast station use with "FLC" and "FLT" Series Pickups, to filter and match high impedance output of pickup to low impedance mixer circuits. Has output impedances of 37.5, 150 and 250 ohms.

Code ASXMR ....List Price $28.50

THE FL FILTER



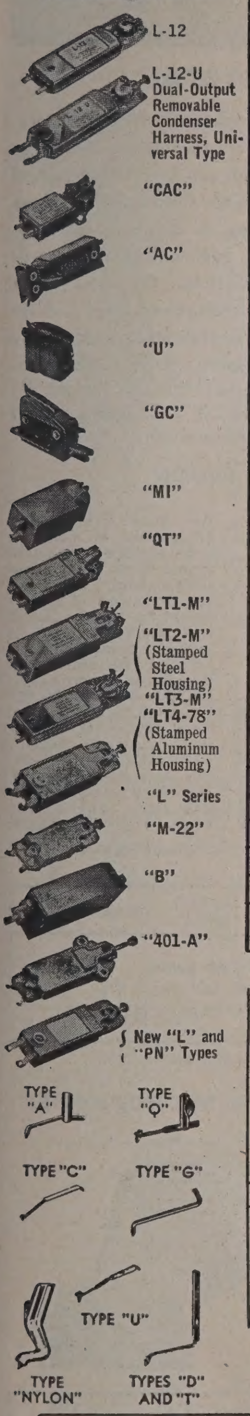
- For best performance with highest quality speakers, the FL Filter is recommended as an accessary unit with "FLO" and "FLT" Series Pickups. Controls high frequency response.

Code ASXMS ....List Price $6.90

Astatic Crystal Devices manufactured under Brush Development Co. patents.

ASTATIC

CARTRIDGES FOR 78 RPM RECORDS



Model No.	Element Type	List Price	Minimum Needle Pressure	Output Voltage 1000 c.p.s. 1.0 Meg. Load	Frequency Range c.p.s.	Needle Type*	Approx. Net Wt. in Grams	Code
TYPE "CAC"								
CAC-78-J	Crystal	$ 7.50***	10 gr.	1.35†	30 to 11,000	Q (J)	5	ASWZY
CAC-78W-J	Crystal	7.50***	(Same as CAC-78-J except equipped with special terminals and fittings for easy installation in record changer tone arms with plug-in heads.)				5	ASWYA
TYPE "AC"								
AC-78-J	Crystal	8.90	6 gr.	1.0†	50 to 10,000	A-3 (J)	5	ASWYN
AC-C-78-J	Ceramic	8.90	6 gr.	0.4†	50 to 6000	A-3 (J)	5	ASWTM
TYPE "MI"								
MI-2J	Magnetic	7.50	¾ oz.	0.1††	50 to 12,000	Fixed (J)	22	ASALX
TYPE "L" SERIES								
L-26A	Crystal	4.45	2¾ oz.	1.4†	50 to 4500	Optional	30	ASWVZ
L-40A	Crystal	4.45	1¼ oz.	0.6†	50 to 4500	Optional	30	ASWUA
TYPE "M"								
M-22	Crystal	5.55	2¾ oz.	2.9†	50 to 6500	Optional	21	ASWJM
TYPE "B" SERIES								
B-2	Crystal	5.55	2¾ oz.	2.5†	50 to 4000	Optional	26	ASWHJ
B-4	Crystal	5.55	2¾ oz.	2.5†	50 to 4000	Optional	26	ASWHH
NEW TYPE "L" SERIES								
L-12	Crystal	4.45	1 oz.	4.0†	50 to 5000	Optional	19	ASWSG
L-12-U	Crystal	4.95	1 oz.	1.25† or 4.0	50 to 5000	Optional	19	ASWSF
L-70A	Crystal	5.55	1¼ oz.	1.0†	50 to 4000	Optional	28	ASWVT
L-71A	Crystal	6.65	1 oz.	1.0†	50 to 8000	Optional	28	ASWVP
L-72A	Crystal	6.65	1¼ oz.	3.5†	50 to 4000	Optional	28	ASWVL
L-82A	Crystal	5.55	1½ oz.	3.5†	50 to 5000	Optional	28	ASWSJ
L-92A	Crystal	6.00	1 oz.	2.25†	50 to 7000	Optional	19	ASWTR
TYPE "LT" SERIES								
LT1-M	Crystal	7.00	¾ oz.	1.0†	50 to 10,000**	T (M)	28	ASXAA
LT-2M	Crystal	7.00	¾ oz.	1.0†	50 to 10,000**	T (M)	20	ASXAC
LT3-M	Crystal	7.00	¾ oz.	1.0†	50 to 10,000**	T (M)	11	ASXAE
LT4-78	Crystal	7.00	10 gr.	2.0†	50 to 5000	D (M)	8	ASWYW
TYPE "QT" . . . *NOTE:* Exceptionally smooth response over entire frequency range with a gradual roll-off commencing at approximately 5,000 c.p.s.								
QT3-J	Crystal	8.90	1 oz.	0.85†	50 to 10,000	Q (J)	23	ASXBN
QT3-M	Crystal	8.40	1 oz.	0.85†	50 to 10,000	Q (M)	23	ASXBL
TYPE "GC"								
GC-78-J	Ceramic	7.40	12 gr.	0.7†	50 to 10,000	G-78 (J)	5	ASWZI
TYPE "U"								
U-78-J	Crystal	8.90	5 gr.	0.5†	30 to 10,000	U-78 (J)	4	ASWZG
"P. N." TYPES								
L-74A	PN Crystal	10.00	1½ oz.	1.4†	50 to 4000	Optional	28	ASWVD
L-78	PN Crystal	11.15	(Special P.N. Crystal Cartridge for Seeburg Record Changers)				28	ASWWO

SPECIAL PURPOSE TYPES

Model	Element Type	List Price	Minimum Needle Pressure	Output Voltage	Frequency Range c.p.s.	Needle Type	Application	Approx. Net Wt. in Grams	Code
PT	Crystal	$ 5.00	1 oz.	1.4†	50 to 10,000 Roll-off at 3000	Not Included	Replacement for Philco Parts—35-2671, 35-2671-1	27	ASWTB
401-A	Crystal	4.45	2¾ oz.	1.4†	50 to 4500	Optional	Replacement for RCA	27	ASWTA
402-M	Ceramic	6.90	12 gr.	0.7†	50-10,000	G-78 (M)	Replacement for Admiral 78 RPM Snap-in Cartridge —Part No. A1372.	8	ASWZN
403-J	Crystal	7.50	Special replacement kit consisting of CAC-78-J Cartridge with necessary adapter plate and screws to replace RCA Part 70338, 70339 and 72551 silent sapphire cartridges.						ASWUZ
DOUBLE-NEEDLE MODELS									
MD-5J	Crystal	10.90				M-5 (J) Set	Special for Markel Record Changer—for 33-1/3 and 45 RPM	15	ASWWA
MD-6J	Crystal	10.90				M-6 (J) Set	Special for Markel Record Changer for 78 RPM	21	ASWWG
NOTE: Cartridge types B, QT and LT also available with PN Crystal upon request.									

*"J" stands for Sapphire Tip, "M" for Precious Metal Tip. ††Columbia 10,004 Test Record. †Audio-tone 78-1 Test Record.
**Exceptionally smooth response over entire frequency range with a gradual roll-off commencing at approximately 4,000 c.p.s.
***With Diamond Stylus at $31.00.

REPLACEMENT NEEDLES

Type	LIST PRICE Sapphire (J)	LIST PRICE Osmium (M)	Tip Size	For Cartridge Types
A-1	$1.50	$1.00	1-mil	AC, ACD Series
A-3	1.50	1.00	3-mil	AC-78, ACD Series
A-AG	1.50	1.00	AG*	AC-AG
C-1	1.50	1.00	1-mil	MD-1
C-3	1.50	1.00	3-mil	MD-3
D	None	1.00	3-mil	LT-3D, LT-4D, MD
D-33	None	1.00	1-mil	LT-3D, LT-4, LT-4D
D-AG	None	1.00	AG*	LT-4-AG, LT-5-AG
G	1.50	1.00	1-mil	GC Series
G-78	1.50	1.00	3-mil	GC-78 Series, 402-M
G-AG	1.50	1.00	AG*	GC-AG

Type	LIST PRICE Diamond (X)	LIST PRICE Sapphire (J)	LIST PRICE Osmium (M)	Tip Size	For Cartridge Types
Nylon		1.50	1.00	3-mil	Nylon Series
Q	$25.00	1.50	1.00	3-mil	CAC-78, CAC-D, LQD and QT Series
Q-33	25.00	1.50	1.00	1-mil	CAC, CAC-D, CQ, LQD and QT-33 Series
Q-AG		1.50	1.00	AG*	CQ-AG, CAC-AG
T		None	1.00	3-mil	LT1-M, LT2-M, LT3-M
T-33		None	1.00	1-mil	LT-33
U		1.50	1.00	1-mil	U Series
U-78		1.50	1.00	3-mil	U-78 Series
M-5**		3.25	2.25	1-mil	MD-5
M-6**		3.25	2.25	3-mil	MD-6

*ALL-GROOVE Needle Tip of Special Design and Size to Play 33-1/3, 45 and 78 RPM Records.
**Card of two matched needles, one with reversed rake angle for special Markel Record Player requirements.

Astatic Crystal Devices manufactured under Brush Development Co. patents.

SHURE CRYSTAL AND CARBON MICROPHONES

"MONOPLEX" SUPER-CARDIOID CRYSTAL

MODEL 737A

A high-output, undirectional microphone that ranks far above ordinary crystal microphones. The Super-Cardioid "Monoplex" is TWICE AS UNIDIRECTIONAL AS THE CARDIOID. It has a 14 to 1 front to rear pickup ratio and REDUCES PICKUP OF RANDOM SOUND BY 73%! The "Monoplex" employs the same type of acoustic phase-shifting network used in the Shure Broadcast microphones. New moisture-proofed "Metal Seal" crystal for long operating life. Case pivots at rear, can be pointed toward desired sound or upwards for horizontal plane pickup. The "Monoplex" is excellent for high-quality public address, communications, recording and similar applications. Operates under adverse conditions of background noise and reverberation where a conventional microphone would be practically useless. Built-in cable connector. Standard ⅝"—27 thread. Height 4". Width 3 3/32". Thickness 1⅞". Shipping weight 2¼ lbs. Rich satin chrome finish.

MODEL	CABLE	OUTPUT	IMPED.	LIST PRICE
737A	15 ft.	54.0 db below 1 volt per microbar	High Impedance	$39.75

Microbar=one dyne per sq. cm.

Code: RUMON

707A CRYSTAL

Good-quality performance at low cost. Has good response characteristics, is free from peaks, has typical semi-directional pickup. Uses moisture-proof Bimorph Crystal. Ideal for low-cost P. A. systems, call systems, amateur 'phone transmitters and similar applications.

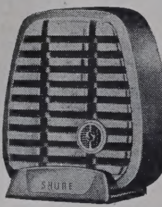
Pearl Gray case with rich satin chrome finish on front grille. The case is a heavy die casting. Standard ⅝"—27 thread. Diameter 2⅜". Shipping weight 2¼ pounds. High impedance.

MODEL 707A Code: 707A—RUDOF

MODEL	OUTPUT	CABLE	LIST PRICE
707A	51.0 db below 1 volt per microbar	7 ft.	$15.50

Microbar = one dyne per sq. cm.

THE "REX"



710 SERIES

Its extremely low price makes this striking hand-held microphone a natural for hams, low-cost public address systems, and as a replacement for home recording microphones. A rugged unit designed for high speech intelligibility. The "Rex" saves further costs, as it needs no desk stand! Has a broad base, sits firmly on a table top without tipping over. Frequency response 60 to 9000 c.p.s. 5' shielded cable. Beautiful Burgundy-red metallic finish. Die-cast case complete with stand adapter. 2⅔" wide, 3¼" high, 1⅛" thick. High impedance.

Code: 710A—RUDEL
710S—RUDET

MODEL	OUTPUT LEVEL	SHPG. WT.	LIST PRICE
710A—5'	50 db below 1 volt per microbar	1¼ lb.	$10.95
710S—5' (with switch)	50 db below 1 volt per microbar	1½ lb.	$12.95

Microbar = 1 dyne per sq. cm.

STRATO-LINER

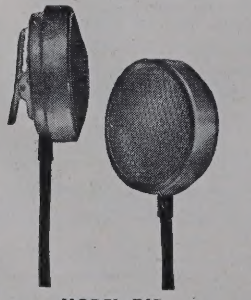
An expensive-looking microphone at moderate cost. Wide-range response (free from undesirable peaks) for good reproduction of either voice or music. Placed horizontally, the 708A is semi-directional; used vertically it becomes non-directional. Bimorph Crystal. A swivel permits 90° tilting of the microphone. Case dimensions: diameter 2½", length 4-7/16". Standard thread ⅝"—27. Shipping weight 2½ lbs. Frequency response is 60-8000 c.p.s. Pearl Gray finish. High impedance.

MODEL 708A Code: 708A—RUDUM

MODEL	OUTPUT LEVEL	CABLE	LIST PRICE
708-A	51.0 db below one volt per microbar	7 ft.	$27.50

Microbar = one dyne per sq. cm.

LAPEL MICROPHONE



MODEL 76B

Designed for Public Address, lecturing, portable transmitters, and all general uses for intelligible reproduction of speech. Pressure-actuated diaphragm-type crystal microphone. Graphoil Bimorph crystal, moisture-sealed. Microphone is inconspicuous, weighs only 1½ ounces. Response from 40 to 6,000 c.p.s. High frequency response accentuated for maximum intelligibility. 1⅞" diameter. Gray finish. Lapel clip. 20-foot shielded single-conductor cable. Shipping weight 1 pound. Output level: 57 db below 1 volt per bar. Code RULOP. List Price $27.00.

MODEL "100" SERIES CARBON MICROPHONE

A high-quality, carbon microphone specially designed for mobile equipment. Rugged, dependable unit with clear, crisp voice response and high output. Fits snugly into palm of hand. Heavy duty switch for push-to-talk performance. Furnished with hook for suspension and bracket for wall mounting, plus coiled-cord cable. Adopted as standard microphone by leading manufacturers of police transmitters. Output level: 5 db below 1 volt for 100 microbar speech signal. Net weight 14 oz. Shipping weight 1¼ pound. Case dimensions: 3¾" high, 1¾" deep, 2¾" wide. 70 to 80 ohms impedance.

MODEL	SWITCH ARRANGEMENT	CABLE	CODE	LIST PRICE
101C	Two Wire Relay Switch normally open (No microphone switch).	Coiled Cord 11" retracted 5' extended	RUCEG	$27.50
102C	Relay normally open. Microphone switch normally open.	Coiled Cord 11" retracted 5' extended	RUCEM	$27.50

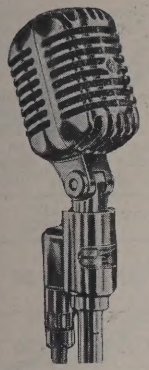
Microbar = one dyne per sq. cm.

MODEL C15C Coiled Cord with trimmed and tinned leads. Used in "CB" and "100" Series Microphones.

MODEL: C15C Code: RUCOR List Price. $6.75

MULTI-IMPEDANCE DYNAMIC MICROPHONES SHURE

NEW "SMALL UNIDYNES"



MODEL "556S"
(For Broadcast)

MODEL "55S"
(For General Purpose)

The "Small Unidynes" are the only small sized uni-directional moving coil dynamic microphones. They are completely new microphones with improved performance, yet retaining all of the highly desirable features of the world famous original "Unidynes." The internal unit, based on the Shure-patented "Uniphase" principle, has been designed for high overall efficiency and extended peak-free frequency response. Rugged coil construction also provides greater immunity of the moving coil system to abnormal atmospheric conditions and mechanical shock.

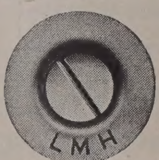
Model "55S" and Model "556S" are considerably smaller than the original Model "55" and Model "556" and are ideal for installations where it is desirable to keep the microphone size to a minimum and still retain operating efficiency.

The "Small Unidynes" are "Perfect Performers"—ideal for high quality public address, theatre-stage sound systems, recording and remote broadcasting. Because of the unusual ruggedness and reliability, Model "55S" is also recommended for fixed station use in the Police, Fire and Transportation services. For studio broadcasting and television use and similar applications where the utmost in qualty is desired, Model "556S" is recommended. "Small Unidynes" reduce reflection and reverberation, decrease random noise energy pickup by approximately 67%, allow performer to stand at a distance from the microphone 75% greater than is possible with non-directional (omnidirectional) microphones, have smooth response from 40-15,000 c.p.s at front—dead at rear. Standard ⅝"—27 thread. Both are supplied with a 20 foot, high-quality cable and plug assembly. Model "556S" features a Cannon connector, and it also has a special newly designed shock isolation unit of live rubber construction.

Dimensions for both units: case $3\frac{5}{16}$" high; $2\frac{3}{16}$" wide, $3\frac{1}{16}$" deep.
Shipping weight: "55S" 3¾ pounds; "556S" 4¼ pounds.

IMPEDANCE TABLE	OUTPUT LEVEL
L—35-50 ohms	59.4 db below I Milliwatt per 10 microbar signal
M—150-250 ohms	60.1 db below I Milliwatt per 10 microbar signal
H—High	60.5 db below I volt per microbar

Multi-Impedance Switch on Models "55S", "556S", "51"



MODEL	CABLE	CODE	LIST PRICE
556S	20 ft.	RUDOV	$100.00
55S	20 ft.	RUDOT	$ 72.50

"SONODYNE" HIGH-OUTPUT DYNAMIC

MODEL "51"

A rugged pressure-type dynamic microphone with wide range frequency response and semi-directional pickup characteristics. Features a multi-impedance switch for low, medium or high impedance. Operates on the principle of a moving coil element in a magnetic field. Has built-in receptacle and a two-conductor shielded cable with microphone plug attached.

The rich satin chrome case is functionally designed for improved acoustical performance and modern appearance. Frequency response 60-10,000 c.p.s. The "Sonodyne" is ideal for all general-purpose use including public address, wire and tape recording, communications and similar applications. Code: RUSON.

IMPEDANCE TABLE	OUTPUT LEVEL
L—35-50 ohms	53.0 db below I Milliwatt for 10 Microbar signal
M—150-250 ohms	52.5 db below I Milliwatt for 10 Microbar signal
H—High Impedance	52.0 db below I volt per Microbar

MODEL	CABLE	SHPG. WEIGHT	LIST PRICE
51	15 ft.	3½ lbs.	$45.00

Microbar=one dyne per sq. cm.

CONTROLLED RELUCTANCE MICROPHONES
AND RECORDING HEADS

SHURE

THE "HERCULES"

510 SERIES

The "Hercules" is a hand-held magnetic unit. Provides the ruggedness, clear reproduction, and high output long needed for Public Address, Communications, and Recording—AT AN AMAZINGLY LOW PRICE! Recommended for Announcing and Mobile Public Address Systems; Communications; Home Recording; high quality Inter-Communication. Ideal for general-purpose use in tropical countries and all coastal areas where humidity is a problem.

The output voltage is induced in a coil of wire by causing a sound wave to modulate the reluctance of the magnetic circuit. By the control of this reluctance the utmost in quality and stability is achieved. High impedance is obtained without the use of a transformer. The "Hercules" can be used either Indoors or Outdoors. Fits snugly in the hand, sits firmly on a desk. Frequency response is 100 to 7,000 c.p.s. Furnished with 5' shielded cable. Green metallic finish. Die-cast case. Complete with stand adapter. 2⅔" wide, 3¼" high, 1½" thick.

MODEL	CABLE	OUTPUT LEVEL	IMPEDANCE	SHPG. WT.	CODE	LIST PRICE
510C	5 ft.	52.5 db below 1 volt per microbar	High	1½ lb.	RUTUF	$15.00
510S (with switch)	5 ft.	52.5 db below 1 volt per microbar	High	1¾ lb.	RUTUS	$17.00

Microbar = one dyne per sq. cm.

THE "GREEN BULLET"

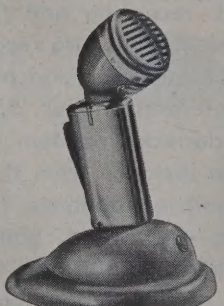
MODEL 520

The "Green Bullet" is a magnetic unit, especially designed to provide quality music and speech reproduction at moderate cost. It is practically immune to the effects of high temperatures and humidity. The "Green Bullet" has a stability assured by unique control of the reluctance of the magnetic system. It features: high output, good response, high impedance without the need of a transformer. The "Green Bullet" has a beautiful modern metallic green finish with a plated grille. Frequency response is 100 to 7,000 c.p.s. Furnished with 7' single-conductor shielded cable.

MODEL	CABLE	OUTPUT LEVEL	IMPEDANCE	SHPG. WT.	CODE	LIST PRICE
520	7 ft.	52.5 db below 1 volt per microbar	HIGH	1½ lbs.	RUDAL	$17.50

Microbar = 1 dyne per sq. cm.

THE "DISPATCHER"



MODEL 520SL

This new Controlled Reluctance unit is designed to handle the most severe field requirements of paging and dispatching systems. The unit is supplied with 3-conductor shielded cable, and is wired to operate both microphone and relay circuits. The "Dispatcher" is ideal for police, taxi-cab, railroad, airport, bus, truck, and all emergency communications work where dependability is vital. Large grip-bar assures positive contact. Firm downward pressure on grip-bar locks switch. NOTE: THE UNIT CAN BE PICKED UP WITHOUT ACTUATING THE MICROPHONE.

MODEL	OUTPUT	IMPED.	CODE	LIST PRICE
520SL-7'	52.5 db below 1 volt per microbar	HIGH	RUDAN	$35.00

Microbar = 1 dyne per sq. cm.

THE "RANGER"

The new Shure "Ranger" is a new development of a similar magnetic unit originally housed in microphones used by the Armed Forces. The "Ranger" is especially recommended for those applications where long lines are used, and a rugged hand-held microphone is needed. It is ideal for outdoor public address (sports arenas, athletic fields), mobile communications, hams, audience participation shows, etc. The "Ranger" is designed for high speech intelligibility. Easy to use, fits snugly in the palm of the hand. Has heavy-duty single-throw, double-pole leaf-type switch for push-to-talk operation. Phosphor-bronze blades and silver contacts for maximum operating life. Furnished with 5' three-conductor shielded cable. Frequency response is 100 to 9,000 c.p.s.

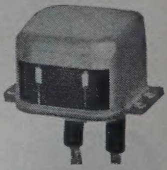
505 SERIES

MODEL	CABLE	OUTPUT LEVEL	IMPEDANCE	SHPG. WT.	CODE	LIST PRICE
505B	5 ft.	47.0 db below 1 milliwatt per 10 microbar signal	150-250 ohms	1¼ lb.	RUDAY	$27.50
505C	5 ft.	50.5 db below 1 volt per microbar	High	1¼ lb.	RUDAX	$27.50

Microbar = 1 dyne per sq. cm.

TAPE RECORDING HEAD

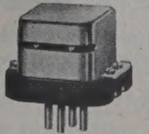
The Shure Tape Recording Head is a high quality, precision-engineered unit incorporating recording, reproducing, and erasing in one head. Suitable for all types of tape recording: professional, semi-professional, experimental, technical, and amateur use. Records on half width of tape—for double-track recording.



TAPE MODEL 815

Model: 815 Code: RUWAT List Price: $15.00

WIRE RECORDING HEAD



WIRE MODEL 812

The Shure magnetic Wire Recording Head is a high quality recording unit with recording, play-back, and signal erasure in one small unit. Has standard 4-prong adapter base. The Model "812" is a direct replacement unit for the improved Sears-Roebuck Wire Recorder.

Model: 812 Code: RUWIR List Price: $15.00

SHURE CRYSTAL PHONOGRAPH PICKUPS AND NEEDLES

PHONOGRAPH PICKUPS

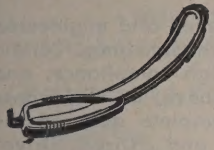


Fig. A

Like the popular Shure Cartridges, each Shure Phonograph Pickup has been designed to meet specific requirements. There is at least one model for each type of reproduction desired — standard (78 RPM), fine-groove (33⅓ and 45 RPM), or single-needle "All Purpose" and dual-needle "Turnover" for playing all types of records. Each tone arm is scientifically curved and balanced for faithful tracking, and designed to emphasize the best qualities of the cartridge with which it is equipped.

STANDARD FOR 78 RPM RECORDS

MODEL	ILLUSTRATION	LIST PRICE	OUTPUT LEVEL	NEEDLE FORCE	RESPONSE TO	SHURE CARTRIDGE USED	SHURE NEEDLE NUMBER	SHIPPING WEIGHT	CODE
92H	Fig. D	$5.50	3.5V	1 oz.	5000 c.p.s.	W42H	None	9 oz.	RUSUV
93A	Fig. C	7.50	1.6V	1⅛ oz.	6000 c.p.s.	W57A	None	13 oz.	RUGLI
96A	Fig. C	8.50	4.3V	1⅛ oz.	6000 c.p.s.	W56A	None	13 oz.	RUGAB
900HS*	Fig. B	11.50	1.8V	1⅛ oz.	4500 c.p.s.	W60HS*	A62A	12 oz.	RUZUA

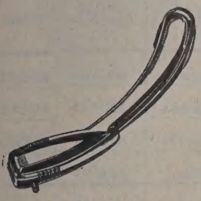


Fig. B

TURNOVER FOR 33⅓, 45, 78 RPM RECORDS

MODEL	ILLUSTRATION	LIST PRICE	OUTPUT LEVEL		NEEDLE FORCE	RESPONSE TO	SHURE CARTRIDGE USED	SHURE NEEDLE NUMBER		SHIPPING WEIGHT	CODE
			MG	STD.				MG	STD.		
901D	Fig. A	$16.25	1.2V	1.4V	7 grams	10,000 c.p.s.	W22AB	A65MG	A62A	12 oz.	RUZEL

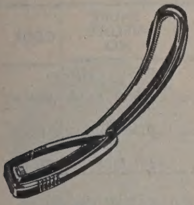


Fig. C

SINGLE-NEEDLE ALL-PURPOSE FOR 33⅓, 45, 78 RPM RECORDS

MODEL	ILLUSTRATION	LIST PRICE	OUTPUT LEVEL		NEEDLE FORCE	RESPONSE TO	SHURE CARTRIDGE USED	SHURE NEEDLE NUMBER	SHIPPING WEIGHT	CODE
			MG	STD.						
92U	Fig. D	$9.75	2.0V	2.3V	8 grams	4500 c.p.s.	W66B	A66U	9 oz.	RUZIP

FINE-GROOVE FOR 33⅓, 45 RPM RECORDS

MODEL	ILLUSTRATION	LIST PRICE	OUTPUT LEVEL	NEEDLE FORCE	RESPONSE TO	SHURE CARTRIDGE USED	SHURE NEEDLE NUMBER	SHIPPING WEIGHT	CODE
902MG	Fig. B	$10.75	2.0V	10 grams	7500 c.p.s.	W31AR	A53MG	12 oz.	RUGEX

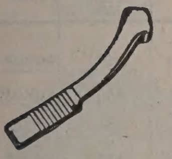


Fig. D

SPECIAL SHURE PICKUP FOR "WEBSTER-CHICAGO" THREE SPEED CHANGERS

MODEL	ILLUSTRATION	LIST PRICE	OUTPUT LEVEL		NEEDLE FORCE	RESPONSE TO	SHURE CARTRIDGE USED	SHURE NEEDLE NUMBER		SHIPPING WEIGHT	CODE
			MG	STD.				MG	STD.		
920W	Fig. E	$11.50	1.2V	1.4V	6 grams	10,000 c.p.s.	W22AB	A65MG	A62A	6 oz.	RUZUT

*"Humi-Seal" Metal Wrapped Moisture Proofed Rochelle Salt Crystal for Use in Tropical Areas.

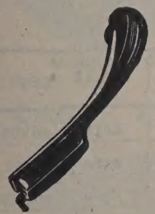


Fig. E

PHONOGRAPH PICKUP NEEDLES

All Shure Needles are manufactured to exacting specifications to assure top quality performance. Needle-point quality is carefully controlled by precision craftsmanship. Extended performance is assured by life tests at the Shure Laboratories. SPECIFY SHURE NEEDLES ONLY. ACCEPT NO SUBSTITUTES.

MODEL	ILLUSTRATION	DESCRIPTION	LIST PRICE	CODE
A52A	Fig. C	Std. Osmium	$1.50	RUGEM
A53MG	Fig. C	MG Osmium	1.50	RUGES
A56U	Fig. C	All Purpose Osmium Unipoint	1.50	RUGEP
A61A	Fig. A	Std. Sapphire	2.50	RUZAN
A62A	Fig. B	Std. Osmium	1.50	RUZAP
A63MG	Fig. B	MG Osmium	1.50	RUGAZ
A64MG*		MG Osmium	2.00	RUZAS
A65MG	Fig. A	MG Sapphire	2.50	RUGAY
A66U	Fig. B	All Purpose Osmium Unipoint	1.50	RUZIK
A67U	Fig. A	All Purpose Sapphire Unipoint	2.50	RUZIN

*Standard Bent Shaft Needle Not Illustrated.

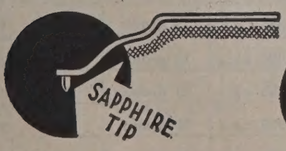


Fig. A

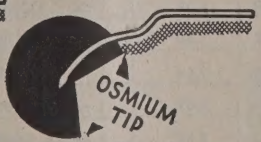


Fig. B

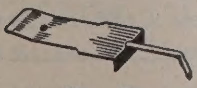


Fig. C

CRYSTAL AND CERAMIC PICKUP CARTRIDGES SHURE

All Shure Replacement Cartridges have been painstakingly designed and engineered to meet the most exacting specifications. Each has been designed to meet certain specific requirements, such as high output, extended range, high compliance, and maximum tracking. For the finest in standard 78 RPM, fine-groove, or all-purpose replacement cartridges, see the charts below which furnish complete data on the popular Shure "Vertical Drive," "Lever-Type," "Muted Stylus," and "Direct Drive" Cartridges.

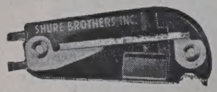


Fig. A
"Direct Drive"

FINE GROOVE CARTRIDGES FOR 33⅓, 45 RPM RECORDS

MODEL NO.	ILLUSTRATION	TYPE	LIST PRICE	OUTPUT LEVEL	MIN. NEEDLE FORCE	RESPONSE TO	NET WT.	SHURE NEEDLE NO.	CODE
W21F*	Fig. C	Crystal	$7.75	1.5V	6 grams	10,000 c.p.s.	4½ grams	A63MG	RUGEX
W31AR	Fig. A	Crystal	6.50	2.1V	7 grams	7,500 c.p.s.	5½ grams	A53MG	RUGEB
WC31AR	Fig. A	Ceramic	6.50	.65V	7 grams	7,500 c.p.s.	5½ grams	A53MG	RUGED
W53MG	Fig. E	Crystal	8.50	1.3V	6 grams	8,500 c.p.s.	12 grams	A64MG	RUGET

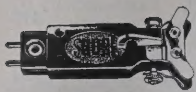


Fig. B
"Vertical Drive"
(Turnover)

TURNOVER CARTRIDGES FOR 33⅓, 45, AND 78 RPM RECORDS

MODEL NO.	ILLUSTRATION	TYPE	LIST PRICE	OUTPUT LEVEL		MIN. NEEDLE FOORCE	RESPONSE TO	NET WT.	SHURE NEEDLE NO.		CODE
				MG	STD				MG	STD.	
W22A	Fig. B	Crystal	$10.50	1.2V	1,4V	8 grams	10,000 c.p.s.	4½ grams	A65MG	A61A	RUVAL
W22AB	Fig. B	Crystal	9.50	1.2V	1.4V	8 grams	10,000 c.p.s.	4½ grams	A65MG	A62A	RUVAX
WC22AB	Fig. B	Ceramic	9.50	.21V	.18V	9 grams	10,000 c.p.s.	5 grams	A65MG	A62A	RUVUC

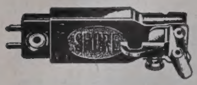


Fig. C
"Vertical Drive"
(Single Needle)

ALL PURPOSE SINGLE NEEDLE CARTRIDGES FOR 33⅓, 45, 78 RPM RECORDS

MODEL NO.	ILLUSTRATION	TYPE	LIST PRICE	OUTPUT LEVEL		MIN. NEEDLE FORCE	RESPONSE TO	NET WT.	SHURE NEEDLE NO.	CODE
				MG	STD.					
W26A	Fig. C	Crystal	$8.50	.87V	1.0V	8 grams	8,000 c.p.s.	4½ grams	A67U	RUVUP
W26B	Fig. C	Crystal	7.50	.87V	1.0V	8 grams	8,000 c.p.s.	4½ grams	A66U	RUVUM
W36B	Fig. A	Crystal	6.50	2.3V	2.5V	9 grams	7,000 c.p.s.	5½ grams	A56U	RUGEN
WC36B	Fig. A	Ceramic	6.50	.6V	.7V	9 grams	7,000 c.p.s.	5½ grams	A56U	RUGER
W66B	Fig. D	Crystal	7.50	2.0V	2.3V	8 grams	4,500 c.p.s.	12 grams	A66U	RUSUN

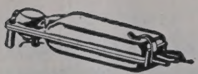


Fig. D
"Muted Stylus"

STANDARD CARTRIDGES FOR 78 RPM RECORDS

MODEL NO.	ILLUSTRATION	TYPE	LIST PRICE	OUTPUT LEVEL	MIN. NEEDLE FORCE	RESPONSE TO	NET WT.	SHURE NEEDLE NO.	CODE
W23B	Fig. C	Crystal	$7.75	1.1V	6 grams	8,000 c.p.s.	4½ grams	A62A	RUVER
WC33B	Fig. A	Ceramic	6.50	.75V	9 grams	7,000 c.p.s	5½ grams	A52A	RUGEL
W42B	Fig. E	Crystal	4.45	1.3V	1 oz.	5,000 c.p.s.	25 grams	None	RUGUB
W42H	Fig. E	Crystal	4.45	3.5V	1 oz.	5,000 c.p.s.	25 grams	None	RUGUT
W56A	Fig. E	Crystal	6.65	4.3V	1⅛ oz.	6,000 c.p.s.	12 grams	None	RUGUS
W56N**	Fig. E	Crystal	8.50	4.3V	1 oz.	10,000 c.p.s.	12 grams	A68D	RUG[illegible]C
W57A	Fig. E	Crystal	5.55	1.6V	¾ oz.	6,000 c.p.s	12 grams	None	RUGLA
W58A	Fig. E	Crystal	5.55	1.6V	1 oz.	6,000 c.p.s	25 grams	None	RUGLU
W58HS***	Fig. E	Humi-Seal Crystal	6.55	1.6V	1 oz.	6,000 c.p.s	25 grams	None	RUGUY
W59A	Fig. E	Crystal	5.55	2.5V	1 oz.	6,000 c.p.s	25 grams	None	RUGAT
W60A	Fig. D	Crystal	8.50	1.6V	1 oz.	4,500 c.p.s	12 grams	A61A	RUSIS
W60B	Fig. D	Crystal	7.50	1.6V	1 oz.	4,500 c.p.s	12 grams	A62A	RUSID
W60HS***	Fig. D	Humi-Seal Crystal	8.50	1.8V	1 oz.	4,500 c.p.s	25 grams	A62A	RUSIB
W61B	Fig. D	Crystal	7.50	1.6V	1 oz.	4,500 c.p.s	25 grams	A62A	RUSIL

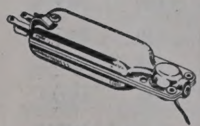


Fig. E
"Lever Type"

*With .453 Mount for Oak Changer.

**Cutter-Cartridge for Wilcox-Gay "Recordette." Is equipped with a biforcated cutter-playback needle.

***"Humi-Seal" Metal Wrapped Rochelle Salt Crystal Ideal for Tropical Areas.

SHURE SWITCHES AND ACCESSORIES

MICROPHONE REPLACEMENT CARTRIDGES

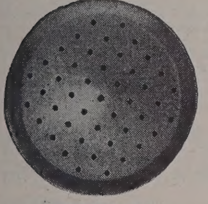
CONTROLLED RELUCTANCE

MODEL R5

The Model R5 Controlled Reluctance Microphone Cartridge is available for service installation and is also ideal for the replacement of crystal microphone cartridges in Shure cases of the Model 707A and Model 100 Series designs. It will also replace cartridges in cases of other manufacturers' models of similar design, where space permits. Complete installation instructions in English and Spanish are included. It is an acoustically controlled balanced-armature transducer ideal for both microphone and soft-speaker applications. Practically unaffected by heat and humidity. Supplied with rubber mounting ring. Overall diameter of mounting ring 2¼"; thickness of rubber ring 3/16". Overall depth of cartridge ⅞". Shipping weight 4 ounces.

Code: RUTUC. List Price: $10.00

CRYSTAL

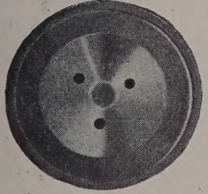


MODEL R7

The Model R7 Crystal Microphone Cartridge is available for service installation as a replacement for the cartridges in the Shure Crystal Microphones of the 707A and 708A series. High output—48db below 1 volt per microbar. Cartridge supplied with rubber mounting rings and a complete set of mounting instructions.

Model: R7 Code: RUDEC
List Price $7.75

CARBON

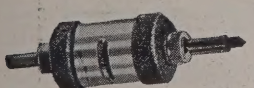


MODEL R10

Model R10 Carbon Cartridge used in "CB", "100", and "120" Series Carbon Microphones. Rubber mounting rings. Easy to install.

Model: R10 Code: RUTUB
List Price $8.00

CABLE TYPE TRANSFORMER



Model A86A is a high-quality cable-type transformer which offers additional versatility when used in conjunction with Shure Models 55, 55S, 556, 556S, and 51 Dynamic Microphones, which employ the impedance matching switch. It solves the frequent problem of installations requiring long lengths of microphone cables without the loss of high-frequency response. Model A86A matches 35 to 50 and 150 to 250 ohm microphones to high impedance amplifier input. Compact, sturdy. Case diameter 1⅝", length 2⅞", 2-foot cable. Shipping weight, 1¼ pounds.

Model: A86A Code: RUDEB List Price: $16.00

TAKE-APART STAND

Model S34B. Handy low-cost stand for desk or hand use. One twist of handle locks it securely in base for use as a table stand, or releases handle for use in hand. Metal base, wood handle. Metal top threaded ⅝"—27. Height overall 6-11/16". Base diam. 4½". Length of handle 5⅞". Shipping weight 1 pound.

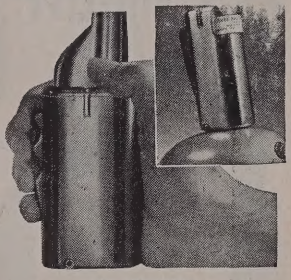
Code: RUKAB List Price: $3.00

Model A41B. Microphone handle only. Threaded ⅝"—27.

Code: RUJAD List Price: $1.25

"GRIP-TO-TALK SLIDE-TO-LOCK" SWITCH

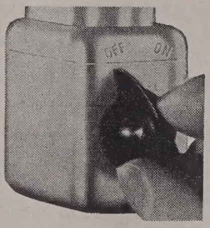
This rugged Heavy-Duty Switch employs a long life, leaf-type switch element that withstands the most severe field requirements of paging and dispatching systems. Has spring-temper, phospor-bronze switch blades with pure silver contacts. Ideal for Police, Taxi-Cab, Railroad, Airport, Bus, Truck, and all emergency communications work. Large grip-bar assures positive contact. Firm downward pressure on grip-bar locks switch. Can be used with Shure connector-type crystal, dynamic and carbon microphones of any impedance. Fits handily on Shure S36A Desk Stand as shown in illustration. No soldering necessary, simply plug in. Switch element can be readily removed for rewiring to accommodate other switching combinations. Rich satin chrome finish. Shipping weight 1 pound.



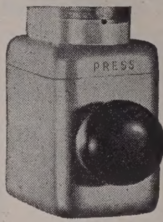
MODEL A88A

Model: A88A Code: RUNEL List Price: **$11.75**

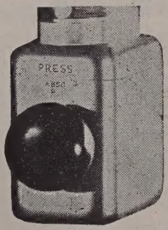
ON-OFF PRESS-TO-TALK SWITCHES



A83B



A84B



A85C

Plug into the microphone quickly and conveniently. Durable, dependable. No soldering necessary.

Model A83B. Rotary-type "On-Off" switch. Quickly attached to any cable-connector type Shure microphone. Internal plug establishes connections. Bakelite arrow knob.

Model A83B. Code: RUNIM	List Price: $6.50
55A15 Switch element only.	List Price: $1.50

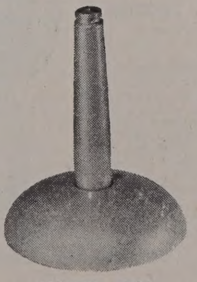
Model A84B. Momentary "On-Off" switch. Press-to-talk Bakelite disc.

Model A84B. Code: RUNID	List Price: $7.50
55A16 Switch element only.	List Price: $1.75

Model A85C. Momentary Relay-Type switch. Press-to-talk Bakelite disc. Normally-open switch closes circuit comprising one conductor and shield of outgoing cable for operation of relay or other device; remaining conductor and shield of cable carry microphone output. Must be used with two-conductor shielded cable. Standard Shure cable-connector receptacle. Satin chrome finish.

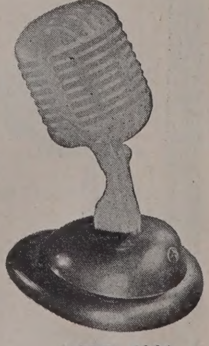
Model A85C. Code: RUNAT	List Price: $10.75
55A19 Switch element only.	List Price: $2.00

MODERN DESK STAND



MODEL S34B

Model S36A. Streamlined Desk Mount with stable support. Fits Shure connector-type Microphones, concealing plug in base. Ideal for use with A88A Grip-to-Talk Switch. Adapter provided for other type microphones. Removable button for installation of ⅜" standard bushing switch or volume control. Pearl Gray finish. Base: 2½" high, 5" wide, 7" long. Shipping weight 1½ pounds.



MODEL S36A

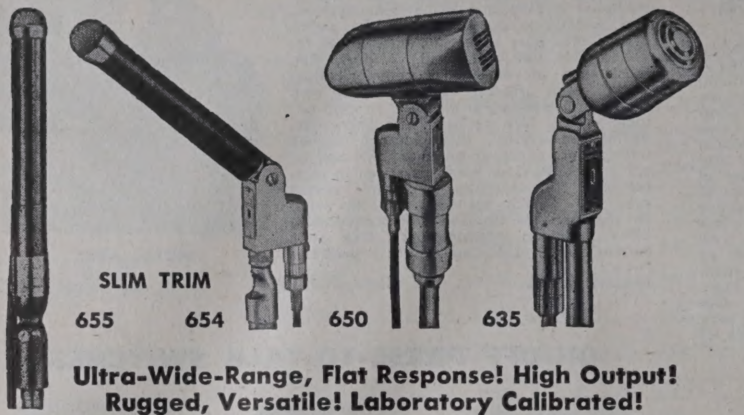
Model: S36A Code: RUSEF List Price: $5.50

NO FINER CHOICE THAN Electro-Voice RESEARCH-ENGINEERED

MICROPHONES

for TV • BROADCASTING • RECORDING • P.A. • COMMUNICATIONS

HIGH-FIDELITY TV-BROADCAST DYNAMICS



Ultra-Wide-Range, Flat Response! High Output! Rugged, Versatile! Laboratory Calibrated!

Proved in studio and remote use on network and local telecasts and broadcasts. Exclusive, long-life *Acoustalloy* diaphragm and highly efficient magnetic structure assure ultra-wide-range high fidelity response. High output level gives excellent signal to noise ratio. Omnidirectional, becoming slightly directive at extremely high frequencies. Close tolerances and individual laboratory control guarantee uniformity. Ideal for audience participation, applause pick-up, recording and high quality public address . . . for individual or group pick-up of voice and music indoors and outdoors.

Model 655 Slim-Trim TV Dynamic. Frequency response 40-15,000 c.p.s, ±2.5 db. Output level −54 db. *Pop-proof* head stops wind and breath blasts. Can be used on stand, in hand or on boom; easily concealed in studio props. Needs no additional closely-associated auxiliary equipment. *Acoustalloy* diaphragm. Impedance 250 ohms. Easily changed to 50 ohms. Removable swivel. Cannon XL-3 connector. Has ½" pipe thread. ⅝"-27 adapter furnished. Made of high tensile aluminum. Size: with swivel 11⅜" long; dia. 1¹⁄₁₆". 18 ft. broadcast-type cable. Net wt., less swivel, 10 oz.

List Price........................$200.00

Model 654 Slim-Trim Broadcast Dynamic. Similar to Model 655. Frequency response 50-13,000 c.p.s., substantially flat. Output level −55 db. Recessed selector in stud gives 50 or 250 ohms impedance. *Pop-proof* head. *Acoustalloy* diaphragm. Swivel case, made of brass. Cannon XL-3 connector. ⅝"-27 thread. ½" pipe thread adapter furnished. 18 ft. broadcast-type cable. Size: 10" long with stud; 1¹⁄₁₆" dia. Net wt., 15½ oz.

List Price........................$90.00

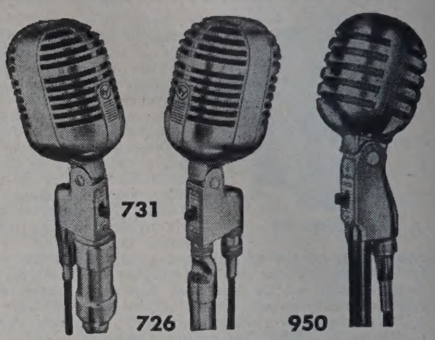
Model 650 Broadcast Dynamic. Frequency response 40-15,000 c.p.s., ±2.5 db. Output level −48 db. Dual-type external shock mount. Recessed impedance selector switch gives 50 or 250 ohms. Tiltable head. Pressure cast case, finished in durable Satin Chromium. *Acoustalloy* diaphragm. Cannon XL-3 connector. ⅝"-27 stand coupler. 18 ft. broadcast type cable. Size: 2¼" x 4⅝" x 5¼" including stud. Shock mount is 1½" x 3⅞". Net wt., including shock mount, 2¾" lbs.

List Price........................$150.00

Model 635 Broadcast Dynamic. Meets exacting requirements of TV and Broadcast service. Compact, rugged, versatile—used in studios and on remotes, on a stand or in the hand, indoors and out. Response 60-13,000 c.p.s., ±2.5 db. Output level −55 db. 50-250 ohms impedance selector. *Acoustalloy* diaphragm. Head tilts through 90° arc. ⅝"-27 thread. Cannon XL-3 connector. Satin Chromium finish. 18 ft. broadcast-type cable. Size 2" x 4¼" x 4½". Net wt., 1½ lbs.

List Price........................ $69.00

CARDIOID UNIDIRECTIONAL MIKES



Overcome Background Noise, Stop Feedback, Improve Pick-up

E-V Mechanophase* Principle provides wide-angle front pick-up—dead at rear. Solves difficult sound pick-up problems—assures finer, clearer reproduction of voice and music—simplifies microphone and speaker placement—increases pick-up range—permits higher volume levels. Tiltable head. Satin Chromium finish. ⅝"-27 thread. 18 ft. cable. Size, less shock mount, 2½" x 3½" x 9". Net wt., 2½ lbs.

Model 731 Dynamic (Cardyne II). Flat response 30-12,000 c.p.s. Output level −53 db Dual-type external shock mount. High-Low impedance selector. Cannon XL-3 connector. "On-Off" switch (optional).

List Price........................ $92.00

Model 726 Dynamic (Cardyne I). Frequency response, 40-10,000 c.p.s. Output level −55 db. High-Low impedance selector, MC-3 type connector. "On-Off" switch.

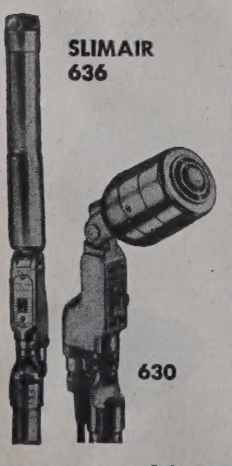
List Price........................ $68.50

Model 950 Cardax Crystal. First High level cardiod crystal microphone with *Dual Frequency Response*—Flat for high fidelity sound pick-up (output −57 db), or rising characteristic for extra crispness of speech (output −50 db). Fully enclosed Metal Seal crystal. Built-in cable connector. "On-Off" Switch. Size 2½" x 2⅞" x 6¼", including stud. Net wt., 1¾ lbs. *E-V Pat. Pend.

List Price........................$42.50

All E-V Dynamic Microphones are now phased to facilitate multiple microphone installations

E-V DYNAMIC, DIFFERENTIAL* AND CRYSTAL MICROPHONES



Model 636 "Slimair" Dynamic for P. A. Exceptionally fine for public address, recording, and other general-purpose use. Rugged, versatile. High-fidelity response 60-13,000 c.p.s. Output −55 db. *Pop-proof* head stops wind and breath blasts. *Acoustalloy* diaphragm. Alnico V. Omnidirectional. Wide pick-up range, for individual or group work indoors and outdoors. Used in hand, on stand, or overhead—or can be concealed in stage props. "On-Off" switch optional. Metal case, in Satin Chromium finish. Swivel head permits 90° vertical tilt. MC-4 connector. ⅝"-27 thread. 18 ft. cable. Size: 10¼" long incl. stud. Dia. 1¹⁄₁₆". Net wt., 15 oz. High or low impedance selection.

List Price........................$70.00

Model 630 High Fidelity, High Output Dynamic. Brilliant, general-purpose dynamic—famous for quality far beyond its moderate price! Substantially flat response 60-11,000 c.p.s. Assures faithful reproduction of speech and music. Output level −55 db. Compact, lightweight, extra rugged for indoor and outdoor use. Unaffected by heat and humidity. Exclusive *Acoustalloy* diaphragm. Swivel head permits 90° tilt. Built-in cable connector. ⅝"-27 thread. Satin Chromium finish. "On-Off" switch. 18 ft. cable. Size 2" x 4¾" x 4½" including stud. Net wt., 1⅓ lbs. Available in Hi-Z, 50, 200, 250 or 500 ohms impedance.

List Price........................$42.00

Model 606 Differential* Dynamic. Close-talking, noise-cancelling microphone. Used in airport control towers, police dispatching, close-talking public address and high noise industrial applications. Response substantially flat, 100-6,000 c.p.s. Output −55 db. *Acoustalloy* diaphragm. Head at 22° fixed tilt. ⅝"-27 thread. Built-in cable connector. Satin Chromium finish. Size 2" x 3¼" x 2½" incl. stud. Net wt., 12 oz. Available in Hi-Z, 50, 200 or 250 ohms impedance. Low impedances not balanced to ground. (*Patent No. 2,350,010.)

Model 606-8. With 6 ft. cable. List $42.00
Model 606-20. With 18 ft. cable. List $43.50

E-V "Mercury" Model 611 Dynamic. For economical public address systems, home recorders, Ham rigs, other uses. Smooth response 50-8000 c.p.s. Output −55 db. Non-directional. *Acoustalloy* diaphragm. Tiltable head. "On-Off" switch. Built-in cable connector. ⅝"-27 thread. Satin Chromium finish. Available in Hi-Z, 50, 150, 250 or 500 ohms impedance. Size 2⅜" x 3⅛" x 6¼" incl. stud. Net wt. 2 lbs.

Model 611-8. With 6 ft. cable. List $33.50
Model 611-20. With 18 ft. cable. List $35.50

E-V "Mercury" Model 911 Crystal. Same smart design and fine performance as Model 611. Response 50-8000 c.p.s. Output −50 db. Metal Seal Crystal. High imp. Net wt. 1½ lbs.

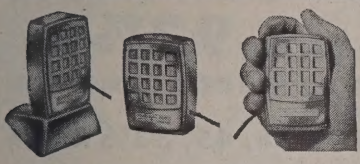
Model 911-8. With 6 ft. cable. List $25.50
Model 911-20. With 18 ft. cable. List $27.50

Reference Level: Dynamic Microphones 6mw/10 dynes/cm²; Crystal, Ceramic and Carbon Microphones 1 volt/dyne/cm².

NO FINER CHOICE THAN RESEARCH-ENGINEERED

Electro-Voice MICROPHONES

STANDS AND ACCESSORIES



Multi-Purpose CENTURY

Most popular microphone ever produced! Incomparable for all low-cost applications. Hundreds of thousands in use for public address, paging, recording, amateur communications. Can be used in any position—in hand, on table, on stand or overhead. Excellent frequency response. High output level. Essentially non-directional, becoming directive at higher frequencies. Highest purity pressure cast case finished in rich, durable Satin Chromium. Rugged, light weight. Size 3" x 2$\frac{3}{16}$" x 1". Furnished with ⅝"-27 thread stand adapter.

Model 915 "Century" Crystal. High capacity, moisture sealed crystal. Smooth response 60-7500 c.p.s. Output −50 db. High impedance. AC-DC insulated. 7½ ft. cable. Net wt., 6 oz.

List Price.......................... $11.25

Model 915-S. Same with slide-to-talk switch.

List Price.......................... $13.00

Model 715 "Century" Ceramic. Moisture-proof ceramic generating element. AC-DC insulated. Smooth response 55-7500 c. p. s. Output -55 db. High impedance. 7½ ft. cable. Net wt. 6 oz.

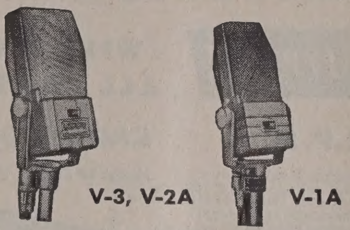
List Price..........................$11.25

Model 615 "Century" Dynamic. Has exclusive, long-lasting E-V *Acoustalloy* diaphragm. Withstands extreme temperature, humidity, corrosive effects of salt air, and severe mechanical shocks. Smooth response 55-7500 c.p.s. Output −55 db. Choice of high impedance or 50 ohms. Low impedance not balanced to ground. 7½ ft. cable. Net wt., 8 oz.

List Price.......................... $18.50

Model 415. Reclining Desk Stand. Mounts Century at 15° tilt. Gray-brown finish. Size 2⅝" x 2¾" x 1". Net wt., 4 oz.

List Price.......................... $1.70



High Fidelity, High Output Bi-Directional VELOCITY

Superb pick-up and reproduction of voice and music has made these microphones favorites over the years. Advanced design now brings Dynamic advantages to Velocity performance. Response is smooth, peak-free over a wide frequency range. Equal front and back pick-up. Zero pick-up at sides, top and bottom. Excellent for individual or group work in public address, broadcasting, recording. Proper placement and tilting reduce feedback and random noise. *Acoustalloy* Diaphragm. Reflection-free housing. Internal shock absorber. Locking cradle. "On-Off" switch. ⅝"-27 thread. 18 ft. cable.

Model V-3. Impedance selector provides high or low impedance. Substantially flat response, 40-10,000 c.p.s. Output level −53 db. Size 3½" x 2¾" x 8", including stud. Net wt., 2½ lbs.

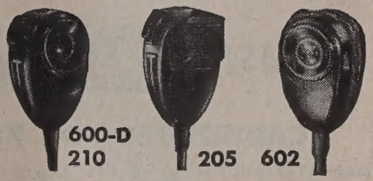
List Price.......................... $69.00

Model V-2A. Similar to V-3, but without impedance selector switch. Choice of 50, 250, 500 ohms, or Hi-Z.

List Price.......................... $57.50

Model V-1A. Same high quality in compact, smaller size, ribbon-type velocity. Frequency response 40-9,000 c.p.s., substantially flat. Output level −63 db. Size 2¾" x 2⅛" x 6½" including stud. Net wt., 2 lbs. Available in Hi-Z, 50, 250 or 500 ohms impedance.

List Price.......................... $46.00



E-V MOBIL-MIKES

Model 600-D Dynamic. Lightweight, hand-held, extra-rugged. Withstands extreme climatic conditions. Smooth response provides higher articulation and more usable power level; less fatiguing to listener. Output −55 db. *Acoustalloy* diaphragm. Press-to-talk switch controls relay. Size 2¼" x 2" x 4". Black phenolic case, with mounting bracket. 6 ft cable. Choice of high or low impedances. Wt. 8 oz.

List Price..........................$38.50

Model 600-DL. With switch lock. List...$40.00

Model 210 Carbon. Similar to Model 600-D, but single-button carbon. Gives high intelligibility speech transmission. Substantially flat response. Output−50 db. Press-to-talk switch controls relay. 5 ft. cable. Net wt., 7 oz.

List Price.......................... $28.50

(*Also available in exact replacement models for Motorola, RCA, G.E. and similar mobile equipment*)

Model 205 Differential* Carbon. Close-talking, noise-cancelling single-button carbon Mobil-Mike. Gives maximum speech intelligibility under high ambient noise. Blast proof, waterproof, shock resistant. Substantially flat response gives high articulation. Output −50 db. Press-to-talk switch controls relay. Black phenolic case, with mounting bracket. 5 ft. cable. Size 2¼" x 2¼" x 4". Net wt., 7 oz. (*Patent No. 2,350,010)

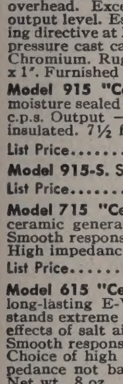
List Price.......................... $34.50

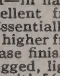
Model 602 Differential* Dynamic. Similar to Model 600-D, but close-talking, noise-cancelling *Differential* type. Assures clear speech transmission under intense noise in any weather or climate. Output −55 db. Press-to-talk switch controls relay. 5 ft. cable. Available in all impedances. Wt. 8 oz.

List Price..........................$45.00

ELECTRO-VOICE FLOOR AND DESK STANDS

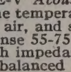
Model 425 Deluxe Floor Stand





Remarkably light in weight, yet very stable. Red button at top of shaft gives one-hand height control from 37" to 66". Locks automatically on release. Shaft can be rotated without any adjustment device. Unique locking-type adjustable legs permit stand to be placed flush against wall or speaker's table. Easy to assemble or take apart. Folds into small, compact package. Modern die-cast base. 3-leg spread 17". Satin Chromium finish. Net wt., 7½ lbs.

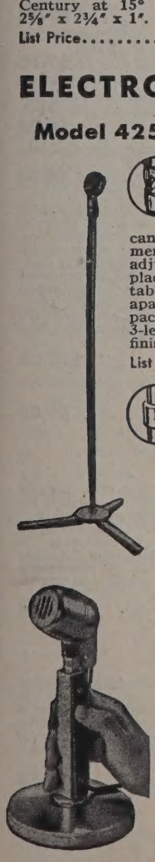
List Price................ $27.50



Model 430 Utility Floor Stand

Similar to Model 425, but with button control on lower section for height adjustment from 36" to 65". 3-leg spread 17". One bolt assembly. Gray finish. Extension shaft in Satin Chromium. Net wt. 7½ lbs.

List Price............$17.00

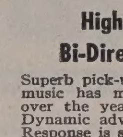


Touch-to-Talk Stand

Fits *any* microphone with standard ⅝"-27 thread! Specially-designed, lever-type switch for relay operation or microphone "On-Off"—closes or opens instantly, or locks in "talk" position, with light finger-tip action. Gives easy "*Break-in*" operation in communications, public address, paging, dispatching. Switch is self-contained unit, easily removable from the round die-cast base. Single-pole double-throw. Stand finished in Satin Chromium. Gray plastic switch lever and red locking button.

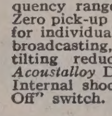
Model 428. "Break-in" Touch-to-Talk Stand with switch. Ht., 7". Base diam., 5⅛". Net wt., 1¾ lb.

List Price............ $14.00



Model 423-A Desk Stand. Sturdy, smartly styled, round die-cast base, 5⅛" diam. Rests firmly. Rich Satin Chromium finish. Rubber base buttons. ⅝"-27 thread. Choice of 3" or 5" matching stem riser. Net wt., 1 lb.

List Price.................... $4.50



Model 427-A Desk Stand. Attractive, round die-cast base rests stably on desk or table. 5" stem riser. Satin Chrome finish. Standard ⅝"-27 thread. Base diam. 4⅝". Net wt., ⅝ lb.

List Price.................... $3.50

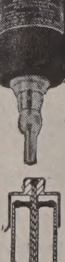
Model 427. Same as 427-A but finished in lustrous gray-brown.

List Price.................... $2.75

Low Impedance Microphone-to-Grid Matching Transformer

Model 502. Transformer windings have low distributed capacity and are amply shielded against inductive hum by a high permeability shield inside a pressure cast case. Designed for mounting on amplifier chassis or in series with the microphone line. Designed for 50 and 250 ohm (500 ohms optional) microphones. Broadcast fidelity. Response 40-20,000 cps ±1 db, for speech or music. MC-4 input connector.

List Price..................$15.00



Model 345 Shock Mount. Dual-type external shock mount prevents reproduction of external shocks and stand vibrations. Permits tilting microphone head. ⅝"-27 thread. Easily attached or removed. Satin Chromium finish. Size 1½" x 3⅞". Net wt. 10 oz.

List Price.................. $13.00

Model 335 Blast Filter. Acoustically treated, scientifically curved grille stops wind and breath blasts in dynamic microphones. Does not affect frequency response. Easily fits over head of E-V Models 630, 635 and 605 Microphones. Satin Chromium finish.

List Price..................$5.50

Model 605 Durable Dynamic

605

For dependable, low-cost general-purpose use. Substantially flat response, 50-7500 c.p.s. Output level −55 db. Non-directional, becoming directive at higher frequencies. *Acoustalloy* diaphragm. Head at 22° fixed tilt. Built-in cable connector. Satin Chromium finish. Available in Hi-Z, 50, 200, or 250 ohms impedance. Low impedances not balanced to ground. Wt., 12 oz.

Model 605-8. With 6 ft. cable.

List.................. $27.50

Model 605-20. With 18 ft. cable.

List.................. $29.50

Model 920 "Spherex" Crystal

920

Fine quality all-direction pickup for conferences, round table discussions, home recording and public address. Substantially flat frequency response, 60-7000 c.p.s. Output level −50 db. Omnidirectional polar pattern. Strong wire-mesh head acoustically treated for wind and moisture protection. High capacity, moisture sealed crystal. Lustrous Satin Chrome finish. ⅝"-27 thread. Diameter 2¼". Net wt., 8 oz.

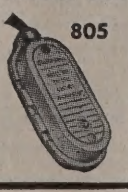
Model 920-8. With 6 ft. cable.

List.................. $19.00

Model 920-20. With 18 ft. cable

List.................. $20.50

Model 805 Contact Microphone



805

For guitar, banjo, mandolin, violin or any vibrating musical instrument. Increases natural sound volume, enriches tonal effects. Response 40-8000 c.p.s. High impedance. Crystal sealed against moisture and acoustic feedback. Chromium finish. 15 ft. cable. Net wt. 2 oz.

List Price............ $17.25

NO FINER CHOICE THAN

Electro-Voice

MODERN PHONO-PICKUP

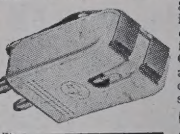
CARTRIDGES

FOR ALL 3 SPEEDS

6 BASIC PREFERRED TYPES ★ WILL MAKE OVER 92% OF ALL CARTRIDGE REPLACEMENTS

CARTRIDGES FOR 78 R.P.M.

Model 12 Crystal. The most versatile 78 r.p.m. replacement. Replaces over 80% of cartridges in use. Medium voltage output is ideal for most phono combinations. Weighs 1/5 ounce. Tracks perfectly with less needle force. Ideal for "in stock" cartridges for general replacement. Output, 2 volts. Supplied with E-V Snap-In Holder and mounting hardware. For standard ½" hole centers, RCA 13/16" mounting or Webster-Electric side mounting cartridges.

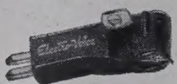


Model 12, with O-3 Osmium needle. List....$7.50

Model 12-S, with S-3 Sapphire needle. List..$8.50

PREFERRED ★

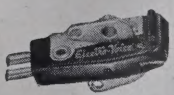
Model 32 Crystal. The 78 r.p.m. cartridge that provides the longest record life, lowest needle talk and greatest stylus life. Ideal for record enthusiasts with valuable libraries of 78 r.p.m. records. Frequency response comparable to wide range magnetics. Output 1 volt, useable in most radio-phono combinations. Standard ½" mounting. Uses E-V whisker-type needle.



Model 32, with O-3 Osmium needle. List....$6.50

Model 32-S, with S-3 Sapphire needle. List..$7.50

Model 42 Ceramic. The Model 42 cartridge utilizes a ceramic generating element for complete moisture inhibition. Long-lasting in extremely hot, humid climates. Output is .8 volt. Inherently, ceramic elements have a lower output than crystal elements. Purchasers should be advised to turn set gain control to higher level than normally used with crystal cartridges. Mounting bracket of Model 42 drilled for mounting in tone arms with either ½" or ⅝" hole centers.

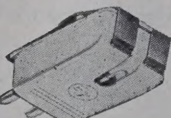


Model 42, with O-3 Osmium needle. List....$6.50

Model 42-S, with S-3 Sapphire needle. List..$7.50

CARTRIDGES FOR 45 and 33⅓ R.P.M.

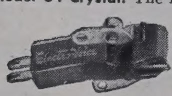
Model 14 Crystal. The E-V Model 14 cartridge gets *all* the music from the extended range fine groove records. Response follows professional standards . . . is free from peaks and distortion that mar wide range response. Range *guaranteed* 50 to 15,000 c.p.s. ± 2½ db. A truly high fidelity phono-cartridge that requires no expensive preamplifier or equalizer. Output, 1 volt. Uses E-V 1-mil, whisker-type needle.



Model 14, with O-1 Osmium needle. List....$7.50

Model 14-S, with S-3 Sapphire needle. List..$8.50

Model 34 Crystal. The high compliance-to-voltage output ratio of this cartridge makes it a superb replacement for 45 and 33⅓ r.p.m. players. Reproduction is fuller yet needle tracks with whisker touch in record grooves. Records sound better and last longer. Output, 1.25 volts, slightly higher output than average fine groove cartridge. Mounting bracket has ½" and ⅝" hole centers. Makes ideal replacement in RCA-type "45" changers and in Columbia 33⅓ "LP" player. Uses E-V whisker-type 1-mil needle.



PREFERRED ★

Model 34, with O-1 Osmium needle. List.....$6.50

Model 34-S, with S-1 Sapphire needle. List...$7.50

Model 44 Ceramic. Model 44 utilizes a ceramic generating element for complete moisture inhibition. Makes an ideal, long lasting replacement in hot, humid climates. Output is .5 volt. Ceramic elements are inherently lower in output than crystal elements. Purchasers should be advised to turn volume control higher than normally used with crystal cartridges. Model 44 mounts in tone arms with either ½" or ⅝" hole centers.

Model 44, with O-1 Osmium needle. List....$6.50

Model 44-S, with S-1 Sapphire needle. List..$7.50

ELECTRO-VOICE REPLACEMENT NEEDLES

MODEL	TYPE AND APPLICATION	LIST PRICE
O-3	Single-Tip .003" Osmium for Models 12, 32, 42, 96, 96-T	$1.50
S-3	Single-Tip .003" Sapphire for Models 12, 32, 42, 96, 96-T	2.50
O-2	Single-Tip .0023" Osmium for Models 33, 33-B, 43	1.50
S-2	Single-Tip .0023" Sapphire for Models 33, 33-B, 43	2.50
O-1	Single-Tip .001" Osmium for Models 14, 34, 44, 96, 96-T	1.50
S-1	Single-Tip .001" Sapphire for Models 14, 34, 44, 96, 96-T	2.50
SO-13	Twin-Tip .001" Sapphire-.003" Osmium for Models 16 & 16-TT	3.00
O-13	Twin-Tip .001" Osmium-.003' Osmium for Models 16 & 16-TT	2.50

Model 10 (not listed here) takes same needle as Models 12, 14 or 16.
Model 30 (not listed here) takes same needle as Models 32, 33 or 34.

CARTRIDGES FOR 78, 45, 33⅓ R.P.M.

Model 33 Crystal. Utilizes a specially designed all-purpose needle which plays all three speeds with a single tip. Simplifies operation of multi-speed changers. Tracks well in all grooves. 2.3 mil tip reduces record wear over other types of all-purpose needles. Output 1 volt on microgroove, 1.8 volts on 78 r.p.m. records. Mounting bracket has ½" hole spacing for wide adaptability and ease of installation. Uses E-V whisker-type 2.3 mil needle.

PREFERRED ★

Model 33, with O-2 Osmium needle. List....$6.50

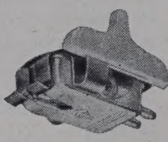
Model 33-S, with S-2 Sapphire needle. List..$7.50

Model 43 Ceramic. Model 43 utilizes a specially designed all-purpose needle which plays all three speeds with a single tip. Ceramic generating element assures complete moisture inhibition. Ideal replacement for multi-speed changers in hot, humid climates. Output is .5 to .8 volt. It is an inherent characteristic of ceramic elements to have a lower output than crystal elements. Purchasers should be advised to turn set volume control higher than normally used with crystal cartridges. Mounting bracket has two sets of mounting holes spaced at ½" and ⅝" centers for wide adaptability in installation.

Model 43, with O-2 Osmium needle. List....$6.50

Model 43-S, with S-3 Sapphire needle. List..$7.50

Model 16-TT Crystal TWIN TILT. The Twin-Tilt Cartridge with a one-piece, twin-tip needle will play all types of records . . . 78, 45 and 33⅓ r.p.m. without weight change. The Model 16-TT is complete with Tilt mechanism. Merely tilt the selector handle to select the 1-mil or 3-mil needle tip . . . for slow or fast speed records. Output, 1-volt on each tip. Excellent for Webster-Chicago changers. With Osmium 3-mil tip and Sapphire 1-mil tip on single E-V silent, whisker-type stylus.



Model 16-TT, List Price....................**$10.00**

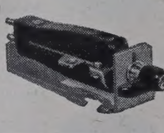
Model 16-OTT. Same as Model 16-TT above but with Osmium 3-mil and Osmium 1-mil tips.
List Price..............................**$9.50**

PREFERRED ★

Model 16. Cartridge only, without Tilt mechanism, but with Osmium 3-mil tip and Sapphire 1-mil tip, for exact replacement of units already installed.
List Price..............................**$9.00**

Model16-O. Same as Model 16, but with Osmium 3-mil and Osmium 1-mil tips.
List Price..............................**$8.50**

Model 96-T Crystal TURNOVER. Popular Turnover type cartridge with separate needles for fast and slow speed records. The two needles are completely isolated from one another allowing correct frequency response on each. "Free" needle does not cause distortion. Output, 1 volt on each needle, ample for all turnover replacements. Positive-acting turnover mechanism prevents needle set-down error. Mounting plate supplied for LQD type cartridges. Complete with 3-mil Osmium needle, O-3, and 1-mil Sapphire needle, S-1.



Model 96-T. List Price..................**$10.00**

PREFERRED ★

Model 96. Same but without turnover harness for installation in existing mechanism.
List Price..............................**$9.00**

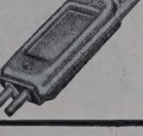
WITHOUT NEEDLE

Model 60 Crystal DUO-VOLT. This Bimorph* Crystal Cartridge permits easy selection of high or medium output for the job. Just connect leads to the two outer terminals for 4 volts output or to the center terminal and one outer terminal for 2 volts. No soldering. No accessories to attach or remove. Uses any standard 3-mil, 1-mil, or all-purpose needle. ½" mounting hole centers. Aluminum case. Ideal for varied replacement needs.

Model 60. Less needle. List Price..........**$4.95**

PREFERRED ★

Model 50 Crystal. Bimorph high level cartridge, supplied without needle. Can be used with any standard 1-mil, 3-mil or all-purpose tip replacement needle. Output level with straight shank is 5 volts; with compliant needle, 3½ volts. Excellent replacement in record players with low gain amplifiers and in single play phonographs. Aluminum case.



Model 50. Less needle. List Price..........**$4.50**

---

*®Brush Development Co.

Microphones BY TURNER

THE WORLD FAMOUS TURNER MODEL 22X CRYSTAL 22D DYNAMIC

Tops in value, tops in performance. Accurate pickup and faithful reproduction have made these units the most popular general purpose microphones on the market. Full 90° tilting head for semi or non-directional operation. Satin chrome finish. ⅝"-27 coupler.

MODEL 22X CRYSTAL. High quality humidity protected crystal, mechanical shockproofed, barometric compensator. Level: 52 db below 1 volt/dyne/sq. cm. Response: 60 - 9000 c.p.s. Complete with 7 ft. removable cable set.................List Price **$22.50**

Model S-22X.
With slide on-off switch. List Price **25.00**

MODEL 22D DYNAMIC. High quality Alnico magnets in high level dynamic circuit. Level: 54 db below 1 volt/dyne/sq. cm. at high impedance. Response: 70 - 9000 c.p.s. 7 ft. removable cable set. Available in 50, 200, 500 ohms or high impedance.
List Price **$27.25**

Model S-22D.
With slide on-off switch. List Price **29.75**

HIGH PERFORMANCE! EYE APPEAL! MODERATE COST! MODEL 33X-33D CRYSTAL OR DYNAMIC

These high fidelity, all purpose units combine high output with smooth response over a wide frequency range. Streamlined case designed with full rich satin chrome finish. 90° tilting head.

MODEL 33X CRYSTAL has high quality 2-element moisture sealed crystal, automatic barometric compensator, and mechanical shock proofing. Level: 52 db below 1 volt/dyne/sq. cm. Response: 60-9000 c.p.s. Complete with 20 ft. removable cable set......................List Price **$24.50**

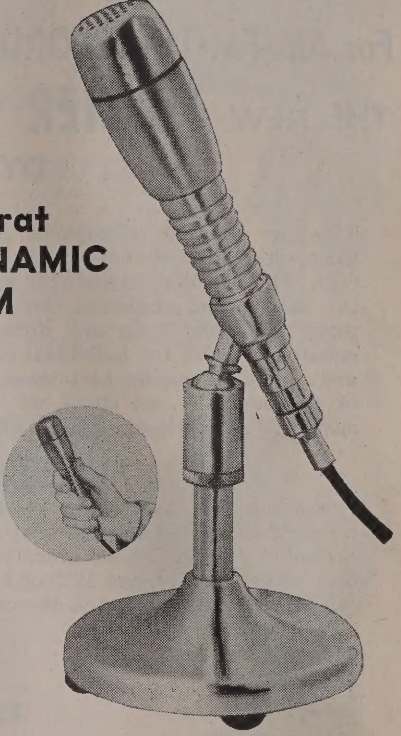
Model S-33X.
With slide on-off switch. List Price **27.00**

MODEL 33D DYNAMIC. Alnico magnets. Level: 54 db below 1 volt/dyne/sq. cm. at high impedance. Response: 60-9000 c.p.s. Complete with 20 ft. removable cable set. High impedance wired single ended (single conductor shielded cable). 50, 200 or 500 ohms wired for balanced line (two conductor shielded cable)...........List Price **$29.00**

Model S-33D.
With slide on-off switch. List Price **31.50**

The New Turner Aristocrat Model 50D DYNAMIC for TV - FM - AM

- ★ **Recording . . .**
- ★ **Broadcast . . .**
- ★ **Public Address**

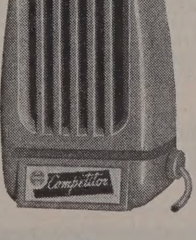


THE CROWN JEWEL OF DYNAMIC MICROPHONES

New beauty, new styling, new utility, and **new performance** make the Turner Aristocrat the finest of fine microphones. Each unit is **laboratory calibrated** to insure specification standards. Use indoors or out — in hand, on stand, suspended, or concealed in stage settings. Quickly and easily detached from ball swivel coupler for hand use. Non-directional polar pattern picks up sound from any direction. Equally effective for individual or group pickups with wide range, high fidelity reproduction. Completely self-contained, — its **high output dynamic generator requires no closely associated auxiliary equipment for outstanding results.**

MODEL 50D DYNAMIC. Frequency response: 50-15,000 c.p.s. flat within 2½ db. Level: 56 db below 1 volt/dyne/sq. cm. at high impedance. Available in 15, 50, 200, 500 ohms or high impedance output. Complete with ball swivel coupler, and 20 ft. two conductor shielded cable with cannon quick-disconnect plug (stand not included)................List Price **$150.00**

MODEL 60X CRYSTAL MICROPHONE



A striking, low cost crystal microphone recommended where good quality speech reproduction is required and the factor of economy is important. A natural for hams, low priced public address systems, dictation machines, and home recorders. Use in hand, on desk, or on stand. Frequency response is 70 - 7000 c.p.s. and output level is 52 db below 1 volt/dyne/sq. cm. 6 ft. single conductor cable is securely anchored to case and cannot twist or pull out. Baked on beige wrinkle enamel finish. Complete with stand adaptor.

Model 60X ....List Price **$10.85**
Model S60X. With on-off slide switch.....List Price **12.85**

THE TURNER COMPANY, CEDAR RAPIDS, IOWA

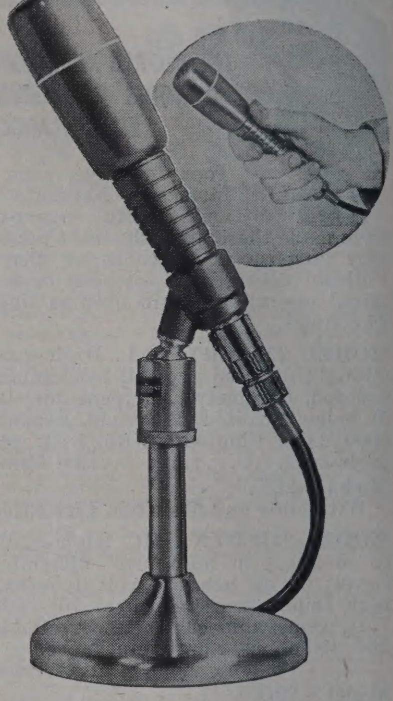
TURNER

Microphones BY TURNER

For AM·FM·TV·RECORDING·PUBLIC ADDRESS

THE NEW TURNER 51D

DYNAMIC MICROPHONE

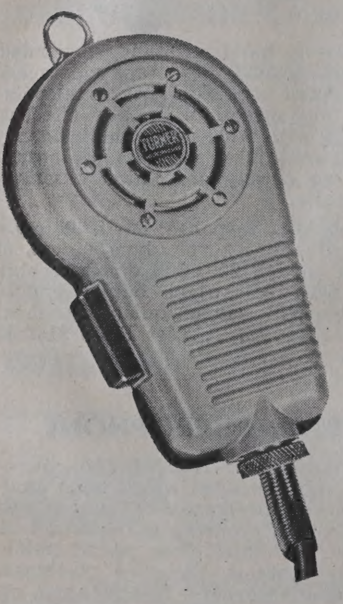


This new dynamic microphone, handsomely finished in rich umber grey, offers exceptionally high quality performance at a new low cost. The slender, cylindrical design allows unobstructed vision for artists and audience. Omnidirectional in operation, the 51D picks up sound from any direction without discrimination . . . equally effective for individual or group pickups. Blast-proof head and rugged dynamic performance make it ideal for use indoors or outdoors . . . on stand, or quickly detached for hand use or suspension. No closely associated auxiliary equipment required.

MODEL 51D DYNAMIC

Frequency response: 60 to 13,000 c.p.s. substantially flat. Output level: 58 db below 1 volt/dyne/sq. cm. at high impedance. Impedance: choice of 50, 200 or 500 ohms or high impedance. Complete with ball swivel coupler, and 12 foot high quality two conductor shielded cable with Cannon quick-disconnect plug. (Stand not included)

List Price **$85.00**



The New TURNER Model 70D Dynamic or 70R Carbon

Great performance — Amazing ruggedness

Watertight! ● Dust-Proof! ● Corrosion-Proof!

The new Turner 70 is a rugged, dependable unit designed especially to take tremendous punishment without affecting its clear, crisp voice response and high output. It is the ideal microphone for applications where high quality performance plus durability and dependability are demanded. It is completely impervious to water, dust and corrosion, even under conditions of prolonged exposure to these "mike wreckers."

Specific applications in which the 70 will prove to be superior are: Grain elevator, cereal mill, coal mine and other industrial uses where dust and corrosion render the average microphone useless in a short time; Shipboard and marine use, military, fire department, carnival and athletic field uses in which the 70 remains unaffected by water in any form—rainfall, mist, steam or total immersion.

All Model 70 and Model 71 microphones supplied complete with 7 foot attached cable, 2 conductor shielded for low impedances, single conductor shielded for high impedance. Quotations on request for any model furnished with Koiled Kord to meet your specifications.

MODEL 70D DYNAMIC—Frequency response: 200 to 5000 c.p.s. with slightly rising characteristic for maximum speech intelligibility. Output level: 52 db below 1 volt/dyne/sq. cm. Impedance: Choice of 50, 200, 500 ohms or high impedance, connected either for balanced line or single ended output. Diaphragm: Special heavy duty for maximum ruggedness and resistance to abuse—aluminum alloy.

List Price **$42.50**

Standard models 71D and 71R (not sealed against prolonged exposure to water, dust and corrosion) are also available. Write for complete information.

MODEL 70R CARBON—Same as 70D except with high quality carbon cartridge giving excellent articulation and intelligibility for speech. DC resistance: 150 to 250 ohms. Output level: 42 db below 1 volt/dyne/sq. cm.

List Price **$38.50**

TURN TO TURNER for "sound performance"

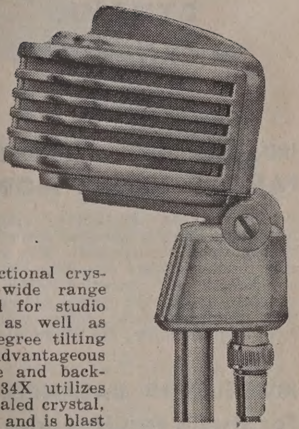
Microphones BY TURNER

TURNER

BROADCAST QUALITY DYNAMIC

MODEL 211. Precision engineered for critical recording, P.A., sound system and broadcast work, including FM. Level: 54 db below 1 volt/dyne/sq. cm. at high impedance. Response: 30-10,000 c.p.s. Equipped with tilting head, balanced line output connection, and 20 ft. 2-conductor, heavy duty removable cable set. Satin chrome finish. 50 ohms, 200 ohms, 500 ohms or high impedance.

Model 211 ....List Price $47.50



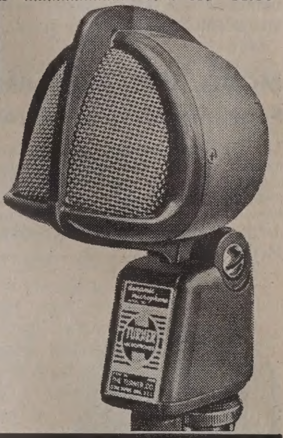
MODEL 34X CRYSTAL MICROPHONE

Attractive, high fidelity, semi-directional crystal unit. Exceptionally smooth wide range frequency response. Recommended for studio and public address installations as well as quality recording work. Ninety degree tilting head permits tilting to most advantageous position to reduce audience noise and background disturbances. The Model 34X utilizes a high quality Bimorph moisture sealed crystal, automatic barometric compensator, and is blast and mechanical shock-proofed. Satin chrome finish. Level: 52 db below 1 volt/dyne/sq. cm. Response: 60-10,000 c.p.s. Complete with 20 ft. removable cable set.

List Price $29.00

Model S-34X. With slide on-off switch ....List Price 31.50

BEAUTIFUL NEW MODELS 25X AND 25D
CRYSTAL AND DYNAMIC



A new leader in beauty and performance for all sound installations, call systems, recording, amateur communications, etc., indoors or out. Striking, modern case finished in rich two-tone umber gray with chrome plated grille. Full 90° tilting head for semi or non-directional operation. ⅝″—27 coupler.

MODEL 25X CRYSTAL. Genuine Bimorph, high quality, moisture sealed crystal, mechanically isolated. Level: 52 db below 1 volt/dyne/sq. cm. Response: 50-9,000 c.p.s. Complete with 20 ft. removable cable set.

Model 25X ....List Price $27.50

Model S-25X. With slide on-off switch ....List Price 30.00

Model P-25X. With push-to-talk button switch ....List Price 30.00

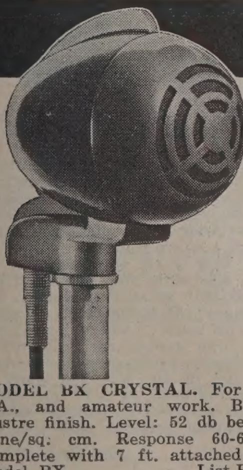
MODEL 25D DYNAMIC. High flux Alnico V magnets. Level: 54 db below 1 volt/dyne/sq. cm. at high impedance. Response: 50-10,000 c.p.s. Complete with 20 ft. removable cable set. High impedance wired single ended (single conductor shielded cable); 30, 200 or 500 ohms wired for balanced line (two conductor shielded cable).

Model 25D ....List Price $40.00

Model S-25D. With slide on-off switch List Price 42.50

Model P-25D. With push-to-talk button switch ....List Price 42.50

TURNER *Challengers*



INEXPENSIVE, PRACTICAL MICROPHONES FOR GENERAL SOUND WORK

Priced within the range of every user. Turner Challenger Microphones offer performance, quality and appearance usually found in microphones listing at twice their low cost. Available with a choice of crystal or dynamic elements, they retain many of the high quality features of Turner construction. You can rely on Turner Challengers — they are fully guaranteed.

MODEL BX CRYSTAL. For recording, P.A., and amateur work. Brown Metalustre finish. Level: 52 db below 1 volt/dyne/sq. cm. Response 60-6,000 c.p.s. Complete with 7 ft. attached cable.

Model BX ....List Price $11.75

MODEL BD DYNAMIC. Same appearance and finish as BX. Equipped with dynamic cartridge. Level: 52 db below 1 volt/dyne/sq. cm. at high impedance. Response: 100-6,000 c.p.s. Complete with 7 ft. attached cable. 50, 200, 500 ohms or high impedance.

Model BD ....List Price $16.85

MODEL CX CRYSTAL. Satin chrome finish. 7 ft. removable cable set. Standard ⅝″ 27 mounting. Level: 52 db below 1 volt/dyne/sq. cm. Response: 60-7,000 c.p.s.

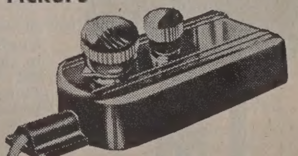
Model CX ....List Price $16.25

MODEL CD DYNAMIC. Same style and finish as CX. High quality magnets. 7 ft. removable cable set. Level: 52 db below 1 volt/dyne/sq. cm. at high impedance. Response: 100-7,000 c.p.s. 50, 200, 500 ohms or high impedance.

Model CD ....List Price $20.75

MODEL M M

MAGNETIC CONTACT PICKUPS



FOR MUSICAL INSTRUMENTS

MODEL MM. Standard Turner pickup. Alnico V circuit provides uniform response over entire musical range. Gives pleasing reproduction of any string instrument. High impedance output. Installed in a few seconds. Complete with 20 foot cable and mounting device.

Model MM/VC.
With volume control........$19.00

Model MM.
Without volume control.. 16.75

DELUXE MODEL MIP
(not illus.) 23.50

TURN TO TURNER for "sound performance"

RUGGED TURNER DYNAMIC MICROPHONES

Microphones BY TURNER

UNFAILING DEPENDABILITY IN ANY CLIMATE OR TEMPERATURE . . .
FAMOUS TURNER MODEL 99

U9S ILLUSTRATED

Professional in appearance and performance. Smooth response not affected by heat, cold or humidity. Has adjustable saddle ⅝″—27 mounting. Semi or non-directional operation. For annoucing, and mobile public address systems, paging systems, communications, recording machines, etc. Gunmetal metalustre finish. Level: 52 db below 1 volt/dyne/sq. cm. at high impedance. Response: 60-9,000 c.p.s. 20 ft. removable single conductor shielded cable set. 50, 200, 500 ohms or high impedance.

Model 99 ....List Price $36.00

MODEL 999 BALANCED LINE DYNAMIC
For studio results under critical conditions.

Same professional appearance as Model 99. Voice coil and transformer leads are insulated from ground and microphone case. Line is balanced to ground. Gunmetal metalustre finish. Level: 52 db below 1 volt/dyne/sq. cm. at high imedance. Response: 60-9,000 c.p.s. With 3 pin polarized locking connector and 20 ft. balanced line low capacity cable. 50, 200, 500 ohms or high impedance.

Model 999 ....List Price $39.50

MODEL U9S MULTI-IMPEDANCE DYNAMIC
Four impedances at your finger tips

50, 200, 500 ohms or high impedance — get it quickly with the turn of the switch on the Turner U9S Dynamic. Same precision engineering and rugged construction as the Model 999 with built-in tapped multi-impedance transformer and switch. Dependable at all impedances and frequencies. Gunmetal metalustre finish. Level: 52 db below 1 volt/dyne/sq. cm. at high impedance. Response: 60-9,000 c.p.s. Complete with 20 ft. balanced line removable cable set.

Model U9S ....List Price $42.50

TURNER MODEL 87

Velocity Microphone High Fidelity . . . Bi-Directional Multi-Impedance

A new unit, engineered with single element ribbon supported in the field of an Alnico V magnet for maximum sensitivity. Thorough shielding excludes hum pick-up. The Model 87 has a bi-directional pick-up pattern with exceptionally smooth response from 80-10,000 c.p.s. Level: 62 db below 1 volt/dyne/sq. cm. at high impedance. Built-in impedance switch gives selection of 50, 200, 500 ohms or high impedance output. Universal swivel mounting, ⅝″—27 thread. Finished in dark umber gray with bright chromium screen. Complete with 20 ft. two conductor balanced line shielded cable.

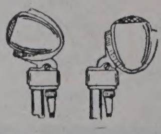
Model 87 ....List Price $49.85

MODEL 77 . . .

THE TURNER "TRU-CARDIOID"

The Turner "Tru-Cardioid" is a super-cardioid type microphone employing a combination of dynamic and velocity generators. "Tru-Cardioid" pickup pattern practically eliminates feedback, audience and background noise. Has wide range pickup at front and a sharply attenuated output at rear with approximately 15 db discrimination between front and rear at all frequencies. Response: 70-10,000 c.p.s. Level: 62 db below 1 volt/dyne/sq. cm. at high impedance. Built-in impedance selector switch gives choice of 50, 200, 500 ohms or high impedance output. 90 degree tilting head, ⅝″—27 mounting. Finished in dark umber gray with polished chromium screen. Complete 20 ft. removable two conductor shielded cable set.

Model 77 ....List Price $79.50



TILTING HEADS

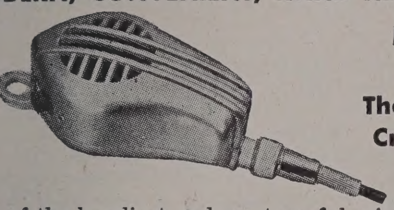
Turner Microphone Models 22X, 22D, 25X, 25D, 33X, 33D, 34X, 211, and 77 are all equipped with 90° tilting heads.

TURN TO TURNER for "sound performance"

Microphones BY TURNER

TURNER

MODERN, CONVENIENT, HAND HELD MICROPHONES



MULTI-PURPOSE MICROPHONE

The Turner "Han-D" Crystal or Dynamic

One of the handiest and most useful microphones made. Hang it, hold it, or mount on any standard floor or desk stand. Standard ⅝"—27 thread mounting. Balanced to fit the hand naturally, Ideal for stage, paging, public address, amateur, mobile and traveling mike broadcasting. Satin chrome finish. Positive contact slide switch permits on-off operation.*

MODEL 9X CRYSTAL. High quality, shock mounted, humidity protected crystal. Level: 52 db below 1 volt/dyne/sq. cm. Response: 60-7000 c.p.s. Complete with removable 7 ft. single conductor shielded cable set.
List Price $23.50

MODEL 9D DYNAMIC. Level: 52 db below 1 volt/dyne/sq. cm. at high impedance. Response: 100-7000 c.p.s. Complete with removable 7 ft. single conductor shielded cable set. 50, 200, 500 ohms or high impedance.
List Price $28.50

*Also available with heavy duty non-locking push-to-talk switch at same price. Specify: "P-9D" on order.

THE POPULAR LOW COST TURNER TWENTY

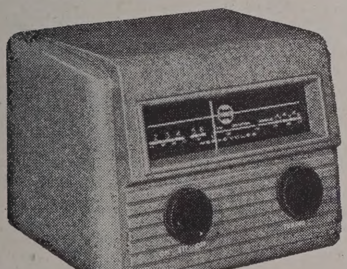
A light-weight, convenient, hand held microphone available in a choice of crystal, dynamic, or carbon circuits. Various switching arrangements provide versatility for a wide range of applications. Equipped with hook ring for hanging. Bronze metalustre finish. Cable is securely anchored and is guaranteed not to pull out.

Model 20X Crystal. Level: 52 db below 1 volt/dyne/sq. cm. Response: 60-7000 c.p.s. 7 ft. cable. List $12.85
Model S20X. With push to talk switch having slide-lock feature. Switch connected in microphone circuit, normally open. List $14.85
Model SR-20X. With push to talk slide-lock switch. Wired for relay control. List $17.85

Model 20D Dynamic. Level: 52 db below 1 volt/dyne/sq. cm. Response: 100-7000 c.p.s. 7 ft. cable. List $16.85
Model S20D. (With push to talk switch having slide lock feature.) List $18.85
Model SR-20D. (For Relay Operation). List $21.85

Model 20R Carbon. Level: 32 db below 1 volt/dyne/sq. cm. Response: 200-4000 c.p.s. 48" cable. List $12.85
Model S20R. (With push to talk switch having slide lock feature.) List $14.85
Model SR-20R. (For Relay Operation). List $17.85

THE TURNER BOOSTER



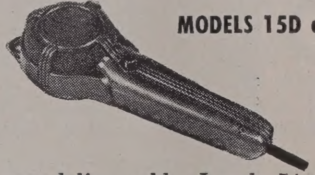
The Turner Television Booster and FM Amplifier is especially engineered to permit satisfactory TV reception in extreme fringe areas by increasing the television signal strength without appreciably increasing the noise level. It is also desirable for eliminating costly antenna installations in weak signal areas.

The now-famous cascode circuit utilizes the inherently low noise factor of the triode tube to provide an extremely high signal-to-noise ratio and deliver a higher usable gain.

- Continuous tuning on all channels
- Gain: 20 db on channels 2 to 6
  12-14 db on channels 7 to 13
- Fully shielded chassis
- Power Consumption: 6 watts, 105-120 volts, 50-60 cycles, a.c.
- Dimensions: 8" x 6" x 6"

List Price $57.50

MODELS 15D and 15D-NC HAND-HELD DYNAMICS



Model 15D. Heavy duty functionally designed case finished in gray gun metal. Hook for hanging when not in use. Equipped with attached 20 ft. two conductor shielded balanced line cable. Level: 54 db below 1 volt/dyne/sq. cm. at high impedance. Response: 100-7000 c.p.s. Available in 50, 200, 500 ohms or high impedance. ....List Price $31.50

Model P-15D. With push-to-talk button switch. ....List Price $34.00

Model 15D-NC. Noise cancelling. Designed for intelligible communications under adverse background noise conditions. Unwanted sound cancelled out. Same case and finish as 15D. Level: 54 db below 1 volt/dyne/sq. cm. at high impedance. Response: 100-5000 c.p.s. Available in 50, 200, 500 ohms or high impedance. Complete with attached 20 ft. two conductor shielded balanced line cable. ....List Price $34.00

Model P-15D-NC. With push-to-talk button switch. List Price $36.50

L40 LAPEL MICROPHONE

Small, lightweight, and inconspicuous, the L40 can be worn in the lapel or concealed. Highest quality Bimorph, moisture sealed crystal produces high signal level. Engineered for crisp, clear speech reproduction. Chest sounds damped out. Alligator clip. Satin chrome finish. Level: 52 db below 1 volt/dyne/sq. cm. Response: 50-8000 c.p.s. With 20 ft. attached cable.
List Price $25.00

WITH THIRD HAND—L40-3H

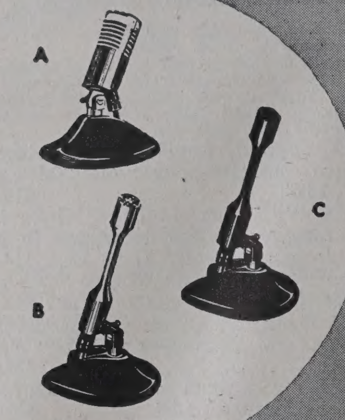
Slips over neck in a jiffy. Ideal for mobile sound work and call systems where operator needs both hands free. Indispensable for demonstrators. ....List Price $30.00

Crystals licensed under patents of the Brush Development Company.

THE TURNER COMPANY, CEDAR RAPIDS, IOWA

A complete line MICROPHONES

FULL VISION *by American*

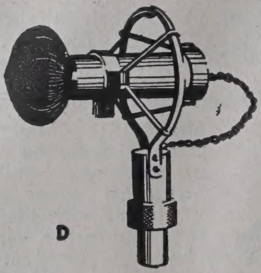


Radio & TV

A. DR-330 Cardioid (Dynamic and Ribbon) designed specifically for radio and television broadcast, and for motion picture studio requirements. The DR-330 Cardioid represents an achievement in ultimate cardioid performance. A superb smooth and extended peak-free frequency response, from 40-15,000 c.p.s., plus or minus 2.5 db., 50, 150 or 250 ohms impedance. List..............................$250.00

B. D-33 Dynamic omni-directional designed for broadcast, sound recording, public address. This full vision D-33 microphone provides extended peak-free frequency response. 40-15000 c.p.s., plus or minus 2. db., impedance 30-50 and 250 ohms. No pre-amplifier is required. List..............................$125.00

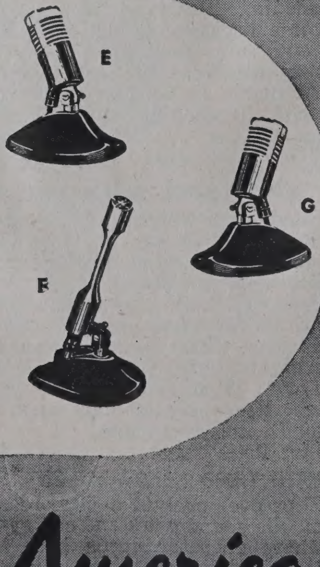
C. D-33 Dynamic omni-directional, antihalation finish; same specifications as D-33. The DR-330, DR-332, D-22 and R-331, shown on this page, are all available with permanent antihilation finish when specified. List (add to price of microphone)..............................$10.00



Motion Pictures

D. D-44 Dynamic omni-directional. 50-15,000 c.p.s., plus or minus 2.5 db., 0 degree angle of acceptance. Impedance 50 ohms, output level minus 86 db. List..............................$225.00 Exclusive American designed wind screen shown, efficient in wind velocities to 35 m.p.h., does not effect sensitivity or pattern. Wind screen available extra, fits Models D-22 and D-33 shown. List..............................$37.50

Sound Recording and Public Address:



E. DR-332 Cardioid represents an achievement in ultimate cardioid performance. A superb smooth and extended peak-free frequency responce, from 50-8000 c.p.s., plus or minus 5.0 db. May be easily and quickly changed to low (30-50) med. (250), or high (40,000) ohms. List..............................$85.00

F. D-22 Dynamic omni-directional. Recommended for both public address and sound recording. Two impedances are provided, low (30-50) and high (40,000) ohms. Extended peak-free response 50-8,000 c.p.s., plus or minus 5.0 db., high output level, minus 52 db. No pre-amplifier is required. List..............................$75.00

G. R-331 ribbon bi-directional. Designed for sound recording and public address. The R-331 ribbon microphone represents an outstanding achievement in performance. An exceptionally smooth and extended peak-free frequency response, from 50-8,000 c.p.s., plus or minus 3.0 db. May be easily and quickly changed to low (30-50) med. (250), or high (40,000) ohms. List..............................$75.00

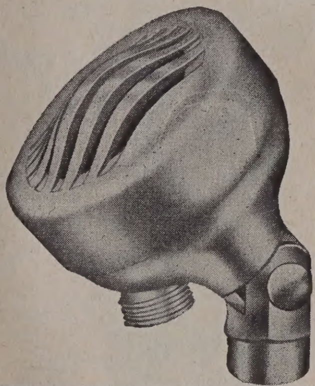
American MICROPHONE CO.
370 SOUTH FAIR OAKS AVENUE, PASADENA 1, CALIFORNIA

WRITE FOR FREE
DESCRIPTIVE LITERATURE
AND CATALOGUE NO. 46.

American MICROPHONES

Licensed under Pats. of The Brush Develop. Co. and Licensed by Electrical Research Prods, Inc., under U. S. Pat. of A. T. & T. Co.. and Western Elec. Co., Inc.

C6 CRYSTAL MICROPHONE



EXTREME SENSITIVITY. New crystal driving lever, twice as efficient as previously used, produces twice the voltage output with equal sound pressure.

BROADER RESPONSE. Results of new construction include extension of both low and high end.

BASS END IMPROVED. Naturalness insured by improvement in low frequency response.

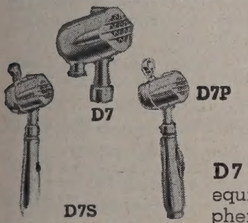
LONGER LINES. By increasing the voltage output, the cable length may be increased proportionately. In laboratory tests, regular cables 250 feet in length have been used with a net voltage sufficient to operate any standard high gain amplifier.

MECHANICAL NOISE REDUCED. Mechanical and stand noise is no longer a factor. The C6 method of crystal mounting reduces mechanical noises by 12 db.

LESS AMPLIFIER AND INDUCED NOISE. The high output of this microphone assures a very desirable signal-to-noise ratio.

SWIVEL HEAD. All angles for semidirectional and nondirectional pick-up are provided by the ⅝" x 27 (standard) mounting connector.

Complete with 7' cable and plug at microphone. Polished chrome finish. Net weight 8 oz. Over-all height 3". Diameter 2⅜". ⅝x27 thread provided for suspension or stand mounting.
C6 Crystal, Code CESIX..List Price **$18.00**



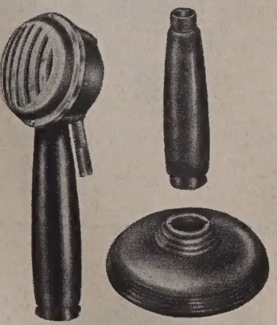
THE *"Clipper"* DYNAMIC

D7 and D7T MICROPHONES equipped with single conductor Amphenol plug and 12½ feet shielded cable. Chrome finish, ⅝"-27 thread stand mounting. Over-all height, 2½"; diameter, 1½". Net wt. 8½ oz. Hand microphones (D7P, D7TP, D7S, D7TS) with press-to-talk or slide switch all supplied with six feet of cable, loose ended. No plug.

APPLICATIONS: Excellent for communication purposes, Marine safety-at-sea installations, police broadcasting, amateur communication, public address, indoor and outdoor installations.

D7T—High Imp., 38,000 or 500 or 200 Ohms;
Code: DISET ....List Price **$27.00**
D7TP (Press-contact Switch),
Code: DIMAT ....List Price **$31.00**
D7TS (Slide Switch), Code: DIAHT........List Price **$30.00**
D7—Low Impedance, 50 Ohms,
Code: DISEV ....List Price **$24.00**
D7P (Press-contact Switch),
Code: DIMAR ....List Price **$28.00**
D7S (Slide Switch), Code: DIAHL........List Price **$27.00**

RC CRYSTAL MICROPHONE



Complete with NON-BREAKABLE PLASTIC STAND and 7 foot Cable

RC Crystal Microphone may also be mounted on any stand equipped with standard ⅝" x 27 thread. . . . An excellent microphone for Communication, Public Address or Amateur Radio.

HOME RECORDING OR BROADCASTING
HIGH OUTPUT, GOOD QUALITY

Base easily removed by quarter turn, releasing bayonet lock. Cable replacements accomplished by releasing set screw in back of microphone and pulling gently on spring cable protector ....List Price **$10.90**

American ★ ACCESSORIES

SUSPENSION EYE. For suspending any microphone with standard ⅝" x 27 thread. Chrome finish. Sturdy.
Code: DYEYE ....List Price **$2.00**

DD DESK STAND. Round base, 4" upright. Net weight 1¼ lbs. 5¼" base. Chrome finish. Code: DYNES
List Price **$4.50**

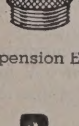
BS BANQUET STAND. Round base, 8" in diameter. Rods 12". Extended hgt. 24". Satin Black finish. Wt. 6 lbs. Code: FUDAS ....List Price **$12.00**

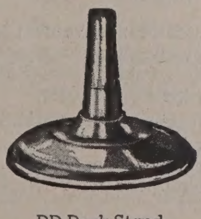
FH3 and FL3 FLOOR STANDS. Approved by the best sound studios. Positive leather, friction-lock clutch. Noiseless operation. Rods 38". Extended height 6'. Three-contact, "floor grip," rubber-mounted base.

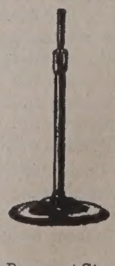
FH3, studio model, net weight 15 lbs. **FL3,** public address model, net weight 10 lbs.

FH3 Floor Stand, Code: FUHET ....List Price **$18.50**

FL3 Floor Stand, Code: FLEXR ....List Price **$15.00**


Suspension Eye


DD Desk Stand


BS Banquet Stand

FH3 and FL3 Floor Stands

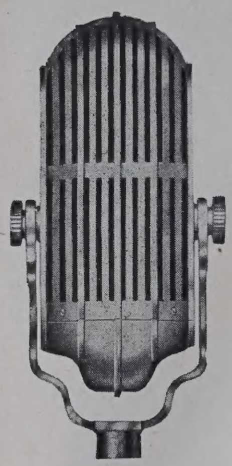
American MICROPHONES

Licensed under Pats. of The Brush Develop. Co. and Licensed by Electrical Research Prods, Inc., under U. S. Pat. of A. T. & T. Co.. and Western Elec. Co., Inc.

D9A *Unidirectional* MICROPHONE

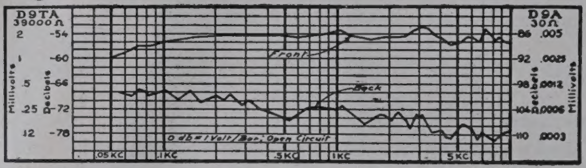
GUARANTEED to produce 30% MORE VOLUME (power) than any microphone at twice the list price. UNIDIRECTIONAL, True CARDIOID pattern pickup, frequency response good to 10,000 c. p. s.

Actual Tests are Convincing Arrange for Test with your Jobber



THE D9A DYNAMIC, a pressure-velocity combination microphone, with pick-up from front only, broad frequency response and high output, plus the usual dynamic microphone qualities of ruggedness, immunity to weather conditions, and circuit adaptability, should fill the majority of requirements.

The D9A Microphone is recommended for public address and general sound installations because its energy response field (cardioid of revolution) excludes extraneous pick-up and reduces feed-back by two-thirds. May be used for close talking due to the modified velocity section which also reduces wind noises to a minimum.



The above graph illustrates the average response characteristics for the D9A and D9AT. Voltage output levels, for 1 bar sound pressure (1 bar=1 dyne per sq. cm.) of the high and low impedance models. For 10 bar signal the output will be 20 db. higher.

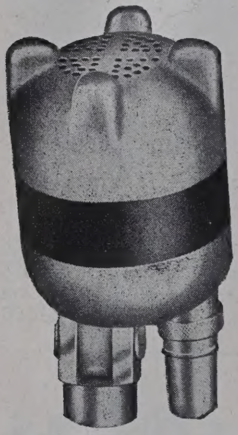
Net weight, 2½ lbs. Packed weight, 4 lbs. Height, 7"; depth, 2¼"; breadth, 2½". Standard ⅝-27 thread provided for suspension or stand mounting. Finish: Satin Chrome.

25' Shielded Rubber-Jacketed Cable Supplied with each Microphone.

D9A, Low Imp. (50 ohms).
Code: LOWEL..........List **$42.00**

D9AT, High Imp. (38,000 ohms).
Code: HIWEL..........List **$45.00**
Available on Order in 200 or 500 ohms..........List **$45.00**

D4T DYNAMIC MICROPHONE

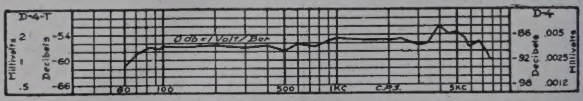


A QUALITY, LOW-PRICED, MOVING-COIL MICROPHONE. For general use where clear speech and natural music reproduction is required. This new AMERICAN microphone is a very efficient instrument, having a broad range, from 60 to 7500 c.p.s., and high output of —56 db (O db=1 v/bar). The utility value lies not only in the quality and type of response but also in mechanical features, such as light weight (approximately 10½ oz.), a full 180° vertical angular setting, and positive friction lock at the swivel.

The **D4T,** high impedance, is equipped with a single-contact, shielded plug. The 50, 200 and 500 ohm models are equipped with a two-conductor plug and have a balanced line out.

The **D4** model is of voice-coil impedance, approximately 30 ohms. Lines up to several hundred feet may be used on all models except the high impedance, where line should be restricted.

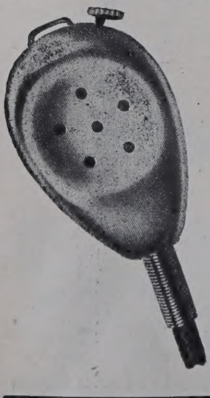
The complete assembly includes 12½ feet of shielded, rubber-covered cable and shielded plug. Finished in platinum chrome. Standard mounting, ⅝" x 27 thread.



D4T Dynamic (38,000 ohms), Code: DFORT..........List Price **$24.00**
Available on order in 200 or 500 ohms..........List Price **$24.00**
D4 Dynamic (30-50 ohms), Code: DEFOR..........List Price **$21.50**

DHT DYNAMIC HAND-HELD MICROPHONE

Retractable Hanger — Press-to-talk Switch

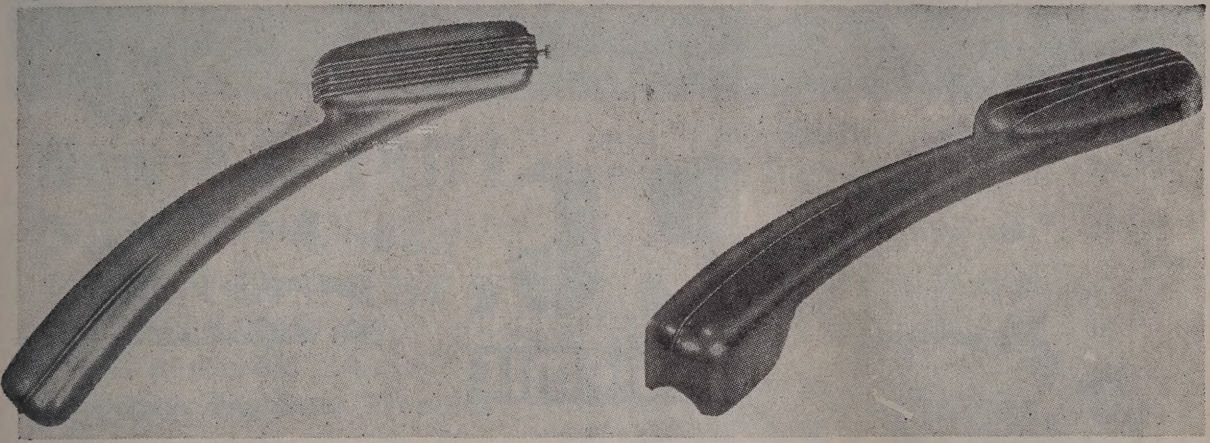


This compact, sturdy microphone was designed for all applications requiring a dependable hand microphone for voice communication. Small and lightweight, it can readily be concealed in the palm of the hand. An Alnico V magnet, efficient magnetic circuit and newly developed diaphragm and voice coil assembly combine to generate the high output of 56 db below 1 volt per bar for the high impedance model.

Other desirable features are: convenient hanger which retracts into the case of the microphone when not in use; molded plastic diaphragm not affected by heat, moisture or mechanical shock; supplied with five feet of low loss cable; press-to-talk locking type switch for operation of the microphone unit. Additional switch contacts on request.

DHT Dynamic (38,000 ohms), Code: CALEB..........LIST **$25.00**
Available on order in 200 or 500 ohms..........**$25.00**
DH Dynamic (30-50 ohms), Code: CALYX..........LIST **$22.50**
CH Carbon hand microphone with switch, hangar and 5 feet cable. 70 ohms. Code: CARBO
LIST **$20.00**

American



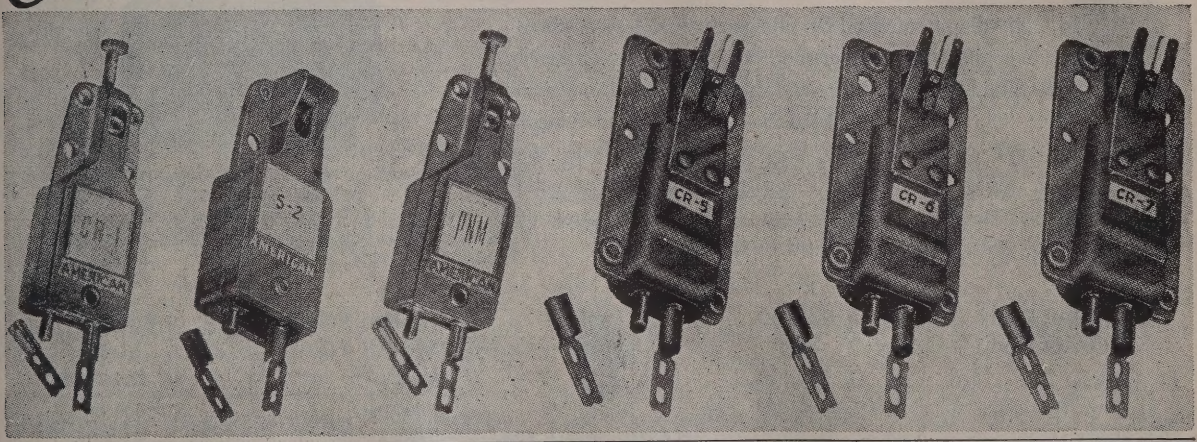
J-1 PHONOGRAPH PICKUP. The curved arm with offset head was designed to provide optimum tracking for both ten and twelve inch records with minimum wear of record and stylus. Base of the arm is designed for single hole mounting. Assembly includes CR-1A Crystal Cartridge, twenty-four inch single conductor shielded wire, arm rest, mounting hardware and complete mounting instructions.

Model J-1 Code: JADED List: **$6.00**

J-3 LIGHTWEIGHT PHONOGRAPH PICKUP for replacement purposes or new equipment. The arm is cast aluminum. The cartridge is aluminum. Needle force, 8 grams. For use with cartridges CR5, CR6, and CR7. Single hole mounting. Assembly includes arm and either cartridge CR5, CR6 or CR7.

Model: **J-3** Code: JUBAL List: **$8.00**

American CRYSTAL CARTRIDGES



Model	List	Needle Force	*Output Voltage	Response	Terminals	Weight	Needle Screw	Type	Stylus	Code
CR1	$4.00	1¼ oz.	3	8000	Pin	17 Grams	Thumb	Std. 78RPM	Optional	CINCH
CR2	4.00	1⅛ oz.	1½	7000	Pin	17 Grams	Thumb	Std. 78RPM	Optional	CIVIC
CR4	6.50	1¼ oz.	3½	8000	Pin	17 Grams	Thumb	Std. 78RPM	Optional	CLASP
CR5	6.50	6 grams	1	6000	Pin	5 Grams	Set	LP	1MO or S	CABAL
CR6	6.50	8 grams	1.1	6000	Pin	5 Grams	Set	Std. 78RPM	3MO or S	CUPAY
CR7	6.50	8 grams	1	6000	Pin	5 Grams	Set	Comb. LP&78	1MO or S	CADET
S2	6.50	1 oz.	1	6000	Pin	17 Grams	Set	Std. 78RPM	3MO or S	DELTA
PNM	8.00	1¼ oz.	1	5000	Pin	17 Grams	Thumb	Std. 78RPM	Optional	CRESS

Licensed under Patents of The Brush Development Co., and Licensed by Electrical Research Products, Inc., under U. S. Pat. of A. T. & T. Co. and Western Electric Co., Inc.

AMERICAN MICROPHONE CO. 370 South Fair Oaks Avenue, Pasadena 1, California

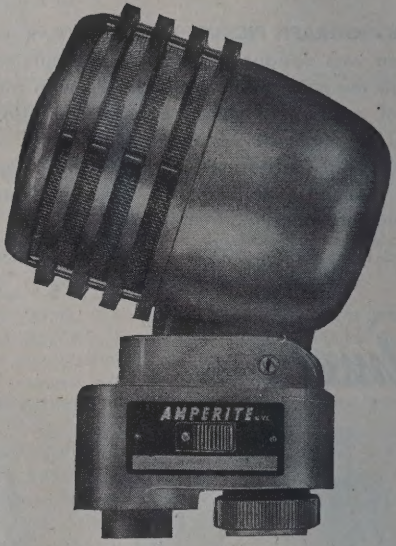
VELOCITY **AMPERITE** MICROPHONES

PREFERRED BY LEADING P. A. MEN THE WORLD OVER

The Finest Cardioid Dynanic!

P.G.
PRESSURE GRADIENT
DYNAMIC

You can actually hear the difference!



•UNI-DIRECTIONAL

NEW SUPERIOR ELIPSOID PICKUP PATTERN

•ELIMINATES FEEDBACK

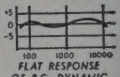
TROUBLE BECAUSE IT HAS LOWEST FEED BACK POINT OF ALL DIAPHRAGM TYPE MICROPHONES

•FLAT RESPONSE.

FREE FROM ANNOYING PEAKS, GIVING STUDIO QUALITY REPRODUCTION

The P.G. diaphragm follows air particle velocity where amplitude is a **GRADIENT** of the **PRESSURE.** In ordinary dynamics amplitude is restricted from following air particle velocity. The **P.G. DYNAMIC** is a radical improvement in this type of microphone. You can actually hear the difference. Case is designed according to modern acoustic principles. Rugged, not affected by temperature, altitude or humidity. **Has unusually high output.**

ELIPSOID PICKUP PATTERN



FLAT RESPONSE OF P.G. DYNAMIC

Model PGH —hi-imp. } **$32.00**
Model PGL —50 ohms } **List**

Output	—55 db
Freq. Resp.	40-10000 CPS
Cable Length	25 ft.
Finish	Chrome
Switch	Yes
Cable Connector	Yes
Stand Thread	5/8-27
Ship. Wt.	2½ lbs.

PLASTIC BAFFLE FOR P.G. DYNAMIC
Increases output of the microphone 4 db. Especially useful when performer is at distance of 12″ or more. Excellent for picking up entire stage, bands, etc. Snaps into place.
Model PG.....List $1.50

Model PGAH —hi-imp. } **$25.00**
Model PGAL —50 ohms } **List**

Output	—60 db
Freq. Resp.	70-8000 CPS
Cable Length	12 ft.
Finish	Chrome
Switch	Yes
Cable Connector	Yes
Stand Thread	5/8-27
Ship. Wt.	2½ lbs.

AMPERITE MICROPHONE STANDS—SPECIFICATIONS

Model	Description	Base Wt.	Base Spread	Height Range	Thread	List Gunmetal or Chrome	Ship. Wt.
DS-M	Comb. Desk & Banquet	6 lb.	7½″	16″–24″	5/8–27″	$12.00	11 lb.
DS	Desk only	6 lb.	7½″	3″	5/8–27″ & ½″ P.	6.00	11 lb.

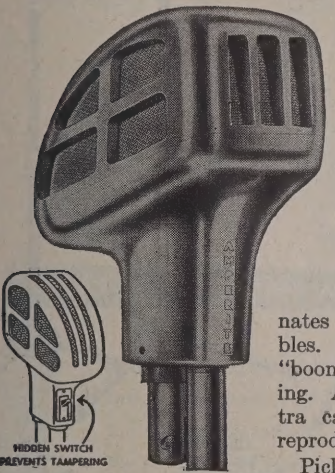
VELOCITY **AMPERITE** MICROPHONES

PREFERRED BY LEADING P. A. MEN THE WORLD OVER

New AMPERITE STUDIO "Ribbon" MICROPHONE

MODELS R80H-R80L

A "Blastproof Velocity" Eliminates Feedback Troubles



The Finest in Microphones regardless of Price

Reproduction is of the very highest type. Excellent for broadcasting, recording and public address. Eliminates feedback troubles. Will not become "boomy" on close talking. An entire orchestra can be faithfully reproduced.

Pick-up angle 120° front and back with practically no frequency discrimination. In spite of the wide pick-up angle, feedback is reduced to a minimum.

Not affected by temperature, altitude or humidity. Will operate under any climatic conditions—indoors or outdoors. Not affected by wind.

Frequency range 40-14,000 cps. Output —56 db. Complete with switch (optional), cable connector and 25′ cable. Finish—Chrome. Stand thread, Standard ⅝″-27.

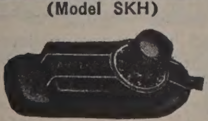
Model	**List**
R80L—200 ohms output	$80.00
R80H—High impedance	80.00

50 ohms available. Shipping Weight 10 lbs.

AMPERITE KONTAK MIKE

FOR MUSICAL INSTRUMENTS

(Model SKH)



(Model KKH)

Gives natural reinforcement without peaks. Easily attached without tools. Will operate with either low or high-gain amplifiers. Frequency response 40 to 9000 cps. Output, —40 db.

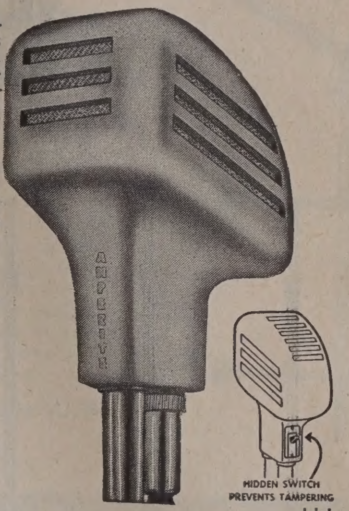
Shipping Weight 2 lbs.

Model SKH—Hi-impedance	List $12.00
Model KKH—With Hand Volume Control	List 18.00
Model KF —Foot Pedal Only	List 18.00

Low impedance available in model SKH at same price.

New "RIBBON" MICROPHONE, RBHG—RBLG

Automatically Adjusted for Close or Distant Pick-Up A "Blastproof" Velocity



Studio reproduction — low feedback. A "ribbon" microphone that brings broadcast quality within everyone's reach. Perfectly natural reproduction on close talking—you can even shout into it. Will also faithfully reproduce an entire orchestra.

Pick up angle front and back—120° with practically no frequency discrimination. In spite of wide pick-up angle—feedback is reduced to an absolute minimum. Low feed back is due to flat response of the microphone.

Excellent for studio—P. A. or recording. Not affected by temperature, altitude or humidity. Can be used under all climatic conditions, and will withstand rough handling. Not affected by wind.

Frequency range 50-11,000 cps. Output —62 db. Complete with switch, cable connector, and 25′ cable. Finish — Chrome. Stand thread—Standard ⅝″—27.

	List
Model RBHG—High impedance	$42.00
Model RBLG—200 ohms output	42.00

50 ohms available. Shipping Weight 8 lbs.

COMPACT VELOCITY, ACH—ACL

The smallest complete velocity ever made

Compact—yet a complete Amperite "Ribbon" Microphone including transformer, switch and cable connector. Recommended wherever a compact microphone is a necessity. Can be used either as a hand microphone or on a stand. Frequency range 120 to 8,000 cps. Output —65 db.

Complete with switch—cable connector—12′ cable. Stand thread—Standard ⅝″-27.

	List
Model ACH—High impedance	$32.00
Model ACL—200 ohms output	32.00

50 ohms available

Shipping Weight 5 lbs.

Amperite 7JH—7JL VELOCITY MICROPHONE

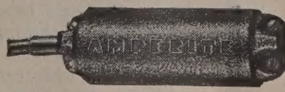
"Lapel" Type

Reproduction is so perfect—you can hardly tell a microphone is working. Free from annoying peaks or mechanical reproduction. Output does not change with any position of the head. It can be concealed in clothing. Will operate under all climatic conditions. Unusually low feedback. Frequency range 60-7,000 cps. Output: —63 db. Cable length 25′. Rubber case.

Model 7JH—High impedance	List $32.00
Model 7JL—200 ohms output	List 32.00

50 ohms available. Shipping Weight 3 lbs.

Model LGP—Input Transformer (Cable Type)



Enables the use of low impedance microphones and cable lengths up to 5,000′ with amplifiers having high impedance input. Special shielding eliminates hum pick-up. Can be used with 25, 50, or 200 ohm microphones. Output connects directly into high impedance input of amplifier.

Standard grade recommended for speech. Laboratory grade for music.

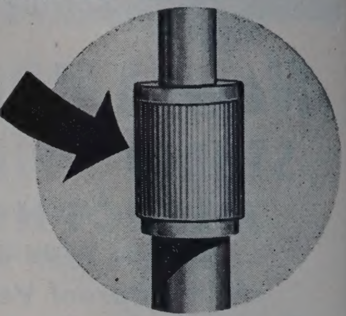
Model LGP—Lab—40 to 14,000 cps. List 10.00

Shipping Weight 3 lbs.

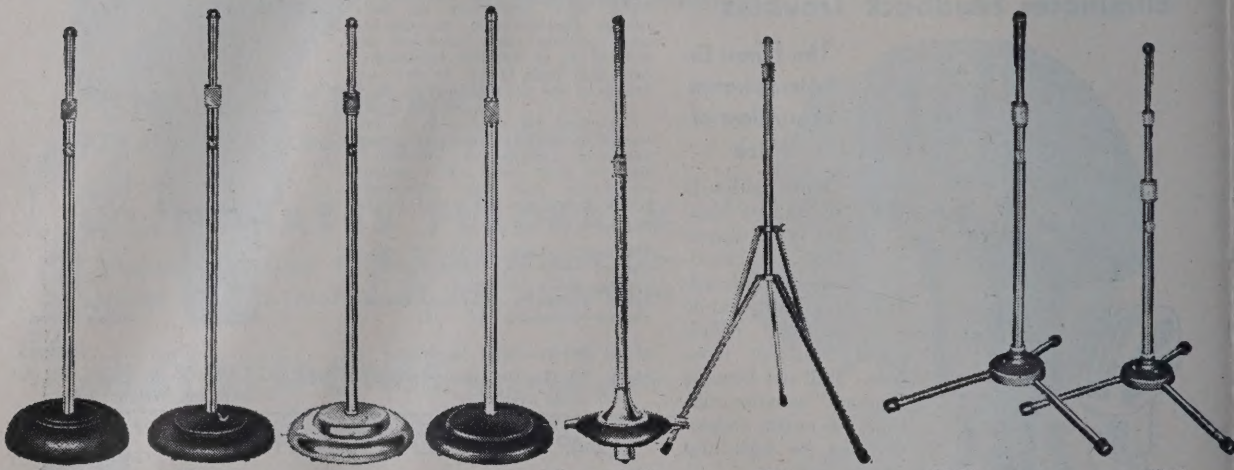
ATLAS SOUND CORP.

the complete line for every public address need!

ATLAS MICROPHONE STANDS *featuring* SPECIAL FULL-GRIP VELVET-ACTION CLUTCHES



**Maximum Stability • Maximum Quiet & Ease
Maximum Wear**



MS-10C Leader

MS-12C Standard

MS-11C Standard DeLuxe

MS-20 Professional

MS-24 Studio DeLuxe

CS-1 Collapsible

CS-32 2-piece Demountable

CS-33 3-piece Demountable

The "Full-Grip" Clutch offers an extended length clutch body, permitting a secure, full-hand grip. The clutch mechanism is inner-lined with a wear-proof bakelite locking collet which grips without jamming, slipping, or sudden dropping. All bases are functionally designed to offer maximum stability for a given base weight. The maximum base mass is located at the outer periphery of the casting where the concentrated weight is most useful. All bases include self-leveling, shock-absorbent base pads, plus three additional "anti-tip" points located between the base pads. The complete tube assemblies of all models are "super-chrome" plated, assuring "life-time" wear. All models terminate in a ⅝"-27 carefully machined thread.

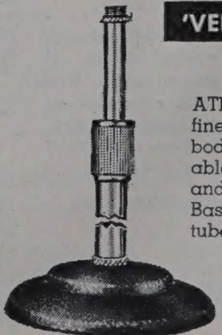
MODEL	Weight	Base Finish	Tube Finish	Height Adjust.	Base Diam.	LIST PRICE
MS-10C	9 lbs.	Gray Shrivel	Full Chrome	35" to 64"	10"	**$ 9.75**
MS-12C	12 lbs.	Gray Shrivel	Full Chrome	35" to 65"	10"	**10.50**
MS-11C	12 lbs.	Full Chrome	Full Chrome	35" to 65"	10"	**13.00**
†MS-20	15 lbs.	Gray Shrivel	Full Chrome	42" to 72"	12"	**15.50**
†MS-24	24 lbs.	Chrome & Gray Shrivel	Full Chrome	42" to 72"	17"	**21.50**
§CS-1	5 lbs.	Cadmium Plated	Full Chrome	23" to 62"	Collapsible	**18.75**
***CS-32**	4 lbs.	Chrome & Gray	Full Chrome	36" to 64"	Demountable	**10.25**
***CS-33**	3 lbs.	Hammerloid	Full Chrome	26" to 64"	Demountable	**11.75**

*Each stand is individually packed complete in a single carton.
†The MS-20 and MS-24 use large diameter, oversize, telescoping brass tube assemblies (⅞" telescoping tube — 1⅛" base tube) resulting in a handsome and fine-appearing stand that supplements the professional appearance of large-size high quality microphones.
§Collapsible to a minimum overall length of 23 inches.

ADJUSTABLE BANQUET STAND

This stand incorporates the "Full-Grip Velvet-Action" principle of adjustment. The tube and base are completely finished in "super chrome" offering a fine appearing stand suitable for use on a banquet table. Adjustable from 18" to 32". Base diameter 8"; Weight 5 lbs.

Model TS-6 **List Price $9.00**



'VELVET ACTION' DESK STAND

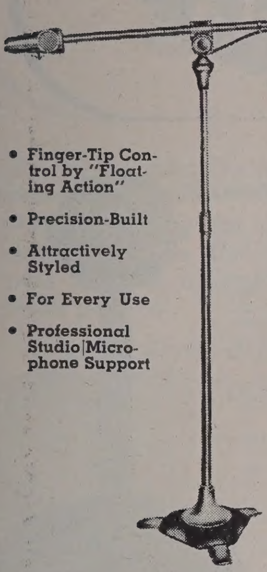
MODEL DS-7

ATLAS Desk Stands employ the same fine finish and workmanship as embodied in the floor models. The adjustable Model DS-7 uses heavy duty ⅝" and ⅞" tubing. Felt base pads included. Base diameter 6", finish gray shrivel; tube chromium plated.

Model	Adj. Height	List Price
DS-5	**Fixed 6"**	**$3.00**
DS-7	**8" to 13"**	**5.00**

ATLAS SOUND CORP.

the complete line for every public address need!



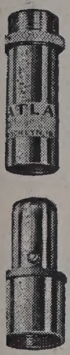
- **Finger-Tip Control by "Floating Action"**
- **Precision-Built**
- **Attractively Styled**
- **For Every Use**
- **Professional Studio|Microphone Support**

PROFESSIONAL BOOM STAND

Precision Built . . . "Floating Action" Stand . . . All moving parts and locking adjustments are "velvet smooth" in operation. By simple and quick removal of the boom arm, the stand is similar to the MS-24. The BS-35 is adjustable vertically and horizontally. The counterweight and boom extension can be adjusted for all microphone weights and various extensions. **Specification . . .** Dimensions: Maximum vertical extension 72", minimum 48". Length of horizontal boom arm 63". Base Diameter, at floor contact points, 17". Total weight 35 lbs. Tube diameters 1⅛" and ⅞" brass, triple "superchrome" plated . . . Base finished in chromium and gunmetal shrivel, rubber shock-absorbing bumpers. Snap-on hangers for holding cable to boom section supplied.

Model BS-35 **List $60.00**

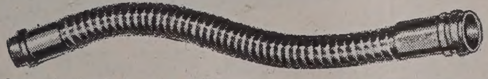
'SNAP ON' MICROPHONE ATTACHMENT



A quick, simple, and safe means of attaching any microphone to any floor stand. Eliminates the need of threading the microphone on and off the stand. A two-section "Snap-On" ball bearing spring sleeve attachment permits the microphone to be attached or removed instantaneously. One section is attached to the microphone and one section permanenly fastened to the stand.

Model SO-1 **List Price $2.75**

FLEXIBLE GOOSE NECK



Can be attached to any microphone stand so that some amount of overhang can be accomplished. Ends have ⅝"-27 male and female threads. Finished in bright chrome. Length 13".

Model GN-13 **List Price $2.75**

'BABY BOOM' ATTACHMENT

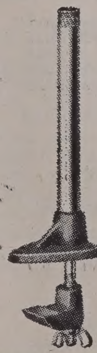
Easily attached to any type of microphone stand. Can be locked in any position. Length of tube 32", chrome plated; castings in gray shrivel. ⅝"-27 thread size.

Model BB-1 **List Price $7.50**

MODEL US-1 BOOM BRACKET KIT

Will answer practically every conceivable problem of microphone placement. Set Screw assembly makes it possible to simply cut down any tubular section to any dimension and, thereby, tailor the bracket to suit the exact application. Microphone cable feeds through entire support arm including the adjustable elbow mechanism. Finished in bronze enamel. Main tube sections 22" long, support bracket tubes 5" long.

Model US-1 **List Price $11.50**

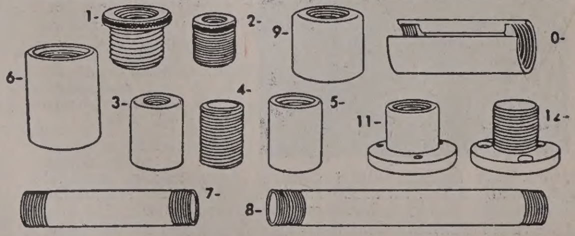


BRACKET CLAMP

A multitude of useful applications. Can be used with Boom Arm, Goose Neck, etc. Chrome tube 6" long. Castings finished in gray shrivel. Can be clamped or permanently screwed or bolted in position. Thread size ⅝"-27.

Model BC-1 **List Price $3.50**

MICROPHONE ADAPTORS & FITTINGS



MODEL	Description	LIST PRICE
AD-1	⅝"-27 female to ½" pipe thread male (RCA Adaptor)	.60
AD-2	⅛" pipe female to ⅝"-27 male	.60
AD-3	⅛" pipe female to ⅝"-27 female	.60
AD-4	¾" long, ⅝'-27 male running thread	.30
AD-5	⅝55-27 female to ⅝"-27 female coupling	.60
AD-6	⅞"-27 female to ⅞"-27 female coupling	.60
AD-7	3" long tube ⅝"-27 male each end	.60
AD-8	6" long tube ⅝"-27 male each end	.70
AD-9	⅞"-27 female to ⅝"-27 female	.60
AD-10	⅝"-24 female to ⅝"-27 female (W. E. Adaptor)	1.20
AD-11	Flange, ⅝-27" female. Base Diameter 1¼"	.70
AD-12	Flange, ⅝"-27 male. Base holes on ⅞" mounting centers	.70

All adaptors chrome plated.
We are prepared to supply any special types of adaptors or fittings, and bent tube sections, to your specifications in reasonable quantities.

Brush CRYSTAL PRODUCTS

BRUSH MODEL BA-109 MICROPHONE

The Brush Model BA-109 microphone using the improved Acoustical* was created for public address, home recording and amateur applications. The "Metalseal" * crystal insures long life and reliability. Styled in rich maroon plastic and brushed chrome in compliance with the recent trend in industrial design.

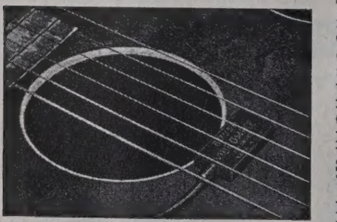
- Response from 40 to 10,000 cps.
- Output Level 54 db. below 1 volt/dyne cm².
- Non-directional.
- High Impedance equivalent to approximately .002 mfd. (1.8 meg. ohms at 1,000 cycles.)

The microphone is designed for use with standard 5/8" 27 thread microphone stand.

List Price $22.50

* Trade Mark Shipping Wt. 1 lb.

BRUSH MODEL "VM-1" "VIBROMIKE"



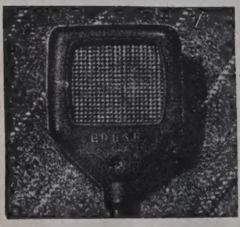
The VM-1 or "Vibromike" is a miniature CONTACT-TYPE microphone with high sensitivity and unusually wide-range frequency response (30 to 6,000 cps.). Output voltage from .05 to .1 volt or higher. Size of microphone 7/8" x 3/4" x 5/8".

Designed for a broad field of reproduction applications through direct contact. Adaptable to musical instruments, industrial uses—detecting mechanical vibrations. Hermetically sealed in black rubber covered case.

Microphone complete with mounting clamp and 25' of cable.

Model VM-1 . . . (#325) . . . . $19.50 list

BRUSH MODEL "BL-2" LAPEL MICROPHONE



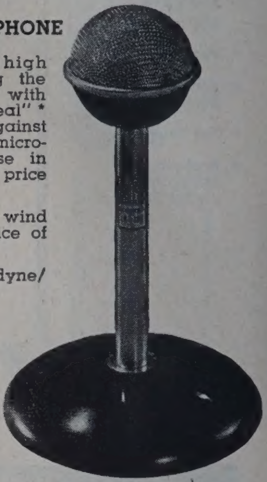
The improved Model BL-2 lapel microphone features virtually flat response from 30 to 10,000 cycles. Output level 57 db. below 1 volt/dyne/cm². Small and rugged (1½" x 2¼") the BL-2 can be used in hand or as instrument pickup as well as in lapel.

Microphone complete with 25' of cable.

Model BL-2 (BA-111) $25.00 list

Net Wt. 8 oz. Shpg. Wt. 2 lbs.

BRUSH MODEL BA-106 MICROPHONE



The Brush Model BA-106 is a high quality microphone incorporating the hermetically sealed "Acousticel" * with Sintered bronze damping. "Metalseal" * crystal is used for protection against conditions of high humidity. This microphone offers unexcelled response in microphones of this type and price range.

Vibration, shock or low frequency wind noise do not affect the performance of this microphone.

Output level 50 db. below 1 volt/dyne/cm².

Flat from 40 to 6,000 cps. Unexcelled for home recording, public address systems, ham shacks, monitoring and institutional and industrial applications.

Net Wt. 1¼ lbs.
Shipping Wt. 3¼ lbs.

List Price $19.75

BRUSH MODEL BA-116 MICROPHONE

The Brush Model BA-116 microphone features rugged dependability and uniform frequency response. Because of its quality features, this microphone is unexcelled in its price range for home recording, amateur, public address, institutional and industrial paging applications.

The microphone's "Metalseal" * cartridge insures long life and reliability. It's shock mounted for protection against microphone stand and other mechanical noises.

Styled in brown hammered metallic finish and designed for desk or hand use without need of a stand. A standard 5/8" 27 thread is incorporated for floor stand use.

Net Wt. 1 lb. 4 oz. Shipping Wt. 1 lb. 8 oz.

Frequency Response	Output	Cable	List Price
50 to 6,000 cps.	53 db. below 1 volt/dyne/cm²	8'	**$14.75**

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

Complete technical data on request

* Trade Mark. Reg. U. S. Pat. Off.

THE BRUSH DEVELOPMENT CO.

Brush CRYSTAL PRODUCTS

Brush crystal phones possess the following outstanding features:

1. **BIMORPH* crystal drive element of such high impedance that line or circuit characteristics are not affected when monitored by Brush phones.**
2. **Wider range response with more uniform output.**
3. **Compensation for ear coupling.**
4. **Light-weight, rugged, shock-proof construction.**

BRUSH MODEL BA-206 HEADPHONE

Designed for use where High Fidelity and smooth frequency response are of paramount importance. They are especially applicable to broadcast monitoring, to laboratory use in the study of sound measurements, audiometry and similar exacting headphone applications. Feature exceptionally flat frequency response. Impedance of 100,000 ohms at 1000 cps; no transformer required. Ideal for multiple installation. Sensitivity is approx. 6.3 dynes/cm²/volt at 1000 cps. Low percentage of distortion. Designed to give your ear a smooth comfortable air-tight fit which provides an excellent bass response. The Metalseal Crystal* drive element is of such high impedance that line or circuit characteristics are not affected when monitored by these phones. Available in double, single and lorgnette models:

BA-206	**Double**	**$28.00 list**
Net Wt. 8 oz.		Shipping Wt. 2 lbs.
BA-207	**Single**	**$16.00 list**
Net Wt. 4 oz.		Shipping Wt. 1 lb.
BA-208	**Lorgnette**	**$22.95 list**
Net Wt. 6 oz.		Shipping Wt. 1 lb.

HIGH FIDELITY MODEL "A-1"

For use where HIGH FIDELITY and extended frequency response are of paramount importance. (60 to 10,000 cps. Corrected for rising response below 200 cps.) Especially suited to monitoring, sound measurement, audiometry, and similar exacting headphone applications. Sensitivity approx. 1.5 dyne/cm²/volt at 1,000 cps. Impedance over 80,000 ohms at any frequency within audio range. Headset complete with 5' cord and headband.

Model A-1 . . . (#205) . . . $18.00 list
Net Wt. 6 oz. Shipping Wt. 2 lbs.

BRUSH MODEL "A" LORGNETTE PHONE

The "A" lorgnette phone is designed for use in group hearing aid sound systems installed in churches, concert halls, theatres and auditoriums. Telescope extension from 12" to 17". Attractively finished in satin black. Light weight, easy to handle, and comfortable at the ear.

Single phone complete with 5' cord and lorgnette handle.

Model A . . . (BA-202) . . . $9.75 list
Net Wt. 5 oz. Shipping Wt. 1 lb.

MODEL BA-303 HUSHATONE*

A miniature, molded plastic extension speaker for under pillow use. Disc shaped (4$\frac{3}{16}$" dia. by 1$\frac{1}{16}$" thick). Makes no uncomfortable lump beneath the pillow. Tone quality comparable to cone type speaker because of specially engineered response. Speaker gives ample output with low power consumption (.001 watt). Hermetically sealed, can be dipped into disinfecting solution (temperature not above 120°F). Light weight BIMORPH* crystal drive element insures uniform response and high sensitivity. No parts to wear, loosen, or become detached. Furnished in maroon with satin chrome trim. HUSHATONE* with 10' cord.

Fair Trade Retail Price $9.75
Net Wt. 8 oz. Shipping Wt. 2 lbs.

BRUSH MODEL "A" GENERAL PURPOSE

Designed for GENERAL PURPOSE applications including laboratory, studio and skilled amateur home use. The BIMORPH* crystal drive element insures wide ranges response (100 to 8,000 cps. and high sensitivity. High impedance; ideal for multiple installations.

Headset complete with 5' cord and adjustable headband.

Model "A" . . . (#200) . . . $12.00 list
Net Wt. 6 oz. Shipping Wt. 2 lbs.

BRUSH MODEL "A" SINGLE PHONE

Particularly adapted to individual or group hearing aid and radio applications. Light weight, good ear seal, and comfortable to wear. Spring steel headband with soft rubber cushion to eliminate slipping.

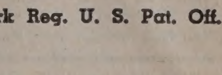
Single phone complete with 5' cord and headband.

Model "A" . . . (#202) . . . $6.45 list
Net Wt. 3 oz. Shipping Wt. 1 lb.

BRUSH MODEL "RC-20" CRYSTAL CUTTER

The Brush RC-20 Crystal Cutter has been designed to satisfy the demand for high quality, low cost recordings in the home, school and studio. Due to its inherent stiffness, the RC-20 will cut lateral type records in virtually all hard or soft disc materials. Being of simple and compact design, it is readily adaptable to all types of transcription equipment. A three watt amplifier is sufficient to satisfactorily drive the RC-20 cutter frequency response — flat within plus or minus 3 db. from 50 to 9,000 cps.

Cuts "Constant Amplitude" without equalization, and "Constant Velocity" or other desired frequency characteristics with suitable equalization. Complete technical data sent on request. Cutter (less stylus).



Model RC-20 . . (#385) . . . $25.00 list
Net Wt. 4 oz. Shipping Wt. 2 lbs.

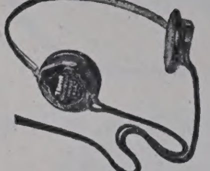
Prices Subject to Change Without Notice **Complete technical data on request** ***Trade Mark Reg. U. S. Pat. Off.**

THE BRUSH DEVELOPMENT CO.

TRIMM

HEADSETS AND ACCESSORIES

FEATHERWEIGHT



The world-famous TRIMM FEATHERWEIGHT headset. Weight: 4½ oz. complete with two units, 5-ft moisture-proof cord. Bakelite shell and cap. A custom-built phone throughout. Available in all standard ohmages.

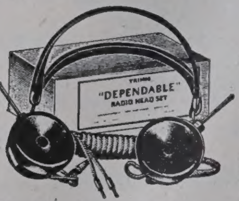
24,000-OHM IMP. SPECIAL for amateurs

No. 106—Double, adjustable nickel-plated headband	$11.00
No. 107—Double, fabric-covered wire headband	11.00

STANDARD FEATHERWEIGHT HEADSETS are available in 3, 76, 220, 500, 2M, 4M and 5M ohms d.c. resistance (Impedance approximately 5 times greater).

No. 100—Double, adjustable nickel-plated headband	$11.00
No. 104—Double, fabric-covered wire headband	11.00

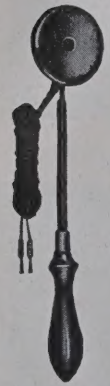
DEPENDABLE



When a high grade headset is desired, but price must be considered, choose the DEPENDABLE. Bakelite caps and shells. Extra heavy chrome steel forged magnets, 5-ft. cord, vinyl plastic covered wire headband.

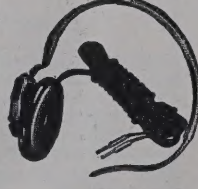
No. 65—Double, 2M ohms	$4.80
No. 67—Single, 1M ohms	2.60

GROUP HEARING AID COMPONENTS



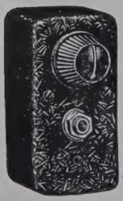
FEATHERWEIGHT EARPHONES

The most widely used single earphones for group hearing aid systems in churches, theatres, mortuaries, etc., are of the FEATHERWEIGHT type. Available with either lorgnette handles, or single headbands. Standard ohmages: 76, 1,000 ohms d.c. Low (less than 100-ohm), medium (100-500-ohm), and high (500 ohms and over lines respectively.



No. 110—Headband type	$7.15
No. 120—Lorgnette type	8.25

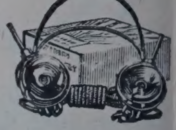
OUTLET BOXES AND CONTROLS



Boxes 460 and 461 are recommended for the majority of installations, combines volume control and jack. No. 460 has brown hammertone finish, No. 461 glossy ivory to improve visibility in theatres. Standard ohmages: 1000 for low impedance lines, 10,000 for high.

No. 460—Outlet Box (Brown—specify ohmage)	$4.40
No. 461—Outlet Box (Ivory—specify ohmage)	4.40
No. 477—Outlet Box, dual jack, brown, same general shape as No. 460	3.85
No. 478—Outlet Box, dual jack, ivory	3.85
No. 484—Outlet Box, single jack, brown	3.30
No. 485—Outlet Box, single jack, ivory	3.30

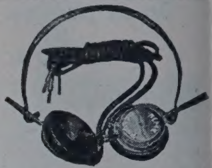
PROFESSIONAL



The choice of countless users . . . The original TRIMM headset. Watch case bipolar design, cap and shell molded of black bakelite (unless specified otherwise). Chrome steel forged magnet, concealed terminals, 5-ft. tinsel-braided cord. Standard resistance for double headsets: 4, 78, 500, 2M, 3M and 4M ohms d.c.

No. 70—Double (4M ohms furnished if not specified)	$5.80
No. 72—Single (2M ohms maximum ohmage)	3.30

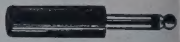
ACME



A superior lightweight, low-cost headset. Cap and shell of molded bakelite. Weight: 6 oz. Cord: 4½-ft.

No. 24—Double, 2M ohms, vinyl-covered headband	$3.95
No. 24—Double, 4M ohms, vinyl-covered headband	4.10
No. 25—Double, 2M ohms, metal headband	3.35
No. 25—Double, 4M ohms, vinyl-covered headband	3.65
No. 27—Single, 1M ohms, metal headband	2.00

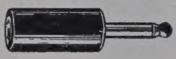
"501" PLUG



Similar to widely used Sig. C. PL-55 plug, brass body, tip permanently attached to rod, assembly cannot come apart. Precision profiled and polished for perfect contact with jack.

No. 501—Black plastic shell	$1.75
No. 501-10—Black plastic shell, similar appearance to No. 501 but combines tip and sleeve assembly of "511" type plug. Ideal where cost is important	1.15
No. 501-11—Red plastic shell	1.15

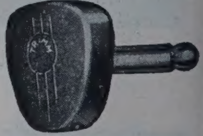
"511" PLUG



The standard radio phone plug. Tip and sleeve bright nickel. Stay cord anchorage provided. Shielded types have a fiber liner.

No. 511—Black plastic shell	$0.55
No. 511-1—Red plastic shell	.55
No. 511-2—Shielded, nickel-plated, single-piece shell	.95
No. 511-3—Shielded, nickel-plated, two-piece shell	1.45
No. 511-4—Shielded, nickel-plated, stubby shell	.90
No. 515—Adapter (Couples Amphenol type microphone plug to standard phone jack)	.50

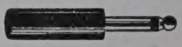
"512" PLUG



Compact, non-protruding design. Bakelite body, nickel-plated tip and sleeve. Cord pin tips held by set screws.

No. 512	$0.75

"514" MIN-A-PLUG



Developed especially for shielded microphone cable. Standard tip-sleeve construction. Wing type terminal clamps directly onto cord shield. Center conductor solders to lug.

No. 514—Black plastic shell	$0.55
No. 514-1—Red plastic shell	.55
No. 514-2—Shielded shell	.90
No. 514-3—Shielded, stubby shell	.85

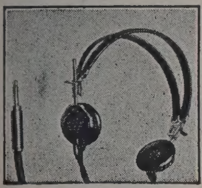
See other sections of U.C.P. Catalog or TRIMM General Catalog for more complete listings of headsets, plugs, jacks, replacement parts.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

—TRIMM—

HEADSETS AND ACCESSORIES

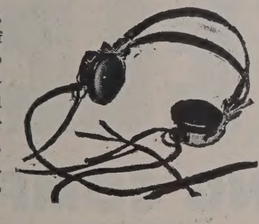
COMMERCIAL



One of the most ruggedly built yet lightweight headset. Practically non-breakable. Shell and cap molded of high strength plastic. Diameter 2⅛", depth ¾", cord 5-ft. tinsel, moisture-proof construction, type No. 501-10 plug attached. Leather-covered headband. This headset is recommended for monitoring service because of its high quality performance.

No. 156—Double, 600 ohms Imp.	$17.60
No. 157—Double, 17M ohms Imp.	17.60
No. 158—Double, 600 ohms Imp., no plug	15.95
No. 159—Double, 17M ohms Imp., no plug	15.95

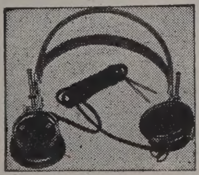
ARMY-NAVY



Very sensitive, 6-ft. waterproof cord, phone tip terminals. Plastic cap, metal shell. Leather headband. Weight: 1 lb. Available in two impedances.

No. 29—Double, 2,200 ohms d.c. (20M ohms Imp.)	$17.60
No. 28—Double, 112 ohms d.c. (600 ohms Imp.)	17.60

TRIMM "B"



Suggested for hospital installations. Bakelite shell and cap. Forged bar magnet. Fabric-covered headband. 5-ft. tinsel cord.

No. 42—Double, 2M ohms	$8.80
No. 43—Double, 600 ohms Imp.	8.80
No. 44—Single, 1M ohms	5.10
No. 45—Single, 300 ohms Imp.	5.10

Ohmages given are d.c. resistance unless specifically indicated as impedance which is about 4-7 times the d.c. resistance.

Prices subject to change without notice.

HEADSET REPLACEMENT PARTS

CORDS FOR TRIMM HEADSETS

No. 811—Double, black, 4½-ft., braided. Fits Acme and Rex	$1.27
No. 821—Double, black, 5-ft., braided. Fits Dependable	1.32
No. 822—Double, black or brown (specify), braided. Fits Professional	1.54
No. 831—Double, black, 6-ft., moisture-proof, braided. Fits Featherweight	2.09
No. 870—Double, black or brown (specify), 6-ft., moisture-proof, braided. Fits Commercial	1.76
No. 880—Double, black, 6-ft., water-proof, braided. Fits Army-Navy, etc.	3.30
No. 807—Single, black, 4½-ft., all-rubber. Fits Acme and Rex	.62
No. 826—Single, black, 5-ft., braided. Fits Dependable, Professional, etc.	.94
No. 838—Single, black, 6-ft., moisture-proof, braided. Fits Featherweight	1.65

MISCELLANEOUS CORDS

No. 881—Double, black, 5-ft., pin tips at terminal and receiver ends	$1.10
No. 882—Double, black, 5-ft., pin tips at terminal. Fits Brush type A headsets	2.20
No. 883—Double, black, 5-ft., pin tips at terminal, spade at receiver end	1.10
No. 884—Double, black, 5-ft., pin tips at terminal, eyelet and receiver end. Fits Brandes, etc.	1.21
No. 845—Double, all synthetic rubber cordage with molded plastic crotch. Terminals and length as specified. Widely used in hospital radio installations	2.75

DIAPHRAGMS

No. 610—Featherweight	$0.25
No. 612—Professional, Dependable	.20
No. 613—Acme and Rex	.20

EAR CUSHIONS

Sponge rubber ear cushions provide maximum ease in wearing headsets. Fit TRIMM Featherweight, Commercial, Acme, Rex, and "E" types.

No. 654	$1.50

For complete listing see TRIMM General Catalog

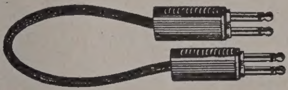
ADDITIONAL PRODUCTS MANUFACTURED BY TRIMM

- * WIRE WOUND POTENTIOMETERS
- * RHEOSTATS
- * L AND T PADS
- * MIDGET EARPHONES
- * STETH-A-PHONES
- * MIN-A-PHONES
- INSTITUTIONAL HEADSETS
- SPECIAL ARMY-NAVY HEADSETS
- PLUGS
- JACKS
- PATCHCORDS
- REPLACEMENT CORDS

* Items marked with (*) are temporarily discontinued

COMPLETE LINE OF TELEPHONE PLUGS AND JACKS TO A-N SPECIFICATIONS
Further information on all items available upon request.

PATCH CORDS

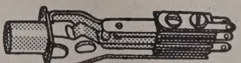


Widely used by the majority of radio stations. Cord assembly uses TRIMM No. 506 twin plugs and high quality shielded cord. Plug self aligning.

Number following "840" represents length.

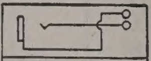
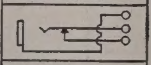
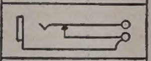
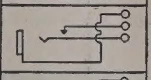
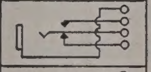
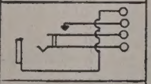
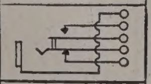
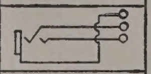
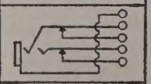
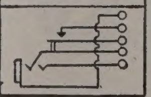
No. 506—Plug, twin type	$ 4.95
No. 840-1-PP—Cord-Plug assembly	13.20
No. 840-2-PP—Cord-Plug assembly	13.42
No. 840-3-PP—Cord-Plug assembly	13.80
No. 840-4-PP—Cord-Plug assembly	14.19
No. 840-6-PP—Cord-Plug assembly	14.96

See TRIMM Bulletin R-15 for more complete listing of Patch Cords, Plugs, etc.



JACKS

TRIMM "90" Series, illustrated above, is commonly used for telephone switchboard types of applications, and permits very close spacing of jacks. The bushing at end of frame is plain, unthreaded, and the jack is mounted by means of a screw through the panel mounting plate. Frame is of steel, suitably plated. Springs are of nickel silver, and contacts are of fine silver providing excellent electrical contact.

CIRCUIT	"90" SERIES CODE No.	LIST
	90-01	$1.00
	90-02	1.21
	90-03	1.21
	90-04	1.27
	90-05	1.32
	90-06	1.38
	90-07	1.54
	90-25	1.21
	90-26	1.60
	90-27	1.76

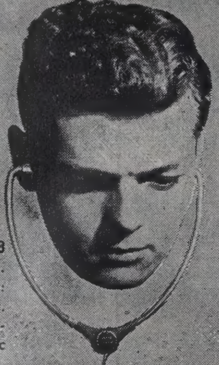
PRICES SUBJECT TO CHANGE WITHOUT NOTICE

MONOSET*

Direct Signal for Both Ears!* Stethoscope design eliminates tiresome pressure . . . Blocks out background noise . . . Weighs only 1.2 oz. . . . Excellent for communications, dictation equipment, aircraft radio, etc.

	List
Monoset only	$ 9.95
Monoset with Standard Cord	14.15
Monoset with Volume Control Cord	18.55
Standard Cord only	4.20
Volume Control Cord only	8.60

SPECIFICATIONS—*Sensitivity: 88 db. above .000204 dynes per sq. cm. for 10 microwatts input. Impedances: 128 ohms, 500 ohms, 2,000 ohms. Construction: Sealed magnetic receiver . . . Grey polished Tenite plastic . . . Removable plastic eartips . . . 5 ft. tinsel cord with standard plug . . . Built-in volume control optional.*



DYNASET*

New Dynamic Under-the-Chin Headset with dynamic driver in plug. Excellent for office transcribing, radio monitoring and telecasting. Higher fidelity brings more lows and highs to your ears. Extremely sensitive—lightweight, only 1.25 oz. Comfortable under-the-chin styling.

	List
Dynaset Complete	$15.60

SPECIFICATIONS—*Sensitivity: Approximately 105 db. above .000204 dynes per square centimeter for one milliwatt power input. Recommended Maximum Power input: 25 MW. Impedance: 6 ohms. Construction: Anodyzed aluminum tone arm. Dynamic Driver housed in specially molded Tenite No. 2 plug. Frequency Range: 50 to 8,000 cps. or better.*

6 NEW WAYS TO TELEX LISTENING COMFORT

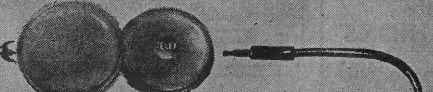
TWINSET*

Nothing touches the ear! Adjusts to any head without pinching or pressure . . . Adjustable sound arm need not touch ear . . . Entire unit weighs only 1.6 oz. . . . Flexible, can be slipped into pocket . . . C. A. A. approved . . .

	List
Twinset only	$13.05
Twinset with Cord	17.25
Monocord only	4.20

SPECIFICATIONS—*Sensitivity: 101 db. above .000204 dynes per sq. cm. for 10 microwatts input. Impedances: 1,000 ohms—brown; 64 ohms—yellow. Coding visible inside female socket. Construction: Tenite plastic and bright nickel. Headband, spring steel wire cased in Tenite. 5 ft. Monocord plugs into either receiver. Special cord with built-in volume control available.*

PILLOW SPEAKERS



DYNAMIC

	List
Model 51 Deluxe Dynamic Speaker complete with cord & plug	$13.20
Model 51 Deluxe Dynamic Speaker with Transformer—available upon request up to 20,000 ohms	15.50

MAGNETIC

	List
Model R Complete with Cord & Plug	$12.10
Model R Unit only, no Cord	7.90
Standard Cord & Plug	4.20

EARSET*

Slips onto the ear! Made with flat plastic frame or slim metal bow, Telex Earset holds sensitive receiver securely in place . . . Weighs only ½ oz. . . . User's other ear is always free for phone calls or conversation . . . Fits either ear, may be worn by anyone . . .

PLASTIC EARSET	List
Earset only	$ 7.80
Earset with Cord & Plug	12.00
Standard Cord only	4.20

METAL EARSET	List
Earset only	$ 8.50
Earset with Cord & Plug	12.70
Standard Cord only	4.20

SPECIFICATIONS—*Sensitivity: Comfortable listening level with 3 milliwatt input. Impedances: 120 ohms, 2,000 ohms. Construction: Clear plastic ear frame or metal bow. Sealed, rustproof receiver. 5 ft. Monocord with standard phone plug connection.*

TELEX HEARING AT ITS BEST!

STANDARD OF THE WORLD
FOR QUALITY HEADSETS

*TRADEMARK

ELECTRO-ACOUSTIC DIVISION • TELEX PARK
ST. PAUL 1, MINN. *In Canada, Atlas Radio Corporation, Toronto*

DEPT. B-17

HEADPHONES By C. F. CANNON

THE "CHIEF"
Cannon-Ball Bakelite Headset

A high quality headset of durable molded black plastic. Attractive in appearance, it is a sensitive and practical phone for every headset use. Inside terminals. Diameter of diaphragm is $2\frac{1}{16}$". Double coils, two in each receiver. Chrome steel magnets ¼" diameter. Supplied with braid-covered headband with permanent adjustment and no removable parts. Cotton covered cord, 4½ ft. long.

CC-2—2000 ohms D.C.	**List $4.00**
CC-3—3000 ohms D.C.	**List 4.50**
CC-5—5000 ohms D.C.	**List 5.50**

BRANDES "SUPERIOR"
Matched Tone Headset

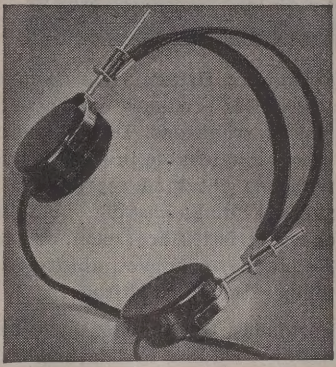
A rugged headset, millions of which are in use all over the world. Large size diaphragms of 2⅛" diameter assure efficient performance. Outside terminals, with polished aluminum cases and bakelite caps. Double coils, two in each receiver. Chrome steel magnets. Steel headband with permanent adjusment. 4½ ft. cotton covered cord.

BS-2—2000 ohms D.C.	**List $3.50**

BRANDES "ADMIRAL"
Matched Tone Headset

The Brandes "Admiral" is of the same general construction as the Brandes Superior, but has terminals on the inside.

BA-2—2000 ohms D.C.	**List $3.75**
BA-3—3000 ohms D.C.	**List 4.25**
BA-5—5000 ohms D.C.	**List 5.75**



CANNON-BALL ALNICO MAGNETIC No. 25

A New Headset of Unusual Quality, Efficiency and Durability, powered by Alnico V magnets.

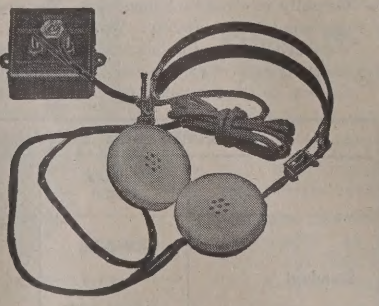
The headband is covered by attractive black extruded vinylite and provides utmost wearing comfort. Limits turn of phone to prevent twisting of cord. Cap and case of molded plastic. Large size diaphragm 2⅛". Equipped with sanitary moisture-resistant plastic cord with riveted crotch piece.

AM-25-2	**List $6.50**
AM-25-3	**List 7.00**
AM-25-5	**List 8.50**

ALNICO MAGNETIC No. 15

A new, small size, extra sensitive headset, light in weight. Diameter of diaphragm 1⅞". Molded cap and case. Steel adjustable headband. 4½ ft. cord.

AM-15-2	**List $4.00**
AM-15-3	**List 4.50**



CANNON-BALL HEARNG AID FOR RADIO OR TELEVISION

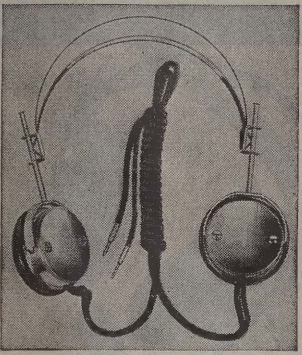
Provides private listening without disturbing others. Excellent for persons hard of hearing. Can be attached to any radio or television set and permits listening to phones alone, speaker alone, or both together.

FOR RADIO

With single phone	**List $5.75**
With double phones	**List 8.00**

FOR TELEVISION

Kit complete with 15 foot cord, phone volume control and two sets of phones	**List $16.50**



THE "MASTER"
Cannon-Ball Headset

Used extensively in hospitals and other institutions as well as for general purposes, and is especially recommended for institutions. Inside terminals Aluminum cases with black bakelite caps. Spring steel adjustable headband with no removable parts. Diaphragm $2\frac{1}{16}$" diameter. Double coils. Chrome steel magnets. 4½ ft. cotton-covered cord.

MC-2—2000 ohms D.C.	**List $3.50**
MC-3—3000 ohms D.C.	**List 4.00**
MC-5—5000 ohms D.C.	**List 5.50**

CANNON-BALL "EMPIRE"
Lightweight Headset

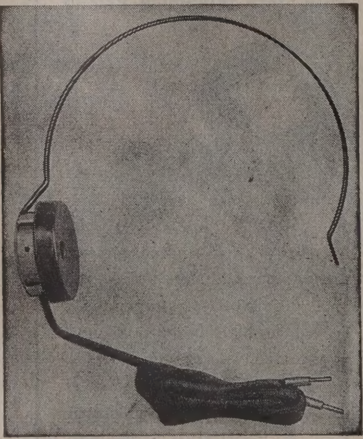
A low-priced light-weight headset with large magnet and double coils. Reproduces with clarity and good volume. Diameter of diaphragm is 1⅞". Polished aluminum cases with bakelite caps. Steel adjustable headband. 4½ ft. cord. Inside terminal connections.

EC-2—2000 ohms D.C.	**List $3.00**
EC-3—3000 ohms D.C.	**List 3.25**

THE "DIXIE"
Cannon-Ball Headset

The "Dixie" is of the same general construction as the "Master" headset except that the terminals are on the outside.

CD-2—2000 ohms D.C.	**List $3.25**
CD-3—3000 ohms D.C.	**List 3.50**



CANNON-BALL "GRAND"
Single Headphone

Equal in clarity and volume to most double headsets, efficient and attractive. Permits listening while being addressed by others. Concealed terminals. Diaphragm 1⅞". Aluminum case and bakelite caps. Chrome steel magnet, double coils. 4½ ft. cord. Spring steel headband permanently attached.

SG-1—1000 ohms D.C.	**List $1.85**

Phones can be supplied with any resistance required or with variations to meet special requirements. Sanitary plastic covered cords available for institutional use. Write for special quotation.

Permoflux

DYNAMIC Headsets

"SOUND IN DESIGN"

Permoflux Dynamic Headphones employ actual moving coil type motor assemblies produced under conditions rivalling those used in finest watchmaking traditions. Design and construction tolerances are maintained that were unbelievable in the Electronic Art only a short time ago. Frequency response obtained reproduces the full orchestral scale within range of average human hearing. Combined with the above outstanding performance characteristics are: compact design, sealed assembly, light weight, high resistance to impact, ability to withstand high humidity and extremes of temperature and altitude.

Permoflux Headphones have been test proven by U.S. Armed Forces, the nation's leading artists and broadcast engineers. Permoflux Headphones are also widely used in group training for deaf children and with audiometer equipment for testing hearing.

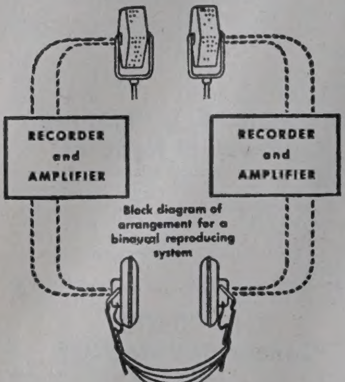
Permoflux Monaural and Binaural Headset (Binaural has PL-68 plug.)

PERMOFLUX MONAURAL DYNAMIC HEADSETS

	Headset Model	Uses Earphone	Headset Total Ohms Impedance	Professional Net Price
Standard	DHS-1B	PDR-1	24	$35.00
	*DHS-15B	PDR-3	600	$40.00
High Fidelity	DHS-28B	PDR-10	24	$40.00
	*DHS-17B	PDR-8	600	$45.00

Note: Headsets are supplied complete with ear cushions, 5 ft. cord and PL-55 plug. Shipping weight, 1¼ lbs.

*Have CAA Type Certification



Block diagram of arrangement for a binaural reproducing system

BASIC BINAURAL THEORY

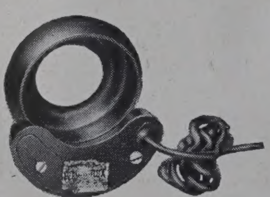
Basically in binaural recording two microphones are used. Each receives sound as normally received by human ears. The sound picked up by each microphone is recorded and amplified separately. When replayed, each sound channel is fed to the earphone corresponding to the microphone that picked it up. (See diagram). This gives a startling sense of realism and figuratively transports the listener "through" the recording medium to the position occupied by the microphones.

PERMOFLUX BINAURAL DYNAMIC HEADSETS

	Headset Model	Uses Earphone	Ohms Impedance Per Phone	Professional Net Price
Standard	B-DHS-1B	PDR-1	12	$40.00
	B-DHS-15B	PDR-3	300	$45.00
High Fidelity	B-DHS-28B	PDR-10	12	$45.00
	B-DHS-17B	PDR-8	300	$50.00

Note: Headsets are supplied complete with ear cushions, 5 ft. cord and PL-68 plug. Shipping weight, 1¼ lbs.

Permoflux Telephone Pickup



Attaches to any telephone ear-piece to pickup both sides of a telephone conversation. Output may be fed to high impedance input of any tape, disc or wire recorder. No electrical connection to telephone is necessary. Higher output than any "underphone" type pickup — important in recording long distance conversations. Shipping weight ½ pound. **$17.50 LIST.**

TRADE MARK
PERMOFLUX®
"SOUND IN DESIGN"

Write for More Complete Information

PERMOFLUX CORPORATION
CHICAGO 39, U.S.A.
GLENDALE 5, CALIF.

Fairchild Recording and Playback Equipment

TRANSCRIPTION PLAYBACK EQUIPMENT

530	Transcription Table, 3-speed, in Cabinet	$ 530.00
200 Type	Turret-Head 3-Way Transcription Arm, with Viscous Damping	65.00
205-C	Passive Equalizer	50.00
215-A	Moving Coil Cartridge, Microgroove, 1.0 mil dia. Tip	47.50
215-B	Moving Coil Cartridge, Lateral 2.5 mil	42.50
215-C	Moving Coil Cartridge, Lateral 3.0 mil	42.50
216-A	Moving Coil Cartridge, Vertical, 2.0 mil	50.00
542-M1	Transcription Arm	65.00
542-N1	Moving Coil Cartridge, Lateral, 3.0 mil	60.00
542-P1	Moving Coil Cartridge, Lateral 2.5 mil	60.00
650-A-B	Preamplifier (650C-D with Tubes; 651-B Power Supply; 20048 Frame)	130.00
	650-A, 60 db gain; 650-B, 50 db. gain.	

DISK RECORDERS & ACCESSORIES

523-J1	Studio Recorder, complete with 541-A1 Cutterhead, Microscope, Spiralling	$2985.00
539-K1	Console Recorder, complete with 541-A1 Cutterhead, 542-K1 Dynamic Pickup, Microscope, Spiralling	1395.00
539-G1	Portable Recorder, complete with 541-A1 Cutterhead, 542-K1 Pickup	985.00
541-A1	Magnetic Cutterhead, Equalizer 541-B1	160.00
300	Thermo-Stylus Kit, for Fairchild Cutterhead	100.00
301	Thermo-Stylus Kit, for RCA Cutterhead	115.00
302	Thermo-Stylus Kit, for Presto Cutterhead	115.00
304	Thermo-Stylus Kit, for Fairchild Cutterhead on 539 Recorder (Includes new type advance ball)	135.00
539-A19	Microscope & Mounting Kit for 539 Recorder	140.00
539-B12	Spiralling Kit for 539 Recorder	35.00
	Factory Installation Charge	12.50
539-B18	Suction Attachment, with 539-279 Bracket	12.50
539-325	Microgroove Kit for 539-G1 Recorder	135.00
	Factory Installation Charge	35.00
628-A1	Diameter Equalizer	130.00

TAPE RECORDER & ACCESSORIES

126	Professional Tape Recorder	$2750.00
130	Pic-Sync Attachment	1250.00
137	Automatic Framing Attachment, including Remote Control	1325.00

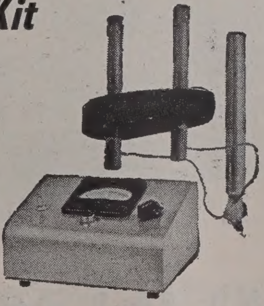
UNITIZED AMPLIFIER SYSTEM

Consists of 620 Power Amplifier, 650 Preamplifier, Line Amplifier, 624 Output Switching, 625 Input Switching, 626 NAB Equalizer, 629 Mixer, 630 VU Panel, Auxiliary Power Supply, 633 Frame and other mounting accessories.

Write for detailed information and prices.

NOTE: All prices are net, f.o.b. Whitestone, New York and subject to change without notice.

Thermo Stylus Kit



Applies heat directly to cutting jewel, reducing basic surface noise to vanishing point. Records at least 20 db lower noise level.

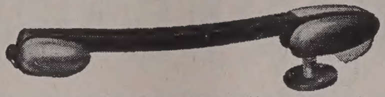
Minimizes mechanical loading of the cutter by disk material, thus increasing high frequency response, especially at small diameters.

Invaluable for microgroove, standard 33-1/3 and 45 r.p.m. speeds.

Available for Fairchild, RCA and Presto Cutterheads.

Easily installed and operated. Includes heat control and calibrated meter.

Turret-Head Arm



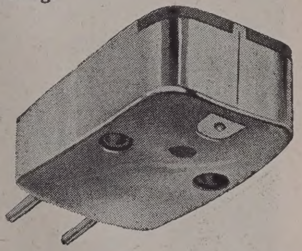
No more messy multiple pickup installations with several arms, equalizers, switches.

One arm, one equalizer do the trick—up to three cartridges in the Turret Head Arm. Equalizer with 4 NAB curves for lateral, two for vertical.

Merely turn a knob on the pickup to select proper cartridge with correct diamond tip for required record. Stylus pressure is adjusted automatically.

New viscous damping eliminates arm resonance; also greatly reduces danger of breakage in handling.

A True Moving Coil Reproducer



A cartridge for every requirement — 78 standard, 33-1/3 transcription, microgroove, vertical. Select only the ones you need. You may be sure of close tolerances in dimensions of the diamond tip to fit the groove for maximum efficiency and minimum distortion.

Frequency response — 30-12,000 cycles.

Unusual mechanical construction allows high compliance to heavily modulated grooves.

Output unequalized — 3 millivolts. Output impedance — 80 ohms, but can be fed into any higher impedance including the grid of a tube.

Pic-Sync Tape Recorder

Each time you retake a sound track, film production costs go up. The waste of film stock and the time delay for processing increase operating cost immeasurably. You *eliminate* these extra costs with the Fairchild PIC-SYNC Tape Recorder. Play back the sound at once . . . check it . . . erase the track . . . retake the sound *before the talent, the set and crew are disbanded.*

NOW USE PIC-SYNC Tape Recorders for ALL Original Sound Tracks

1. ¼″ tape costs 80% less than 16mm magnetic film.
2. ¼″ tape requires 50% less storage space.
3. ¼″ tape recorded quality practically as good as "live" for dubbing or TV broadcast purposes.
4. ¼″ tape noise level far lower than sprocket driven tape or film. This is vital in multiple dubbing operations.

WRITE: FAIRCHILD RECORDING EQUIPMENT CORPORATION

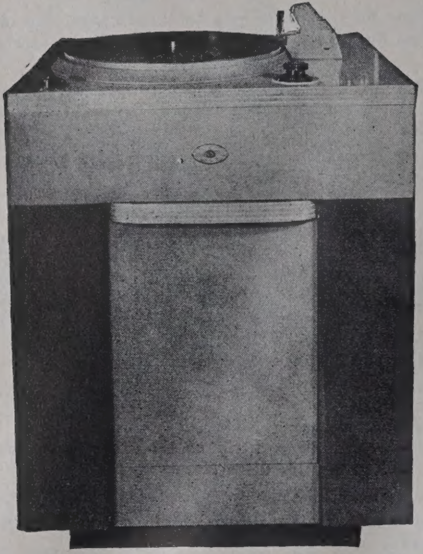
154th ST. and 7th AVE.,
WHITESTONE, N. Y.
PHONE: INDEPENDENCE 3-2100

WRITE for information on the Control Track Generator which permits lip synchronous recording on good quality portable tape recorders for later transference to film, on Pic-Sync Recorder.

Net

PRESTO RECORDING CORPORATION

WORLD'S LARGEST MANUFACTURER OF INSTANTANEOUS SOUND RECORDING EQUIPMENT AND DISCS



Presto Type 153 Reproducer extra

PRESTO 64-A TRANSCRIPTION TURNTABLE

The Presto 64-A transcription turntable offers the following features which are of major importance to the owner and operator: Unusual mechanical simplicity . . . low mechanical disturbance . . . maximum speed accuracy . . . extreme ruggedness for long continuous operation . . . instantaneous selection of desired speed . . . and no requirements for mechanical adjustments.

This transcription turntable is directly gear driven and employs two separate motors, one for 33-1/3, and the other for 78.26 rpm. There is no friction device of any kind in the mechanism and no mechanical shift is required to change speeds. To select 33-1/3 rpm, 78 rpm or "off," the operator merely throws a three position switch. These changes may be made as rapidly as desired while the turntable is in motion with no damage to the mechanism. Only one motor at a time is in operation. The transmission "over runs" the motor which is not turning and thus does not carry it along in rotation although the stationary motor is never disengaged from the mechanism.

SPECIFICATIONS

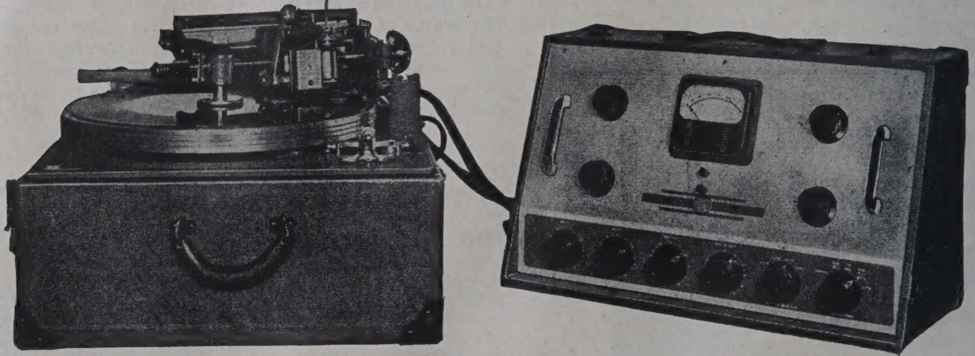
Standard Equipment: The 64-A transcription turntable includes the electro-mechanical gear drive, turntable and cabinet. A reproducer and network is not included.

Speed Accuracy: No deviation from 33-1/3 and 78.26 rpm.

Noise Level: Mechanical noise originating in the equipment over 50 db below program level.

Power Requirements: Approximately 75 watts from a 115 volt, 60 cycle line. Motors are of the 1800 rpm synchronous type and are available for other voltages and frequencies at additional cost.

Mounting: Turntable and gear drive mounted in heavy wood cabinet with inlaid linoleum top is 24 x 24 x 33 inches (61 x 61 x 84 cm.) List Price, **$495.00**



PRESTO 6-N RECORDER AND 90-B AMPLIFIER

The PRESTO 6-N Recorder and 90-B Amplifier is the ideal recording equipment for portable or stationery operation.

The 6-N Recorder is outstanding in its suitability for brodcast stations because it offers all the qualifications for good recordings, including master records, at the most economical price. It is ideal for the station requiring delayed broadcast of network programs, and for reference recordings.

The 6-N standard equipment includes the Presto 1-D cutting head, spiraling feed screw, vertical damper, time scale and pick-up. It is available for microgroove recording at addition cost.

The Presto 90-B recording amplifier contains all the facilities necessary for operation on remote assignments, but with all overall performance found only in high-fidelity studio equipment.

It consists of three preamplifiers with individual gain controls, a mixer circuit, a master gain control and recording amplifier. Provision is made for connecting the Presto 161-A automatic equalizer (radius compensator).

A five-position selector switch provides the following characteristics: 1—flat response, 30 to 15,000 ±1 db; 2—NAB 33⅓ rpm recording; 3—present day 78-rpm recording; 4—NAB playback, and 5—automatic equalization. The flat response can be modified by variable bass and treble controls, giving emphasis up to a maximum of 20 db at 100 and 7,500 cycles per second or 20 db de-emphasis at 7,200 cycles per second.

Noise is 55 db below recording level and distortion at maximum output is less than 1.5%.

The use of input and output selector switches makes the 90-B amplifier unusually flexible. It permits combining the signals of three microphones or of two microphones and either one of two pickups. By using the "Line" position, recordings can be made from an incoming program line. The output selector has three positions; playback (public address), continuous recording and simultaneous recording. While recording, the line jack provides a monitoring outlet or permits feeding a program line at the correct level.

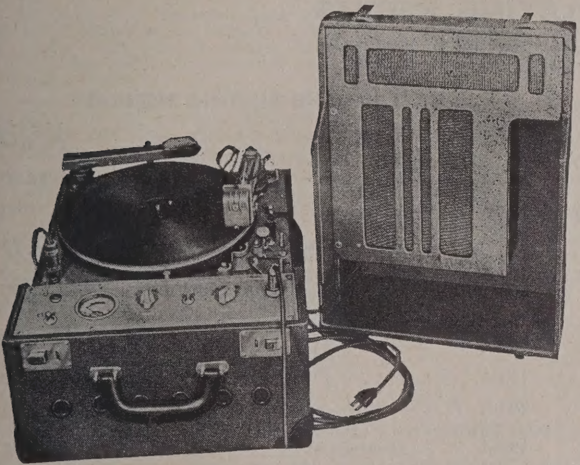
The correct level is monitored by means of a Weston Type 30 VU indicator with illuminated scale and its closely controlled electrical and dynamic characteristics make it an ideal volume indicator for recording.

List Price of 6-N	**$735.00**
List Price of 90-B	**595.00**

PRESTO RECORDING CORPORATION

WORLD'S LARGEST MANUFACTURER OF INSTANTANEOUS SOUND RECORDING EQUIPMENT AND DISCS

PRESTO K-10 RECORDER FOR MICROGROOVE AND REGULAR RECORDING



The PRESTO K-10 Recorder, formerly known as the K-8, the foremost machine of its kind to be used in schools for speech, voice, languages, dramatics, music., etc., is now offered for MICROGROOVE (long-playing) recording as well as the standard method.

Note these features:

- Cutting pitches of 112 lines per inch Outside-in, 112 lines Inside-out, 224 lines per inch Outside-in and 224 lines per inch Inside-out.
- Standard unit is equipped for two speeds, 33⅓ and 78 rpm. Available for three speeds, 33⅓, 45 and 78 rpm at additional cost.
- The cutting head is equipped with an advance ball which regulates the depth of the groove more accurately than a counter spring.
- The K-10 is equipped with a turnover type cartridge having sapphire stylii for both standard and microgroove records. The cartridge is a ceramic type which has high output and is not easily affected by high temperature and humidity.
- A single control permits instant choice of recording, playback, or public address. Amplifier also contains radio and monitor jacks.

The PRESTO K-10 will, when set for MICROGROOVE, record 6¾ minutes on every inch of disc used. This means that a 15-minute recording with good fidelity can be put on one side of a 12" disc! And a half-hour can be put on one side of a 13¼" disc. Seven minutes can be recorded on one side of a 6½" disc.

Price of K-10, less microphone and stand, **$348.00***.

No increase over K-8.

***$5.00** additional for 45 rpm pulley and record adapter.

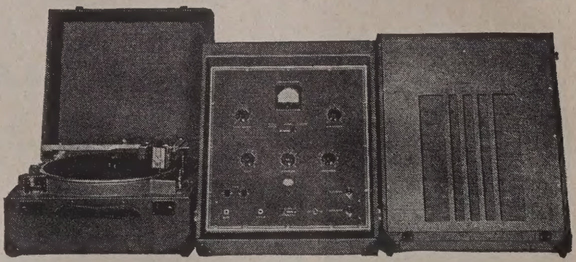
PRESTO "Y" RECORDER FOR MICROGROOVE AND REGULAR RECORDING

The PRESTO Y-5 is identical to the famous Y-4 but MICROGROOVE has been added. The following feed pitches are included with the Y-3: 112 lines per inch Outside-in, 112 lines per inch Inside-out, 224 lines per inch Outside-in, and 224 lines per inch Inside-out.

Other features are:

- Two interchangeable Pickering sapphire cartridges — for MICROGROOVE and regular recording.
- Advance ball on cutting head to accurately control depth of groove.
- 16" turntable — will take 17¼" masters.
- Standard unit is equipped for two speeds, 33⅓ and 78 rpm. Available for three speeds, 33⅓, 45 and 78 rpm at additional cost.
- Amplifier has connections for two microphones and two turntables. Output is 10 watts. Both high and low frequency manual equalizers are included.
- Ten-inch PM speaker and baffle are built into cover of amplifier.
- Presto high-fidelity 1-D cutting head.

When set for MICROGROOVE the Y-5 will record for 6¾ minutes on each inch of disc used. A fifteen-minute program can be put on one side of a 12" record. A half-hour on one side of a 16" record. Forty minutes can be recorded on one side of a 16" record by cutting to minimum diameter.



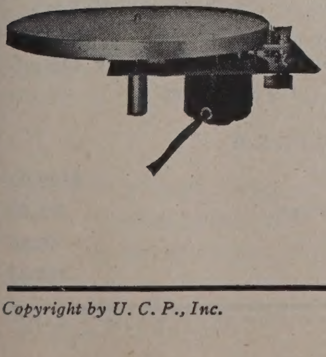
The price of the Y-5 is **$771.00***

Microphone and stands are not included as regular equipment.

***$10.00** additional for 45 rpm pulley and record adapter.

3-SPEED MICROGROOVE & STANDARD PLAYBACK TURNTABLE Type 15-G

The Presto Type 15-G turntable is an unusually high quality unit for the reproduction of recordings at 33⅓, 45 and 78 rpm. The design provides an instantaneous speed selection with a very convenient control arrangement.



FEATURES:

- Heavy cast aluminum 12" turntable accurately machined and balanced.
- Precision idler wheels and motor pulley.
- Good speed regulation—minimum "wow."
- Performance comparable to transcription equipment.
- May be connected to any radio or audio amplifier.

15-G Chassis	**$49.50**
Cabinet for above	**16.00**

PRESTO RECORDING CORPORATION

WORLD'S LARGEST MANUFACTURER OF INSTANTANEOUS SOUND RECORDING EQUIPMENT AND DISCS

PRESTO LACQUER COATED ALUMINUM DISCS
CUTTING AND PLAYING NEEDLES

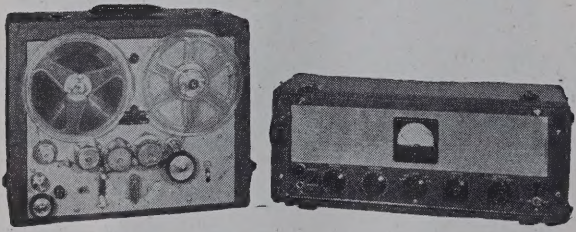
(For Professional and Institutional Recording)

Type	Size	Thickness	List Price Each
PRESTO GREEN LABEL DISCS Packed 25 per box, except 13¼″ are 30 per box.			
610-A	10″	.050	$1.30
611-A	11⅞″	.050	2.05
613-A	13¼″	.050	2.60
616-A	16″	.050	3.75
PRESTO BROWN LABEL DISCS Packed 25 per box, except 13¼″ are 30 per box.			
811-B	11⅞″	.050	1.60
813-B	13¼″	.050	2.05
816-B	16″	.050	3.00
PRESTO DOUBLE SIDED MASTERS Packed: 11⅞″—25, 13¼″—30, and 17¼″—20 per box.			
621-A	11⅞″	.050	2.05
623-A	13¼″	.050	2.60
627-A	17¼″	.064	5.60
PRESTO SINGLE SIDED MASTERS Packed: 11⅞″—25, 13¼″—30, and 17¼″—20 per box.			
821-B	11⅞″	.050	1.60
823-B	13¼″	.050	2.05
827-B	17¼″	.064	4.10
PRESTO ORANGE LABEL DISCS Packed 50 per box.			
306-A	6½″	.039	.40
308-A	8″	.039	.55
310-A	10″	.039	.85
312-A	11⅞″	.039	1.15

CUTTING AND PLAYING NEEDLES

Type and Number		List Price Per Needle
Sapphire Cutting Stylii		
320-A	—Brass Shank—Short, (Box of 6)	$6.00
321-A	—Brass Shank, Long, (Box of 6)	6.00
603-A	—Dural Shank—Short, (Box of 6)	8.00
603 MICRO	—Same as above for MICROGROOVE	8.00
604-A	—Dural Shank—Long, (Box of 6)	8.00
604 MICRO	—Same as above for MICROGROOVE	8.00
	Resharpening Sapphire	2.00
Stellite Cutting Stylii		
330-A	—(Box of 6)	2.00
331-A	—(Box of 6)	2.00
807-A	—Resharpening Stellite Point	.75
Steel Cutting Stylii, Long and Short		
350-A	—(Package of 3)	1.00
Sapphire Playing Needle		
420-A	—Sapphire Playing Needle	1.25
Transcriptone Playing Needle		
430-A	—Transcriptone Playing Needle	1.00
Red Shank Playing Needles		
440-A	—(Package of 25)	.25
440-B	—(40 Packages of 25)	10.00

PT-920 TAPE RECORDER



TYPE RC-7 TYPE A-920

PT-920 COMPLETE IN CARRYING CASES

The PT-920 tape recorder has been developed for fully professional recording work and hence no compromise has been made with quality of materials and workmanship. The PT-920 has been designed especially for broadcast stations and recording studios and has found wide acceptance among colleges and universities as well.

This recorder consists of a three-motor drive system, separate erase, record, and reproduce heads and two separate amplifiers—one for recording and the other for monitoring. This arrangement permits instantaneous monitoring of the tape. The equipment takes standard RMA 7″ reels. Continuous recording with two mechanical sections (type RC-7) and one amplifier section (A-920) may be done by interconnecting the units through the SA-10 changeover switch.

The PT-920 may be had on standard 19″ relay rack mounting panels. Simply specify: "for rack mounting." Price same as in carrying cases.

SPECIFICATIONS

Frequency response 50 - 15,000 cps at 15″/sec. tape speed and 50 - 10,000 cps at 7½″/sec.

Signal to noise ratio is 50 db with 2% distortion at 400 cps.

Instantaneous speed variations at 15″/sec. is not more than 0.25%.

Microphone input impedance normally 250 ohms.
Output of amplifier 15 ohms, 10 watts.
Bridging input 20,000 ohms, unbalanced.

Weights: RC-7—40 lbs.; A-920—35 lbs.

PRICES

Complete PT-920	$749.00
RC-7—Tape Transport Mech.	425.00
SA-10—Transfer Switch	46.00
A-920—Amplifier	324.00

PRESTO RECORDING CORPORATION

WORLD'S LARGEST MANUFACTURER OF INSTANTANEOUS SOUND RECORDING EQUIPMENT AND DISCS

RC-10-24 TAPE RECORDER

The RC-10-24 is an extremely high quality rack mounting tape recorder for both RMA reels and NAB hubs. Maximum tape capacity is 2400 feet (nominal). This recorder incorporates a three-motor drive system with solenoid operated brakes and capstan pressure pulley. All functions are selected by push-button switch. The recorder may be completely connected to remote controls, either directly or by using relays.

The panel measures 19″ wide by 24½″ high and is normally rack mounted although the recorder will operate in any position. Separate recording and reproducing heads are provided so that the tape may be monitored during recording.

The 900-A2 or the 901-A1 amplifiers are for use with the RC-10-24.

The three-motor drive system eliminates the complex mechanical arrangements which require frequent adjustment. This system also makes possible very fast speeds forward and reverse. This recorder has proven to be exceptionally reliable and trouble-free even under continuous periods of operation.

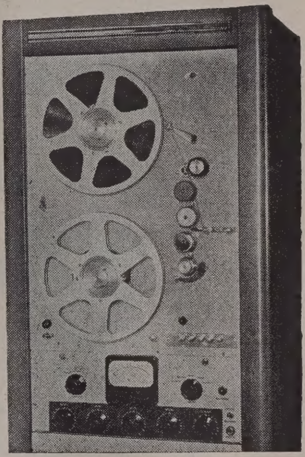
SPECIFICATIONS

Reels 7″ and 10½″. Standard tape speeds 7½ and 15″/sec.
Fast Speeds, forward and reverse: 250″/sec.
Frequency response 50 - 15,000 cps at 15″/sec. and 50 - 7,500 cps at 7½″/sec.
Dynamic range 55 db.
Instantaneous speed accuracy .15% at 15″/sec.

PRICES

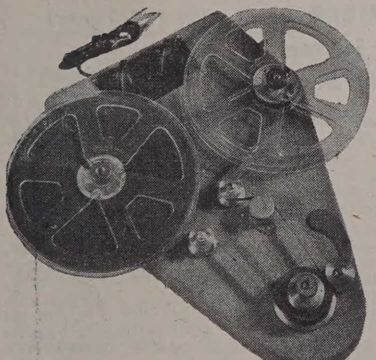
RC-10-24 Recorder	**$761.00**	**900-A2 or 901-A1 Amplifier**	**$403.00**

NOTE: Amplifier types 900-A2 and 901-A1 are generally similar except that the former is equipped with a low level 3-microphone mixer whereas the latter has a line-level input, either high impedance bridging or 500 ohm matching.



RC-10-24, in rack with 900-A2 Amplifier

TL-10 PRESTO TAPE DRIVE



Presto offers an ingenious tape transport mechanism which can be quickly installed on any sixteen inch turntable. This mechanism derives its power from the turntable—it has no motors of its own. The present model is for tape reproduction only—no erasing or recording is included. No amplifier is provided. The equalized output of the playback head may be fed directly into standard speech input equipment.

The TL-10 Tape Drive consists of a triangular shaped cast chassis which mounts on two small posts fastened to the turntable panel. One point of the triangle carries the tape capstan and this rests directly on the center pin of the turntable to which the TL-10 is attached. A belt drive from the under side of the capstan rotates the take-up reel through a slip clutch. The reproducer head and guide pulleys are located on the upper side of the chassis and the equalizer network is placed below.

Two capstans are available for 15 or 7½ inches per second tape speed based on the turntable speed of 78 rpm. Rewinding is achieved by transferring the empty reel to the take-up spindle and releasing the drag on the supply spindle. Specify type of turntable when ordering the TL-10.

The output of the head and equalizer is sufficiently high to be fed directly into a high quality preamplifier such as found in standard broadcast speech input equipment. An unusual type of capstan is employed, consisting of a wheel, relatively large in diameter, and having a rubber rim. The tape is wrapped around this capstan 180° and obtains very great traction against the rubber surface.

PRICES

TL-10 Tape Drive — 1-Speed	**$132.50**
2-Speed	**140.00**

RC-10-14 TAPE RECORDER

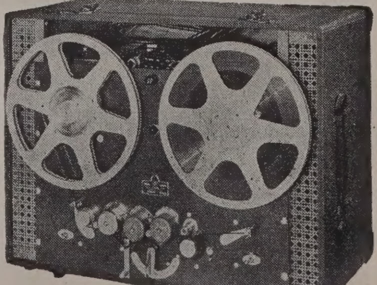
The RC-10-14 is similar in most respects to the RC-10-24, differing only in the panel size and the control switch arrangement. The panel is 19″ x 14″ and is frequently mounted in the CS-10 carrying case although the unit may be rack mounted also. The function switch is the rotary type and also mechanically operates the idler pressure pulley. The same three-motor drive and solenoid braking is used as on the RC-10-24.

The RC-10-14 recorder with the 900-A2 amplifier, in carrying cases, constitute portable equipment of the highest quality—equal in performance to the best studio recorders.

PRICES

RC-10-14 Recorder	**$684.00**
CS-10 Carrying Case	**52.00**
900-A2 Amplifier, in carrying case	**403.00**

See Page E-4



RC-10 in Carrying Case
900-A2 Amplifier in Separate Unit

REK-O-KUT COMPANY

MANUFACTURERS OF RECORDING AND TRANSCRIPTION EQUIPMENT FOR THE BROADCAST INDUSTRY

WORLD'S TWO GREATEST HI-FIDELITY PORTABLE PHONOGRAPHS

THE *Rhythmaster*

THE *Recitalist*

The RHYTHMASTER is equipped with the CVS-12 *Continuously-Variable Speed Turntable.*

The RECITALIST is equipped with the LP-743, *3-Speed Turntable.*

BOTH OFFER 3 INSTRUMENTS IN ONE

★ PHONOGRAPH ★ P.A. SYSTEM ★ BROADCAST RECEIVER (used with FM Tuner)

Indispensable for Recreation Centers, Broadcast Stations, Advertising Agencies, Schools, Hospitals, Record Collectors, Musicians, Etc.

THE RHYTHMASTER AND THE RECITALIST are the only full-range portable phonographs that balance the response characteristics of amplifier, speaker and speaker enclosure. By carefully compensating the natural resonances of these three components, undesirable reverberations are eliminated, and **truly lifelike sound reproduction is achieved.**

THE POLYPHONIC SELECTOR, an exclusive Rek-O-Kut engineering triumph, found only in the Recitalist and the Rhythmaster, maintains the proper relationship between the highs and lows when the record is played **at any volume,** either very softly or very loud! Thus, the high notes of the violins, chimes, triangles, cymbals, etc., are always reproduced clearly and distinctly in all their original beauty and cannot be drowned out by the loud passages of the brasses and percussion instruments.

THE RHYTHMASTER'S PATENTED CONTINUOUSLY-VARIABLE SPEED TURNTABLE plays records not only at 33⅓, 45 and 78 R.P.M., but at **ANY speed variation** from 25 to 100 R.P.M. Not only will the CVS Turntable play your records back at the exact pitch and tempo they were recorded, but also at any increased or decreased tempo to fit a particular need: **★DANCING:**—Set the rhythm of your folk-dance, tango, rhumba to your own taste. **★PHYSICAL EDUCATION:**—Set the rhythm most suitable for teaching swimming, exercises, etc. **★MUSICIANS:**—(1) You can now set the pitch of your records to your own personal interpretation of any recording. (2) You can set the pitch of the record to match the pitch of your piano or other instrument for purposes of accompaniment. **★SCHOOLS:**—Invaluable tool for teaching music, band instruments, languages, typing, dancing, gymnastics, etc. **★RECREATION CENTERS, CAMPS, COMMUNITY CENTERS:**—Powerful amplifier and speaker afford undistorted volume to cover an assemblage of 500 people or more.

THE RHYTHMASTER AND RECITALIST ARE BOTH "FLEXIBLE" INSTRUMENTS. (1) A microphone input enables "mixing" of live music or voice simultaneously with a recording being played. (2) Can be used as a high fidelity public address system. (3) By connecting an AM or FM Tuner, these phonographs become superb broadcast receivers.

SPECIFICATIONS

TURNTABLE: 12″ cast aluminum, with hardened and ground shaft.

MOTOR: Constant-speed, 4 pole induction.

SPEAKER: 8″ PM type, built to our exacting specifications with heavy Alnico V magnet.

AMPLIFIER: Frequency response is controlled by **Polyphonic Selector.**

- **Position No. 1**—Uniform within 1 db from 50 to 15,000 cycles.
- **Position No. 2**—Bass up 4 db at 100 cycles, treble uniform above 5,000 cycles.
- **Position No. 3**—Bass up 6 db at 100 cycles, treble uniform above 5,000 cycles.
- **Position No. 4**—Uniform from 50 to 3,000 cycles, increasingly sharp cut-off, 14 db down at 10,000 cycles.

PICKUP: 16″ with dual stylus cartridge. Plays up to 16″ broadcast transcriptions, standard commercial pressings and micro-groove records.

POWER OUTPUT: 10 watts at less than 3% total harmonic distortion.

INPUT CHANNELS—THREE: High impedance microphone, radio, phono-pickup.

INPUT GAIN: Microphone, 120 db; phono-pickup, 80 db; radio, 80 db; magnetic pickup, 90 db.

OUTPUT IMPEDANCE: 6 - 8 ohms at speaker jack.

NOISE LEVEL: More than 50 db below rated output with all controls set at maximum.

CONTROLS: Microphone, radio-phono, Polyphonic Selector.

TUBE COMPLEMENT: (2) 6SL7, (2) 6V6GT, (1) 5Y3GT plus (1) 6SC7 for magnetic pickup.

POWER INPUT: 70 watts.

CASE: Sturdy Plywood, covered with rich grey leatherette.

DIMENSIONS: 17″ wide, 9½″ high, 21¼″ deep (Closed).

WEIGHT: 38 pounds.

Model	Description	Net Price
RP-43C RECITALIST	3 Speed, crystal pickup	**$229.95**
RP-43M RECITALIST	3 Speed, pre-amp., mag. pickup	**249.95**
RP-43VC RHYTHMASTER	Variable Speed, crystal pickup	**269.95**
RP-43VM RHYTHMASTER	Variable Speed, pre-amp., magnetic pickup	**289.95**

REK-O-KUT COMPANY

MANUFACTURERS OF RECORDING AND TRANSCRIPTION EQUIPMENT FOR THE BROADCAST INDUSTRY

Challenger De Luxe

PROFESSIONAL 13¼" DISC RECORDER FOR STANDARD AND MICRO-GROOVE RECORDING

The "Challenger," America's finest professional 13¼" disc recorder, is built to meet the respective needs of the Professional Recordist, Musician, Educator and Recording Enthusiast who wants to make permanent, professional recordings. The "Challenger" embodies the most advanced design, engineering and production techniques in the disc recording industry. The many exclusive operating features incorporated in the "Challenger" simplify and improve the art of disc recording.

SPECIFICATIONS:

1. **MOTOR:** Heavy duty Synchronous motor (TR-12H, described in detail on page E-8), fitted with lamitex drive pulley. Suspended in sheer shock mounts to prevent transmission of motor vibration.
2. **RECORDING AREA:** Records from 6" up to 13¼" masters.
3. **SPEEDS:** Simple, finger-tip speed control for instantaneous selection of speed desired — 78, 45, or 33⅓ RPM.
4. **OVERHEAD RECORDING MECHANISM:**
   - (a) **"LIFTOMATIC SAFETY CAM"** prevents double cutting and damage to the stylus by automatically raising the cutter from the disc as it approaches the center of the record.
   - (b) **FACILITATES INTERCHANGING LEADSCREWS** for standard or micro-groove recording.
   - (c) **SPIRAL GROOVES:** Run-in, run-out and locked grooves are made with a simple, manual operation.
5. **PICKUP ARM:** 16" with dual stylus magnetic variable reluctance cartridge. Plays up to 16" broadcast transcriptions, standard commercial pressings and micro-groove records.
6. **TURNTABLE:** Precision machined aluminum fitted with hardened and ground shaft. Driven by two double-duty neoprene idlers running against the inside rim.
7. **SPEAKER:** 8" PM type. Custom-built to rigid REK-O-KUT specifications for extra power and wide range. Mounted into detachable cover of case.
8. **CASE:** Sturdy plywood covered with rich grey leatherette. Built to withstand rough usage.
9. **DIMENSIONS:** 25" x 22" x 12". Weight: 65 Lbs.

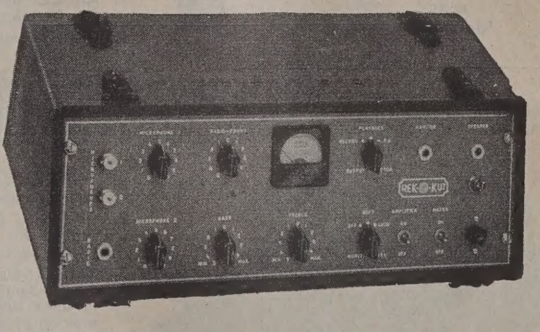
CHALLENGER DELUXE..........$439.95

ACCESSORIES

M12-192	Micro-Groove Leadscrew	17.95
TR-103A	Idler and Adapter for 45 RPM, interchangeable with 33⅓ RPM idler	7.00

R-8A UNIVERSAL RECORDING AMPLIFIER
(as used in DeLuxe "Challenger")

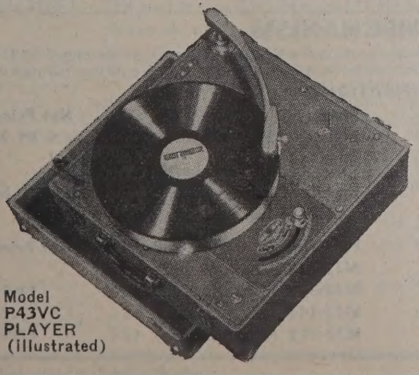
FREQUENCY RESPONSE: ±1 db from 30 to 20,000 cycles at normal setting of equalizer controls.
POWER OUTPUT: 13.5 watts at less than 3% total harmonic distortion into resistive load.
TREBLE EQUALIZER: Boost of 14 db and attenuation of 15 db above 8,000 cycles, continuously variable.
BASS EQUALIZER: Boost of 14 db and attenuation of 14 db below 50 cycles, continuously variable.
INPUT CHANNELS—FOUR: 2 high impedance microphones, phono channel compensated for G.E. or Pickering pickup, radio. Switch on rear of chassis changes phono channel for crystal pickup operation.
GAIN: Microphones—120 db; Phono—90 db; Radio—80 db.
OUTPUT IMPEDANCE: 4, 8, 15, 125, 250, 500 ohms for cutter and speaker.
OUTPUT SELECTOR: Three positions providing—recording, play-back and public address. Microphones are muted in play-back position.
MONITORING: A switch is provided giving three positions of monitor level—off, medium, loud. Speaker or headphones may be used. Meter on front panel indicates correct recording level.
HUM AND NOISE: 64 db below 13.5 watts with all controls turned for maximum hum and noise output.
CONTROLS: Microphone "1", microphone "2", radio-phone fader, output selector, treble equalizer, bass equalizer, monitor.
TUBE COMPLEMENT: (2) 6SJ7; (2) 6SL7; (1) 6SC7; (2) 6V6; (1) 5Y3.
POWER SUPPLY: 105-125 volts, 50-60 cycles.



POWER CONSUMED: 100 watts.
DIMENSIONS: Panel—19" x 6¼"; Chassis—17" x 8¾".

R-8A	For rack mounting, including tubes	$149.95
C-85	Portable Case (illustrated), additional	22.95

RECORD PLAYERS
3 SPEED • VARIABLE SPEED



Model P43VC PLAYER (illustrated)

The quality instruments of the playback field. Play through any amplifier, sound projector, recorder, radio or TV set. Recommended for dubbing your favorite records into ANY type of recorder—wire, tape or disc.

Model	Turntable (See Page E-9 for Detailed Descriptions)	Pick-up	Net Price
P-43C	LP-743, 3 Speed	16" Crystal, Dual Stylus	$ 94.95
P-43M	LP-743, 3 Speed	16" Dual Stylus, Magnetic Variable Reluctance	99.95
P-43VC	CVS-12 Continuously Variable from 25 to 100 RPM	16" Crystal, Dual Stylus	124.95
P-43VM	CVS-12 Continuously Variable from 25 to 100 RPM	16" Dual Stylus, Magnetic Variable Reluctance	129.95

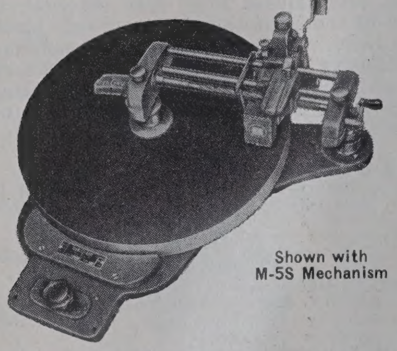
REK-O-KUT COMPANY

MANUFACTURERS OF RECORDING AND TRANSCRIPTION EQUIPMENT FOR THE BROADCAST INDUSTRY

MODEL V DELUXE DUAL SPEED 16" RECORDING TURNTABLES

The outstanding value in the recording field. Ruggedly constructed and precisely machined, the model "V" deluxe turntable will maintain the constant, wow-free speed and smoothness demanded in broadcast work.

The model M-5S Overhead Cutting Mechanism mounts to the "V" deluxe turntable in a matter of moments.


Shown with M-5S Mechanism

SPECIFICATIONS:

1. **MOTOR:** Synchronous type equipped with lamitex pulley for synchronous speed and maximum drive. Suspended in sheer shock mounts to prevent transmission of motor vibration to turntable or chassis.
2. **TURNTABLE:** Normalized aluminum alloy casting, lathe turned and balanced.
3. **CHASSIS:** Cast-iron ribbed L beam type with socket for instantaneous installation of M-5S recording mechanism.
4. **IDLERS:** Double-duty type made of Neoprene compound provides maximum traction. Will not glaze under operating conditions.
5. **OILING:** Shafts and bearings are self-oiling. Require infrequent periodic lubrication.
6. **SPEED CHANGE:** Mastermatic self-locking instantaneous speed shift.
7. **DIMENSIONS:** Front to Back 20"; Width 20"; Height 2½" above motor board; 5" below motor board; Weight 28 lbs.

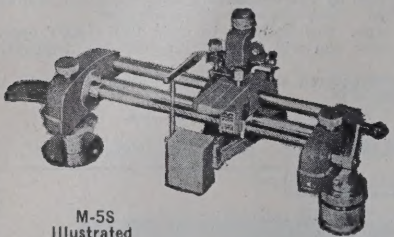
Model	Net Price
"V-Deluxe"	**$215.00**

ACCESSORIES

P-11—Portable case for "V" Deluxe recording table and M-5S cutting mechanism	**64.00**
C-7—Console cabinet, metallic grey finish, with record drawer for storing 100 transcriptions. 4 adjustable screw jacks. Built-in electrical outlets. Motorboard cutout	**129.95**
V103A—45 RPM Idler and record adapter interchangeable with 33⅓	**8.00**

MODEL M-5S MASTER-PRO 16" OVERHEAD RECORDING MECHANISM

A precise tool for professional work. Working surfaces and moving parts are hardened, ground and polished to a micro finish. The Master-Pro is a universal machine that can be readily attached to all 16" recording turntables as well as the Rek-O-Kut model "V" recording table.


M-5S Illustrated

SPECIFICATIONS:

1. **TILT AND LEVEL ADJUSTMENT:** Enables the operator to level and square his unit to disc in a matter of moments.
2. **DUAL CLUTCH SPIRALING CONTROL:** A fool-proof device which eliminates the danger of spoiling a record while the crank-handle is in motion.
3. **MICROMETER DEPTH ADJUSTMENT:** For positive depth control of the cutting head.
4. **LEADSCREW:** Stainless steel with matched bronze feednut.
5. **ANGLE OF CUT:** Is controlled by a simple micrometer adjustment.
6. **GEARS:** Drive gears completely enclosed to prevent fouling by loose chips. Standard units are equipped with 8-ohm magnetic cutter and 120-line O.I. Leadscrews.
7. **DIMENSIONS:** Length 16"; Width 6½"; Height 9"; Weight 11 lbs.

Model		Net Price
M-5S	With 8 ohm cutter	**$215.00**
M-5S	Without cutter	**200.00**

EXTRA LEADSCREWS

Specify "Inside Out" or "Outside In" by letters I.O. or O.I. after part number.

Part No.	Lines Per Inch	Net Price
MS-105	105	**$ 37.50**
MS-120	120	**37.50**
MS-135	135	**37.50**
MS-210 (Micro-Groove)	210	**47.50**

MODEL TR-12H DUAL SPEED 12" RECORDING TURNTABLE

The first 12" dual speed recording turntable to feature a SYNCHRONOUS MOTOR. Design and construction of the model TR-12H is similar to the Rek-O-Kut 16" professional recording tables. The model M-12 overhead recording mechanism is mounted to the chassis in a few moments.

Shown with M-12 Mounted

SPECIFICATIONS:

1. **TURNTABLE:** Aluminum, lathe turned and balanced.
2. **CHASSIS:** Cast aluminum. Drilled and tapped for instantaneous mounting of the M-12 recording mechanism.
3. **MOTOR:** Heavy duty Synchronous, fitted with a lamitex drive pulley. Suspended in sheer shock mounts to prevent transmission of motor vibration.
4. **SHAFTS:** Hardened, ground and polished to a micro-finish.
5. **DRIVE:** Internal rim. Drives through double-duty Neoprene idlers which insure free, smooth and quiet operation.
6. **SPEED CHANGE:** Instantaneous speed shift engages either the 78 or 33⅓ RPM idler.
7. **FINISH:** Beautiful grey wrinkle.
8. **DIMENSIONS:** Front to Back 16½"; Width 16"; Height 1⅜" above motor board. 5" below motor board. Weight 17 lbs.

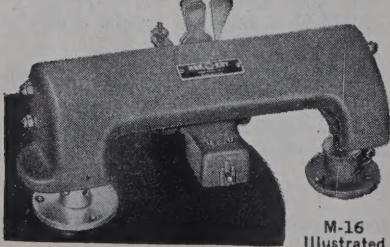
Model	Description	Net Price
TR-12H	With Synchronous Motor	**$129.95**
TR-12	With 4 pole induction motor	**99.95**

ACCESSORY

T-103A....45 RPM Idler and record adapter interchangeable with 33⅓	**7.00**

MODEL M-12 OVERHEAD RECORDING MECHANISM

The M-12 Overhead Cutting Mechanism is a truly professional machine for recording enthusiasts and professionals. It incorporates many of the features found only in 16" professional units. The M-12 records up to 18¼" master discs and can be mounted on any 12" recording turntable.


M-16 Illustrated

SPECIFICATIONS:

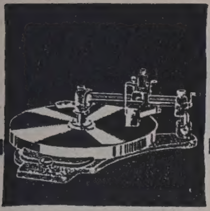
1. **SPIRAL GROOVE:** A run-in, run-out and locked groove made with a simple manual operation.
2. **LEADSCREW:** 108LPI stainless steel, lapped to a matched feednut which is in constant mesh.
3. **LIFT-O-MATIC:** Automatically lifts cutter from disc as it approaches end of leadscrew.
4. **MAGNETIC CUTTER:** 8 ohms, flat from 40 to 7,000 cycles.
5. **DIMENSIONS:** Length 11¼"; Width 4¼"; Height 6".

Model		Net Price
M-12	For 12" turntables	**$ 99.95**

EXTRA LEADSCREWS

Specify "Inside Out" or "Outside In" by letters I.O. or O.I. after part number.

Part No.	Lines Per Inch	Net Price
M12-108	108	
M12-120	120	**17.95**
M12-144	144	**17.95**
M12-192 (Micro-Groove)	192	**17.95**



REK-O-KUT COMPANY

MANUFACTURERS OF RECORDING AND TRANSCRIPTION EQUIPMENT FOR THE BROADCAST INDUSTRY

MODEL "G-2" DELUXE 16" TRANSCRIPTION TURNTABLES

The model "G-2 Deluxe" Transcription Turntable is acknowledged without reservation by the broadcasting industry to be the finest rim-driven turntable on the market. The rigid requirements for network programs are easily met by the "G-2 Deluxe."

OPERATING DATA:

1. **STARTING:** From standing start to 78 RPM ¾ of a turn. From standing start at 33⅓ RPM ¼ of a turn. Meets the NAB standard for speed variation and wow content.
2. **NOISE LEVEL:** 50 db below average recording level.
3. **CUEING:** 15¾" turntable permits the record to overlap ⅛" which enables the operator to cue from the rim of the disc.
4. **CONSTRUCTION:** (A) Precision lathe-turned balanced turntable. (B) Synchronous motor with Lamitex pulley for maximum drive. (C) Double-duty Neoprene idlers. (D) Cast-iron L beam **no twist chassis.** (E) Mastermatic self-locking instantaneous speed shift. (F) All shafts hardened, ground, polished to micro finish.
5. **DIMENSIONS:** Front to Back 20"; Width 16"; Height 2½" above motor board; 5" below motor board. Weight 26 lbs.

Model	Description	Net Price
G-2 Deluxe	With Synchronous Motor, Mastermatic Shift	**$179.95**
G-2 Standard	With 4 pole Induction Motor and Manual Shift	**137.50**

ACCESSORY

G 103 A	45 RPM Idler and record adapter interchangeable with 33⅓	**8.00**

G-2 Standard
Illustrated

MODELS T-12H and T-43H DUAL SPEED 12" TRANSCRIPTION TURNTABLES

The REK-O-KUT Models T-12H and T-43H are the only 12" dual speed turntables that meet the standards for speed regulation and wow content specified by the National Association of Broadcasters. The construction, design and performance standards equal the REK-O-KUT 16" broadcast models. The T-12H and T-43H are recommended for use with Hi-Fi amplifiers and speaker systems.

SPECIFICATIONS:

1. **NOISE LEVEL (a) T-12H—T-43H:** 50 db below average recording level.
   (b) **T-12—T-43:** 40 db below average recording level.
2. **MOTORS:** (a) **T-12H and T-43H**—Synchronous.
   (b) **T-12 and T-43**—4 pole induction, built to REK-O-KUT specifications.
   All motors, shock mounted, are fitted with lamitex pulleys, which are pressed on, and ground concentric to the motor shaft—an exclusive REK-O-KUT feature which insures smooth, rumble-free operation.
3. **COMPONENTS:**
   Turntable—Cast aluminum, machined and balanced.
   Chassis—Aluminum casting, cross ribbed, flush mount. Requires a rectangular cutout for mounting. Easily installed.
   Drive—Internal rim drive through double-duty Neoprene idlers insures free, smooth and quiet operation.
   Shafts—Hardened, ground and polished to a micro-finish.
4. **SPEED SELECTION:** Instantaneous speed shift engages either 78 or 33⅓ RPM idler without stopping turntable or removing disc.
5. **FINISH:** Grey Wrinkle.
6. **DIMENSIONS:** Front to Back 15"; Width 13"; Height 1⅜" above motor panel and 5" below motor panel. Weight 13 lbs.

Model	Speeds	Net Price
T-12H	78 - 33⅓	**$119.95**
T-12	78 - 33⅓	**84.95**
T-43H	45 - 33⅓	**119.95**
T-43	45 - 33⅓	**84.95**

ACCESSORIES

T-103 A	45 RPM Idler, with record adapter, interchangeable with 33⅓	**7.00**
T-104	78 RPM Idler, interchangeable with 45 RPM	**6.50**

T-12H
Illustrated

MODEL LP-743 — 3 SPEED 12" TRANSCRIPTION TURNTABLE

Here is the outstanding value for the discriminating buyer who seeks a quality three-speed turntable, at a moderate price. The LP-743 meets the growing demand for a good turntable which is priced between deluxe models and ordinary phono motors. Designed and dimensioned for easy replacement of obsolete motors in average consoles.

SPECIFICATIONS:

1. **NOISE LEVEL:** 30 db below average recording level.
2. **TURNTABLE:** Lathe-turned and balanced. Made of laboratory tested aluminum casting.
3. **MOTOR:** Induction type, designed for smooth, quiet, vibration-free operation, fitted with a Lamitex motor pulley.
4. **SHAFT:** Turntable shaft hardened, ground and polished.
5. **SPEED CHANGES:** Instantaneous without stopping turntable or removing disc.
6. **FINISH:** Grey hammertone.
7. **DIMENSIONS:** Front to Back 14"; Width 12"; Height 1⅜" above motor panel; 5" below motor panel. Weight 10 lbs.

Model		Net Price
LP-743	3 Speeds: 78 - 45 - 33⅓	**$54.95**

MODEL CVS-12 — CONTINUOUSLY VARIABLE-SPEED TURNTABLE

Plays at any speed from 20 to 100 RPM without distortion or warble

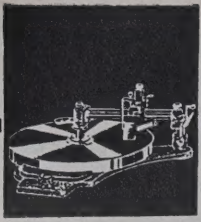
Operates on 50 or 60 cycles. Just plug in . . . no more changing of motor pulley or idler to convert from 50 to 60 cycles, or vice versa. Speeds are regulated by a simple movement of the lever to compensate for any fluctuations in line voltage or frequencies. Plays all standard and microgroove records as well as 16" professional broadcast transcriptions. Excellent for broadcast stations, disc jockeys, schools, dance studios, musicians, singers, record collectors, gymnasiums, etc. The only turntable to use in areas of fluctuating line voltage, frequency, or with portable power plant.

SPECIFICATIONS:

1. **SPEED RANGES: Continuously Variable.**
   (a) 110V-60 cycles, Range: 25 to 100 RPM.
   (b) 110V-50 cycles, Range: 20 to 85 RPM.
2. **MOTOR:** Constant speed, 4 pole, with cone pulley.
3. **DRIVE:** Exclusive VARI-CON* self-seating rim drive.
4. **TURNTABLE:** 12" cast aluminum, with hardened and ground shaft.
5. **NOISE LEVEL:** 30 db minimum below average recording level.
6. **DIMENSIONS:** Front to Back 15½"; Width 12"; 1½" above chassis, 5" below chassis.

*Patent Pending.

Model		Net Price
CVS-12	Variable Speed, 25-100 RPM	**$84.95**

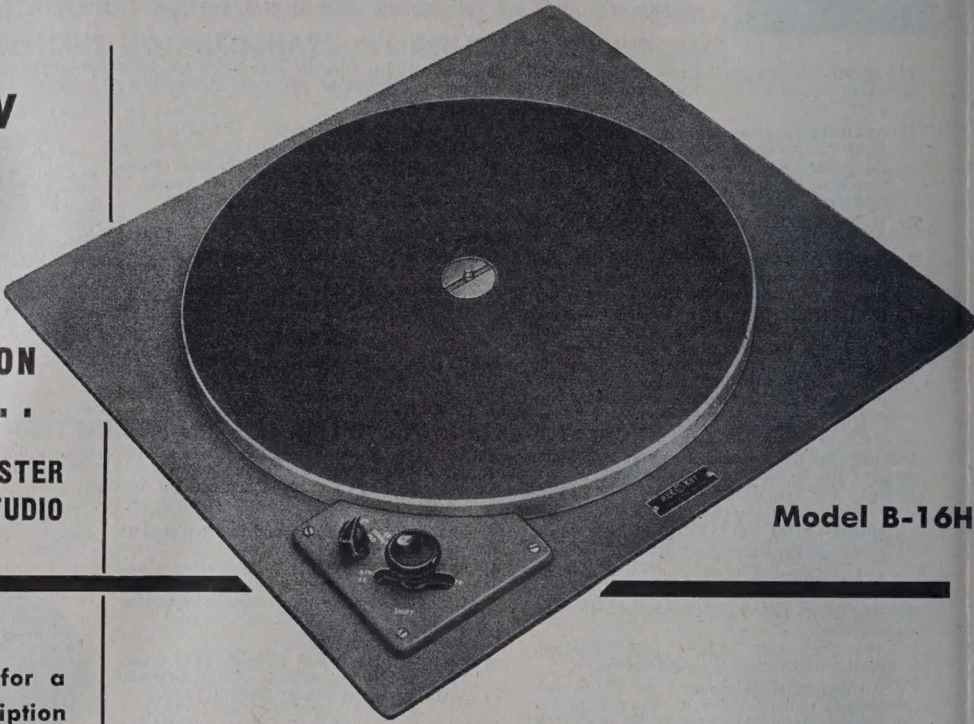


REK-O-KUT COMPANY

MANUFACTURERS OF RECORDING AND TRANSCRIPTION EQUIPMENT FOR THE BROADCAST INDUSTRY

THE *NEW* 16-INCH 3-SPEED TRANSCRIPTION TURNTABLE . . .

. . . for the BROADCASTER and the RECORDING STUDIO



Model B-16H

THE UNIVERSAL DEMAND for a 16-inch, 3-speed transcription turntable, specifically designed and engineered for the three disc recording speeds, has now been filled by Rek-O-Kut MODEL B-16H.

Entirely new elements of design and engineering, based upon suggestions made by leading engineers in the field, were embodied to produce this "authentic" three-speed turntable. As a result, all three recording speeds — 33⅓, 45 and 78 — can be selected with equal facility simply by turning an indicator.

Here is another proud result of the recognized skill and ingenuity of the REK-O-KUT craftsmen. The Model B-16H should be in your station or studio.

SPECIAL FEATURES

- The Turntable is sub-mounted in a square, machined, heavy aluminum base —*drilled and tapped for mounting Audak, Gray or Pickering arms.*
- 45 RPM ADAPTER—disappearing type—built into hub of turntable.
- Dimensioned for ready replacement of your obsolete two-speed tables in your present consoles or cabinets with very slight modifications.
- Maintenance is simple . . . the turntable, motor pulley and idlers are easily accessible.

OPERATING DATA

STARTING:
From standing start to 78 rpm . . . ¾ of a turn.

From standing start at 45 and 33 rpm . . . ¼ of a turn.

SPEED VARIATION: Meets the NAB standard for speed variation and "wow" content.

NOISE LEVEL: 50 db below average recording level.

CUEING: 15¾″ Turntable permits the record to overlap ⅛″ which enables the operator to cue from the rim of the disc.

DIMENSIONS: 1½″ above base, 6″ below. 20″ wide x 18¾″ deep.

SPECIFICATIONS

BASE: Aluminum, square shape, machined. Radial ribbed for utmost rigidity. Drilled and tapped for mounting Audak, Gray and Pickering arms.

SPEED CHANGE: Instantaneous for all three speeds. Controlled by selector.

SPEED SHIFT: Mastermatic, self-locking. A REK-O-KUT exclusive.

DRIVE: Rim driven through idlers.

TURNTABLE: Cast Aluminum—16-inch. Lathe turned with extra heavy rim for balanced flywheel action. Sub-mounted in base.

MOTOR: Hysteresis Synchronous. 60 cycles A.C. 115 volts. Motors available in other frequencies and voltages at additional cost.

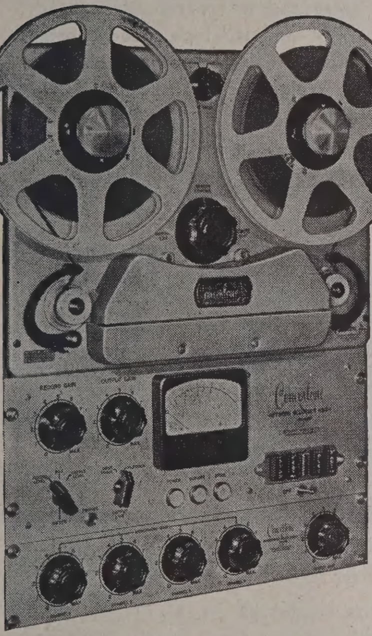
FINISH: Blue-gray wrinkle.

SHIPPING WEIGHT: 30 lbs.

PRICE: $250.00 net.

Concertone

MAGNETIC TAPE RECORDERS

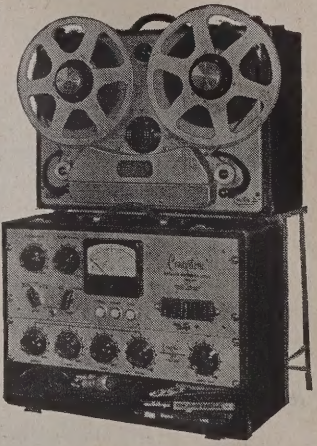


CONCERTONE NETWORK RECORDER

The Concertone Network Recorder and recording amplifier incorporates such features of engineering and design as to represent a major advance in dependability of operation and simplicity of maintenance in the field of broadcast recording and reproduction. A high degree of versatility is achieved through provision for mounting up to 5 heads; flexibility attained by option of rack panel mounting, portable cases or console cabinet installation.

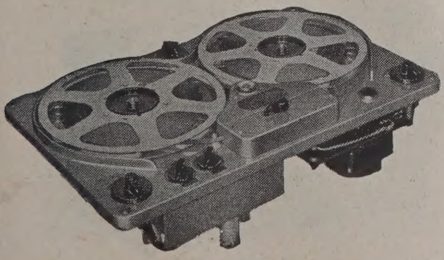
SPECIFICATIONS

NETWORK RECORDER NWR-1: Meets all adopted N.A.B. standards. **Frequency response:** ±2 db from 40 to 15,000 cps at 15″/sec., ±2 db from 50 to 9,000 cps at 7.5″/sec. **Signal to noise ratio:** 55 db. **Harmonic Distortion:** 2% at zero V.U. **NETWORK DRIVE NWD-1: Drive panel:** 14″ x 19″. **Mounting Depth:** 6″ (below panel). **Tape speeds:** 7.5″ and 15″/sec. **Flutter and wow:** 0.1% RMS at 15″/sec. 0.2% RMS at 7.5″/sec. **NETWORK AMPLIFIER NWA-1: Amplifier panel:** 7″ x 19″. **Mounting depth:** 6″ below panel. **Input level:** Minus 20 V.U. minimum. **Output level:** Plus 20 V.U. maximum. **MICROPHONE MIXER BCM-1: Mixer panel:** 3½″ x 19″. **Mounting depth:** 6″ (below panel). **Input:** Four low level low impedance microphone channels, individually controlled. **Output:** Plus 10 V.U. across 600 ohm balanced line.



PROFESSIONAL USERS' NET PRICES

Drive mechanism NWD-1 on 14″ x 19″ rack panel, complete with erase-bias oscillator — $478.00. Amplifier NWA-1 on 7″ x 19″ rack panel, complete with power supply and drive controls — $317.00. Four channel microphone mixer BCM-1, on 3½″ x 19″ rack panel, complete with self-contained power supply — $127.50. Carrying case for Network drive mechanism — $42.50. Carrying case for Network amplifier and microphone mixer — $42.50.



CONCERTONE HIGH FIDELITY RECORDER Model 1401

The only truly high-fidelity high performance tape recorder in the popular price field. Complies with NAB standards. Choice of 7.5″ or 15″/sec. tape speeds. Plays standard 5″, 7″ and NAB 10½″ reels. Extended frequency response, 50 to 15,000 cps ±2 db; tape noise down to random level. Simultaneous monitoring from tape while recording. Basic recorder (illustrated) ready for custom installation, includes drive, power supply and preamplifiers. Professional Users' Net Price, single or dual track heads — $345.00. Model 501 carrying case with monitoring amplifier, high fidelity 8″ speaker and all connections for portable system — $82.50. Model 502, without amplifier and speaker — $47.50. Model 702 Console Cabinet, all metal — $97.50.

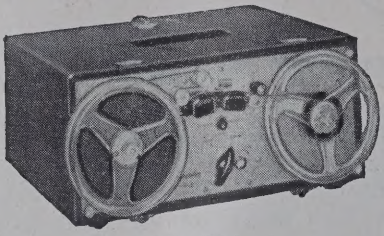
Manufactured by

BERLANT ASSOCIATES

WORLD'S MOST WIDELY USED

Magnecord

—FIRST CHOICE OF THE PROFESSIONALS

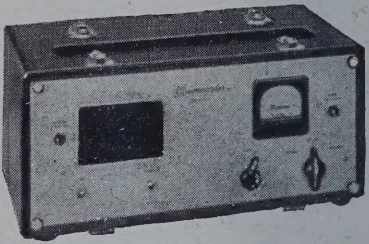

PT6-AH

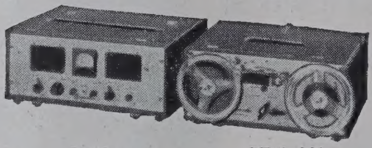
PT6-AH Magnecord mechanisms are recognized as the greatest value in the professional field.

This recorder has separate erase and record/reproduce heads; high speed forward; includes 7½" and 15" tape speed capstans for either speed. Uses standard 7" reels and rewinds 1200 feet in 40 seconds. Price **$316.00.** Weighs less than 29 lbs. **PT6-AHX** (less case): **$299.00**

Also available with 2-speed motor for all 3 tape speeds (3¾", 7½" or 15"/sec.). **PT6-AH** recorder with dual track heads also obtainable on special order.

PT6-J—An all-purpose combination record/reproduce amplifier, 10 watts of audio, terminals for external speaker. One low-impedance mike input, also bridging input. Output: zero level at 600 ohms, balanced. Monitor speaker. Complete with tubes and interconnecting cables, **$248.00.** Specify for 15" or 7½"/sec. equalizer. (3¾"/sec. tape speed equalizer extra). Weight 21 lbs. Panel 7" x 17".


PT6-J


PT63-J PT63-AH

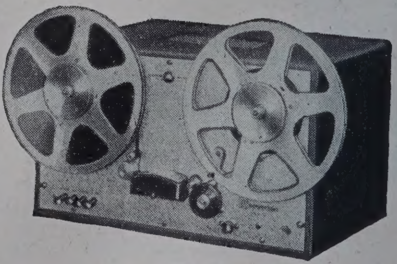
This Magnecorder has THREE heads—erase, record, playback—to monitor from the tape while recording.

The **PT63-AH** is the same size and weight as the PT6-AH complete with capstans for 7½" and 15" tape speeds—**$350.00.** Three speeds (3¾", 7½", 15") are obtained by ordering **PT63-AH** mechanism with two-speed hysteresis synchronous motor, $30 additional. Dual track heads also at slightly additional cost.

PT63-J has separate record and playback amplifiers for simultaneous playback of tape while recording. Single low-impedance microphone input, also bridging input. Has 600 ohm balanced, zero level output and 10 watts of audio with terminals for external speaker. Switch for 7½" or 15"/sec. tape speed equalization. Switch for reading bias, record or playback. **$387.00.**

The **PT7-AH** Magnecorder has many outstanding features. Three heads—erase, record, playback—triple shielded to eliminate cross-talk or hum . . . New positive drive speed reducer for perfect timing . . . Instantaneous start and stop . . . 2-speed switch on panel for 7½" and 15" tape speeds . . . High speed forward and rewind . . . Frequency response: flat from 50-15,000 cps. ±2 db. at 15" tape per second; flat from 50-7,500 cps. ±2 db. at 7½" tape per second . . . Interlocked pushbutton controls, forward-stop, rewind, or hi-speed. Can be remote-controlled . . . Automatically lifts tape from heads in hi-speed or rewind. **$468.00.**

PT63-J Amplifier, illustrated and described above, is used with PT-7 series.

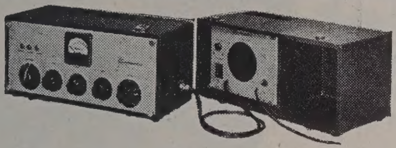

PT7-AH

FOR BROADCASTING • INDUSTRIAL RESEARCH
SCHOOLS • CHURCHES • BUSINESS • MEDICINE

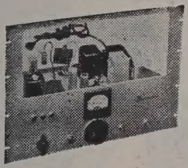
PROFESSIONAL TAPE RECORDER . . . . . .

STANDARD MAGNECORD SPECIFICATIONS

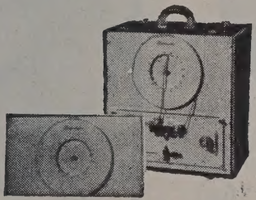
- FREQUENCY RESPONSE: Flat from 50 to 15,000 cps, ±2 db. at 15" per second tape speed and flat from 50 to 7500 cps, ±2 db. at 7½" per second tape speed, when using Magnecorder equalizers selected for specific speed used. 50 to 4000 cps, ±2 db. at 3¾" per second tape speed.
- SIGNAL TO NOISE RATIO: Exceeds 50 db. with less than 2% harmonic distortion.
- MAXIMUM FLUTTER: Less than 0.3% peak-to-peak.
- FINISH: Gray hammered panels—Leatherette cases.
- POWER: 117 volt, 60 cycle, AC (single phase).



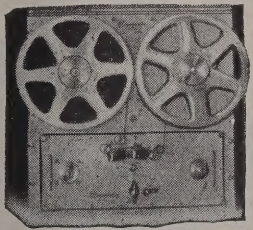
PT6-P combination record/playback amplifier with small monitor amp. Includes tubes, case, connector cables. Specify 15" or 7½"/sec. equalizer. **$462.00**



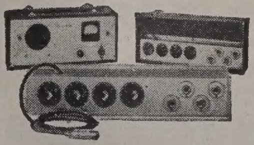
PT6-R record/playback amplifier. Zero-in, Zero-out. Headphone jack. Includes all tubes and connector cables. Specify either 15" or 7½"/sec. equalizer. **$383.00**



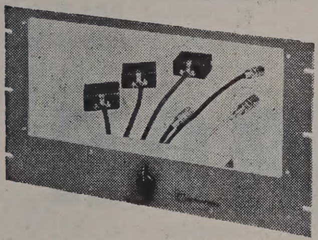
PT6-EL—Continuous Loop Mechanism. Eliminates rewinding tape. Holds up to 600 ft. (15 min. at 7½"/sec.). Use with PT6AX and PT6 amplifiers. 19" wide x 10½" for rack mount or PC-MA portable case. Gray finish. Mounting bolts. **$64.50**



PT6-M—Auxiliary spooling mechanism accommodates 10½" NAB reels — doubles record and playback time. 19" wide x 10½" high for rack mount. Separate rewind and take-up motor. No reels included. **$128.00**



PT6-IM4—Four-channel input mixer (low level) 17" long. 30/50 ohm microphones. **$74.50**

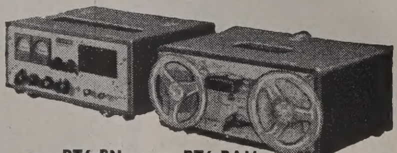


PT6-HT—Panel and throwover switch provides selective switching for two recorders. Permits continuous operation using single amplifier. Panel 19" for rack mounting. For PT6 equipment. **$36.00**

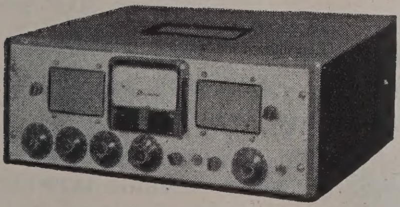
Here's something really NEW in tape recording—*a third dimension in sound!* It is available only in the Binaural Magnecorder. Unequaled realism through stereophonic sound!

Dual half-track Binaural heads. Uses standard ¼" tape; records two tracks simultaneously through two microphones and two amplifiers; playback through two amplifiers and two speakers or headphones. Meets all NAB standards.

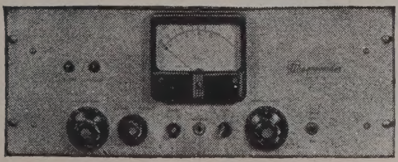
PT6-BN—Binaural Amplifier	$515.00
PT6-BAH—Binaural Mechanical Unit	$364.50



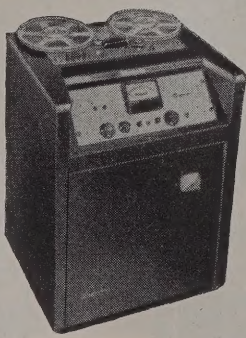
PT6-BN **PT6-BAH**



Professional amplifier unit—**PT7-P**—well adapted for console, rack or portable. Three-channel, high-level mixing amplifier. Balanced output at zero level, 600 ohms. Separate record and playback amplifiers plus 10 watts audio. Switch for 7½"-15" equalizer. Switch for record or playback bias readings on 4" VU meter. Includes tubes, case, connector cables. **$440.00**



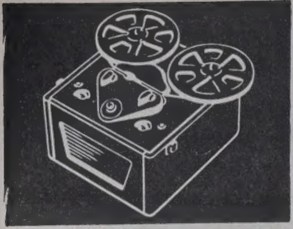
The line level amplifier—**PT7-C**—has separate record and playback amplifiers. Headphone jack. Can be rack mounted either horizontally or vertically. Input: 600 ohm, balanced; also bridging input. Output: zero level at 600 ohms, balanced. Switches for reading bias, record or playback on 4" VU meter, and for 7½" or 15"/second tape speed equalization. Gray finish. Weight 26½ lbs. **$334.00**



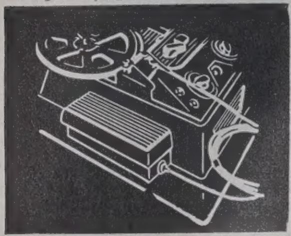
America's most complete console combination—**PT7-CC.** It offers you maximum flexibility, yet all in one unit! A beautifully finished wood cabinet, Formica top, with chrome trim . . . plenty of storage space for reels and extra equipment. No slipping—no wear—no oiling . . . assured accurate timing always. A dependable drive, surpassing all others. **PT7-CC** includes PT7-AX, PT7-C amplifier and cabinet. Dimensions: 38" high, 25" wide, 24½" deep. **$950.00.** Console cabinet only, **$164.00.** Above combinations also available with PT63-J or PT7-P at extra cost.

All prices and models subject to change without notice

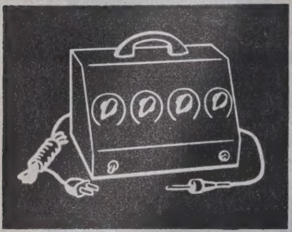
WRITE FOR COMPLETE NEW CATALOG OF EQUIPMENT:
MAGNECORD, INC., 360 N. MICHIGAN AVE., CHICAGO, ILL. Dept. RM-52



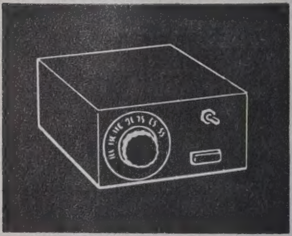
TAPE PLAYER
2 Speeds. Plays back any pre-recorded tape. Fast rewind, forward. Model PB1 with pre-amp plays through any amplifier. Model PBA2 has amplifier, speaker.



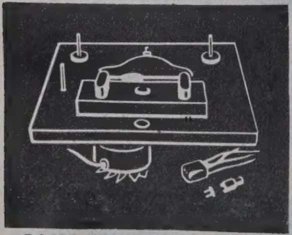
FOOT CONTROL
Model FP-5 instantly starts, stops tape recorders and players. Designed for business and institutions. Invaluable for transcription, lectures, slide-film, conferences and dictation.



AUDIO-MIX
Model MM4 electronic mixer for multiple mike recording on tape, wire, disc, or P.A. systems. Wide range of audio blending. Connects to any audio system.

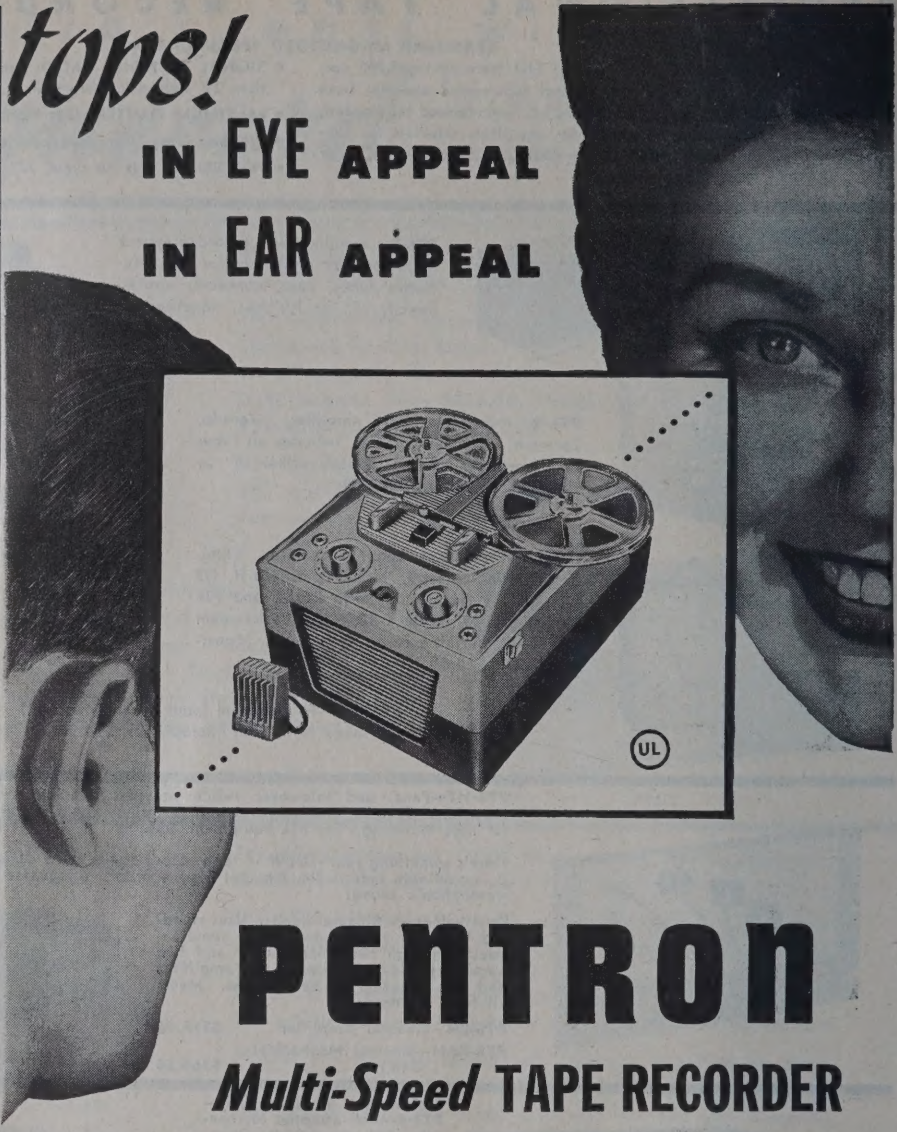


AM RADIO TUNER
Model AM-T. Self-powered selective tuner fits recorder compartment. Has AC line and plugs into phono jack. Plays through any amplifier.



BASIC TAPE UNIT
Model 9T-3M. 2 push-button speeds. Mounts in radio or TV sets, or joins to P.A. system. Dual track or full width (single track) heads.

tops! IN EYE APPEAL IN EAR APPEAL



PENTRON

Multi-Speed TAPE RECORDER

The *one* all-purpose portable recorder that records and plays back every voice, every sound with faithful realism. Its unmatched versatility meets countless requirements of industry, business and government. Recordings can be played over and over or same tape can be re-recorded any number of times.

Only Low-Priced Recorder with all these Professional Features

- ***2 Hours*** recording or playback.
- ***"Edit-Ear" Control*** corrects while playing.
- ***Push-Button*** 3¾" and 7½" speeds.
- ***Fastest Rewind*** and forward speeds.
- ***Auto. Amplifier Equalization*** in both speeds.
- ***Auxiliary Jacks*** for P.A. system.
- ***Heads***—single or dual track.
- ***Weight***—only 27 lbs.

Write for FREE Bulletins!

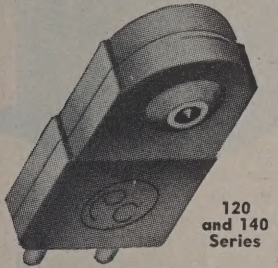
IN "SOUND" ELECTRONICS IT'S
THE **PENTRON** CORP.
CHICAGO 16, ILLINOIS

ACCESSORIES Pentron auxiliary speaker. Telephone pick-up. Microphone. Magnetic tape. Plastic reels. Extension cords.

PICKERING HIGH QUALITY AUDIO COMPONENTS FOR RECORD REPRODUCTION

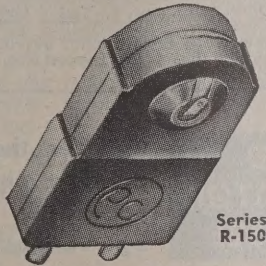
THE PICKERING CARTRIDGE

There is a Pickering Cartridge Reproducer for every record playing and transcription use . . . Professional, Laboratory and Home Phonograph.


120 and 140 Series

Models D-120M, S-120M, D-140S and S-140S, with diamond or sapphire stylus, are without equal; they produce the finest quality reproduction of lateral recordings; they are the choice of professional audio engineers.

MODELS D-120M AND S-120M are for playing standard records and transcriptions requiring 2.5 mil styli. MODELS D-140S AND S-140S are for long playing, microgroove records; 33⅓ and 45 RPM.


Series R-150

Model R-150, featuring a replaceable diamond or sapphire stylus is specifically designed to produce optimum quality record response with standard home record playing phonographs. The R-150 is designed for 78 RPM shellac records. The high frequency response is attenuated by mechanical means above 8000 cycles.

All Pickering Cartridges will fit practically any arm made for a standard pickup. Their ingenious "Keystone Clip" mounting permits adaptation to a wide variety of arm shapes and sizes; also permits adjustment of the stylus position for minimum tracking error. Special adapter-clips are available for Webster-Chicago and Garrard changers.

PICKERING CARTRIDGES ARE UNCONDITIONALLY GUARANTEED

Model S-120M with .0027" Sapphire stylus . . .

Model D-120M with .0025" Diamond stylus . . .

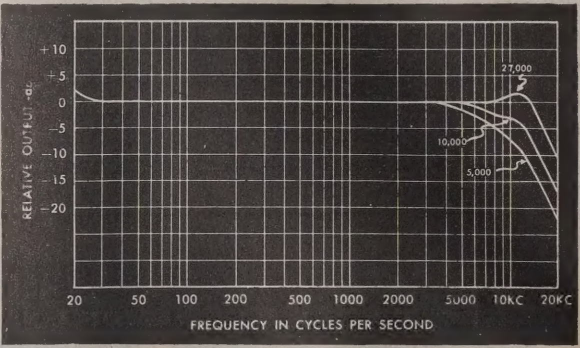
Model S-140S with .001" Sapphire stylus for long-playing MICROGROOVE recordings .

Model D-140S with .001" Diamond stylus for long-playing MICROGROOVE recordings .

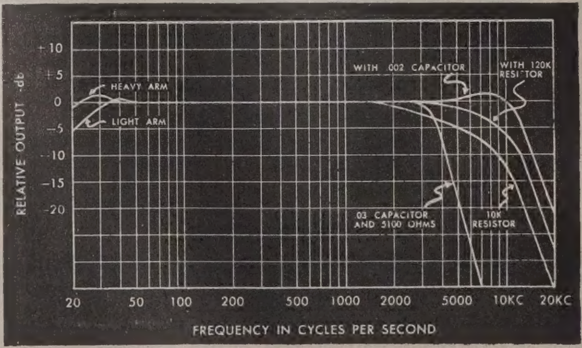
Model R-150 without stylus for home phonographs . .

Styli for Model R-150 Cartridge Reproducer

S-20 —	.002"	Sapphire	**D-20** —	.002"	Diamond
S-25 —	.0025"	Sapphire	**D-25** —	.0025"	Diamond
S-30 —	.003"	Sapphire	**D-30** —	.003"	Diamond



The frequency response characteristics with various load impedance values are shown in the accompanying curves. Series 140 and 120 above and R-150 below.



With the exception of the stylus point, all Pickering Cartridges are covered by an unconditional guarantee, provided the cartridge has not been opened nor subjected to extraordinary abuse. Every Pickering Cartridge, before leaving the factory, is carefully tested for FREQUENCY RESPONSE, WAVEFORM DISTORTION, OUTPUT LEVEL, TRACKING PRESSURE, and in addition, optical inspection of the stylus polish and shape, mechanical inspection of moving parts and electrical inspection of the pickup coil are made on each unit. Reports from users reveal absolute stability, amazing ruggedness and complete insensitivity to the effects of temperature and humidity.

Pickering
& Company, Inc.

Oceanside, Long Island, N. Y.

PICKERING HIGH QUALITY AUDIO COMPONENTS

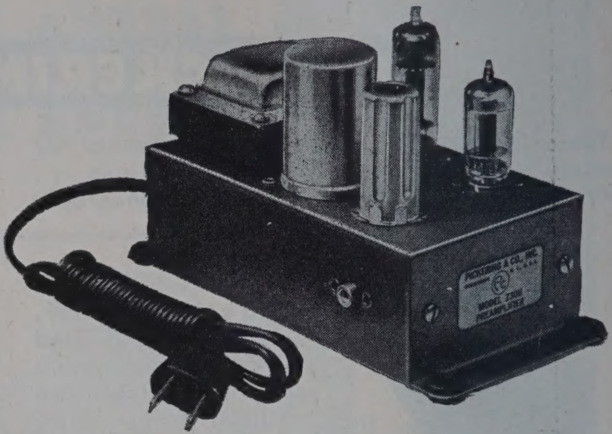
PREAMPLIFIER MODEL 230H

EQUALIZES THE BASS RESPONSE OF RECORDS AND TRANSCRIPTIONS AND PROVIDES THE NECESSARY GAIN FOR HIGH-QUALITY MAGNETIC PICKUPS.

The Pickering 230H Preamplifier is designed to operate with any high-quality amplifier having a high impedance input. It is self-powered, operates from the 115 volt AC line, and is installed by simply plugging in.

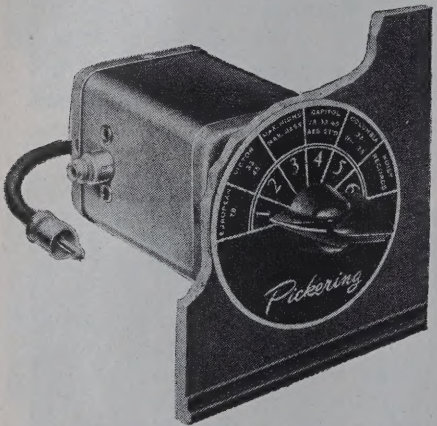
Model 230H is unique in its accuracy of equalization, being superior to most broadcast station equipment in this respect. Further, the intermodulation and harmonic distortion is lower than good engineering practice requires in professional equipment.

The 230H Preamplifier represents the most advanced design ever achieved in phonograph preamplifiers, and like all Pickering Audio Equipment, symbolizes maximum performance.



TECHNICAL SPECIFICATIONS

FREQUENCY RESPONSE: Within 2 db from 40 — 20,000 cps. Compensates for 6 db per octave loss below 500 cps. . . . OUTPUT: High impedance, 2 volts average from phonograph records. (For 500/600 ohm output at –10 dbm use Pickering 600G transformer, available as accessory equipment.) . . . DISTORTION: Not more than 0.2 percent intermodulation at normal output level. Not more than 0.4 percent intermodulation at +10 db over normal level. Not more than 1.7 percent intermodulation at +20 db over normal level. . . . HUM LEVEL: –56 db below maximum signal. . . . INSTALLATION: Unit furnished with 6 ft. approved cord which can be connected to wall socket or amplifier. Input socket — standard type; matching plug furnished with unit. Output — terminal strip. Rubber shock mounts provided. . . . DIMENSIONS, WEIGHTS AND TUBES: Size of preamplifier: 7½ inches long, 3½ inches deep and 4⅝ inches high. Weight: 2 lbs. 6 oz. Tubes: 6C4, 6x4, 6AU6 (any good, standard brand).



RECORD COMPENSATOR MODEL 132E

Provides the flexibility required to properly equalize for the different recording characteristics used by various record manufacturers.

The Pickering Record Compensator permits proper equalization of the amplifier system to produce optimum reproduction of individual records; because all linear circuit elements are used it has no inherent distortion. This Compensator permits each individual record to offer all of its quality without compromise . . . permits getting the maximum use out of scratched and worn records. Its six positions correctly equalize for all of the established recording characteristics including microgroove and standard records, domestic and foreign.

The Pickering Record Compensator is a most important addition to any record player equipped with an amplifier system having a high gain preamplifier, such as the Pickering 230H. It is easily installed, and like all Pickering Audio Equipment, symbolizes maximum performance.

SWITCH POSITIONS

1 — EUROPEAN RECORDS, this group covers HMV, English Decca, FFRR 78's, and American pressings of European recordings. 2 — VICTOR, 33⅓ and 45 rpm recordings. 3 — VICTOR 78, no high frequency roll-off, 500 cycle turnover. 4 — CAPITOL, and for most 78 rpm domestic records, including Columbia, Decca, MGM, etc. 5 — COLUMBIA, and for most makes of 33⅓ rpm microgroove recordings. 6 — NOISY RECORDS, this position permits playing of old noisy records with objectionable hiss removed.

TECHNICAL SPECIFICATIONS

INPUT: High impedance magnetic cartridge . . . OUTPUT: To feed into high-gain amplifier which has 6 db per octave rise below 500 cycles per second, and which has an input resistance of 47,000 ohms . . . INSTALLATION: Unit can be mounted in any position (on panels up to ⅜ inch thick) by means of threaded bushing. Since no power is required to operate the Record Compensator only a single connection has to be made to a suitable preamplifier. Input connection — standard socket. Matching plug furnished with unit. Maximum distance between record compensator and preamplifier input 20 inches, cable supplied . . . DIMENSIONS AND WEIGHT: Size of unit: 1⅞" square by 3⅛" overall, less switch shaft. Weight: 6½ oz.

Pickering
& Company, Inc.

Oceanside, Long Island, N. Y.

...FOR RECORD REPRODUCTION

PICKUP ARM — MODEL 190

The only arm capable of Optimum Performance on both Microgroove and Standard Records.

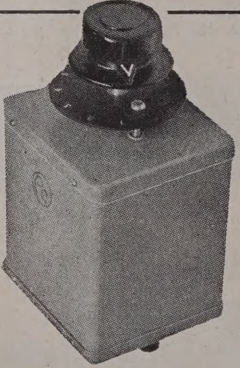
Much distortion in playing records can be caused by an inadequate pickup arm, regardless of how good the cartridge. The most common causes of distortion inherent in the operation of conventional arms are poor tracking and excessive record and stylus wear. These undesirable qualities are a result of improper lateral and vertical moments of intertia and an incorrect relationship between the two. Further, many arms cause tracking error which creates needless distortion.

The Pickering 190 Pickup Arm is designed to overcome the disadvantage of all conventional arms, the shortcomings of which have been severely accentuated by the advent of LP microgroove records. Extensive investigation by Pickering engineers disclosed that reproducer arms which perform well on 78 RPM phonograph records and standard transcriptions will not necessarily produce good results on LP microgroove records. In fact no commercially available arm was found which would meet all of the requirements for this type of service.

The 190 Pickup Arm embodies all the features determined as significant and important to enable a high quality cartridge to meet the stringent requirements for playing LP records without distortion and free of record and stylus wear: 1 — The ratio of vertical-to-lateral moment of inertia is as low as possible . . . 2 — The vertical mass has been minimized in order to track any record without imposing extra vertical load on grooves. It plays badly warped records just as well as flat ones . . . 3 — There is no spurious arm resonance at any frequency . . . 4 — Pivot friction is lower than 3 gram centimeters and the bearings are rugged and trouble-free . . . 5 — The arm is statically balanced about the vertical axis to eliminate tendency to jump grooves when subjected to bumping or jarring . . . 6 — Offset head reduces tracking error to less than plus or minus 2½° . . . 7 — Stylus point is protected against contact with anything but the record grooves. It cannot strike the turntable mat or center-pin. It plays all size records up to 17¼" O.D. In addition to these important design considerations, the 190 Pickup Arm features: Sensitive tracking force adjustment . . . height adjustments for turntables from ½" to 2" high . . . one-hole mounting and self-contained levelling screws . . . plug-in cartridge holder . . . magnetic arm rest . . . stylus point completely visible for starting and cueing records . . . 16¾" long.

Pickering Cartridges used with the Model 190 Arm require 50% less vertical tracking force than is required when using conventional arms.

MODEL 163A EQUALIZER



Model 163A Equalizer A loss-type equalizing network for use with the Model 161M Pickup. It is designed to compensate for most of the commonly encountered record characteristics. Position 1 — flat high frequency response to over 15,000 cps. Low frequency rise to give full compensation from 500 to 40 cycles. Position 2 — flat high frequency response. Low frequency response approximately 5 db. below position 1. Position 3 — for NAB or Orthacoustic transcriptions. Position 4 — Low frequencies same as position 2. High frequencies sharply attenuated to reduce surface noise. Attenuation starts at 4000 cycles. Position 5 — low frequencies same as position 1. High frequencies same as position 4. 250/600 ohms output, — 60 lb. Size 3½ x 3¾ x 5 inches. Shipping weight 2 lbs.

EACH PICKERING PICKUP AND CARTRIDGE IS UNCONDITIONALLY GUARANTEED

With the exception of the stylus point, all models of the Pickering Cartridge Reproducer and Pickering reproducing equipment, are covered by an unconditional guarantee provided that the unit has not been tampered with nor subjected to extraordinary abuse. Replacement diamond and sapphire styli can be installed in cartridge reproducers for the following net charges:

Pickering Reproducing Equipment is Sold by All Principal Distributors

For Models 160 or 161 Diamond stylus of any radius	**$22.50 Net**
For Cartridge Reproducers	
.0027" Sapphire for 120 Series	**2.50 Net**
.001" Sapphire for 140 Series	**5.00 Net**
.0025" Diamond for 120 Series	**15.00 Net**
Special Radius Diamond for 120 and 140 Series	**22.50 Net**
.001" Diamond for 140 Series	**22.50 Net**

Pickering & Company Inc.

Audio Laboratories, Oceanside, Long Island, New York

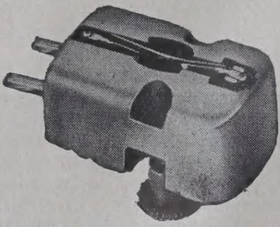
GENERAL ELECTRIC

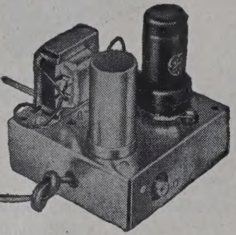
PHONOGRAPH
PARTS and ACCESSORIES

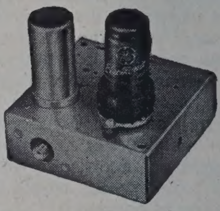
UPX-007 List Price $15.95
Tone arm and cartridge—78RPM records

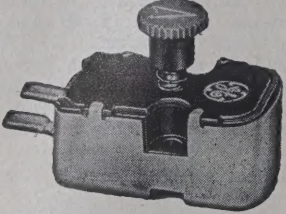
UPX-006 List Price $19.95
Plays 33, 45, 78 records (with stylus)

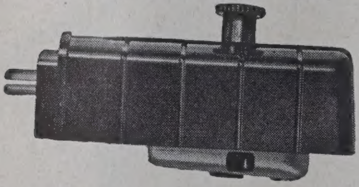
FA-21-A List Price $41.00
Professional transcription arm

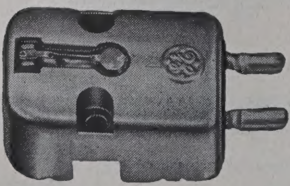

RPX-052 List Price $38.95
Furnished with Dual
Diamond *and* Sapphire Stylus

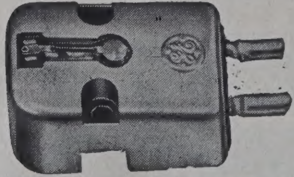

UPX-003 List Price $17.95
Self-powered preamplifier


SPX-001 List Price $11.90
Preamplifier less rectifier

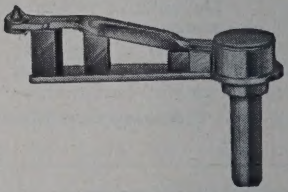

RPX-050 List Price $13.95
Plays 33, 45, 78 records (less stylus)


UPX-111 LIST Price $15.95
Installed in Webster Plug-in Head


RPX-040 and RPX-041 List Price $9.95
Use with 1 or 3 mil single stylus


RPX-046 List Price $11.45
For professional and broadcast use

DUAL WIDE-RANGE STYLI


SINGLE WIDE-RANGE STYLI

All General Electric Single and Dual Styli are now designed to give smooth, vivid performance to 15,000 cycles. Now you can enjoy hearing the reproduction of your favorite musical compositions as they should be heard—with true fidelity of performance. The increased number of damping blocks combined with the double-twist "Baton" design afford a fidelity unexcelled by any commercially available stylus. Harmonic distortion, needle talk and needle scratch are reduced to a minimum. Stylus pressure is very low, only 6 to 8 grams for *all* types of records. See the table below for complete information on these items.

REPLACEMENT STYLI FOR G-E VARIABLE RELUCTANCE CARTRIDGES

Stylus Radius in Ins.	Recommended Use	Diamond Stylus	Color Code	List Price	Sapphire Stylus	Color Code	List Price
SINGLE STYLI FOR RPX-040, RPX-041 AND RPX-042 CARTRIDGES							
.001	Microgroove (33 & 45 RPM)	RPJ-004	Black	$27.50	RPJ-005	Red	$3.50
.0025	NAB Transcriptions	RPJ-002	Yellow	27.50	RPJ-006	White	3.50
.003	Standard 78 RPM	RPJ-003	Violet	27.50	RPJ-001	Natural	3.50
DUAL (SAPPHIRE or DIAMOND) STYLI FOR RPX-051, RPX-052 AND RPX-050 CARTRIDGES							
.001 & .0025	Triple Play (Microgroove & Standard)	RPJ-011	.001 Black .0025 Yellow	$49.95	RPJ-007	.001 Red .0025 White	$5.95
.001 & .003	Triple Play (Microgroove & Standard)	RPJ-012	.001 Black .003 Violet	49.95	RPJ-010	.001 Red .003 Natural	5.95
DUAL (SAPPHIRE and DIAMOND) STYLUS FOR RPX-051, RPX-052 AND RPX-050 CARTRIDGES							
.001 & .003	Triple Play (Microgroove & Standard)	RPJ-013	.001 Diamond .003 Sapphire	Black Tip Natural Tip			$31.00

★ Some Sapphires are synthetic.

WEBSTER ELECTRIC

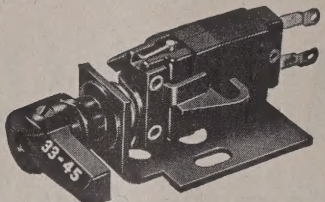
Webster Electric Company, Racine, Wisconsin. Established 1909

CRYSTAL CARTRIDGES

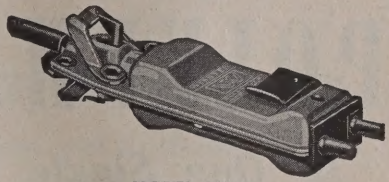
FOR

EASIER STOCKING . . . FASTER TURNOVER . . . EASIER REPLACEMENT

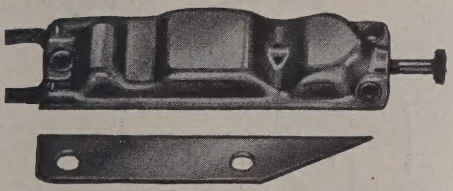
MODEL WS
for all 78 r.p.m.
replacements



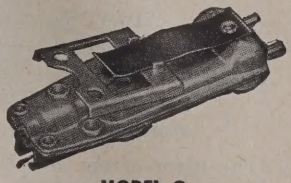
MODEL AX
for 3-speed, 2-needle replacements. Snap-off bracket for arms with integral twist mechanism.



MODEL F16M



MODEL CX



MODEL Q

CHARACTERISTICS AND LIST PRICE

model No.	average output at 1000 C.P.S. Volts		minimum tracking pressure		approx. cut-off frequency C.P.S.	net weight grams	needle information (see note)	list price
	r.p.m. 33⅓ - 45	r.p.m. 78	r.p.m. 33⅓ - 45	r.p.m. 78				
		dual purpose cartridge microgroove and standard (33⅓, 45 and 78 r.p.m.) and microgroove (33⅓ and 45 r.p.m.) only.						
			grams	grams				
A1	.75	1.00	7.0	7.0	5,000	5.0	1MS & 3MS	$8.50
A1M	.75	1.00	7.0	7.0	5,000	5.0	1MO & 3MO	7.50
A2	.75	—	7.0	—	5,000	5.0	1MS	6.50
A2M	.75	—	7.0	—	5,000	5.0	1MO	6.00
A9-1	.75	1.00	7.0	7.0	5,000	5.0	2MS	6.50
A9M1	.75	1.00	7.0	7.0	5,000	5.0	2MO	6.00
AX	1.0	1.5	7.0	7.0	5,000	13.0	1MO & 3MO	8.25
F13M	.85	—	7.0	—	6,000	8.0	1MO	6.50
F14-2	.85	1.70	7.0	21.0	6,000	10.0	DO	8.50
F15M	.85	1.70	7.0	21.0	6,000	10.0	1MO & 3 MO	8.50
F16M	.75	1.00	8.0	8.0	6,000	10.0	1MO & 3MO	8.50
F19	3.5	5.0	12.0	12.0	3,000	10.0	IMO & 3MO	8.50
Q3	2.0	3.0	12.0	12.0	5,000	23.0	2MO	7.50
			standard (78 r.p.m. only)					
				ounces				
A3	—	1.00	—	.25	5,000	5.0	3MS	6.50
A3M	—	1.00	—	.25	5,000	5.0	3MO	6.00
CX	3.0	3.40	15.0	2.50	5,000	16.0	—	4.50
C4	—	2.50	—	2.50	5,000	16.0	—	4.50
D2	—	2.50	—	2.50	5,000	25.0	—	5.40
D3	—	.70	—	1.25	6,000	25.0	—	5.55
F1P	—	1.25	—	1.00	5,000	8.0	—	5.00
F2P	—	1.25	—	1.00	5,000	18.0	—	5.00
F7P	—	1.20	—	1.00	8,000	18.0	3MO	7.50
F7P 2	—	2.25	—	1.50	5,000	8.0	3MO	6.50
N6P	—	1.50	—	1.00	5,500	25.0	—	5.25
N7P	—	.60	—	.75	10,000	25.0	—	6.50
N10P	—	2.50	—	1.25	5,000	25.0	—	5.25
Q1	—	1.00	—	1.00	8,000	23.0	3MO	8.50
Q2	—	2.00	—	1.50	6,000	23.0	3MO	7.50
WS	—	1.50 or 4.00	—	.75	5,500	25.0	3MO	5.50

note: 1 MS = 1 Mil Sapphire tip; 1 MO = 1 Mil Osmium tip; 2 MO = 2 Mil Osmium tip; 3 MS = 3 Mil Sapphire tip; 3 MO = 3 Mil Osmium tip; DO = Dual tip 1 Mil Osmium and 3 Mil Osmium. Symbols indicate needles furnished.

Audax

Pickups for *facsimile* Reproduction

"The Standard by Which Others Are Judged and Valued"

POLYPHASE reproducers

In One Single Magnetic Unit 33-1/3—45—78 rpm

POLYPHASE LIST PRICES

> D-L-6 *CHROMATIC HEAD,* for all lateral records, *MICRO DIAMOND and a standard Sapphire.* $69.50
>
> *(The price of the new Chromatic is the cost of the L-6 plus the regular price of a Diamond)*

L-6 Head — for all lateral records *with two genuine SAPPHIRE jewels*	$34.50
R-2 Head — for all lateral records *with two genuine SAPPHIRE jewels*	$24.50
VL-9 Vertical Lateral Head — (*SAPPHIRE jewels*)	$69.50

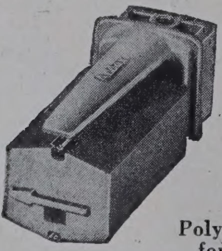
** Sapphires may be replaced with AUDAX DIAMONDS at any time.*

RECORD CHANGER ADAPTERS

For Garrard Changer (Plug-in)	$4.50
For Webster Changer (Plug-in)	$4.50

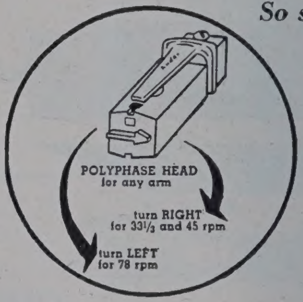
POLYPHASE REPLACEMENT STYLI

Sapphire — Micro or Standard	$ 3.50
Diamond — standard — CHROMATIC	$25.00
Diamond — microgroove — CHROMATIC	$35.00
Diamond — Vertical	$35.00
Sapphire — Vertical	$ 6.00



Polyphase Head
for any arm

So simple



- One, single magnetic unit and one low point-pressure for all discs.
- Replaceable Sapphire (or diamond).
- Response 20 to over 10,000 cps.
- Needle-talk practically nil.*
- Near-infinite compliance.
- Tracking phenomenal.
- Flexible plug-in connectors.
- Listening Quality — Superb.

By merely inserting the desired styli, the POLYPHASE makes possible any of the following combinations:

1. Microgroove and 78 rpm
2. Both Microgroove
3. Both 78 rpm
4. Microgroove and lateral transcriptions
5. 78 rpm and lateral transcriptions
6. Both for lateral transcriptions

See *"ELECTRONIC PHONO FACTS"

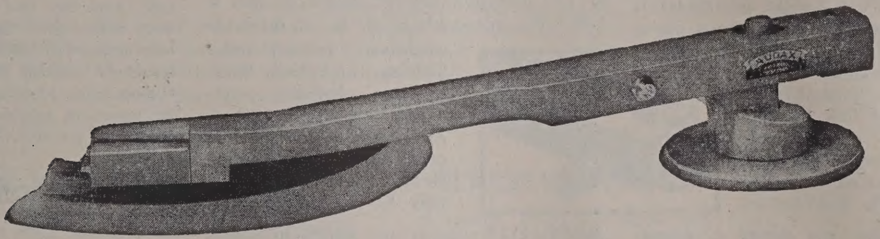
Audax

Cutters and Tone Arms

"The Standard by Which Others Are Judged and Valued"

COMPASS-PIVOTED tone-arms

unquestionably, the simplest and most efficient arms yet devised.

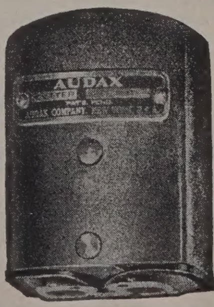


#16 arm—(*#12 same style*) for use with any current model AUDAX Reproducer.

- Only **3** parts.
- Highest tracking efficiency.
- No restraint to stylus travel.
- Frontal oscillations nil.
- No springs.
- No fatigue.
- Maintains original point-pressure permanently — regardless of climatic changes.
- Greatest possible distance between stylus and vertical pivots.

	turntable center to end of arm	LIST
#12 Arm to 12″ disc	10″	$23.00
#16 Arm to 16″ disc	13-9/16″	$33.00
STUDIO Arm to 16″ disc	18½″	$65.00

HIGH FIDELITY CUTTERS



AUDAX CUTTER H-5 — Substantially FLAT to 10,000 cycles, Distortion about 1.2% at 1000 cycles. Fully modulates groove with input of about 18 db with 96 lines. Impedances up to 500 ohms. List Price $185.00

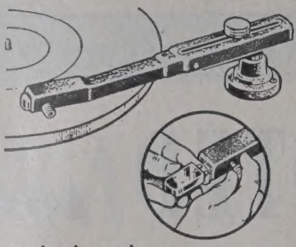
AUDAX CUTTER H-4 — Substantially FLAT to 8,000 cycles. Distortion about 1.7% at 1000 cycles. Fully modulates groove with input of about 18 db with 96 lines. Impedances up to 500 ohms. List Price $125.00

AUDAX CUTTER H-3 — Substantially FLAT to about 7500 cycles. Distortion about 2.1% at 1000 cycles. Fully modulates groove with input of about 18 db with 96 lines. Impedances up to 4000 ohms. List Price $83.00

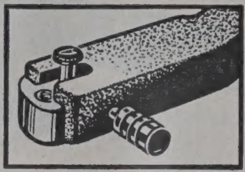
AUDAX Cutters are readily interchangeable on most recording machines

CLARKSTAN FINE ELECTRONIC & INDUSTRIAL EQIUP.

BEST FOR LP MICROGROOVE AND STANDARD DISCS



MODEL 213 — The new Clarkstan 12" record arm offers the best in standard disc and microgroove reproduction. Heavy aluminum casting eliminates audible resonance point. The slide-in cartridge holder allows instantaneous mounting of all types of standard cartridges. Silver-plated, spring loaded plungers maintain positive electrical contact without necessity of soldering. Quick acting weight adjustment is positive and accurate for change from microgrove to standard records. Arm has adjustable height, fits all standard turntables. Vertical roller bearing and thrust ball bearing minimize cramping — no mechanical bias on the pickup. Finish grey wrinkle and brushed chrome. **Net price arm only $18.90.**

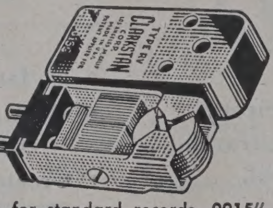


MODEL 212 — 16" Transcription arm. This high quality professional arm is built on same proven engineering principles as the above Model 213. Has slide-in cartridge holder and quick adjusting weight for accurate needle force. Accommodates both LP microgroove and standard records — any size up to 17" diameter. Overall length of arm is 14⅜". Has adjustable height for all turntable conditions. Vertical roller bearings and ball thrust bearings eliminate mechanical bias on the pickup. Attractively finished in grey wrinkle and brushed chrome. **Net price arm only $19.90.**

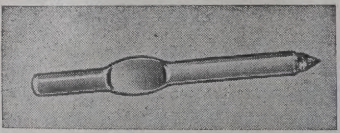
MODEL 213G — Same arm slotted to accommodate G.E. cartridge RPX-050. **Net price arm only $18.90.**

MODEL 212G — Same arm slotted to accommodate G.E. cartridge RPX-050. **Net price arm only $19.90.**

WIDE RANGE RV PICK-UP



MODEL 201 — Clarkstan RV wide range variable reluctance cartridge for best reproduction of LP microgroove and standard records. Instantaneously replaceable and interchangeable needles. Frequency velocity responsive to above 12,000 cps. Needle force 5-7 grams for LP microgroove, as low as 10 grams for conventional records. Output 60 millivolts. High impedance — 5 - 50 - 250 and 500 ohm models available. ½" mounting centers. Supplied with sapphire stylus. Specify .0012" for LP microgroove or .0030" tip radius for standard records .0015" - .0022" - .0025" tip radii also available. (Can also be supplied with diamond stylus of any of above tip radii. **Net price (cartridge only with standard sapphire stylus) $15.00.**



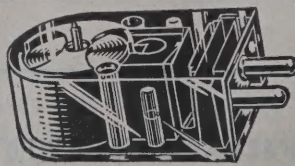
SAPPHIRE & DIAMOND STYLI

Extra styli (tubular shank) for Clarkstan Pickups:

Sapphire No.	Diamond No.	Ball Point Radius
251.10	254.10	.0012"
251.15	254.15	.0015"
251.2	254.2	.0022"
251.5	254.5	.0025"
251.3	254.3	.003"

Net Price Sapphire stylus only $2.40. **Diamond stylus only $18.00.**

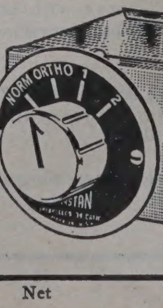
CLARKSTAN MAGNETIC PICKUP



MODEL 204 "RV-Jr." variable reluctance pickup has a removable and replaceable stylus. It weighs only one-half ounce and plays all popular makes of record changers having standard mounting holes ½" between centers. It is 1½" overall length. This magnetic pickup with balanced armature is velocity responsive (flat ± 2 db) from 50 cps to 10,000 cps. It delivers .030 volt from the average record.

#204 "RV-Jr." Cartridge only (with 1 sapphire needle)................Net price $5.40
#204D "RV-Jr." Cartridge only (with 1 diamond needle)...............Net price $21.00
(Specify whether .0012" or .0030" radius needle desired.)

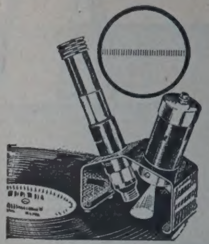
FOUR-POSITION EQUALIZER



MODEL 221 — Clarkstan 4-position equalizer. A high impedance input and output — adjustable network, without amplification, for use with magnetic pick-ups. Has one position for correct NAB or orthacoustic roll-off required for finest reproduction of LP microgroove records. Also two positions for sharp high frequency cutoff for standard records. Will give proper response when used in normal high gain microphone input of amplifier. Turn-over frequency is 500 cps. Panel mounting on 2½" centers, ⅜" diameter center hole. Furnished with Clarkstan hand machined superfine knob and attractive dial plate. **Net price $12.60.**

(All prices subject to change without notice.)

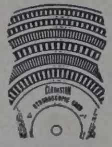
MICROSCOPE GROOVE ANALYZER



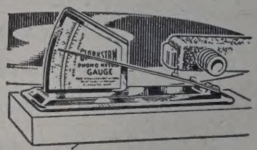
MODEL 231 — Low-cost, medium power microscope with built-in light and reticle. Designed expressly for the phono record recorder. The illumination is optimum for observing the condition of the groove and the number of lines per inch and depth of cut. Has flat field, excellent optics — can be used with glasses (eyepoint is 1" above top). Both 20x and 40x provided in one microscope. Reticle for direct measurement by .0020". Complete with lacquered wooden carrying case with sliding cover. Focusing is accomplished by means of friction sliding tube. Is easy and positive. **Net price $22.50.**

STROBOSCOPIC CARD #610

**FOR 33-1/3 RPM
45 RPM AND 78 RPM**



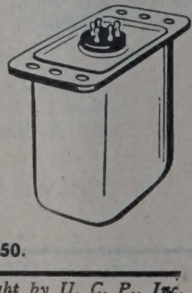
MODEL 610 — New stroboscopic card for checking turntable speed of microgroove and standard records. Includes replaceable punch-out for new 1½" center hole for 45 RPM records. Printed on quality enameled stock. **Net price $0.15.**



NEEDLE FORCE GAUGE

MODEL 301 — Clarkstan Gauge for phono needle force. This professional device has a calibrated dial to read in grams for use with LP microgroove records. Easily read to less than 1 gram. Also has scale in ounces. **Net price $1.50.**

PICK UP-TO-LINE TRANSFORMER



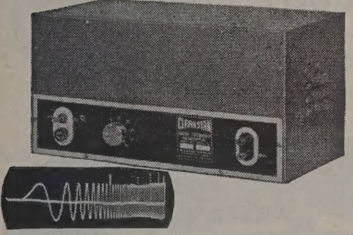
MODEL 225 — Clarkstan pick-up-to-line transformer. A high quality transformer to be used wherever the signal is to be introduced to 30/50, 200/250, 500/600 ohm lines. May also be used as a line to grid transformer.

Net price $19.50.

CLARKSTAN FINE ELECTRONIC & INDUSTRIAL EQIUP.

REPRODUCTION AND TEST EQUIPMENT

AUDIO SWEEP FREQUENCY GENERATOR



MODEL 125 — Clarkstan Audio Sweep Frequency Generator. A Clarkstan development for testing the behavior of audio and other alternating electrical apparatus with respect to frequency and associated phenomena. The generator operates in the audio range from 40 cps. to 10,000 cps. The complete frequency range is regularly recurrent so that the signal may be used in conjunction with an oscilloscope. The sweep frequency is governed by 20 synchronizing pulses per second. Provides an instantaneous evaluation of the performance of amplifiers at various settings of tone control and pick-up correction networks, wire recorders, film recorders, broadcast and aircraft receivers, motion picture sound equipment, loud speakers, microphones, transformers, filters, pickups, pre-amplifiers and cutting heads. **Net price Model 125 complete with scanning disc $165.00.**

MODEL 130.1 — Scanning disc, 40 cps. to 10 kc. disc only. **$12.20 net price.**

MODEL 130.2 — Scanning disc 40 cps. to 7500 cps. disc only. **$12.20 net price.**

GRAPH SHEETS

Four extremely useful tools for the audio engineer. These specially designed graph sheets save endless time:

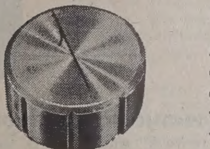
601 — Reactance-Freq. Graph. The elements of reactance, capacitance, and inductance all related in one simple graph. **Net price $1.00 pad of 50 sheets.**

602 — dbm — Impedance Graph. The four variables: power (W), voltage (V), current (ma), and Impedance or Resistance (Ω) are acquainted in such a manner that given any two of these electrical quantities the other two may be graphically determined. A decibel scale in dbm (decibels below or above 1 milliwatt) parallels the power ordinate. **Net price $1.00 pad of 50 sheets.**

603 — Attenuator-Design Graph. In this universal pad design chart here presented for the first time, the resistance in ohms for each branch of the pad may be determined by multiplying the values found at the lower horizontal scale by the impedance of the line into which the pad is to be inserted. It covers balanced and unbalanced T and Pi pads. **Net price $1.00 pad of 50 sheets.**

604 — Semi-log, 3-cycle Graph. Designed expressly for the audio range. It has the unique virtue of starting at 20 cps. and covering three logarithmic cycles to 20,000 cps. On the vertical scale are 10 divisions per inch over 7 inches. **Net price per pad 50 sheets $1.00.**

CLARKSTAN KNOBS



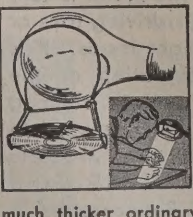
Attractive one-piece knobs accurately machined from DURAL add the professional appearance to control panels. All knobs have fluted sides and have screw-type mounting for round or flat shafts to fit standard ¼″ shafts. Back of all knobs recessed ¾″ dia. by 5/64″ deep to accommodate panel bushing nut. Supplied with or without pointer.

Model	Knob Dia.	Height	Net Price
275-1B	1″	5/8″	.90
275-12B	1¼″	21/32″	.96
275-2B	1½″	11/16″	.99
275-3B	2″	3/4″	1.53
275-4B	2½″	13/16″	1.77

ALPHA COUNTER

This newly developed nuclear instrument is a practical tool for nuclear physicists, assayers, etc. An optical instrument which gives a clear visual statistical count of alpha particles from any source. Complete with quencher, carrying case, radioactive samples and instructions for use. **Net price: $5.00.**

Light Concentrator



Provides bright spot illumination for close work. Lens clips easily on regular 40 to 100 watt frosted bulb, concentrating light in a 4″ diameter at 12″ from bulb. Steps up light intensity by 5 times. A Fresnel type lens ⅛″ thick by 2½″ dia., does the work of a much thicker ordinary type lens. Effective focal length 2½″. **Net $1.00 each.**

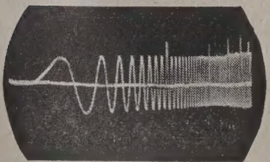
OTHER CLARKSTAN PRODUCTS

Industrial Microscope for inspection work in shops, laboratories. Rubber Hardness Gauge to measure the Shore (Durometer) hardness of all rubber and other elastomers. Accurately measures rubber hardness within any of the commercial manufacturing tolerances.

(All prices subject to change without notice.)

PACIFIC TRANSDUCER CORP., Los Angeles 64, California
(formerly CLARKSTAN CORP.)

AUDIO SWEEP FREQUENCY TRANSCRIPTION



The Sweep Frequency Transcription is a new method of making instantaneous frequency response runs. It has been designed with all correction factors included in the original recording, therefore, no charts or graphs are needed. Before the development of the Sweep Frequency Transcription, the tone record was used for frequency response measurements on playback systems. This method was both time consuming and laborious. If adjustments were required, a new frequency run was required after each adjustment. Now all that is needed is a cathode ray oscilloscope and a Sweep Frequency Transcription for instantaneous response measurements. Only a few quick adjustments on the equalizer circuits and the job is done. For complete frequency checking of all broadcast transmission equipment and components for production testing of phonographic reproducers, filter networks, audio amplifiers, preamplifiers, tone control systems and components.

MODEL 1000A — 12″ Vinylite transcription, 78 RPM, 70 to 10,000 cps. recorded flat ± 1 db. **Net price $6.60.**

MODEL 1000D — 12″ Vinylite transcription, 78 RPM, 5 KC to 15 KC, recorded flat ± 1 db. **Net price $6.60.**

MODEL 100A — 16″ Vinylite transcription, 33-1/3 RPM, 60 to 10,000 cps. recorded with NAB curve. **Net price $10.00.**

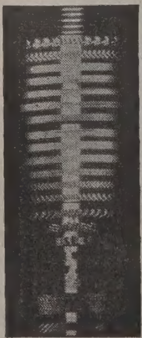
MODEL 102M — 12″ Vinylite, for microgroove testing, 33-1/3 RPM, 70 to 10,000 cps. modified NAB recording. **Net price $6.60.**

MODEL 115 — audio sweep frequency film, 35mm, positive print, variable density, 10 ft. lengths. **Net price $10.00.**

MODEL 116 — audio sweep frequency film, 35mm, positive print, variable area, in 10 ft. lengths. **Net price $10.00.**

MODEL 117 — audio sweep frequency film, 16mm, positive print, variable density, in 10 ft. lengths. **Net price $10.00.**

STEADY STATE FREQUENCY RECORDS



A series of new test records in which all the information for the engineer is annotated for both the cutting and reproduction. In recording these records harmonic distortion was kept to the lowest possible figure. Extreme care throughout the processing cycle was used. Careful reproduction, using the latest techniques insures exact duplication of the original recordings in each pressing.

MODEL 2000S — Steady State Frequency Record, 12″ Vinylite, 78.26 RPM 50 cps. to 10,000 cps. flat recording (1 side only). **Net price $3.90.**

MODELS 2001S & 2002S — Microgroove Steady State Frequency Record, 12″ Vinylite, 33-1/3 RPM, 50 cps. to 10,000 cps. one side NAB, other side flat recording. **Net price $3.90.**

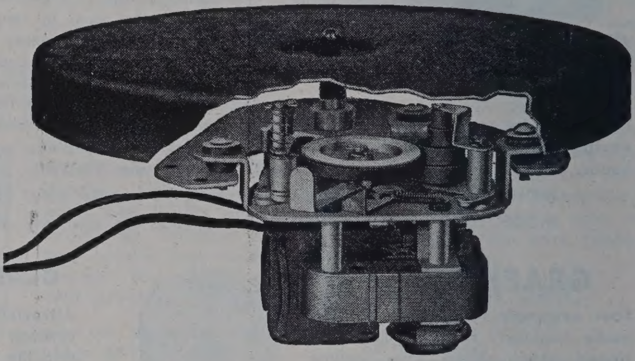
MODEL 101 — Intermodulation Test Record, 12″ Vinylite, 33-1/3 RPM, standard groove, 1/4 ratio, 7 KC and 100 cps. (1 side only). **Net price $3.90.**

alliance PHONOMOTORS

New 3-Speed Phonomotors for Record Players

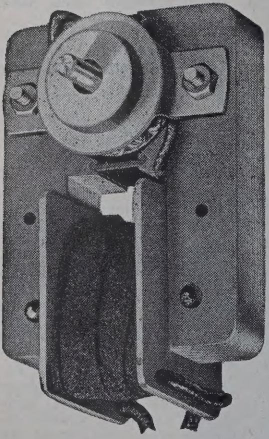
Drive 33 1/3, 45, and 78.26 r.p.m. Records

The new Alliance 3-speed record player Phonomotors, Models JPT8 and JPT9, are so advanced in design that mechanical operation is unexcelled! There are no rubber bands or belts to slip, snap, distort, or stretch . . . no needle shafts to indent tires under stall. A totally new motor assures minimum rumble, hum, and unequalled speed regulation! Motor has minimum height — no external fan — electronically dynamic balanced rotor — new vibration reduction mounting! Driving mechanism assures unimpaired performance at all speeds — has fewer moving parts! These units are furnished with 8″ or 9″ O.D. turntables designed for records with either the conventional or the RCA 1 1/2″ diameter center holes. A removable center disc is provided to fit the 1 1/2″ diameter center holes. This disc is reversible and will go on either way. Its height is designed for ease of record handling.



PHONOMOTOR MODELS JPT 8 AND JPT9 (with 8″ and 9″ O.D. turntables, respectively).

NOMINAL RATING—33 1/3 or 45 r.p.m. for 5 gram stylus force and 78.26 r.p.m. for 10 gram stylus force with 117 volts, 60 cycles, 0.3 amps., and 14 1/2 watts input.



MOTOR MODEL MS

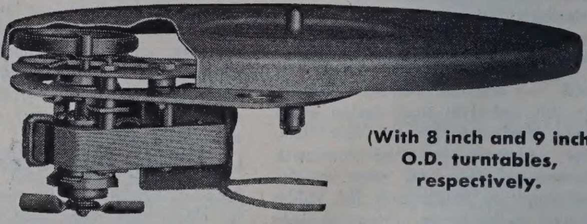
Powr-Pakt Model MS Motor

The Alliance Powr-Pakt Model MS motor is suitable for driving toys or other light loads. It is an adaptation of the quiet, smooth running motor which is used to power the Models MPS8, MPS9, and MPS10 Phonomotors. It measures 3 1/8″ x 2″ x 1 3/4″ not including the 7/16″ long shaft extension which has an 11/64″ diameter. Rotation is clockwise facing the shaft extension. Its self aligning bearings are of the porous bronze oilless type.

NOMINAL RATING—2800 r.p.m. at full load with 117 volts, 60 cycles, 0.3 amps., and 16 watts input. More detailed specifications are available upon request.

SINGLE SPEED

78 R.P.M. Phonomotor



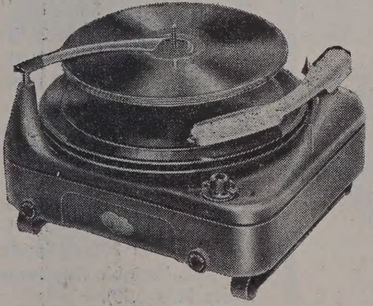
(With 8 inch and 9 inch O.D. turntables, respectively.

This model MP8 Phonomotor is practically regarded as a standard power source! Operates on 110 or 220 volts, is made for 50 or 60 cycles, 16 watts input. Has no gears—runs at an even speed—has smooth, quiet, positive friction-rim drive. Ample proportioned bearings with large oil reserves assure long life. Motor and idler plate are shock mounted to minimize vibration transfer to turntable and motor board. Forced ventilation gives cool operation—the slip-type fan avoids any possible injury. Mounting plate maintains correct turntable height, regardless of mounting board thickness.

V-M tri-o-matic RECORD CHANGERS

MODEL 956
Model 951 equipped with steel base — rubber feet — phono cord and AC cord. Plugs into radio or TV set.

MODEL 920
Record Changer attachment that plays through any Radio or TV set. Mahogany Plastic base. Has SIESTA SWITCH and appliance plug.



MODEL 972
Complete self-contained phonograph, incorporating Model 951 changer, 2 tube (plus rectifier) amplifier, 4″ x 6″ speaker. Has SIESTA SWITCH and appliance plug.

TRI-O-MATIC* RECORD CHANGERS

New modern styling keynotes the 1952 line of V-M tri-o-matic record changers, with smooth, curved surfaces for a sleek luxurious appearance. Designed for maximum consumer appeal, the 1952 tri-o-matic record changers and phonographs retain all the popular features that have made "V-M tri-o-matic" the fastest-selling record changer and phono line on the market. Changer in maroon with gold plastic accessories.

V-M TRI-O-MATIC FEATURES

COMPLETELY AUTOMATIC OPERATION, ALL RECORDS — 33-1/3, 45, 78 rpm., 7″, 10″ and 12″.
POSITIVE INTERMIX, 10″ and 12″ records of same speed.
AUTOMATIC TONE ARM SETDOWN. ALL SIZE RECORDS — 7″, 10″, 12″ — no controls necessary.
POSITIVE RECORD PROTECTION — Records are LOWERED — NOT DROPPED — on spindle shelf, and flat air cushion dropped to turntable.
COMPLETELY JAMPROOF. SIMPLE, CENTRALIZED CONTROLS. DUAL-NEEDLE, REVERSIBLE CARTRIDGE.
UNDERWRITERS APPROVED — Entire machine Underwriter's Approved, mechanically and electrically.

The V-M tri-o-matic 951 (Model 956 less base) is an easily installed replacement unit, for modernizing to three speeds, that fits all standard cabinets. Pre-cut wood mounting boards are also available. Minimum mounting space — 13-13/16″ wide x 12¼″ long x 7¼″ overall height. Shipping weight 11¼ lbs.

The V-M tri-o-matic 956 is the Model 951 mounted on a metal base, as a wired changer for playing through any standard radio or TV set. Complete with 6-foot A.C. cord and 4-foot sound cord and plugs. Shipping weight 14¼ lbs.

V-M tri-o-matic Models 951 GE and 956 GE (not shown) are especially designed for the High-Fidelity trade and features four-pole motor, muting switch, and G.E. Variable Reluctance Cartridge, plus all standard V-M tri-o-matic features listed above.

V-M TRI-O-MATIC PHONOGRAPHS, with *Siesta Switch*

The V-M tri-o-matic amplified line has always found wide acceptance with music lovers, and the new Siesta Switch has added all the more to their popularity. After the last record plays, everything shuts off, including the amplifier! Models 920 and 972 also have an appliance plug in the base for use with a lamp; when last record plays, the lamp shuts off, too!

V-M tri-o-matic Model 920 Record Changer attachment. The lowest-priced three-speed automatic record changer on the market. Plays through any radio or TV set. Beautiful Mahogany plastic base. Has SIESTA SWITCH and plug in for radio. Shipping weight 9¼ lbs.
V-M tri-o-matic 972 — A versatile, good-looking Phonograph that can be used in any room in the house — wherever records are played. Plugs into any AC outlet. Has smooth, functional styling that blends with any furnishings. Has all tri-o-matic features (see above). Overall size, 13″ x 8½″ x 11½″; shipping weight 18¼ lbs. Maroon with gold plastic accessories.

V-M tri-o-matic 985 Portable — Highly popular with teen-agers and those who like to take their music with them. Handsomely cased in mahogany wood-grain leatherette and equipped with a superb amplifying system that offers console-type sound reproduction (two-tube, plus Rectifier, Amplifier, and 4″ x 6″ Speaker). Has all tri-o-matic features (see above). SIESTA SWITCH, and Lazy-Lite — a button located below the Volume Control that lets you reject records without lifting the lid. Plugs into any AC outlet. Overall size 14½″ x 9″ x 17″, shipping weight 21 lbs.

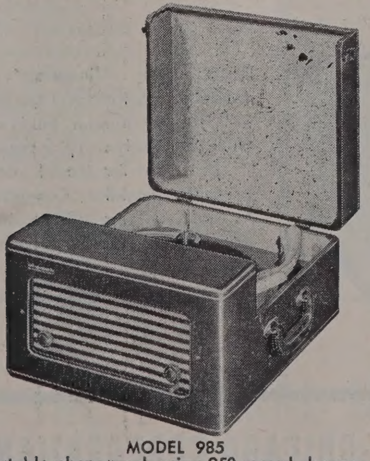
TRI-O-SPEED PHONOGRAPHS

The V-M tri-o-matic speed Model 150 plays all records, all sizes, all speeds (33-1/3, 45 and 78 rpm) manually. Has a beautiful wood-grain mahogany leatherette case and an outstanding amplifying system that reproduces faithfully the complete tonal range of any record (two tubes plus Rectifier, and 4″ x 6″ Speaker). Has free-floating Tone Arm, Dual-Needle Reversible Cartridge, and separate Tone and Volume Controls. Overall size 14½″ x 13″ x 8″, shipping weight 15 lbs.

PORTABLE "PA" SYSTEM

Coming Soon — An 8 watt Portable PA system at a price that will please you and your customers.

*T.M. Reg. U.S. Pat. Off.



MODEL 985
Portable phonograph using 950 record changer. Two tube (plus rectifier) amplifier, 4″ x 6″ speaker. Has SIESTA SWITCH and Lazy-Lite.

MODEL 150
Manual 3 speed phonograph. 2 tube plus rectifier, 4″ x 6″ speaker.

LISTED UNDER REEXAMINATION SERVICE
UL
UNDERWRITERS' LABORATORIES, INC.

V-M
CORPORATION
Benton Harbor, Mich.

Webcor®

the established name for the ultimate in record changers and record changer chassis!

Model 101 For replacement or original installation. Automatically plays all 3 size—3 speed records. Velocity-trip mechanism provides fast, efficient record change. Easily installed. Size base plate: 13″ x 13½″. Mounting space: 14½″ x 13½″; 6³⁄₁₆″ above, 2³⁄₁₆″ below mounting board. List price: $47.50, West of Rockies: $48.50.

Model 101-270 equipped with G.E. Variable Reluctance Pickup. List price $49.50, West of Rockies: $50.50.

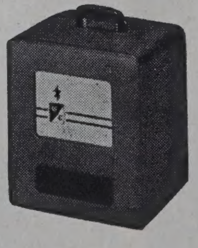
Model 106-27 equipped for G.E. Variable Reluctance Pickup. List price: $48.25; West of Rockies: $49.25.

Model 106 The ultimate for replacement or original installation. Gentle, push-off record change. Automatically plays all 3 size—3 speed records. Webcor "muting switch" silences speaker during change cycle. Size base plate: 14″ x 14″. Mounting space: 15″ x 15″; 6½″ above, 2⅞″ below mounting board. List price: $52.75; West of Rockies: $53.75.

Model 102 Same as Model 101 automatic 3 size—3 speed Diskchanger, but mounted on a beautiful burgundy metal case. Plugs into present radio, TV, or amplifier to provide phono efficiency from any location. It blends with any interior, any furnishings from period to modern. List price: $51.75, West of Rockies: $52.95.

Model 107 Same as Model 106 automatic 3 size—3 speed push-off Diskchanger, but mounted on a beautiful burgundy metal case. Plugs into present radio, TV or amplifier. List price: $58.75, West of Rockies: $60.00. Model 107-27 equipped for G.E. Variable Reluctance Pickup: Model 107-270 equipped with G.E. Variable Reluctance Pickup (RPX-050).

Model 166 Portable push-pull 8 watt amplifier in handsome sturdy carrying case complete with 10″ P.M. speaker. Ideal for use with Diskchanger or as P.A. system. A perfect mate for Model 105 Diskchanger. Sensitive tone and volume controls. Separate microphone and phono controls to permit mixing. List price: $68.75, West of Rockies: $69.75.



Model 105 Same as Model 101 automatic 3 speed—3 size Diskchanger, but in a beautiful, sturdy carrying case. Perfect mate for Model 166 portable amplifier. Connects to radio, TV or amplifier. List price: $66.50, West of Rockies: $68.50.

All music sounds better on a Webcor

Manufactured by
WEBSTER-CHICAGO CORPORATION
Chicago 39, Illinois

Smooth Power

ELECTRIC PHONO MOTORS

RECORDING MOTORS

TAPE-DISC RECORDING ASSEMBLIES

HOME-RECORDING AND PHONOGRAPH ASSEMBLIES

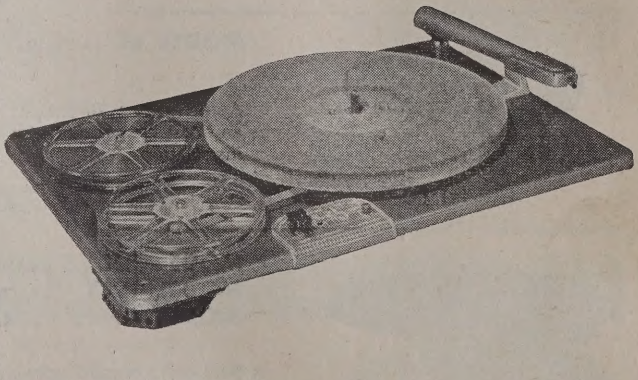
TAPE-DISC RECORDING ASSEMBLY

MODEL 250

115 volts a. c., 60 cycles **List Price, $79.50**

When connected with the proper amplifier, the Model 250 performs the following functions:

- RECORDS TAPE FROM RECORDS
- RECORDS DISCS FROM TAPE
- RECORDS MICROPHONE ON TAPE
- RECORDS RADIO ON DISC
- RECORDS MICROPHONE ON DISCS
- RECORDS RADIO ON TAPE
- PLAYS BACK BOTH TAPE AND DISCS
- PLAYS ANY 78 R.P.M. RECORDS



TAPE RECORDING FEATURES:

One hour recording time.

Dual track.

Fast forward and reverse.

Permanent magnet erase head.

Turntable acts as flywheel, giving constant tape speed.

Designed for use with 5" reels.

Tape speed 3¾" per second.

Designed for use with either plastic or paper base tape.

No tape threading — Merely place tape around turntable — Automatically drops into correct position.

Due to ingenious clutch and drive mechanism, impossible to throw tape.

Mechanical interlock eliminates any possibility of accidentally erasing tape.

Equipped with a switch for recording head electrical interlock.

Automatically shuts off at end of tape playback.

DISC RECORDER AND PLAYBACK FEATURES:

Cuts records up to 10" in diameter at 78 R.P.M.

Plays 78 R.P.M. recorded discs and all 78 R.P.M. commercial records. When pivot of arm is lifted it snaps into recording position, engages lead screw, and insures proper angle for cutting stylus.

Merely push arm down for playback.

Simple to interchange cutting stylus and playback needle.

Dimensions: Width 12½", Length 17½", Depth below mounting plate 4". Equipped with G.I. smooth power, dynamically balanced four-pole motor. Net weight 10½ lbs. Shipping weight 14 lbs.

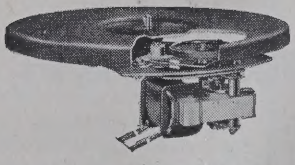
THE GENERAL INDUSTRIES COMPANY, ELYRIA, OHIO

Ⓖ GENERAL INDUSTRIES Ⓖ

Smooth Power PHONOGRAPH MOTORS, TAPE-DISC RECORDER AND DISC RECORDERS

Suitable for every phonograph instrument where low cost, dependable performance, compactness, light weight and quietness of operation are important considerations. GI phonomotors are even in speed and have ample power to play 10" and 12" records. Fan cooling permits use in partially closed cabinets. Designed to comply with Underwriters' Laboratories' requirements.

CONSTANT SPEED ELECTRIC PHONOMOTORS

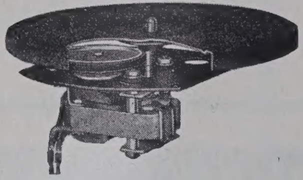


Model MX Model MX-3
Model MX-45

MODEL MX — 78 R. P. M. . . . . **List Price, $8.60**
MODEL MX3 — 33-1/3 R. P. M. . . . . **List Price, 9.90**
MODEL MX45 — 45 R. P. M. . . . . **List Price, 9.90**
115 volts a. c., 60 cycles

Rim drive, 2-pole motor with novel idler arrangement insuring quiet operation. Motor is also insulated from mounting plate to eliminate vibration. Turntable shaft revolves with turntable, and is grooved for turntable clip. Novel bearing construction insures rigid and permanent alignment of motor shaft. Oilless bearings. Furnished with 9" turntable and complete with mounting plate ready for installation.

Dimensions: Length—3⅛"; Width—2¼"; Depth—2¼" below mounting plate. Packed in individual cartons. Shipping weight—4 lbs.

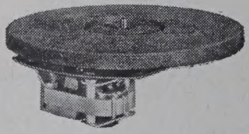


Model LX Model LX-3
Model LX-45

MODEL LX — 78 R. P. M. . . . . **List Price, $7.40**
MODEL LX3 — 33-1/3 R. P. M. . . . . **List Price, 8.70**
MODEL LX45 — 45 R. P. M. . . . . **List Price, 8.70**
115 volts a. c., 60 cycles

Rim drive, 2-pole motor. Rubber insulated from both mounting plate and turntable for quiet operation. Turntable shaft revolves with turntable, and is grooved for turntable clip. Furnished with 9" turntable and complete with mounting plate ready for installation.

Dimensions: Length—3½"; Width—2"; Depth—2" below mounting plate. Packed in individual cartons. Shipping weight—4 lbs.

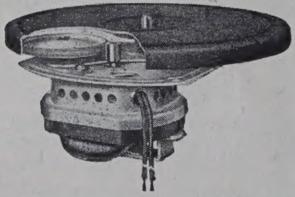


Model LC

MODEL LC — 78 R. P. M. . . . . **List Price, $6.35**
115 volts a.c., 60 cycles

A low-priced 78 R.P.M. 2-pole, rim drive motor suitable for installation where size and cost are prime factors. Furnished with 8" turntable and mounting plate ready for installation.

Dimensions: Length—3½"; width—2"; depth—1⅞" below mounting plate. Packed in individual cartons. Shipping weight—4 lbs.



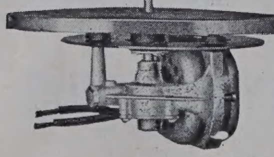
Model RX Model RX-3
Model RX-45

MODEL RX — 78 R. P. M. . . . . **List Price, $11.05**
MODEL RX3 — 33-1/3 R. P. M. . . . . **List Price, 12.85**
MODEL RX45 — 45 R. P. M. . . . . **List Price, 12.85**
115 volts a. c., 60 cycles

Rim drive, 4-pole motor. Rubber insulated from both mounting plate and turntable for quiet operation. Driving pulley, idler and turntable are positively aligned in one plane for efficient performance. Turntable shaft revolves with turntable and is grooved for turntable clip. Furnished with 9" turntable and complete with mounting plate, ready for installation.

EXTRA FOR 10" TURNTABLE (RX ONLY), 20 CENTS EACH

Dimensions: Length—4 1⁄16"; Width—3⅜"; Depth—2 5⁄16" below mounting plate. Packed in individual cartons. Shipping weight—5 lbs.



Models CX & CX3

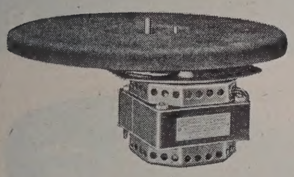
MODEL CX — 78 R. P. M. . . . . **List Price, $15.50**
MODEL CX3 — 33-1/3 R. P. M. . . . . **List Price, 17.40**
115 volts a. c., 60 cycles

Gear drive, 4-pole motor. Fully enclosed, with silent, helical-cut gears running in oil bath within the sealed housing. Patented combination rubber turntable drive sleeve and record centering tip insure mechanical and electrical insulation between turntable and motor. Furnished complete with mounting plate, ready for installation; available with 9" turntable.

EXTRA FOR 10" TURNTABLE, 30 CENTS EACH

Dimensions: Length—4¼"; Width—4⅛"; Depth—3⅛" below mounting plate. Packed in individual cartons. Shipping weight—6 lbs.

GI GENERAL INDUSTRIES GI
Smooth Power PHONOGRAPH MOTORS, TAPE-DISC RECORDER AND DISC RECORDERS



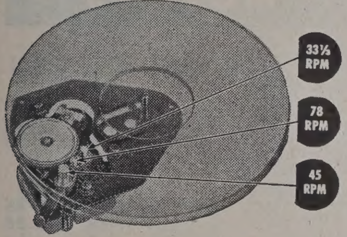
Model RM4 Model RM4-3
Model RM4-45

MODEL RM4 — 78 R. P. M. . . . . List Price, $17.35
MODEL RM4-3 — 33-1/3 R. P. M. . . . . List Price, 19.20
MODEL RM4-45— 45 R. P. M. . . . . List Price, 19.20
115 volts a. c., 60 cycles

Heavy duty, rim drive, 4-pole motor. Rubber insulated from both mounting plate and turntable for exceptionally quiet operation. Turntable shaft revolves with turntable and is grooved for holding clip. Retractable pin in turntable permits playing standard records without adjustment. Efficient performance is assured by positive alignment of driving pulleys, idler and turntable in one plane. Furnished with 10″ weighted turntable and complete with mounting plate ready for installation.

Dimensions: Length—3⅜″: Width—3⅜″: Depth—2 15/16″ below mounting plate. Packed in individual cartons. Shipping weight—9 lbs.

THREE-SPEED PHONOGRAPH MOTORS



Model TS

MODEL TS — 45, 78, 33-1/3 R. P. M. 115 volts a. c., 60 cycles

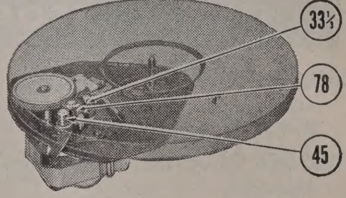
A novel 45-78-33⅓ R.P.M. rim drive, 2-pole motor. Very compact. Employs two identical Neoprene belts for 45 and 33⅓ R.P.M. speeds. 78 R.P.M. speed is obtained direct from rotor shaft. Speed is changed by a simple external lever movement. Specially designed and manufactured to hold wow and rumble to a minimum for excellent reproduction of the new records. Turntable shaft revolves with turntable, and is grooved for turntable clip. Available with 8″ or 9″ turntable, using same mounting plate. A 45 R.P.M. record adaptor and a speed indicator dial are furnished with each motor. **List Price, $11.50**

Dimensions: Length—3⅛″; Width—2¼″; Depth—2 9/16″ below mounting plate. Furnished complete with turntable and mounting plate ready for installation. Shipping weight—4 lbs.

MODEL TR — 45, 78, 33⅓ R. P. M. . . . . 115 volts a.c., 60 cycles

Deluxe three-speed rim drive, 2-pole motor. Turntable speeds of 33⅓, 45 and 78 R.P.M. are secured through three separate pulleys running on oil-impregnated bearings and mounted on a turret plate. By means of a simple lever, the desired pulley is brought into contact with the idler wheel. The two pulleys not in contact with the idler wheel remain stationary. Symmetrical electrical and mechanical design results in minimum stray field and maximum performance. Ingenious locking device holds turret plate firmly in driving position at any of the three speeds. Available with 8″ or 9″ turntable. A 45 R.P.M. record adapter and speed indicator dial are furnished with each motor. **List Price, $12.10**

Dimensions: Length—3⅛″; Width—2¼″; Depth—2 9/16″ below mounting plate. Furnished complete with turntable and mounting plate ready for installation. Shipping weight—4 lbs.



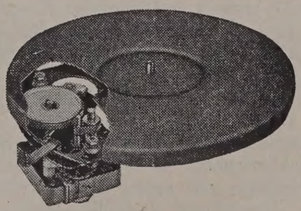
Model TR

DUAL-SPEED PHONOGRAPH MOTORS

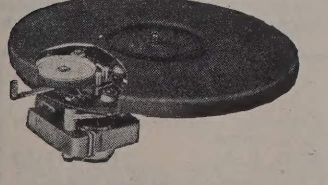
MODEL DS — 45, 33-1/3 R. P. M. 115 volts a. c., 60 cycles

A novel 45-33⅓ R.P.M. rim drive, 2-pole motor. Very compact. Employs a Neoprene belt for the 33⅓ R.P.M. speed. 45 R.P.M. speed is obtained direct from rotor shaft. Speed is changed by a simple external lever movement. Specially designg and manufactured to hold wow and rumble to a minimum for excellent reproduction of the new records. Turntable shaft revolves with turntable, and is grooved for turntable clip. Available with 8″ or 9″ turntable, using same mounting plate. **List Price, $11.15**

Dimensions: Length—3⅛″; Width—2¼″; Depth—2 9/16″ below mounting plate. Furnished complete with turntable and mounting plate ready for installation. Shipping weight—4 lbs.



MODEL DM — 33-1/3, 78 R. P. M. • MODEL DE — 45, 78 R.P.M.
115 volts a. c., 60 cycles



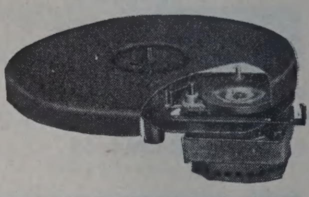
Novel and ingenious rim drive, 2-pole motors. Very compact. Employs a Neoprene belt for slow speeds. 78 R.P.M. speed is obtained direct from rotor shaft. Speed is changed by a simple external lever movement. Specially designed and manufactured to hold wow and rumble to a minimum for excellent reproduction of new records. Turntable shaft revolves with turntable, and is grooved for turntable clip. Available with 9″ turntable. **List Price, $11.15**

Dimensions: Length—3⅛″; Width—2¼″; Depth—2⅜″ below mounting plate. Furnished complete with 9″ turntable and mounting plate ready for installation. Shipping weight—4 lbs,

[DUAL SPEED PHONOGRAPH MOTORS . . . CONTINUED ON NEXT PAGE]

GI GENERAL INDUSTRIES GI
Smooth Power PHONOGRAPH MOTORS, TAPE-DISC RECORDER AND DISC RECORDERS

DUAL-SPEED PHONOGRAPH MOTORS . . . (continued)

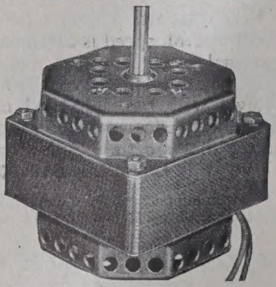


MODEL DR — 78, 33-1/3 R. P. M. • MODEL DZ — 78, 45 R. P. M.
MODEL DV — 45, 33-1/3 R. P. M. **115 volts a. c., 60 cycles**

Deluxe rim drive, 4-pole motors with a simple and positive mechanism for shifting from one speed to the other. Speed change is accomplished by means of an external push-pull lever. An ingenious mechanism raises and lowers the entire idler assembly, disengages the idler wheel from the two-diameter motor shaft and moves the idler wheel from one diameter to the other. At the slow speed the idler wheel engages the small diameter of the motor shaft; at the fast speed it engages the large diameter. **List Price, $19.80**

Dimensions: Length—6"; Width—5 ⅝"; Depth—2 ⅝" below mounting plate. Furnished complete with 10" turntable and mounting plate ready for installation. Shipping weight—6 ½ lbs.

TAPE, WIRE AND DISC RECORDING MOTORS



Heavy duty 4-pole, shaded pole induction motors. 1/70 H.P. Free speed: 1740 R.P.M. Maximum running torque: 12 ounce-inches.

Features include: A locating and locking arrangement for both top and bottom covers which assures high accuracy in alignment of rotor within the stator bore; new air intake; dual cooling fans and self-aligning, oil-impregnated sleeve bearings.

These high torque motors are used in practically all tape, wire and disc recorders now being manufactured. **List Price, $13.25**

Dimensions: Length—3 ⅜"; Width—3 ⅜"; Depth 3" below mounting plate; Shaft diameter—5/16"

115 volts a. c., 60 cycles

HOME RECORDING AND PHONOGRAPH ASSEMBLIES

MODEL GI-R85L — LP, 78 and 33-1/3 R. P. M. with conversion spring for changing the 33-1/3 R. P. M. speed to 45 R. P. M.

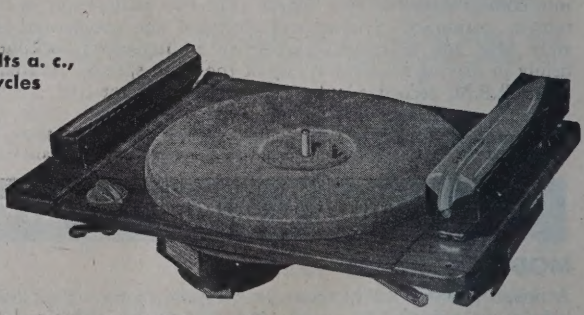
MODEL GI-R90L — 78 & 33-1/3 R. P. M. — Standard

115 volts a. c., 60 cycles

Model GI-R90L is the standard model which has been in the GI line for several years. It cuts 120 lines per inch, and plays back records with the standard needle pressure.

The Model GI-R85L incorporates a dual purpose pickup cartridge and an excellent and simple adjustment for playing the LP records and standard records. It cuts 160 lines per inch. In a separate envelope is furnished a conversion spring for changing the 33⅓ R.P.M. speed to 45 R.P.M. with mounting instructions printed thereon.

Both models cut records up to 10" diameter . . . play records up to 12" diameter. To shift motor from one speed to the other, merely turn the speed change dial. Beautiful walnut wood grain on steel base plate. Streamline plastic trim on pickup and cutter arm attractively engraved with legends "Reproducer" and "Recorder". Turntable recessed into well in base plate. Merely lower cutting arm over record disc to start recording. Convenient, depth-of-cut adjustment. Dynamically-balanced, rim drive, 4-pole motor. Compensating switch operated by speed change dial.



MODEL GI-R85L — LP . . . . List Price, $53.50
MODEL GI-R90L — STANDARD . List Price, 49.50

Assembly includes dual speed motor; 10" weighted turntable; crystal cutter; crystal pickup; compensation switch; pickup and cutter arm rests; drawn steel base plate with formed down edges.

Above prices include crystal cutter.
For (M41-10) magnetic cutter add $2.00 each.

Dimensions: Base plate—15" wide; 11½" front to back; height above lower edge of base plate—2 ¾"; depth below lower edge of base plate—3 ⅞". Packed in individual cartons. Shipping weight—17 lbs.

MASTER JR. SPRING MOTOR

Plays two 10" selections from one winding. Exceptionally quiet and uniform in speed. Turntable is held in place by turntable-holding clip. Furnished with 9" turntable, winding crank and escutcheon; turntable brake; dial and pointer speed regulator; mounting screws and washers. **Dimensions:** Length—5 ⅜"; Width—4 ¾"; Depth—2 5/16" from top surface of casting to bottom.

MODEL: MASTER JR. — 78 R. P. M. **List, $11.10**

Single Spring Type. Price includes 9" turntable and parts.

RECORD PLAYING EQUIPMENT

The World's Finest

GARRARD

3 SPEED MANUAL RECORD PLAYER

MODEL M

Minimum cabinet dimensions — 15″ left to right; 13″ front to rear; 2⅞″ clearance above and 3⅛″ clearance below the top of motor board.

Model M — AC Model Dual voltage motor 100/130 and 200/250, 60 cycles. (50 cycle bushing available)

Model MC — Same as Model M, but complete with Dual Stylus Turnover Crystal Cartridge.

Here, at a moderate price, is the manual record playing machine perfected by Garrard for record enthusiasts who demand perfection in playing performance and who prefer to play one record at a time. The Model M adjusts precisely to all speeds, 33⅓, 45 and 78 RPM, and is particularly desirable for those whose library of long-playing records is extensive.

Simple, Foolproof Operation! The unit is started by moving tone arm to right . . . shuts off automatically at end of record.

The Model M is identical to the renowned 3-speed Garrard Triumph Record Changer, Model RC80 (details of which will be found on the inside pages), with the exception of the record changing mechanism. It therefore retains all the advantages of tested, sturdy Garrard "watch-type" construction and precision parts.

Featuring a *four-pole heavy duty motor* with armature balanced in operation, the Model M runs silently and evenly . . . without hum or speed variation. The heavily weighted turntable eliminates rumble and insures flywheel action. Here, as on the Model RC80, will be found Garrard's exclusive true-tangent tone arm which tracks silently and gives genuine "floating" response, eliminating "drag" and reducing record groove wear.

The Model M is equipped with interchangeable plug-in heads of universal design. It will therefore accommodate virtually any crystal or magnetic cartridge, including the Audak, Pickering and GE twist models.

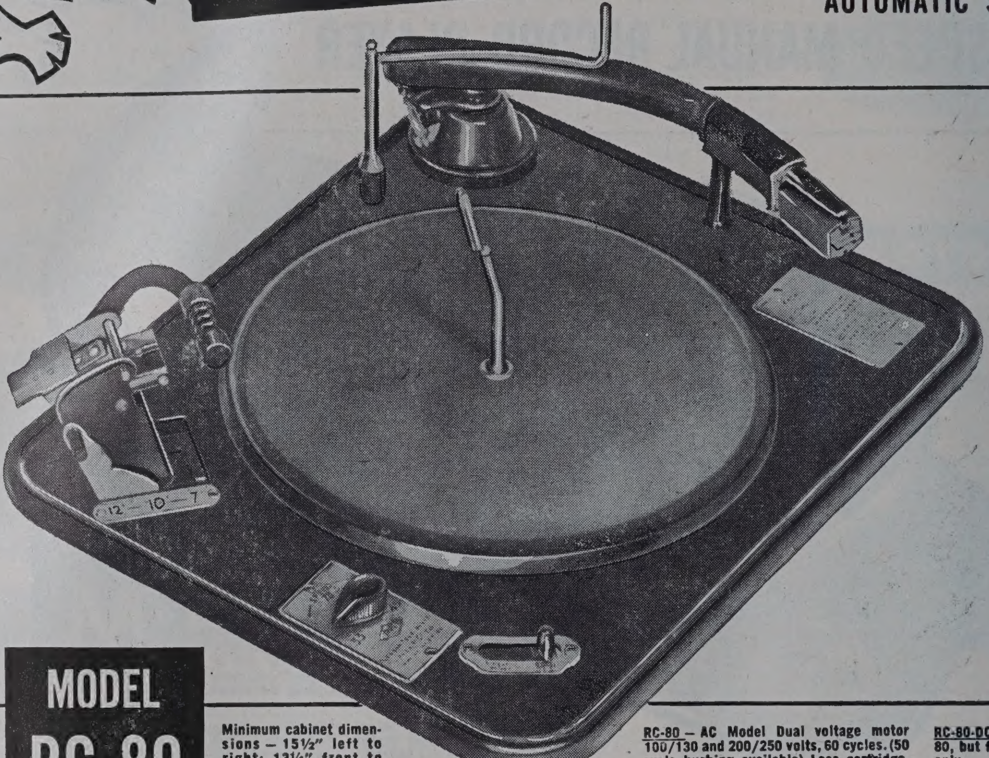
A special disk is supplied with the Model M so that 45 RPM records can be easily played without the necessity of plugging up the large center hole on each individual record.

GARRARD
SWINDON

GARRARD SALES CORPORATION • NEW YORK 13, N. Y.

The World's Finest GARRARD *"Triumph"* 3-SPEED RECORD CHANGER

FULLY AUTOMATIC WITH AUTOMATIC STOP!



MODEL RC-80

Minimum cabinet dimensions — 15½" left to right; 13¼" front to rear; 5¾" clearance above and 3½" clearance below the top of motor board.

RC-80 — AC Model Dual voltage motor 100/130 and 200/250 volts, 60 cycles. (50 cycle bushing available) Less cartridge.

RC-80-C — Same as RC-80 but complete with Dual Stylus Turnover Crystal Cartridge.

RC-80-DC—Same as RC-80, but for Direct Current only.

RC-80-C/DC — Same as RC-80-DC, but complete with Dual Stylus Turnover Crystal Cartridge.

Introducing several ingenious innovations in 3 speed record changers, the RC80, nevertheless, retains the watch-like custom construction which has made Garrard acclaimed by music lovers the world over.

The Garrard "Triumph" plays all types of records now in use, 33⅓-45-78 rpm, regardless of diameter (7"-10"-12") or size of spindle hole. Once records are placed on the player and simply settings made, action is completely automatic, with unfailing switch-off at the end of the last record. Tone arm is automatically returned to rest position.

The RC80 changer is surprisingly simple in operation. It has one turntable, one tone arm, one set of switches. But over-simplification has been avoided in the interests of quality and standards of performance. Certain features found for many years in Garrard instruments have been retained because good basic engineering demands them.

For example, record changing is accomplished by the same tried-and-true pusher-type platform mechanism proven best in previous Garrard models.

45 rpm records are played exactly as intended by the manufacturer. A special spindle is provided with each changer to accommodate these records. No "spiders" or artificial inserts are necessary.

The Garrard RC80 is equipped with interchangeable plug-in heads of universal design. It will therefore accommodate virtually any crystal or magnetic cartridge, including the Audak, Pickering and GE twist models.

The "Triumph" is heavily built for long, rugged service.

It cannot sag or warp. Repairs and adjustments can be made inexpensively on parts which, in most other machines, would require expensive replacement in their entirety.

GARRARD SWINDON

GARRARD SALES CORP. **NEW YORK 13, N. Y.**

HEAVY DRIVE SHAFT:

A unique feature! Exclusive with Garrard!

Drive shaft for 33⅓ rpm and 45 rpm is heavy, thus obtaining more consistent quality at critical low speeds. Wows and wavers eliminated.

PUSHER TYPE PLATFORM:

Adjusts simply to 7″-10″-12″ records regardless of diameter or size of spindle hole.

No record changing mechanism has been developed to equal the performance of the precision pusher platform. For records with standard center holes, the pusher platform is the only method that gives positive gentle record operation.

PULL-AWAY IDLER WHEEL

Avoids flattening on drive wheel when changer is not operating.

AUTOMATIC STOP:

Insures positive and unfailing action at end of any type record.

TRIPLE SPEED SWITCH:

Speed changes are clearly marked, easily made The RC-80 plays 33⅓, 45 and 78 rpm. Records are placed on the player and simple settings made. Action is then completely automatic, including automatic shut-off after last record of any size.

CONVENIENT START-STOP-REJECT LEVER:

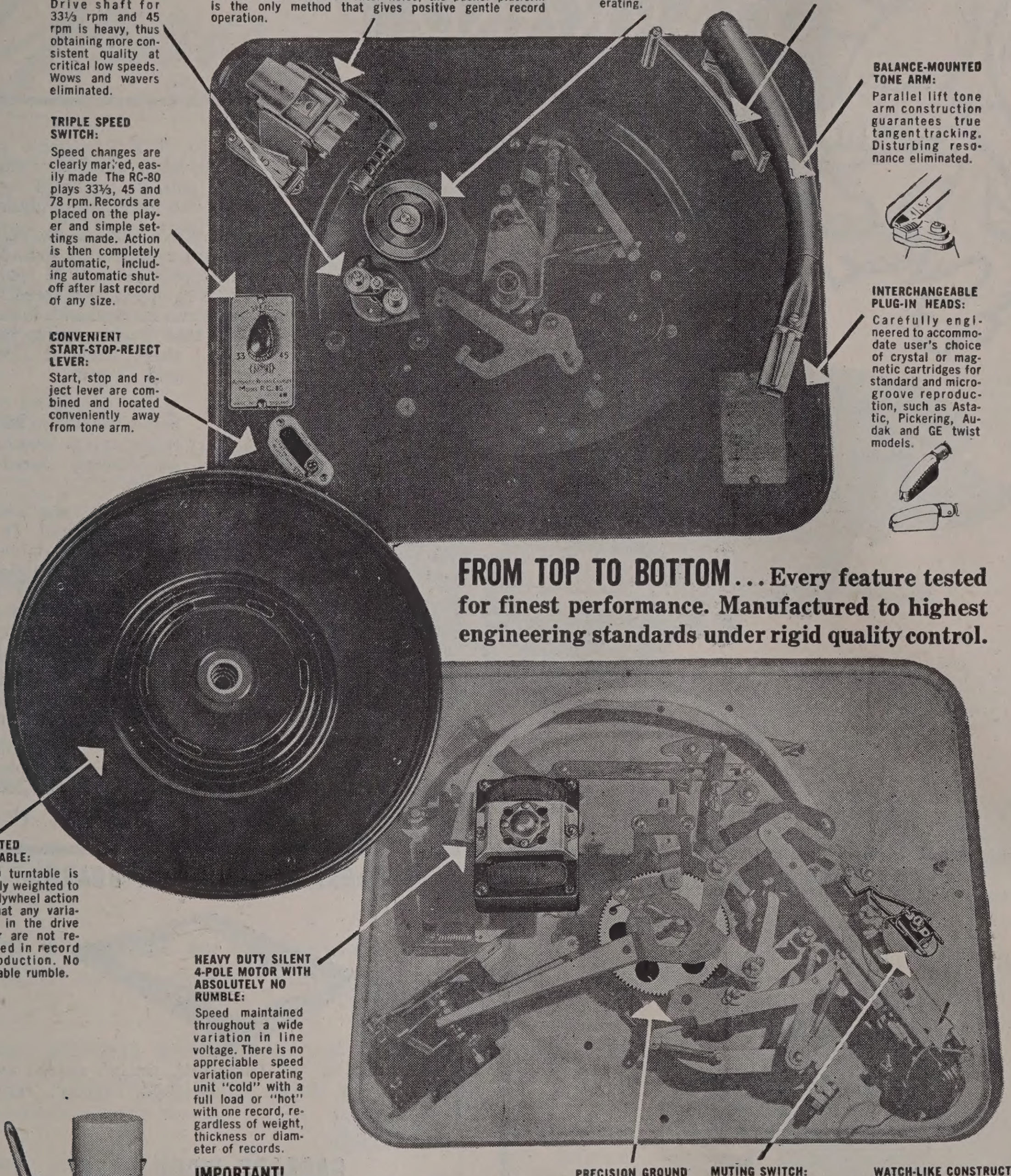
Start, stop and reject lever are combined and located conveniently away from tone arm.

BALANCE-MOUNTED TONE ARM:

Parallel lift tone arm construction guarantees true tangent tracking. Disturbing resonance eliminated.

INTERCHANGEABLE PLUG-IN HEADS:

Carefully engineered to accommodate user's choice of crystal or magnetic cartridges for standard and microgroove reproduction, such as Astatic, Pickering, Audak and GE twist models.



FROM TOP TO BOTTOM... Every feature tested for finest performance. Manufactured to highest engineering standards under rigid quality control.

WEIGHTED TURNTABLE:

RC-80 turntable is heavily weighted to give flywheel action so that any variations in the drive motor are not reflected in record reproduction. No turntable rumble.

HEAVY DUTY SILENT 4-POLE MOTOR WITH ABSOLUTELY NO RUMBLE:

Speed maintained throughout a wide variation in line voltage. There is no appreciable speed variation operating unit "cold" with a full load or "hot" with one record, regardless of weight, thickness or diameter of records.

PRECISION GROUND GEARS

Perfectly meshed to insure constant smooth action and years of service.

MUTING SWITCH:

No sound while changer operates on run-in or run-off grooves. Continuity of music undisturbed by noises.

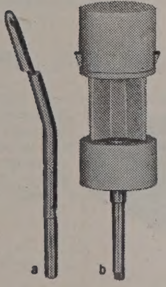
WATCH-LIKE CONSTRUCTION

All parts are precision made, fastidiously assembled and simple to adjust.

A complete stock of replacement parts is readily available to all Garrard owners.

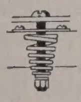
IMPORTANT!

Only a 4-pole motor can assure no hum when used with sensitive magnetic pickups.



TWO INTERCHANGEABLE SPINDLES:

Easily inserted, the two Garrard Spindles accommodate all records as they were made to be played. (If user prefers one spindle can be used throughout simply by plugging center hole of 45 rpm records.) a: Typical Garrard spindle for standard center holes. b: Easily inserted wide spindle, for 45 rpm records, remains stationary when record is played. Only a small collar revolves, assuring longer center hole and record wear.



SIMPLE INSTALLATION:

Mounting holes are identical with former Garrard models, so that replacement is very simple. Unique spring suspension.

GARRARD SWINDON

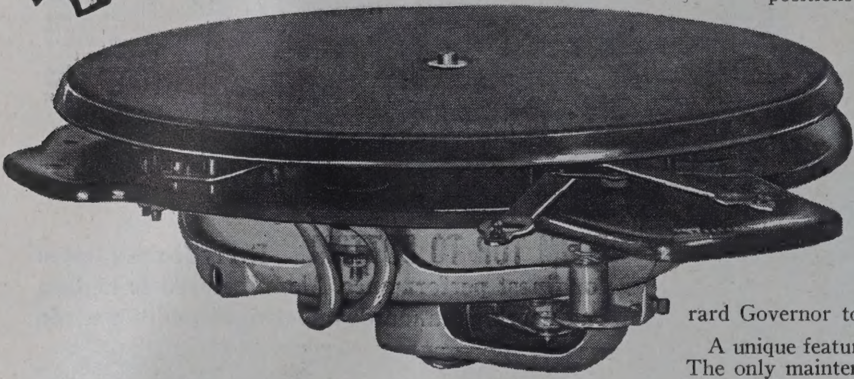
GARRARD SALES CORP. **NEW YORK 13, N. Y.**

GARRARD

MULTI-SPEED TRANSCRIPTION TURNTABLE

MODEL 201B/5

Governor-controlled motor!



The Garrard 201B/5 variable speed motor is the latest version of the famous 201V unit, as produced for the U. S. Navy and the British Admiralty.

The 201B/5 is a continuously variable motor, governor-controlled and adjustable to all speeds between 25 rpm and 90 rpm. It is equipped with speed regulating levers and marked with indicated positions so that precise settings can be easily made at 33⅓, 45 and 78 rpm.

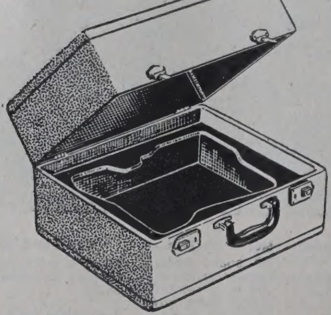
The unit is set on an extension arm so that 16" transcription records can be properly speed-controlled.

Ideal for use where a tor is required. It is a continuous variable moself-starting, induction type unit, and is fitted with the patented Garrard Governor to insure perfect regularity.

A unique feature is its "one shot lubrication." The only maintenance required is to sparingly lubricate the main bearings in the gears through the single oiling point, which is located in the top of the center spindle.

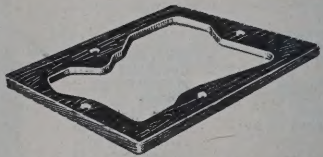
Model 201B/5 — Continuously variable AC Model Dual voltage motor 110/130 and 200/250 volts, 40/60 cycles.

GARRARD CARRYING CASE



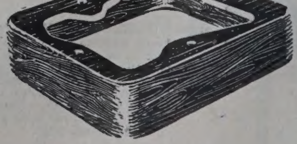
This De Luxe unit is fabricated of seasoned wood and covered with a fine parchment-type material. Sewn leather edges run completely around the case. The hardware used is the very finest durable brass and it has two locking snaps. Easily carried, this unit is ideal for portable installations for use in the home where one does not need the record or playing equipment out unless it is in actual use with solid mounting board or cutout for RC80 Changer.

GARRARD MOUNTING BOARD



Strong, durable ⅝" Gumwood, smooth sanded and cut out for the RC80. Unfinished surface, for easy staining.

GARRARD WOOD BASE



Wood base of finest veneer, cut to fit Garrard Changers or type M player. Smoothly joined, attractively finished in dark mahogany.

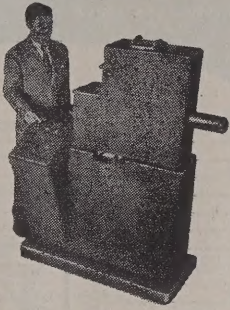
GARRARD SALES CORPORATION • NEW YORK 13, N. Y.

Gray RESEARCH

Networks and independent stations everywhere recommend and approve Gray professional equipment for broadcast station use. Such broad acceptance is not unwarranted. The products here mentioned are designed and engineered by audio and video specialists . . . incorporate highest quality and serviceability . . . are rightfully leaders in the industry.

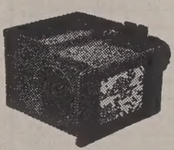
. . . for the finest equipment for AM-FM-TV station use

Gray TELOP (TELevision Optical Projector)



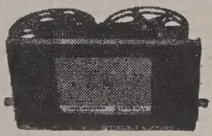
Makes PROFITS GROW for TV Stations. The Gray Telop projects low-cost, easily produced TV 'commercials.' Without keystoning, any two photos, titles, slides, etc., or small objects may be broadcast with superimposition, lap dissolve or fade-out. Four optical openings. Strip material may be used horizontally or vertically with Stages #2 and #3. (For full details write for Bulletin T-101.)

Gray STAGE #2



Attaches to three optical openings of the Telop. Accommodates roll stock *vertically* to televise commentary or the commercial in the same way movie introductions are projected.

Gray STAGE #3

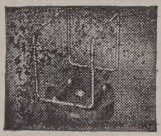


Attaches to optical openings of the Telop. New ticker tape fed from 8-mm reels is projected on any part of the screen, top to bottom, horizontally. May be used with test pattern or other commercial.

Gray TV CAMERA TURRETS

Enable a Single Camera to Serve up to 8 Projectors.

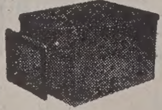
MODEL 556



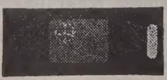
Centered on a rugged 'square' pedestal, requires a minimum of space. Heavy duty ball bearings. Rotates 360°.

Gray LIGHT BOX for Transparencies

Provides back lighting for Telop use.

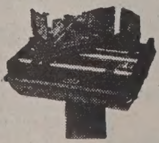


Gray REVERSE READING CLOCK



For use where reversal is required. Designed to permit superimposing of the commercial or other copy.

Gray MULTIPLEXER Model 600



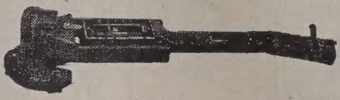
A precision arrangement of mirrors for operation of pairs of projectors simultaneously into a single TV camera or individually into two separate cameras. *Enables a greater number of projectors to be used with fewer highly expensive TV cameras.*

Gray TRANSCRIPTION ARMS

NEW Viscous-Damped Model 108-B Arm

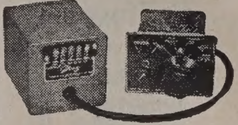
For all records – 33⅓, 45 and 78 r.p.m. Radically new suspension development on the viscous damping principle *for perfect tracking* of records and elimination of tone arm resonances. Instant cartridge change with automatic correct stylus pressure. Solves all transcription problems. IDEAL FOR LP RECORDS. For Pickering and GE cartridges.

Gray Model 106-SP Arm



Designed to meet strictest requirements of modern highly compliant pickup cartridges. Three cartridge slides furnished enable GE 1-mil, 2½-mil or 3-mil cartridges or Pickering cartridge to be slipped into position in a jiffy. No tools or solder! Superb reproduction of 33⅓, 45 or 78 r.p.m. records. Low vertical inertia, precisely adjustable stylus pressure.

Gray EQUALIZERS



MODEL 602 EQUALIZER has been specially engineered to provide constant velocity frequency response for both conventional and LP records. Four steps–flat, transcriptions, good records, poor records. Gray Equalizers used as standard professional equipment by broadcast stations.

MODEL 603 – Has 5 control positions. For both GE and Pickering cartridges.

Gray MILITARY PRODUCTS

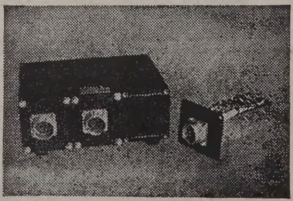
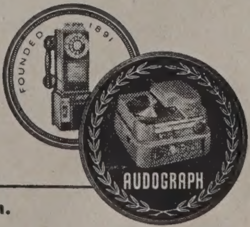


Illustration shows typical airplane controls made for Hamilton Standard, Division of United Aircraft Corporation. Other military developments and products include video indicators, intricate mechanisms, trainers, electronic-mechanical development contracts.

Please write for bulletins describing the above equipment.



GRAY RESEARCH

and Development Co., Inc., 598 Hilliard St., Manchester, Conn.

Division of the GRAY MANUFACTURING COMPANY–Originators of the Gray Telephone Pay Station and the Gray Audograph

RECOTON* *Replacement Needles*

Always faithful

NO DUPLICATION!
Of the same needle under another number! Keeps your inventory down.

SIMPLE CONSECUTIVE MODEL NUMBERS!
As 301, 302, 303 etc.

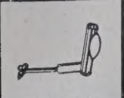
INVENTORY CONTROL!
A separate inventory control card for each number— more sales with less stock.

COMPLETE INFORMATION!
All the information is on the card the needle is mounted on.

Replacement Needles for Cartridges of

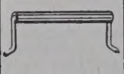
ASTATIC
AMERICAN MICROPHONE
COLUMBIA
CROSLEY
ELECTRO-VOICE
GENERAL ELECTRIC
MAGNAVOX
PHILCO
RCA
SEEBURG
SHURE
SONOTONE
WEBSTER-CHICAGO
WEBSTER ELECTRIC

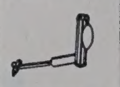
and many others


301-S-M-1.00

310-LP-J-3.50

319-A-M-1.50


328-LP&S-M-2.50


337-A-J-1.50

346-S-M-1.50

355-LP-M-1.00

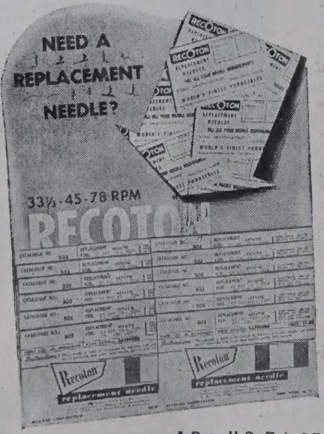
CAT. No.	POINT MATERIAL	POINT SIZE	PRICE
301	Osmium	Standard	$1.00
302	Jewel	Standard	1.50
303	Jewel	Micro Groove	1.50
304	Osmium	Standard	1.00
305	Osmium	Standard	1.00
306	Jewel	Standard	1.50
307	Osmium	Mitro Groove	1.50
308	Jewel	Micro Groove	1.50
309	Jewel	Standard	3.50
310	Jewel	Micro Groove	1.60
311	Osmium	Standard	1.50
312	Jewel	Standard	2.50
313	Osmium	Twin Point	4.00
314	Osmium	Twin Point	5.50
315	Osmium	Micro Groove	1.50
316	Osmium	Micro Groove	1.00
317	Jewel	Micro Groove	2.50
318	Osmium	Micro Groove	1.50
319	Osmium	All Groove	1.50
320	Osmium	Micro Groove	1.00
321	Osmium	Standard	1.00
322	Osmium	Micro Groove	1.00
323	Osmium	Twin Point	4.00
324	Jewel	Standard	2.25
325	Osmium	Twin Point	2.50
326	Osmium	Standard	1.50
327	Osmium	Twin Point	2.50
328	Osmium	Twin Point	2.50
329	Osmium	Standard	1.50
330	Osmium	Micro Groove	1.50
331	Osmium	Twin Point	2.50
332	Jewel	Twin Point	3.50
333	Jewel	Standard	2.50
334	Jewel	Micro Groove	2.50
335	Osmium	All Groove	1.50
336	Osmium	All Groove	1.00
337	Jewel	All Groove	1.50
338	Osmium	All Groove	1.00
339	Osmium	All Groove	1.00
340	Jewel	All Groove	1.50
341	Osmium	Micro Groove	1.00
342	Osmium	Standard	1.00
343	Jewel	Micro Groove	1.50
344	Jewel	Standard	1.50

CAT. No.	POINT MATERIAL	POINT SIZE	PRICE
345	Osmium	Standard	1.50
346	Osmium	Standard	1.50
347	Osmium	Micro Groove	1.50
348	Osmium	Standard	1.50
349	Jewel	Micro Groove	2.50
350	Jewel	Standard	2.50
351	Osmium	All Groove	1.50
352	Jewel	All Groove	2.50
353	Jewel	Twin Point	3.50
354	Osmium	Standard	1.00
355	Osmium	Micro Groove	1.00
356	Osmium	All Groove	1.00
357	Osmium	Standard	1.00
358	Osmium	Micro Groove	1.00
359	Jewel	Standard	1.50
360	Jewel	Micro Groove	1.50
361	Osmium	Standard	1.50
362	Osmium	Micro Groove	1.50
363	Osmium	Standard	1.50
364	Osmium	Micro Groove	1.50
365	Osmium	All Groove	1.50
366	Jewel	Standard	3.50
367	Jewel	Micro Groove	3.50
368	Jewel	Twin Point	5.95
369	Jewel	Transcription	3.50
370	Jewel	Micro Groove	1.50
371	Jewel	Standard	1.50
372	Jewel	All Groove	1.50
373	Jewel	Micro Groove	1.50
374	Jewel	Standard	1.50
375	Jewel	All Groove	2.50
376	Jewel	Standard	pr. 2.50
377	Jewel	Micro Groove	pr. 2.50
378	Osmium	All Groove	1.00
379	Jewel	All Groove	1.50
380	Osmium	Standard	1.50
381	Osmium	Micro Groove	1.50
382	Osmium	All Groove	1.50
2412R	Osmium	Standard	1.00
2512R	Osmium	Standard	1.50
2512MGR	Osmium	Micro Groove	1.50
2712R	Osmium	All Groove	1.00
2812R	Jewel	All Groove	1.50
2912R	Jewel	All Groove	2.50

Standard for 78 RPM Recordings   Micro Groove for 33⅓ and 45 RPM
All Groove for 78, 33⅓ and 45 RPM
Twin Point · one point for 78 RPM, other point for 33⅓ and 45 RPM

RECOTON
Simplified

For complete Information Regarding Replacement Needles, Refer To Recoton Simplified Reference Guide. ***ASK YOUR DISTRIBUTOR — OR WRITE US — IT'S FREE!***



* Reg. U.S. Pat. Off.

RECOTON No. 31512
FOR RCA 45 RPM PLAYER

	List Price
1 needle to card	$ 1.50
12 to display card	18.00

RECOTON No. 30312
FOR COLUMBIA AND
DECCA LP PLAYERS

	List Price
1 needle to card	$ 1.50
12 to display card	18.00

RECOTON No. 31912
MUTED STYLUS
FOR ALL 3 SPEEDS

	List Price
1 needle to card	$ 1.50
12 to display card	18.00

REPLACEMENT NEEDLE KIT No. 250

Recoton Replacement Needles are precision made of the finest materials by Recoton's skilled craftsmen. Expertly designed to fit all popular cartridges — Recoton's famous phoneedles incorporate the most advanced developments in the acoustical field — guarantee full tonal range and longer life.

NEED A
REPLACEMENT
NEEDLE?
RECOTON
MAKES THEM TO FIT ALL CARTRIDGES
RECOTON
REPLACEMENT NEEDLES

	List Price
No. 150—Replacement Cabinet containing 1 needle each of Cat. No. 301 through No. 314	$ 37.10
No. 550—Replacement Cabinet containing 2 needles each of Cat. No. 301 through 379 and including 2 each of 2412R, 2512R, 2512 MGR, 2712R, 2812R, 2912R	$317.60

ASK FOR OUR NEW SIMPLIFIED REFERENCE GUIDE

RECOTON* Phoneedles

Always faithful

SUPEROSMIUM No. 2412

Recoton's fine permanent-type needle made of the finest osmium alloys. Micro-tested and factory sealed for precision results. Good for up to 5,000 performances free of surface noise and hiss. Exceptionally gentle to records.

List Price

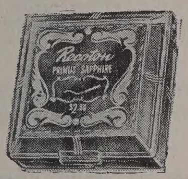
No. 2412—1 needle to a plastic box .... **$ 1.00**
12 to a display card **12.00**

NYLON PHONEEDLE* No. 2512

Recoton's precision-made nylon phoneedle provides up to 6,000 enjoyable plays. Unconditionally guaranteed . . . with shock absorbing action. Contains surface noise filter . . . eliminates needle scratches. Has handy jewel box and record cleaning pad . . . a fine velour brush for keeping records clean.

List Price

No. 2512—1 needle to a plastic box .... **$ 1.50**
12 to a display card **18.00**
No. 2512—MG for 33-1/3 and 45 RPM Recordings



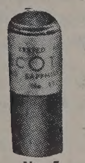
PRIMUS SAPPHIRE NEEDLE
No. 2612

Versatile . . . popular priced . . . ideal for every kind of electrical player including automatic changers. Features special wire-type grip to allow greater flexibility permitting needle to follow modulation track of record faithfully. Fine sapphire point eliminates surface noise, minimizes record wear. Reproduces entire tonal range; good for up to 10,000 fine plays.

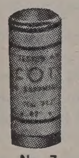
List Price

No. 2612—Each needle ....**$ 2.50**
12 to carton **30.00**
No. 2612—MG for 33-1/3 and 45 RPM Recordings

CUTTING STYLI



No. 5



No. 7

SAPPHIRE CUTTING NEEDLES
Factory Tested and Sealed

Superbly crafted; equipped with finest sapphire point. For professional use.

List Price

No. 5*—Brass shank, packed in wooden container $5.50

No. 7*—Dural shank, packed in wooden container $7.25

* Available in "Long Shank"; specify with order LS after catalog number.

No. 7 also available for Microgroove cutting. Specify No. 7MG when ordering.

SUPERIOR RECOTON No. IS

Recoton's famous popular-priced steel needle, precision turned in Switzerland, made of Swedish surgical steel. Fine reproduction and elimination of surface noise. Good for 12 to 15 plays.

List Price

No. IS—Package of 25 needles (25c each) to an envelope.
50 envelopes to carton....**$12.50**

OSMIUM TIPPED FEATHER-LITE NEEDLE No. 2124

Recoton's new osmium tipped bent shank phoneedle.* Permanent type construction . . . plays up to 2500 perfect performances. Fine value for needle of this quality!

List Price

No. 2124—1 needle to package....**$ .50**
24 packages to a display card **12.00**

ALL GROOVE NEEDLES

No. 2712 SUPEROSMIUM UNIVERSAL 3-SPEED OSMIUM TIPPED

Recoton's fine permanent-type needle made of the finest osmium alloys. Micro-tested and factory sealed for precision results. Good for up to 5,000 performances, lowest surface noise and hiss. Exceptionally gentle to records.

List Price

No. 2712—1 needle to a card......**$ 1.00**
12 to a display card.... **12.00**

No. 2812 ULTRA UNIVERSAL 3-SPEED SAPPHIRE

Popular-priced sapphire-tipped needle featuring high-level performance at low-level cost. Quality crafted . . . micro-tested, factory-sealed for fine results. Up to 6,000 faithful plays with minimum surface noise and record wear. Remarkable value!

List Price

No. 2812—1 needle to a card....**$ 1.50**
12 to a display card **18.00**

STEEL CUTTING NEEDLES

Crafted of the highest-grade steel alloy to cut smooth grooves with low surface noise level. Shaped with careful precision, polished to mirror-like finish for accurate recordings. HAND-LAPPED for extra efficiency.

	List Price
5 needles to a card	$ 1.50
No. 1060—12 cards to a display card	18.00

STELLITE CUTTING NEEDLES

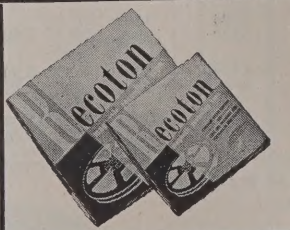
Designed for professional use, these high-grade cutting needles have a special patented finish that cuts and polishes groove of disc at same time. Equipped with Dural shank, can be depended upon for noiseless, high-fidelity performances. Will improve any recorder; recommended for slow-speed recordings.

	List Price
Cat No. 11—Stellite Cutting Needle, packed in individual cards	$ 2.00
Cat No. 1112—12 cards to a display card	24.00

PRECISION-TURNED CUTTING STYLI
Made in Switzerland

These steel cutting styli are precision turned of finest Swedish steel alloys. They are diamond-dust hand-lapped for cutting smooth grooves with extremely low surface noise and minimum background.

	List Price
Each stylus packed in individual container	$ .50
No. 2330 —30 containers to a master carton	15.00
No. 2330M—30 containers on a display card	15.00



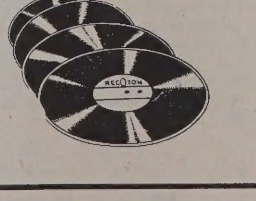
MAGNETIC RECORDING TAPE for all Tape Recorders.

RECOTON Magnetic Recording Tape comes on sturdy six spoke plastic reels which turns true and resists warping.

RECOTON Magnetic Recording Tape is constant output controlled, 65 DB Dynamic Range with minimum background, eliminating rumble and even microscopic irregularities! Wide Bias latitude results in high uniform output and low distortion without critical bias adjustment.

RECOTON Magnetic Recording Tape is easy to erase and is guaranteed for thousands of recordings and playbacks.

Cat No.	Oxide-Base	Winding Oxide Faces	Length In Feet	Size of Plastic Reel	List Price
1112A	Red Plastic	In	1250	7″	$5.50
1112B	Red Plastic	Out	1250	7″	5.50
116A	Red Plastic	In	625	5″	3.50
116B	Red Plastic	Out	625	5″	3.50



HOME RECORDING DISCS

Perfected for home, commercial and educational use, these popular recording discs are preferred for their excellent reproductive quality, long life, absence of surface noise. Each disc is smooth cutting, uniformly coated and free from warpage. Carefully inspected at every point of manufacture.

RED LABEL — ALUMINUM BASE	(per carton) List Price
6½″ packed 100 to a carton (35c each)	$40.00
8″ packed 50 to a carton (45c each)	25.00
10″ packed 50 to a carton (70c each)	40.00
12″ packed 25 to a carton (90c each)	25.00

GREEN LABEL — THIN ALUMINUM BASE		(per carton) List Price
6½″ (100 blanks packed to a carton)	(.25 ea.)	$30.00
8″ (100 blanks packed to a carton)	(.35 ea.)	40.00
10″ (100 blanks packed to a carton)	(.55 ea.)	60.00

RECOTON CORPORATION

NEW YORK 11, N. Y.

*** Reg. U.S. Pat. Off.**

audiotape
TRADE MARK
it speaks for itself

A complete line of professional quality magnetic recording tape—on plastic or paper base, with red or black oxide coating, permitting matched performance in any tape recorder.

Audiotape is precision manufactured to the same exacting standards of quality and uniformity which have characterized Audiodiscs for the past decade—your assurance of maximum fidelity, uniformity, frequency response, and freedom from background noise and distortion.

	Length	Reel	Coating	TYPE No.		List Price
				Oxide Out	Oxide In	
PLASTIC BASE	150 ft.	3″ Plastic	Red Oxide	150	151	$ 0.85
	300 ft.	4″ Plastic	Red Oxide	350	351	1.60
	600 ft.	5″ Plastic	Black Oxide	640	641	3.50
			Red Oxide	650	651	
	1250 ft.	7″ Plastic	Black Oxide	1240	1241	5.50
			Red Oxide	1250	1251	
	2500 ft.	Std. NAB Hub	Red Oxide	2550H	2551H	10.00
		10½″ Alum. Reel	Red Oxide	2550R	2551R	12.85
	5000 ft.	St. NAB Hub	Red Oxide	5050H	5051H	20.00
		14″ Alum. Reel	Red Oxide	5050R	5051R	26.00
	1000 meters (3300 ft.)	Std.. NAB Hub	Red Oxide	3350H	3351H	13.00
PAPER BASE	150 ft.	3″ Plastic	Red Oxide	120	121	0.70
	300 ft.	4″ Plastic	Red Oxide	320	321	1.25
	600 ft.	5″ Plastic	Black Oxide	600	601	2.25
			Red Oxide	620	621	
	1250 ft.	7″ Plastic	Black Oxide	1200	1201	3.50
			Red Oxide	1220	1221	
	2500 ft.	Std. NAB Hub	Red Oxide	2520H	2521H	6.50
		10½″ Alum. Reel	Red Oxide	2520R	2521R	9.35
	5000 ft.	St. NAB Hub	Red Oxide	5020H	5021H	13.00
		14″ Alum. Reel	Red Oxide	5020R	5021R	19.00

Audiotape can also be supplied in any desired width, for special recording applications.

audio
self-timing
LEADER
TAPE
150 ft
audiotape

AUDIO SELF-TIMING LEADER TAPE

This ¼″ wide leader and timing tape is made of a durable white plastic material which is easily marked with pencil or ink to identify selections. Will outlast paper tapes many times over. The words "Audiotape" are spaced 7½″ apart, providing accurate timing at all standard speeds.

	List Price
Per Box	$ .60

AUDIOTAPE is cut by a superior straight-line slitting process which makes it track and wind absolutely flat.

AUDIOTAPE has no curl—lies flat on the magnetic head without increased tension, giving better frequency response and more uniform motion.

AUDIOTAPE has exceptionally low surface friction—reduces wear on heads.

AUDIOTAPE has definitely superior dispersion of oxide particles — no lumps, no bumps. This can be checked with any good microscope.

AUDIOTAPE is completely free from any tendency to stick, layer to layer. Unwinds uniformly, no tendency to create wows.

AUDIOTAPE coating is specially formulated to give strong adherence of the oxide to the base.

AUDIOTAPE is designed to give maximum signal to noise ratio.

AUDIOTAPE has excellent high frequency response.

AUDIOTAPE has low distortion.

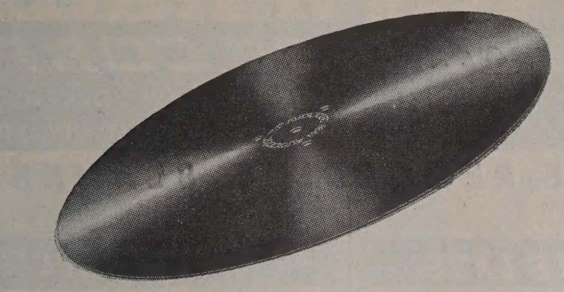
AUDIOTAPE has no low-frequency modulation noise.

AUDIOTAPE has unequalled uniformity—within the reel, and from reel to reel. No magnetic weak spots that can cause fluctuations in output.

AUDIOTAPE is guaranteed SPLICE-FREE in both 1250 and 2500 foot sizes, plastic base.

audiodiscs *and* **audiopoints** ***are listed on the following page.***

audiodiscs®



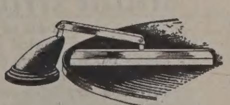
For truly fine recording and reproduction

For more than a decade, Audiodiscs have consistently maintained their position of eminent leadership in every field of instantaneous disc recording. A survey of radio stations completed in Jan. 1952 shows that, in actual use, Audiodiscs lead all other makes by a 3-to-1 margin.

A superior lacquer coating, applied to the mirror-smooth aluminum base by a patented process, gives these outstanding advantages: maximum uniformity of coating, permanent resistance to humidity, longer stylus life, freedom from audible background scratch, long playback life, brilliant frequency response, and freedom from deterioration with age.

Type		Diameter	List Price per Disc	Box Contains
RED LABEL Audiodiscs for professional use. Exceed the most exacting demands for highest quality professional recordings. The finest discs obtainable. Aluminum base. Double sided. Embossed labels.		8″ 10″ 12″ 16″	$0.90 1.25 2.05 3.75	25
SINGLE FACE RED LABEL Audiodiscs. Same quality as double sided Red Label Audiodiscs, listed above.		12″ 16″	$1.65 2.95	25
YELLOW LABEL Audiodiscs for general use. High uniform quality. The popular choice for all general purpose recording. Aluminum base. Double sided. Yellow paper labels.		8″ 10″ 12″ 16″	$0.75 1.00 1.65 2.95	25
REFERENCE LABEL Audiodiscs. Provide maximum economy for test cuts, filing, reference recordings, auditions and equipment adjustments. Aluminum base. Double sided. White paper labels.		10″ 12″ 16″	$0.85 1.25 2.25	25
BLUE LABEL Audiodiscs for amateur use. Same high quality lacquer as professional discs, but on thinner aluminum base. Ideal for schools, homes, and general amateur use. Double sided. Blue paper labels.		6½″ 8″ 10″	$0.40 .55 .80	50
MASTER Audiodiscs. The outstanding choice of professional recordists for use where pressings are to be made. Give fine results with either silvering or gold sputterings. Aluminum base. Double sided or single face.	Double Sided	12″ 13¼″ 17¼″	$2.60 3.35 5.60	25
	Single Face	12″ 13¼″ 17¼″	$2.05 2.35 4.10	25

Prices slightly higher in Pacific Coast and Southwestern Areas.



AUDIODISC CHIP-CHASER

A simple but perfect solution to the thread removal problem in recording. The felt-lined wiper blade is set on the disc before starting the recording. The Chip-Chaser automatically and infallibly brushes the thread toward the center, winding it up on the overhead post or drive pins, as the case may be.

List Price { for 16″ turntables, **$6.25**
for 12″ turntables, **$5.00**

HOW TO MAKE
GOOD
RECORDINGS

"HOW TO MAKE GOOD RECORDINGS"

A complete, authoritative and non-technical handbook on all phases of disc recording—materials, equipment and techniques. Contains 140 pages, profusely illustrated with photographs, charts and diagrams. Includes a glossary of recording terms. Now in its 9th printing. **List price $2.00**

audiopoints®

microscopically matched
recording and playback
styli

The complete line of Audiopoints covers the full range of recording and playback needs—for professional as well as general use. Audiopoints are made by skilled craftsmen, and conveniently packaged in cards, boxes or envelopes.

RECORDING AUDIOPOINTS

audiopoints
RECORDING

SAPPHIRE No. 14—long recognized as the finest recording stylus made. Short or long dural shank, and 87° or 70° included angle.
List Price—$7.25
(Resharpening cost, 89°—$3.25)
(Resharpening cost, 70°— 3.75)

SAPPHIRE No. 202—a high-quality professional stylus. Short or long brass shank.
List Price—$5.25
(Resharpening cost—$2.60)

SAPPHIRE No. 20—especially designed for professional microgroove recording. Short or long dural shank. **List Price—$7.25**
(Resharpening cost—$3.25)

STELLITE No. 34—a favorite with many professional and non-professional users. Short or long shank. 87° included angle.
List Price—$1.75
(Resharpening cost—$0.85)

DIAMOND LAPPED STEEL No. 50—most practical and economical stylus for non-professional use. **List Price—3 for $1.00**

PLAYBACK AUDIOPOINTS

audiopoints
PLAYBACK

SAPPHIRE No. 113—meets the requirements of the most critical professional recordists. Straight dural shank. **List Price—$6.50**
(Resharpening cost—$2.25)

SAPPHIRE No. 123—for professional use with microgroove recordings. **List Price—$2.00**
(Resharpening cost—$1.00)

"RED CIRCLE" SAPPHIRE No. 103—for professional use with instantaneous recordings or vinyl transcriptions. Straight dural shank.
List Price—$2.00
(Resharpening cost—$1.00)

"RED CIRCLE" SAPPHIRE No. 303—same as No. 103, except with bent dural shank. Ideal for phonograph records. **List Price—$2.00**
(Resharpening cost—$1.00)

STEEL TRANSCRIPTION NEEDLE No. 151—finest steel needles made. 100% shadowgraphed to assure perfection of every needle.
List Price—100 for $1.25
20 for $0.25

RESHARPENING SERVICE

Established years ago, our Resharpening Service materially reduces the over-all cost of using sapphire and stellite Audiopoints. Each resharpened point is disc-tested. Special cards and envelopes are available for returning Audiopoints for resharpening.

INSTANTANEOUS RECORDING BLANKS

THE RECORDISC CORP.

395 BROADWAY, NEW YORK 13, N. Y. • CABLE ADDRESS: RECORDISC, NEW YORK, N. Y.
EXPORT DEPT.: ROYAL NATIONAL COMPANY, INC., 89 BROAD STREET, NEW YORK

WORLD-FAMOUS HOME RECORDING BLANKS

ORANGE LABEL

Popular composition base disc . . . a party favorite! Heavy and firm, it will take punishment, yet it is coated carefully with our standard RECORDISC surface compound. The acme of amateur transcription blanks.

"GM" LABEL

Available in the three larger sizes only, these discs are made on heavy .021 aluminum base, coated with critically selected compound. Precision-made, and minutely inspected, they are guaranteed for perfect performance and long use.

PURPLE LABEL

Lightweight aluminum base disc with heavyweight selling power! The lowest-priced high-quality disc with an inexpensive .012 aluminum base, designed for amateurs desiring semi-professional reproduction.

MAGNETIC RECORDING TAPE

Precision-manufactured on a specially designed machine, RECORDISC recording tape features high tensile strength for longer life, even coating for high frequency response and controlled slitting for trouble-free winding.

RED LABEL

High-fidelity, volume selling disc with .021 aluminum base. Coated with flawless RECORDISC compound. Professional quality in smaller sizes for those who want the finest. Professional nitrate coating.

Super-Tone RECORDING WIRE

RECORDISC's stainless steel recording wire is the product of extensive research — delivers ultra-high fidelity, easy erasing qualities and outstanding durability. Wound on RMA-standard spools.

LIST PRICES†

RECORDING WIRE

LENGTH	PRICE
¼ Hour	$2.00
½ Hour	3.00
1 Hour	5.00
Empty spool, 75c	

CODE:
P—Plastic Base
K—Kraft Base
IW—Inside Winding of Oxide
OW—Outside Winding of Oxide
625—625 ft. length
1250—1,250 ft. length

RECORDING TAPE

STYLE NO.	DESCRIPTION	SIZE REELS	LIST PRICE
PIW-625	625 Ft. Plastic Base, Oxide In	5"	$3.50
PIW-1250	1250 Ft. Plastic Base, Oxide In	7"	5.50
POW-625	625 Ft. Plastic Base, Oxide Out	5"	3.50
POW-1250	1250 Ft. Plastic Base, Oxide Out	7"	5.50
KIW-625	625 Ft. Kraft Base, Oxide In	5"	2.25
KIW-1250	1250 Ft. Kraft Base, Oxide In	7"	3.50
KOW-625	625 Ft. Kraft Base, Oxide Out	5"	2.25
KOW-1250	1250 Ft. Kraft Base, Oxide Out	7"	3.50

ALL TAPES SUPPLIED ON 6-SPOKE POLYSTERENE REEL

RECORDING DISCS

LABEL	BASE	6½"	8"	10"	12"
ORANGE	Bond	25c	35c	50c	
PURPLE	Aluminum	30c	40c	60c	
RED	Aluminum	40c	50c	80c	$1.00
"GM"	Aluminum		80c	$1.00	$1.25

Precision-Perfect Professional Recording Discs

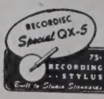
Designed for broadcasting stations and recording studios. Years of costly research and the valuable experience gained as the world's largest producer of home recording blanks have been combined to produce the perfect professional recording disc . . . possessing a fidelity heretofore thought impossible. Each blank guaranteed for five full years.

LIST PRICES†		10"	12"	16"
2 ★ ★ STAR	precision-processed, double-face	$1.15	$2.00	$3.15
3 ★ ★ ★ STAR	perfectly flawless, double-face	$1.40	$2.40	$3.95

STEEL STYLI
Chrome Plated SHANK
DESIGNED FOR PERFECT HOME RECORDING
3 for $1
RECORDISC

STEEL STYLI
(CHROME PLATED)

A fine economy stylus that gives excellent service during its recording life of approximately one hour. Shiny chrome-plate on hardened steel. Packed in protective cards. LIST‡ **3 for $1**

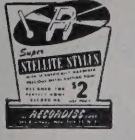


SPECIAL QX-5

A precision-made stylus made of processed and tempered steel . . . with an expensive filter cutting point and recessed shank. Smooth easy cutting for those who seek a fine but non-fragile recording tip. LIST PRICE‡ **75¢**

RECORDISC RECORDING STYLI

Best Suited for Best Recordings



STELLITE STYLUS

Carefully machined of special, hardened metal alloy . . . less fragile than costly sapphire styli. Recommended for less experienced recording operators. Packed one to a protective card. LIST PRICE‡ **2.00**

SAPPHIRE STYLUS
RECORDISC
$6.50

SAPPHIRE STYLUS

A specially lapped sapphire point on each stylus cuts clean shiny grooves with less surface noise than any similar stylus. As much as 10 hours of recording time . . can be sharpened as many as 15 times. Packed in individual jewel box. LIST PRICE‡ **6.50**

Walco PLAY BACK Needles

SAPPHIRE WALCO Trade Mark

Walco "400" Floating Jewel Sapphire*

FLOATING JEWEL
$2.50 NEEDLE

	List price
WS-400	$2.50
WS-400-2, All-groove . .	2.50
400MGS, Microgroove .	2.50

Walco "400" RUBY* JEWEL

Walco 400
RUBY JEWEL
NEEDLE

	List price
WR-400	$2.00

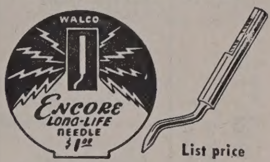
The Walco "400" needles are beautifully packaged and are available 12 to a counter display card or in cartons of 12. All Walco needles are available with microgroove (1 mil) points for LP records.

Walco "400" PRECIOUS METAL

WALCO 400
Precious Metal
$1.50

	List price
WA-400	$1.50
WA-400-2, All-groove . .	1.50
400MGA, Microgroove .	1.50

Walco ENCORE


WALCO
ENCORE
LONG-LIFE
NEEDLE
$1.00

	List price
WA-100	$1.00
WA-100-2, All-groove . .	1.00

Exceptionally fine, precious metal tipped needle, priced for volume sales.

Carded 12 to display card

Walco GROOVE MASTER

Walco
Groove Master
LONG PLAY NEEDLE
50c

	List price
WA-150	$ .50

High-fidelity needle tipped with precious metal alloy. Hand-polished point with filter type shank.

Carded 2 doz. to display card

Walco SAPPHIRE* MUTED STYLUS
for Shure 30 cartridges

WALCO
MUTED STYLUS
NEEDLE
Price $1.50
SAPPHIRE TIP

	List price
WA-30S	$1.50
WA-30MGS, Microgroove .	1.50

Deluxe metal foil and cellophane window package.

Carded 12 to display card

Walco ALLOY MUTED STYLUS
for Shure 30 cartridges

WALCO
MUTED STYLUS
NEEDLE
Price $1.00

	List price
WP-30	$1.00
WP-30MGA, Microgroove .	1.00

Deluxe metal foil and cellophane window package.

Carded 12 to display card

Walco TRU-TRAC SAPPHIRE*

WALCO
Sapphire
NEEDLE

	List price
WN-50, Bent shank .	$1.00
WN-55, Straight shank	1.00

For older type phonos with heavier pick-ups. Hand polished sapphire with notched dural shanks.*

Walco COIN MACHINE NEEDLES

Walco
Alloy
Long Playing Needle
Model SA-2

SA-2
Precious metal

An all-purpose, long life coin machine needle of superior quality.

WALCO
Sapphire
Coin-Machine Needle

WS-900
SAPPHIRE*

For light weight tone arms in new coin phonographs. Rated at an extremely high number of plays.

Prices of above on request

*synthetic

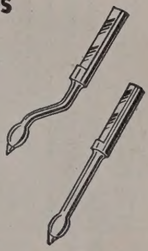
Copyright 1951
Electrovox Company, Inc.,
East Orange, New Jersey.

Walco DIAMOND Needles

WALCO
DIAMOND
NEEDLE

	List price
WD-90, Bent shank . .	$12.50
WD-95, Straight shank .	12.50

In plastic, transparent case, handsomely boxed, with written guarantee. Packaged like the exquisite product that it is. The finest, longest lasting needle made. Costs less per play than any other Walco needle.



PROFESSIONAL
WALCO SAPPHIRE
RECORDING STYLUS
ELECTROVOX CO., INC.
WALCO
Stellite
CUTTING NEEDLE
LONG LIFE
Steel

Walco CUTTING Needles

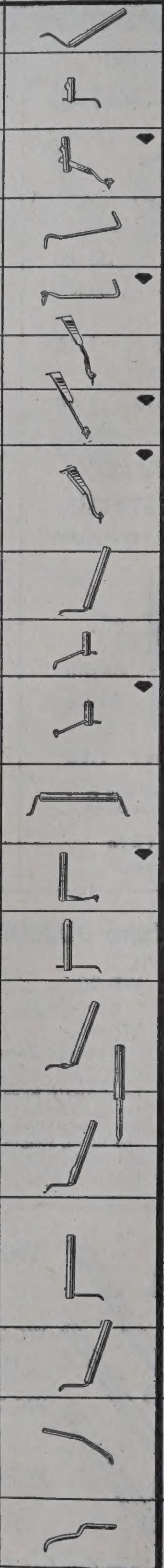
	List price
WC-25 SAPPHIRE* . . .	$6.00
Hand lapped, precision ground.	
WC-20 STELLITE	2.00
Long life, hand-polished stylus.	
WC-30 STEEL, card of 5 .	1.00
For finer home recording.	

Walco Needles are used as Original Equipment by Leading Manufacturers

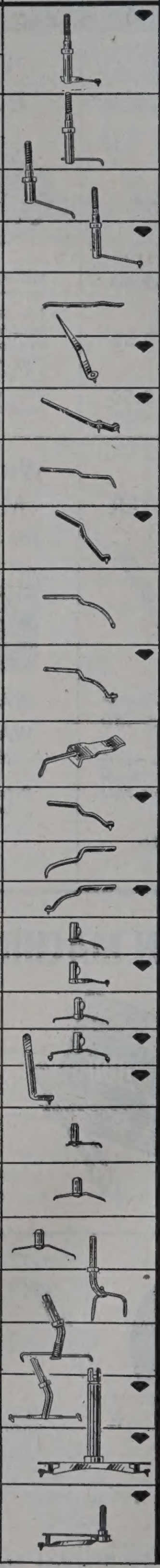
★ Walco REPLACEMENT NEEDLES ★

◆ This insignia indicates needles available with Diamond Tip

IMPORTANT NOTICE! Walco model numbers also indicate specifications as follows: **A—Alloy S—Sapphire (Syn.) MG—MicroGroove AG—All-Groove (3-speed) TP—Twin Point** *Thus the suffix AGS means All-Groove Sapphire, MGA means MicroGroove Alloy (metal), etc.*



CARTRIDGE MFG'S. NEEDLE NO	ILLUSTRATION	WALCO NEEDLE NO	LIST PRICE
ASTATIC T-(M) ASTATIC T-33 (M)		W-1A W-1MGA	$1.00 1.00
ASTATIC Q-(M) ASTATIC Q-33 (M) ASTATIC Q-AG (M)		W-2A W-2MGA W-2AGA	1.00 1.00 1.00
ASTATIC Q-(J) ASTATIC Q-33 (J) ASTATIC Q-AG (J)	◆	W-2S W-2MGS W-2AGS	1.50 1.50 1.50
ASTATIC G-78 (M) ASTATIC G-(M) ASTATIC G-AG-(M)		W-3A W-3MGA W-3AGA	1.00 1.00 1.00
ASTATIC G-78 (J) ASTATIC G-(J) ASTATIC G-AG (J)	◆	W-3S W-3MGS W-3AGS	1.50 1.50 1.50
ASTATIC U-78 (M) ASTATIC U-(M)		W-4A W-4MGA	1.00 1.00
ASTATIC U-(J) ASTATIC U-78 (J)	◆	W-4MGS W-4S	1.50 1.50
ASTATIC C-3 (M) ASTATIC C-1 (M)	◆	W-19A W-19MGA	1.00 1.00
ASTATIC C-3 (J) ASTATIC C-1 (J)		W-19S W-19MGS	1.50 1.50
ASTATIC D-(M) ASTATIC D-33 (M) ASTATIC D-AG (M)		W-6A W-6MGA W-6AGA	1.00 1.00 1.00
ASTATIC A-1 (M) ASTATIC A-3 (M) ASTATIC A-AG (M)		W-5MGA W-5A W-5AGA	1.00 1.00 1.00
ASTATIC A-1 (J) ASTATIC A-3 (J) ASTATIC A-AG (J)	◆	W-5MGS W-5S W-5AGS	1.50 1.50 1.50
WEBSTER- ELECTRIC F-14		W-9TPA	2.50
WEBSTER- ELECTRIC A-3S A-1S	◆	W-10S W-10MGS	2.50 2.50
WEBSTER- ELECTRIC A-30 A-10		W-11A W-11MGA	1.50 1.50
WEBSTER- ELECTRIC Q-1		W-12A	1.50
WEBSTER- ELECTRIC A-2		W-13AGA	1.50
WEBSTER- ELECTRIC C-9		W-14AGA	1.50
WEBSTER- ELECTRIC Q-2		W-15A	1.50
WEBSTER- ELECTRIC F-16-3 F-16-1		W-16A W-16MGA	1.50 1.50
WEBSTER- ELECTRIC F-15-3 F-15-1		W-17A W-17MGA	1.50 1.50
WEBSTER- ELECTRIC F-7		W-18MGA	1.50
WEBSTER- ELECTRIC G-3 G-1 G-2		W-23A W-23MGA W-23AGA	1.50 1.50 1.50
WEBSTER- ELECTRIC F-10 F-10-1		W-30A W-30MGA	1.00 1.00



CARTRIDGE MFG'S NEEDLE NO	ILLUSTRATION	WALCO NEEDLE NO.	LIST PRICE
R.C.A. 72345 and 39863	◆	W-42S	$3.00
R.C.A 74068		W-42MGS	2.00
R.C.A. 39449 and 75046 R.C.A. 38448 and 75045		W-43A W-43MGA	1.50 1.50
R.C.A. 75497 R.C.A. 75496		W-44A W-44MGA	1.50 1.50
R.C.A 75497 R.C.A. 75496	◆	W-44S W-44MGS	3.00 2.00
ELECTRO-VOICE O-3 ELECTRO-VOICE O-1 ELECTRO-VOICE O-2		W-20A W-20MGA W-20AGA	1.50 1.50 1.50
ELECTRO-VOICE S-3 ELECTRO-VOICE S-1 ELECTRO-VOICE S-2	◆	W-21S W-21MGS W-21AGS	2.50 2.50 2.50
ELECTRO-VOICE O-13 ELECTRO-VOICE S-13	◆	W-22TPA W-22TPS	2.50 3.50
SHURE BROS. TURNOVER CARTS TURNOVER CARTS.		W-29A W-29MGA	1.00 1.00
SHURE BROS TURNOVER CARTS. TURNOVER CARTS	◆	W-29S W-29MGS	1.50 1.50
SHURE BROS. A-62A A-63MG A-66U		W-30A W-30MGA W-30AGA	1.00 1.00 1.00
SHURE BROS A-61A A-65MG A-67U	◆	W-30S W-30MGS W-30AGS	1.50 1.50 1.50
SHURE BROS A-52A A-53MG A-56U		W-31A W-31MGA W-31AGA	1.00 1.00 1.00
SHURE BROS P-81 D	◆	W-37AGS	1.50
PHILCO 45-1597		W-30A	1.00
PHILCO 45-1651	◆	W-30S	1.50
PHILCO 45-1613		W-45MGA	1.00
PHILCO 45-1613 PHILCO-COLUMBIA	◆	W-45MGS	1.50
PHILCO 35-2693		W-46TPA	2.00
PHILCO 45-9589	◆	W-46TPS	3.50
PHILCO 45-1596	◆	W-48S	2.25
MAGNAVOX 560102		W-50A	1.00
MAGNAVOX 560138		W-51TPA	2.50
MAGNAVOX 560153-2		W-52TPA	2.50
WEBSTER- CHICAGO NE-215		W-60TPA	3.00
WEBSTER- CHICAGO NE-316		W-63TPA	3.00
WEBSTER- CHICAGO NE-317	◆	W-63TPS	4.00
GENERAL ELECTRIC RPJ-010	◆	W-66TPS	5.95
GENERAL ELECTRIC RPJ-001	◆	W-67S	3,50
GENERAL ELECTRIC RPJ-005		W-67MGS	3.50

Copyright 1952, Electrovox Co., Inc.

Walco DIAMOND NEEDLES

(SEE CHART ON OPPOSITE PAGE)

are available for the following *Cartridges*

NEEDLE	ASTATIC CARTRIDGES
W-2D	QT-J; QT2-J; QT3-J; LQD; LQD-1 series; CAC-78-J
W-2MGD	QT-33-J; CQ-J; LQD; LQD-1 series; CAC-J; CAC-W-J
W-2AGD	CQ-AG-J; CAC-AG-J
W-3MGD	GC-J; GC-1J; MG-J
W-3D	GC-78-J; MG-78-J
W-3AGD	GC-AG-J; MG-AG-J
W-4MGD	U-J
W-4D	U-78-J
W-5MGD	AC. ACD series; AC-J; AC-C-J; ACD-J
W-5D	AC-78J; AC-C-78J
W-5AGD	AC-AG-J
W-19D	MD-3; MD-6J
W-19MGD	MD-1; MD-5J

NEEDLE	WEBSTER ELECTRIC CARTRIDGES
W-10D	A1, A8
W-10MGD	A1 thru A6, A8

NEEDLE	ELECTROVOICE CARTRIDGES
W-21D	12, 32; 42; 96; 96-T
W-21MGD	14, 34; 44; 96; 96-T
W-21AGD	33; 33-B; 43; 33-4
W-22TPD or W-22DS	16; 16TT; 22TT

NEEDLE	SHURE CARTRIDGES
W-29D W-29MGD	W-22AB-T; W-22A; W-22AB; WC22AB; P76V; P76AFV; P77V; P72V PC72V; P76AV; P77AV
W-30D	W60A; W60B; W61B; W60HS; P30; P30B; P70; P74AD; P76; P76AF, P70A; P75A
W-30MGD	W-21AF; WC31AR; P72; P73; P75; P73A;
W-30AGD	W66B; W26B; W26A; P37A; P37C; P71; P71B; P71C; P81; P81A; P81C
W-37AGD	P81D

NEEDLE	R.C.A. CARTRIDGES
W-42D	70338; 70339; 72551; 9890; 39919; 39550; 38598; 70332; 39851
W-42MGD	74067; 74625
W-44D	75475
W-44MGD	75475

NEEDLE	PHILCO CARTRIDGES
W-30D	35-2671-1
W-45MGD	45-1609; 45-1612
W-46TPD or W-46DS	76-4649
W-48D	Dynamic Reproducer

NEEDLE	MAGNAVOX CARTRIDGES
W-51TPD or W-51DS	560101
W-52TPD or W-52DS	560151-2

NEEDLE	WEBSTER CHICAGO CARTRIDGES
W-63TPD or W-63DS	21P404; V-45

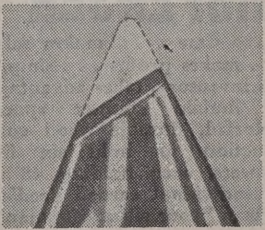
NEEDLE	GENERAL ELECTRIC CARTRIDGES
W-66TPD or W-66DS	RPX-050; RPX-047
W-67D	RPX-040
W-67MGD	RPX-041

LEGEND: *the letters following the model numbers indicate specifications as follows:*

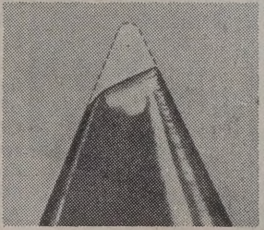
D — 3.0 mil diamond (for 78 RPM)
MGD — 1.0 mil diamond (for 33⅓ and 45 RPM*)
AGD — 2.0 mil diamond (for all grooves, all speeds)
TPD — Twin Point Diamond, 3.0 mil and 1.0 mil (for 78, 33⅓ and 45 RPM)
DS — 1.0 mil diamond and 3.0 mil sapphire (for 78, 33⅓ and 45 RPM)

Walco DIAMOND NEEDLES COST LESS PER PLAY THAN ANY OTHER KIND!

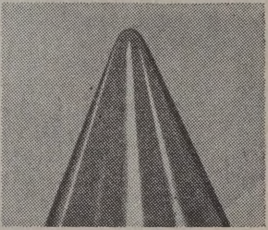
Because WALCO DIAMOND NEEDLES take a perfectly smooth, "ball point" polish and because of the hardness of diamond, keep that polish, the need for further needle replacement is eliminated. Use WALCO DIAMOND NEEDLES wherever economy of operation, perfect reproduction, and longest record life are a consideration.



LP OSMIUM TIP after 15 hours use Note the contour of the needle when new This needle will permanently injure vinyl record surfaces if continued in use



LP SAPPHIRE TIP after 75 hours use Faithful reproduction is no longer possible at this stage and this needle should be replaced as soon as possible



LP DIAMOND TIP after 500 hours. Because of the astonishing hardness of diamond (90 times harder than sapphire), no wear is evident This needle can be used to play hundreds of additional records with perfect safety

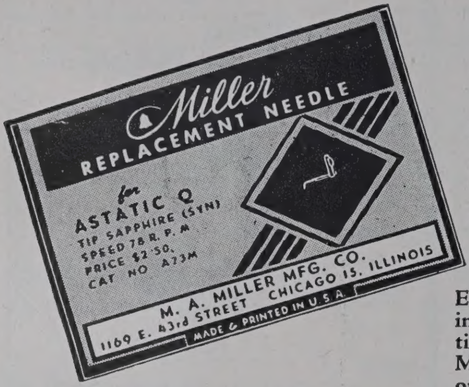
SPECIFY Walco AND BE SURE OF THE FINEST NEEDLES AT LOWEST COST

No first class audio system can possibly maintain the high fidelity response possible of it with a worn needle in the tone arm. Install a WALCO DIAMOND needle for the ultimate in unvarying high fidelity.

Copyright 1952, Electrovox Co., Inc.

Miller Replacement Phonograph Needles

The M. A. Miller Mfg. Co. is a prime manufacturer supplying needles to the most prominent radio and cartridge manufacturers . . . also in position to supply replacement needles . . . to meet your most exacting needs.


Miller
REPLACEMENT NEEDLE
for
ASTATIC Q
TIP SAPPHIRE (SYN)
SPEED 78 R. P. M.
PRICE $2.50
CAT NO A23M
M. A. MILLER MFG. CO.
1169 E. 43rd STREET CHICAGO 15, ILLINOIS
MADE & PRINTED IN U.S.A.

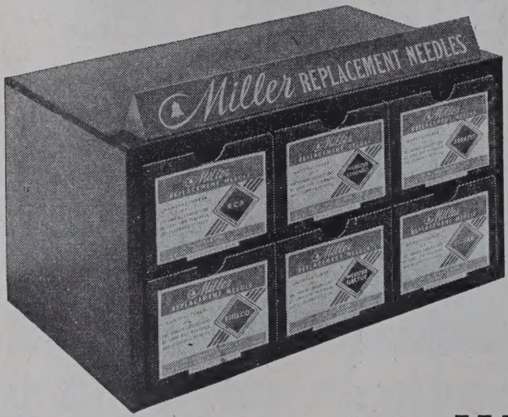
MILLER NEEDLES are Individually Carded

Each needle is attractively packaged in color code for quick identification; blue card for 78 RPM; red for Microgroove; green for all-groove or dual needles.

Miller
REPLACEMENT
NEEDLES

Dealer Counter Dispenser

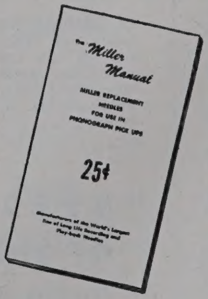
Holds 48 to 60 individual carded needles for easy reference. Sturdy plywood construction, bright red enamel finish with yellow trim. Has transparent acetate cover to protect your needles.


Miller REPLACEMENT NEEDLES

MASTER COUNTER DISPENSER

Saves time . . . makes sales . . . makes profits . . . simplifies inventory, takes advantage of limited counter space. Colorful, durable wood construction to hold six file drawers, each holding 48 to 60 individual carded needles. Acts as "your silent salesman".

MILLER MANUAL


The Miller Manual
MILLER REPLACEMENT NEEDLES FOR USE IN PHONOGRAPH PICK UPS
25¢

Handy, 48 page illustrated booklet plus cover, gives complete summary of Miller Replacement Needles with installation diagrams. Also includes presentation of cartridges to which Miller Needles are adapted; reference material; data, etc. Available upon request.

How to Utilize the MILLER Replacement Needle Chart

To determine the specific needle used in any player, it is necessary to first inspect the cartridge in the record player tone arm. Note the cartridge brand name and serial number or letter. This is easily accomplished by lifting the tone arm and reading the numbers stamped on the cartridge.

Now locate the group of needles, i.e., Astatic, Shure, Electro-Voice or other brand. The cartridge identification shown opposite the caption "manufacturer's cartridge series" will then identify the exact needle required. It is now only necessary to determine whether you desire a sapphire or metal tip as indicated by the code letter "M" for metal and "S" for sapphire and the tip size as indicated for microgroove, standard, or all-groove.

The MILLER REPLACEMENT NEEDLE ILLUSTRATED CHART is designed to make your sales and inventory easier.

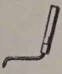
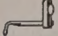
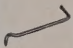
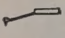
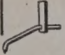
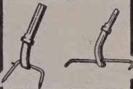
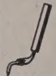
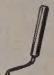
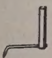
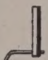
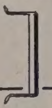
NOTE: All Miller replacement needles listed with the jewelled (Syn.) tip are available with Diamond Stylii upon request.

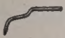
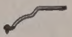
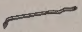
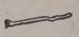
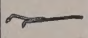
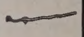
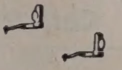
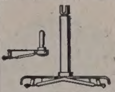
The Miller Manual is a "must" for every serviceman.

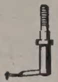
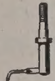
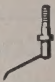
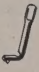
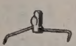
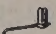
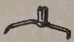
M. A. Miller MANUFACTURING CO.

1169 East 43rd Street, Chicago 15, Illinois
4th & Church Streets, Libertyville, Illinois

M. A. Miller Phonograph Replacement Needles

	I ASTATIC (AST)					II WEBSTER CHICAGO (WC)	III WEBSTER ELECTRIC FEATHERIDE (WE)				
Mfr's Code	T	Q	G	U	A	NE 214-316	Q1	Q2 Q3	A	F16	F14
MILLER Replacements											
Point Description:	**MILLER** Catalog Number					**MILLER** Cat. No.	**MILLER** Catalog Number				
Micro-groove (M)	A11(M)	A21(M)	A31(M)	A41(M)	A61(M)			WE21(M)	WE31(M)	WE41(M)	
Standard 3 Mil (M)	A13(M)	A23(M)	A33(M)	A43(M)	A63(M)		WE13(M)	WE23(M)	WE33(M)	WE43(M)	
Micro-groove (S)		A21(S)	A31(S)	A41(S)	A61(S)				WE31(S)		
Standard 3 Mil (S)		A23(S)	A33(S)	A43(S)	A63(S)				WE33(S)		
All-groove (M)	A113(M)	A213(M)	A313(M)	A413(M)	A613(M)			WE213(M)	WE313(M)		
All-groove (S)		A213(S)	A313(S)	A413(S)	A613(S)				WE313(S)		
Dual Tip (M)						WC213 WC313					WE513(M)
Mfr's Cartridge Series	L-T	QT LQ CQ	GC	UJ. UM M-D (Substitute For C Needle)	AC AC-D	2 Speed 21-291 21-297 3 Speed 21-298	Q1	Standard Q2 All-groove Q3, A9 1 Mil-F13	A1, A8 Micro-groove A (1 to 7)	F15 F16	F14 (1 to 4)

	IV SHURE (SH)		V ELECTRO-VOICE (EV)				VI COLUMBIA (COL)	VII G-E
Mfr's Code	A63MG* A62A A66U‡	A65MG* A61A A67U‡	O	S	OO-D	SS-D	M102	RPJ-005* RPJ-001 RPJ-006± RPJ-010
MILLER Replacements								
Point Description:	**MILLER** Catalog Number		**MILLER** Catalog Number				**MILLER** Catalog Number	
Micro-groove (M)*	P31(M)		E11(M)					
Standard 3 Mil (M)	P33(M)		E13(M)					
Micro-groove (S)*		P41(S)		E21(S)			Col 11(S) Col 21(S)	GE 21 (S)
Standard 3 Mil (S)		P43(S)		E23(S)				GE 23 (S)
All-groove (M)‡	P313(M)		E 113(M)					
All-groove (S)‡		P413(S)		E213(S)				GE 213 (S)
Dual Tip (M)					E313(M)			
Dual Tip (S)						E413(S)		GE 113 (S)
Mfr's Cartridge Series	Standard—P30, P57, P70, P74, P76, P77, P79, P85, P86, P88, P89, P94, PN30, W22, W23, W40, W41, W42, W60, W61, W65. Micro-groove—P73, P74AD, P76, P77 P79, W21, W22. All-groove—P37, P71, P81, W26.		Standard M12, H12, L12 Micro 14, 22, L14, 34 All-groove 130	Standard M12S, H12S, L12S Micro 14S, 22S, 34	16TT 22TT	16TT 26TT	45-1609 Model 101 CQJ Models 102 103 104	DUAL RPX-050 Micro & A.G. RPX-041 Std. & A.G. RPX-040

	VIII RCA			IX PHILCO (PH)			X MAGNAVOX (MA)	
Mfr's Code	74068* 72345	75045* 75046	75496* 75497	DYN	COL	DUAL	560101	560138
MILLER Replacements								
Point Description:	**MILLER** Catalog Number			**MILLER** Catalog Number			**MILLER** Catalog Number	
Micro-groove (M)*		RC21(M)	RC31(M)		PH21(M)			
Standard 3 Mil (M)		RC23(M)	RC33(M)				M13(M)	
Micro-groove (S)	RC11(S)				PH21(S)			
Standard 3 Mil (S)	RC13(S)			PH13(S)				
Dual Tip (M)						PH313(M)		M213(M)
Dual Tip (S)						PH313(S)		
Mfr's Cartridge Series	Standard—70338, 70339, 70332, 72551, 9890, 39919, 39550, 38598, 39851. Micro-groove—74067		135-1	Dynamic Reproducer	45-1609	76-4649	560101	For 560151G3, Use M313(M)

CODE SYMBOLS:
* Micro-groove 1 mil tip
‡ All-grove tip
(M) indicates precious Metal tip
(S) indicates Sapphire tip
Note: Needle Tip, Size Identified by Color

1 Mil Micro-groove	Red
2 Mil All-groove	Green
Truncated	Blue

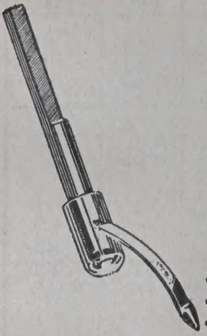
(D) Indicates diamond tip which will be furnished on request for any jewel tipped needle.

LIST PRICES OF MILLER REPLACEMENT NEEDLES

	Osmium	*Osmium Dual*	*Sapphire (Syn.)*	*Sapphire Syn. Dual*	*Diamond*	*Diamond Dual*
Astatic	$1.00	—	$1.50	—	$20.00	—
Columbia	—	—	1.50	—	20.00	—
Electro-Voice	1.50	$2.50	2.50	$3.50	20.00	$40.00
General Electric	—	—	3.50	5.95	27.50	49.95
Magnavox	1.50	2.50	—	3.50	—	40.00
Philco	1.50	2.50	2.25	3.50	—	40.00
RCA	1.50	—	1.60 (.001) 3.45 (.003)	—	20.00	—
Shure	1.50	—	2.50	—	20.00	—
Webster-Electric	1.50	2.50	2.50	—	—	—
Webster-Chicago	—	4.00	—	—	—	—

M. A. MILLER MFG. CO. 1169 EAST 43rd STREET, CHICAGO 15, ILLINOIS
Manufacturers of World's Largest Line of Long Life Playback and Recording Needles

Carillon Dynamic PHONOGRAPH NEEDLES



Individually boxed in transparent plastic container with sliding tight-fitting lid. Needle is mounted on colorful "butterfly" holder.

Cat. #1600-N
list per needle $2.50

Carillon Dynamic
NYLON SHOCKPROOF BUMPER NEEDLE
PRICE $250
M. A. MILLER MFG. CO. CHICAGO

Available With
3 Size Radii for:

- 33 1/3-45 RPM Cat. #1600 N (MG)
- 33 1/3-45-78 RPM Cat. # 1600 N (AG)
- 78 RPM Cat. # 1600 N List $2.50

Eye-appealing, multi-colored display card with one "bonus" needle mounted to produce volume at "point of sale". Almost indestructible needle of nylon and spring wire; bumper absorbs shock.

SHOCK PROOF
NYLON BUMPER
PHONOGRAPH NEEDLES
M.A. MILLER MFG. CO.

Six Free With Each Dozen

Carillon Dynamic NEEDLES are mounted in pilfer-proof, locked-in metal containers.

Cat. #581-S—SAPPHIRE JEWEL (Syn.)

The finest quality jewel-tipped needle with the long-life your customers demand. Designed for lighter tone arms. .... List $2.00

*Cat. #581-S (MG)	List 2.00
*Cat. #581-S (AG)	List 2.00
*Cat. #581-R, with Ruby tip	List 2.50

Cat. #580—OSMIUM ALLOY NEEDLE

High fidelity, minimum record talk. Has duraluminum offset shank for softer tone. Highest quality osmium alloy tip .... List $1.50

*Cat. #580 (MG)	List 1.50
*Cat. #580 (AG)	List 1.50

Cat. #560—PRECIOUS METAL NEEDLE

Extremely long-life needle with highest attainable fidelity. Offset shank provides brilliant tone with minimum record surface noises. ....List $1.00

*Cat. #560 (AG) .... List 1.00

MILLER NEEDLES are displayed to SELL!

This typical display card illustrates how each easeled display card has individual pilfer-proof locked-in metal containers.

Carillon Dynamic
PRECIOUS METAL ALLOY
1.00
PLAYS UP TO 5000 RECORDS
BELL-LIKE CLARITY PHONOGRAPH NEEDLES
FOR PERFECTION IN REPRODUCTION
M.A. MILLER MFG. CO.
CHICAGO

PRECIOUS METAL ALLOY NEEDLE Cat. #550

A fine quality needle at a price to please. .... List $0.50

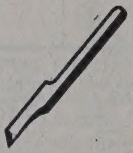
COMBINATION DISPLAY CARD

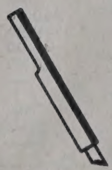
Attractive, colorful card with 14 needles from 50c to $2.50 list price, for the price of 13 needles.

Here is a "bonus" offer. .... List $17.00

CUTTING NEEDLES

Cat. #543
Finest alloy tool steel; microscopically ground, will cut approximately twenty-five six inch records.
List 3 for $1.05





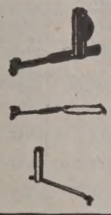
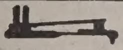
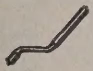
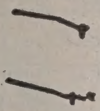
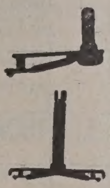
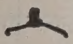
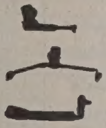
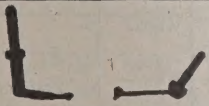
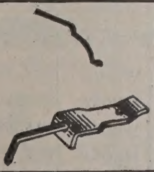
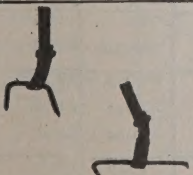
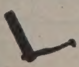
Cat. #542
Stellite . . . fine recording stylus; provides excellent results; hand-finished tip; cuts about five hundred six inch records. ......List $1.50

★ **ALL CARILLON DYNAMIC NEEDLES** are of finest quality . . . available in proper tip radius for standard 78RPM or micro-groove (MG) or for all-groove (AG) records.
When ordering, be sure to specify the tip radius if you desire MG or AG.

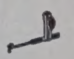
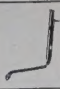
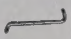
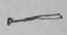
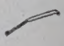
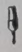
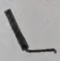
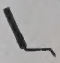
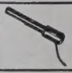
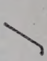
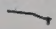
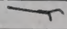
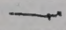
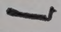
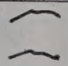
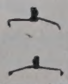
Manufacturers of the World's Largest Line of Long-Life Recording and Playback Records

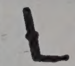
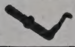
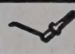
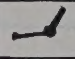
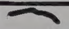
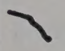
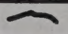
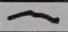
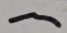
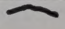
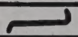
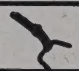
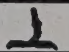
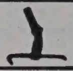
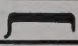
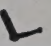
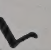
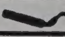
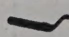
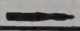
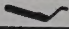
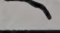
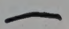
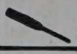
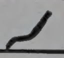
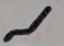
M. A. Miller Manufacturing Co.
1165-69 East 43rd Street • Chicago 15, Illinois

DUOTONE DIAMOND NEEDLES

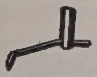
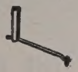
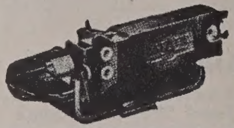
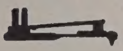
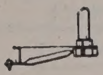
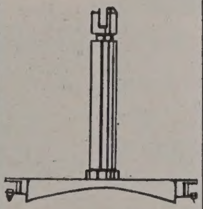
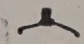
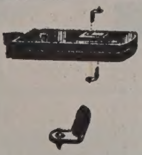
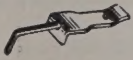
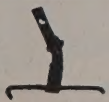
CARTRIDGE	ILLUSTRATION	DUOTONE NEEDLE NO.	POINT SIZE	POINT MATERIAL	PRICE
Astatic Q		AS3	.003	Diamond	$20.00
Astatic Q 33		AS4-LP	.001	Diamond	20.00
Astatic Q		AS4-A	.002 All Groove	Diamond	20.00
Astatic U		AS7	.003	Diamond	20.00
Astatic U		AS7-LP	.001	Diamond	20.00
Astatic C		AS8	.003	Diamond	20.00
Astatic C		AS8-LP	.001	Diamond	20.00
Astatic A-3(J)		AS9	.003	Diamond	20.00
Astatic A-1(J)		AS9-LP	.001	Diamond	20.00
Astatic A-AG(J)		AS9-A	.002 All Groove	Diamond	20.00
Audak		AUS	.003	Diamond	22.50
		AUS-LP	.001	Diamond	22.50
Duotone		36D	.003	Diamond	20.00
Duotone		36D-LP	.001	Diamond	20.00
Duotone		36DA	.002 All Groove	Diamond	20.00
Electro-voice S-3		ES23	.003	Diamond	20.00
Electro-voice S-1		ES24-LP	.001	Diamond	20.00
Electro-voice S-13		ES22	.003 .001	Diamond Diamond	40.00
Electro-voice S-13		ES22-DS	.001 .003	Diamond Sapphire	22.50
General Electric RPJ-001		GE3	.003	Diamond	22.50
General Electric RPJ-005		GE1-LP	.001	Diamond	22.50
General Electric RPJ-006		GEA	.002 All Groove	Diamond	22.50
General Electric RPJ-010		GED	.001 .003	Diamond Diamond	45.00
General Electric		GEDS	.001 .003	Diamond Sapphire	25.00
Magnavox 560138		MAS17	.001 .003	Diamond Diamond	50.00
Magnavox		MASD17	.001 .003	Diamond Sapphire	25.00
Philco-Columbia 45-1613		CS6-LP	.001	Diamond	20.00
Philco-Columbia 35-2693		PHS15	.001 .003	Diamond Diamond	40.00
Philco-Columbia		PHS15-DS	.001 .003	Diamond Sapphire	22.50
Philco 45-1596		*PHS14	.003	Diamond	20.00
RCA 39863		RS7	.003	Diamond	20.00
RCA 74068		RS8-LP	.001	Diamond	20.00
RCA 75497		RS11	.003	Diamond	20.00
RCA 75496		RS11-LP	.001	Diamond	20.00
Shure A61A		MSS	.003	Diamond	20.00
Shure A63-MG		MSS-LP	.001	Diamond	20.00
Shure A66U		MSS-A	.002 All Groove	Diamond	20.00
Shure A52A		SHS	.003	Diamond	20.00
Shure A53MG		SHS-LP	.001	Diamond	20.00
Shure A56U		SHS-A	.002 All Groove	Diamond	20.00
Webster-Chicago NE215		WO-13	.001 .003	Diamond Diamond	50.00
Webster-Chicago NE316		WO11	.001 .003	Diamond Diamond	50.00
Webster-Chicago		Combination above	.001 .003	Diamond Sapphire	25.00
Webster-Racine A-3S		WES28	.003	Diamond	20.00
Webster-Racine A-1S		WES29-LP	.001	Diamond	20.00

DUOTONE REPLACEMENT NEEDLES

Cartridge Mfg. and Their Needle No.		Duotone Needle No.	Cartridge Number	Point Material	Point Size	Price
Astatic Q(M)		AO1	QT-M, QT2-M, QT3-M, LQD, LQD-1	Osm.	Stand.	$1.00
Astatic Q(J)		*AS3	QT-J, QT2-J, Q23-J, LQD, LQD-1	Jew.	Stand.	1.50
Astatic Q-33(M)		AO1-LP	QT33-M, CQ-M, LQD, and LQD-1 Series	Osm.	Micro Groove	1.00
Astatic Q-33(J)		*AS4-LP	CAC-J (New Model) QT33-J, CQ-J, LQD, LQD-1	Jew.	Micro Groove	1.50
Astatic Q-(A-G)(J)		AS4-A	CQ, AG-M, CQ, AG-J	Jew.	All Groove	1.50
Astatic D(M)		AO2	LT2, LTD Series, MD, LT3-D, LT4-D,	Osm.	Stand.	1.00
Astatic D-33(M)		AO2-LP	LT4-D1 LTD3-D, LT4,	Osm.	Micro Groove	1.00
Astatic D-(A-G)(M)		AO2-A	LT4-D, LT4-D1 LT4-AG	Osm.	All Groove	1.00
Astatic G-78(M)		AO5	GC7-J, GC8-M, MG78-J, MG78-M	Osm.	Stand.	1.00
Astatic G(M)		AO5-LP	GC-J, GC-M, GC1-J, GC-1M, MG-J, MG-M	Osm.	Micro Groove	1.00
Astatic G-AGM		AO5-A	GC-AG-M, MG-AG-M	Osm.	All Groove	1.00
Astatic G-AG(J)		AS5-A	GC-AG-J, MG-AG-J	Jew.	All Groove	1.50
Astatic U-78(M)		AO7	U78M	Osm.	Stand.	1.00
Astatic U-78(J)		AS7	U78-J	Jew.	Stand.	1.50
Astatic U(M)		AO7-LP	U-M	Osm.	Micro Groove	1.00
Astatic U(J)		AS7-LP	U-J	Jew.	Micro Groove	1.50
Astatic C-3(M)		AO8	MD-3	Osm.	Stand.	1.00
Astatic C-3(J)		AS8	MD-3	Jew.	Stand.	1.50
Astatic C-1(M)		AO8-LP	MD-1	Osm.	Micro Groove	1.00
Astatic C-1(J)		AS8-LP	MD-1	Jew.	Micro Groove	1.50
Astatic 1J Nylon		ANS10	1-J	Jew.	Stand.	2.50
Astatic T(M)		AO11	LT1-M, LT2-M, LT3-M	Osm.	Stand.	1.00
Astatic T33(M)		AO11-LP	LT33	Osm.	Micro Groove	1.00
Am.-Micro-S-1		AMO	S1, S1-A, S2, S2-A	Osm.	Stand.	1.50
Am.-Micro-CO-3		AMO1	C3	Osm.	Stand.	1.50
Am.-Micro-CO-2		AMO2-A	C1, C2	Osm.	All Groove	1.50
Am.-Micro-CO-1		AMO1-LP	C1, C2	Osm.	Micro Groove	1.50
Crosley 145720		CRO	145749	Osm.	Stand.	2.50
Elec.-Voice O-3		EO19	M12, H12, L12	Osm.	Stand.	1.50
Elec.-Voice O-1		EO19-LP	14, 22, L14, 34	Osm.	Micro Groove	1.50
Elec.-Voice O-2		ESOA25	130-33	Osm.	All Groove	1.50
Elec.-Voice O-2		ES25-A	130-33S	Jew.	All Groove	2.50
Elec.-Voice S-3		*ES23	M12S, H12S,-L12S	Jew.	Stand.	2.50
Elec.-Voice S-1		*ES24-LP	14S, 22S, 34S	Jew.	Micro Groove	2.50
Elec.-Voice O-13		EO21	16TT, 22TT	Osm.	Twin Point	2.50
Elec.-Voice S-13		ES22	16TT, 22TT	Jew.	Twin Point	3.50
Magnavox 560102		MAO16	Magnavox 560101	Osm.	Stand.	1.50
Magnavox 560138		MAS17	Magnavox 560133	Osm.	Stand & Micro Groove	2.50
Philco-Col. 45-1613		CO5-LP	45-1609, 45-1612	Osm.	Micro Groove	1.50
Philco-Col. 45-1613		*CS6-LP	45-1609, 45-1612	Jew.	Micro Groove	2.00
Philco 45-1596		*PHS14	Philco-Dynamic Repro. 76-1622	Jew.	Stand.	2.25
Philco 45-1597		PHO16	35-2671	Osm.	Stand.	1.50
Philco 45-1651		PHS16	35-2671	Jew.	Stand.	2.50
Philco-3 Sp. 35-2693		PHO15	76-4649	Osm.	Twin Pt. Stand. & Micro Gr.	2.50
Philco-3 Sp. 35-2693		PHS15	Philco-Dynamic Repro. 76-4649	Jew.	Twin Pt. Stand. & Micro Gr.	3.50

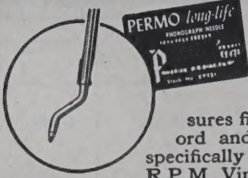
Cartridge Mfg. and Their Needle No.		Duotone Needle No.	Cartridge Number	Point Material	Point Size	Price
RCA-Part # 39863,72345		*RS7	70338, 70339, 72551, 39919, 212X1, 9890	Jew.	Stand.	$3.50
38449,75046		RO7	(Magic Tone Cell) 39550 38598, 70332, 39851	Osm.	Stand.	2.00
RCA-Part # 74068		*RS8-LP	74067, Improved Type, 74625	Jew.	Micro Groove	2.50
RCA-Part # 75045		RO9-LP	74067, 74625	Osm.	Micro	1.50
RCA-Part # 135-1, 75497		RO10	75475	Osm.	Stand.	2.00
RCA-Part # 75496		RO10-LP	75475	Osm.	Micro	2.00
RCA-Part # 75497		RS11	75475	Jew.	Stand.	3.50
RCA-Part # 75496		RS11-LP	75475	Jew.	Micro Groove	2.50
Shure A-62A		MSO	P30, P70, P74-AD, P76, P76-AF, P57-S,	Osm.	Stand.	1.50
Shure A-61A		*MSS	P76-AFV, P77, W22, W22-AB, W23-A, W23-AB, W60-A, W60-B, W60-HS, W60-PN, W61-B, W65-B, P70-A,	Jew.	Stand.	2.50
Shure A-63 Mg.		MSO-LP	P37-A, P75-A, P73, P72-V, P76-AV, P76-AFV,-P77-AV,	Osm.	Micro	1.50
Shure A-63 Mg.		*MSS-LP	Also Turn Over, Admiral 409-A11	Jew.	Micro	2.50
Shure A-66U		MSO-A	Admiral 409-A13 P71, P71-B, P71-C, P81, P81-AD, P81-C,	Osm.	All Purpose Truncated Tip	1.50
Shure A-66U		MSS-A	P37, P37-C, P37-A, P81-A, W26-A, W66-A, W26-B, W66-B	Jew.	All Purpose Truncated Tip	2.50
Sonotone		SO-A	W-7590	Osm.	All Gr.	1.50
Sonotone		SS-A	W-7590	Jew.	All Gr.	2.50
Webster-Chi. 3-Sp. Ch. NE-215		WO13	21P247, 21P402, 21P403	Osm.	Twin Point	4.00
Webster-Chi. 3-Sp. Ch. NE-215		WO12 (Nylon)	21P247, 21P402, 21P403 (Nylon)	Osm.	Twin Point	4.50
Webster-Chi. 3-Sp. Ch. NE-316		WO11	21P404	Osm.	Twin Point	4.00
Webster-El. M		WEO17	M1	Osm.	Stand.	1.50
Webster-El. F-14		WEO18	F14, F14-1, F14-2, F14-3	Osm.	Twin Point	2.50
Webster-El. A3S		*WES28	A8, A1	Jew.	Stand.	2.50
Webster-El. A1S		*WES29 LP	A1, A8, A6, A3, A5, A4	Jew.	Micro Groove	2.50
Webster-El. A30		WEO20	A1-M, A1-M1, A5-M, A6-M	Osm.	Stand.	1.50
Webster-El. A10		WEO20 LP	A1-M, A1-M1, A2-M, A6-M	Osm.	Micro Groove	1.50
Webster-El. A9		WEO31-A	A9-M	Osm.	All Groove	1.50
Webster-El. Q1		WEO22	Q1	Osm.	Stand.	1.50
Webster-El. Q2		WEO26	Q2	Osm.	Stand.	1.50
Webster-El. F7		WEO LP27	Q2, F7-1, F13, F7-2	Osm.	Micro Groove	1.50
Webster-El. C9		WEO21-A	C9	Osm.	All Groove	1.50
Webster-El. A2		WEO-A30	Q3, A9, F13	Osm.	All Groove	1.50
Webster-El. F16-3		WEO32	F16, F16-1, F16-2	Osm.	Stand.	1.50
Webster-El. F16-1		WEO32 LP	F16, F16-1, F16-2	Osm.	Micro Groove	1.50
Webster-El. F15-3		WEO33	F15, F15-1	Osm.	Stand.	1.50
Webster-El. F15-1		WEO33 LP	F15, F15-1	Osm.	Micro Groove	1.50
Webster-El. F10		WEO	F10, F11, F11-1	Osm.	Stand.	1.50
Webster-El. F10-1		WES-LP	F10, F11, F11-1	Jew.	Micro Groove	2.50
Webster-El. G3		WEO34	G3-M	Osm.	Stand.	1.50
Webster-El. G1		WEO34 LP	G1-M	Osm.	Micro Groove	1.50
Webster-El. G2		WEO34-A	G2-M	Osm.	All Groove	1.50
Webster-El. WS		WEO35	WS	Osm.	Stand.	1.50
Webster-El. AJ		WEO35 LP	AJ4	Osm.	Micro Groove	1.50
Duotone		36	For any set screw pick-up made for All Purpose records	Jewel		2.50
Duotone		36-D	For any light weight cartridge. Made for All Purpose use—using set screw for removal	Diamond		20.00

DUOTONE REPLACEMENT NEEDLES '52 Supplement

CARTRIDGE MFG. AND THEIR NEEDLE NO.	ILLUSTRATION ACTUAL SIZE	DUOTONE NEEDLE NO.	CARTRIDGE NUMBER	CARTRIDGE ILLUSTRATION AND INSTRUCTIONS	POINT MATERIAL	POINT SIZE	PRICE
Astatic A-3(M)		AO9	AG78, ACD Series	AC SERIES	Osmium	Standard	$1.00
Astatic A-3(J)		AS9			Jewel	Standard	1.50
Astatic A-1(M)		AO9-LP	AC, ACD Series	Needle held in its socket by friction. Lift old needle out with tip of penknife, and press new needle gently into socket.	Osmium	Micro Groove	1.00
Astatic A-1(J)		AS9-LP		ACD SERIES	Jewel	Micro Groove	1.50
Astatic A-AG(M)		AO9-A	AC-AGM, AC-AG-J		Osmium	All Groove	1.00
Astatic A-AG(J)		AS9-A			Jewel	All Groove	1.50
Audak		AUS	R-2, R-6		Jewel	Standard	3.50
		AUS-LP	R-2, R-6		Jewel	Micro Groove	3.50
General Electric RPJ-001		GE3	RPX-040, RPX-041, RPX-046		Jewel	Standard	3.50
General Electric RPJ-005		GE1-LP	RPX-040, RPX-041, RPX-046		Jewel	Micro Groove	3.50
General Electric RPJ-006		GEA			Jewel	All Groove	3.50
General Electric RPJ-010		GED	RPX-050, RPX-047		Jewel	Twin Point	5.95
Magnavox 560138 560153		MAS18	Magnavox 560138		Jewel	Standard & Micro Groove	3.50
Seeburg		SES1-LP	MRN, A-25162	Seeburg coin phonograph. Uses 2 needles mounted in opposite directions.	Jewel	Micro Groove	2.50
Shure A52-A A53-MG		SHO SHO-LP	WC33-B W31-AR, WC31-AR	SHURE BROTHERS INC	Osmium Osmium	.003 .001	1.50 1.50
A56-U		SHO-A	W36-B, WC36-B		Osmium	All Groove	1.50
A52-A A53-MG		SHS SHS-LP	WC33-B W31-AR, WC31-AR		Jewel Jewel	.003 .001	2.50 2.50
A56-U		SHS-A	W36-B, WC36-B		Jewel	All Groove	2.50
Webster-Chicago NE316		WS11	21P404		Jewel		5.00

PERMO CONVENTIONAL NEEDLES

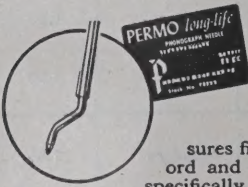
PERMO, INC.
CHICAGO 26, ILLINOIS


PERMO long-life
PHONOGRAPH NEEDLE

THE MICRO-POINT

A-311—The combination of Shielded Jewel Tip, bent shank design and careful matching of needle to record characteristics insures finest reproduction with longest record and needle life. The Micro-Point is specifically designed for use with 33⅓ and 45 R.P.M. Vinylite Records.

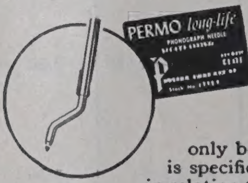
Stock No.	Radius of Tip And Tip Material	For R.P.M. Record Speed	List Price
A-311	.001″ Shielded Jewel	33⅓ & 45	$ 1.50
311-C8	Display Card of 8		$12.00


PERMO long-life
PHONOGRAPH NEEDLE

THE STANDARD JEWEL

C-312—The combination of Shielded Jewel Tip, bent shank design and careful matching of needle to record characteristics insures finest reproduction with longest record and needle life. The Standard Jewel is specifically designed for use with 78 R.P.M. Records.

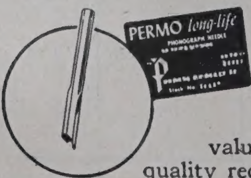
Stock No.	Radius of Tip And Tip Material	For R.P.M. Record Speed	List Price
C-312	.003″ Shielded Jewel	78	$ 1.50
312-C8	Display Card of 8		$12.00


PERMO long-life
PHONOGRAPH NEEDLE

THE COMPROMISE

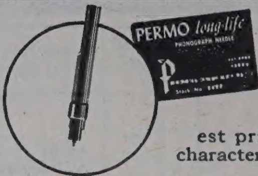
B-310—This needle was designed for use in record players that use one needle for all three speeds: 33⅓, 45 and 78 R.P.M. It should only be used where the compromise point is specified by the equipment manufacturer in relation to the design of the phono cartridge, tone arm and player.

Stock No.	Radius of Tip And Tip Material	For R.P.M. Record Speed	List Price
B-310	.0021″ Compromise Permometal	33⅓, 45 & 78	$ 1.00
310-C8	Display Card of 8		$ 8.00
310-C12	Display Card of 12		$12.00


PERMO long-life
PHONOGRAPH NEEDLE

CUTTING STYLUS

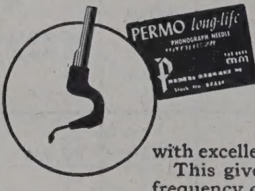
D-366—Permo's highest quality cutting stylus for all standard groove recordings. A real value for those who prefer a fine quality record cutting stylus.
Stock No. D-366. List Price $1.50.


PERMO long-life
PHONOGRAPH NEEDLE

THE VINYL

C-323—Deluxe version of standard output needle with special vinyl dampener and Permometal Tip, provides many features of the highest price needles. Standard frequency characteristics, output, and life.

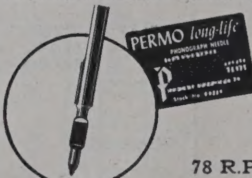
Stock No.	Radius of Tip And Tip Material	For R.P.M. Record Speed	List Price
C-323	.003″ Permometal	78	$ .75
323-C8	Display Card of 8		$ 6.00
323-C12	Display Card of 12		$ 9.00


PERMO long-life
PHONOGRAPH NEEDLE

THE NYLON

C-325—The combination of the offset design with nylon damped spring action provides unusual lateral and vertical compliance with excellent tracking at low needle pressures. This gives low output with extended range frequency characteristics and long life for both needle and records.

Stock No.	Radius of Tip And Tip Material	For R.P.M. Record Speed	List Price
C-325	.003″ Permometal	78	$ 1.25
325-C8	Display Card of 8		$10.00
325-C12	Display Card of 12		$15.00

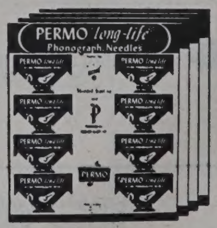

PERMO long-life
PHONOGRAPH NEEDLE

THE PERMOTONE

C-370—Best money value in the Industry. Permometal Tip has standard frequency characteristics, output, and life. For use with 78 R.P.M. records.

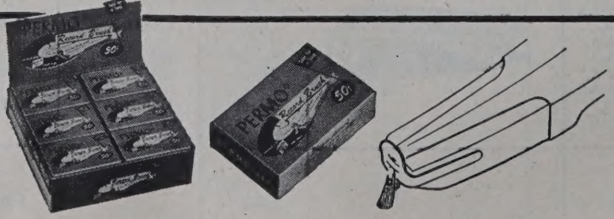
Stock No.	Radius of Tip And Tip Material	For R.P.M. Record Speed	List Price
C-370	.003″ Permometal	78	$ .50
370-C8	Display Card of 8		$4.00

C-8 DISPLAY CARDS


PERMO long-life
Phonograph Needles

C-12 DISPLAY CARDS

PERMO long-life
nylon
$1.25


PERMO
Record Brush
50¢

PERMO RECORD BRUSH

Makes records sound better by removing dust. Easily attached to all types of tone arms. Individually packaged, 12 to the Counter-Display Carton.

Stock No. 700. List Price $.50 ea.

PERMO

SPECIAL TYPE NEEDLE MERCHANDISING SERVICE

PERMO, INC.
CHICAGO 26, ILLINOIS

DISPLAY AND RE-ORDER FEATURES

1

PERMO
Replacement Needle C-320
FOR SHURE CARTRIDGES
PERMOMETAL OSMIUM ALLOY TIP
$1.00
FOR 78 RPM RECORDS
STOCK NO. C-320

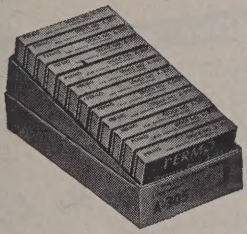
INDIVIDUAL NEEDLE PACKAGE

Uniform Size Packages for all special type needles provide complete interchangeability in display, stock and shipping containers.

Individual Packages Color Coded—

RED—1 Mil Tip for Micro-Groove Records.
GREEN—Compromise Tip for All Three Speeds.
BLUE—3 Mil Tip for 78 R.P.M. Records.

2



"12 IN 1" DISPLAY BOX

This Basic Box of 12 individually packaged replacement needles is an excellent display box or a practical storage unit for reserve stock. Box fits both the "36 in 1" display case and the "40 Dozen in 1" display cabinet.

3

PERMO
long life phonograph needles
PERMO
PERMO for long life

"36 IN 1" DISPLAY CASE HAS MANY FEATURES:

Eye-Catching Display Merchandiser—

Black and yellow colors on case plus the red, blue and green needle packages compel customer attention.

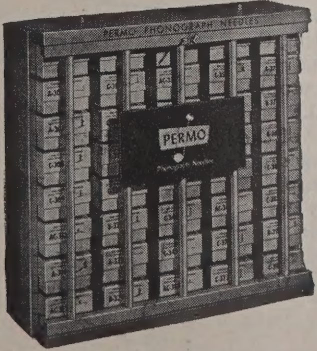
Flexible Stock Arrangement—

Arrange your stock to suit yourself in numerical order, order of turn-over, order of usage, or any way that suits your type of trade.

Re-Order File Built-in—

Just set up your initial stock as you want it. Tear off and deposit the re-order tickets as needles are sold. Staple the re-order tickets to a purchase order and your stock of Permo needles will be automatically maintained.

4


PERMO PHONOGRAPH NEEDLES
PERMO

"40 DOZEN IN 1" DISPLAY CABINET

3 Display Cabinets provide a place for up to a dozen of every special type needle in the line with a few extra spaces for future releases.

Use them in the sales department, in the service department, or in the shipping department.

They hang on the wall, sit on the counter, fit in your shelves, or stack on top of each other.

Any way you use them, these display cabinets will attract attention to Permo needles and to your efficiency.

PERMO

SPECIAL TYPE NEEDLE MERCHANDISING SERVICE

PERMO, INC.

CHICAGO 26, ILLINOIS

SALES AND SERVICE FEATURES:

1

PERMO
Replacement Needle C-320
FOR SHURE CARTRIDGES
OSMIUM ALLOY TIP
$1.00
STOCK NO. C-320
NEEDLE

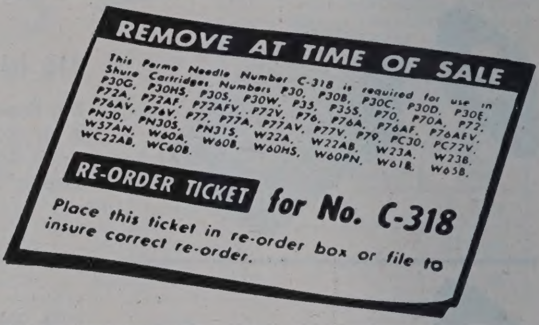
INDIVIDUAL NEEDLE PACKAGE

Permo supplies various accessories for different needles to make installation easy. Panel contains illustrations of wrenches, removal tools and other accessories supplied.

2

CARTRIDGE INFORMATION AND RE-ORDER TICKET

The cartridge number or numbers the needle "fits" is supplied on each PERMO needle package. That important information is printed on a removable label which is also a re-order ticket to insure correct ordering to keep stock complete.



REMOVE AT TIME OF SALE

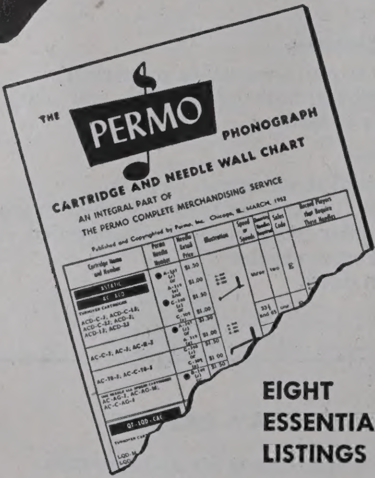
This Permo Needle Number C-318 is required for use in Shure Cartridges Numbers P30, P30B, P30C, P30D, P30E, P30G, P30HS, P30S, P30W, P35, P35S, P70, P70A, P72, P72A, P72AF, P72AFV, P72V, P76, P76A, P76AF, P76AEV, P76AV, P76V, P77, P77A, P77AV, P77V, P79, PC30, PC72V, PN30, PN30S, PN31S, W22A, W22AB, W23A, W23B, W57AN, W60A, W60B, W60HS, W60PN, W61B, W65B, WC22AB, WC60B.

RE-ORDER TICKET for No. C-318

Place this ticket in re-order box or file to insure correct re-order.

3

CARTRIDGE TO NEEDLE WALL CHART



THE PERMO PHONOGRAPH CARTRIDGE AND NEEDLE WALL CHART

AN INTEGRAL PART OF THE PERMO COMPLETE MERCHANDISING SERVICE

Published and Copyrighted by Permo, Inc. Chicago, Ill. MARCH, 1952

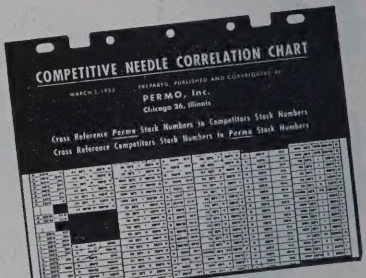
EIGHT ESSENTIAL LISTINGS

1. Cartridge name and numbers
2. Permo needle numbers
3. Retail prices of needles
4. Needle illustrations
5. Record player speeds
6. Quantity of needles used
7. Sales movement code
8. Record players using needles

4

NEEDLE CORRELATION AND CROSS REFERENCE CHART

Tabular listings on competitive phonograph needles (and the complete Permo needle selection) for quick, easy reference. Chart includes complete information on needle catalog numbers.



COMPETITIVE NEEDLE CORRELATION CHART

MARCH 1, 1952

PREPARED, PUBLISHED AND COPYRIGHTED BY

PERMO, Inc.

Chicago 26, Illinois

Cross Reference Permo Stock Numbers to Competitors Stock Numbers

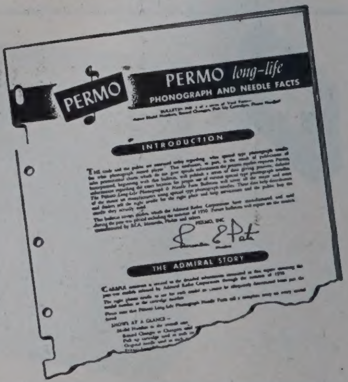
Cross Reference Competitors Stock Numbers to Permo Stock Numbers

---

5

PHONOGRAPH AND NEEDLE FACTS

Complete application information. The "facts" about getting the *right needle for the right place.* These "Facts" supply the model number of the overall set; the number of the record changer or changers; the number of the pickup cartridge or cartridges; the number of the needle or needles, used as original equipment, and the number of the PERMO Replacement needle.



PERMO

PERMO long-life PHONOGRAPH AND NEEDLE FACTS

INTRODUCTION

THE ADMIRAL STORY

Radio's Master — 17th Edition

SPECIAL TYPE REPLACEMENT NEEDLES

PERMO, INC.
CHICAGO 26, ILLINOIS

CARTRIDGE ORIGINATOR'S NAME AND NEEDLE NUMBER	PERMO NEEDLE NUMBER	PERMO LIST PRICE	FIGURE NUMBER	TYPES OF RECORDS PLAYED	PERMO TIP MATERIAL	SALES CODE	DIAMOND TIPS AVAILABLE
AMERICAN MICROPHONE CO.							
A-478(M)	C-391	$1.50	13	78	PERMOMETAL		
CO-1(M) & CS-1(J)	A-387	1.50	11	33⅓ & 45	PERMOMETAL		
CO-3(M) & CS-3(J)	C-389	1.50	11	78	PERMOMETAL		
CO-17-RD(M) & CS-17(J)	B-390	1.50	12	33⅓, 45 & 78	PERMOMETAL		
ASTATIC CORP.							
A-1(M)	A-319	1.00	4	33⅓ & 45	PERMOMETAL	E	
A-1(J)	A-347	1.50	3	33⅓ & 45	SHIELDED JEWEL	E	◆
A-3(M)	C-309	1.00	4	78	PERMOMETAL	E	
A-3(J)	C-348	1.50	3	78	SHIELDED JEWEL	E	◆
A-AG(M)	B-321	1.00	4	33⅓, 45 & 78	PERMOMETAL	F	
A-AG(J)	B-349	1.50	3	33⅓, 45 & 78	SHIELDED JEWEL	F	◆
C-1(M)	A-354	1.00	21	33⅓ & 45	PERMOMETAL		
C-1(J)	A-356	1.50	20	33⅓ & 45	SHIELDED JEWEL		
C-3(M)	C-353	1.00	21	78	PERMOMETAL		
C-3(J)	C-355	1.50	20	78	SHIELDED JEWEL		
D(M)	C-341	1.00	5	78	PERMOMETAL	E	
D-33(M)	A-343	1.00	5	33⅓ & 45	PERMOMETAL	E	
D-AG(M)	B-342	1.00	5	33⅓, 45 & 78	PERMOMETAL	E	
G(M)	A-304	1.00	7	33⅓ & 45	PERMOMETAL	G	
G(J)	A-332	1.50	6	33⅓ & 45	SHIELDED JEWEL	G	◆
G-78(M)	C-331	1.00	7	78	PERMOMETAL	G	
G-78(J)	C-330	1.50	6	78	SHIELDED JEWEL	G	
G-AG(M)	B-326	1.00	7	33⅓, 45 & 78	PERMOMETAL	G	
G-AG(J)	B-334	1.50	6	33⅓, 45 & 78	SHIELDED JEWEL	G	◆
M-5(M)	AA-404	* 2.25 SET	23	33⅓ & 45	PERMOMETAL		
M-5(J)	AA-403	* 3.25 SET	22	33⅓ & 45	SHIELDED JEWEL		◆
M-6(M)	CC-406	* 2.25 SET	23	78	PERMOMETAL		
M-6(J)	CC-405	* 3.25 SET	22	78	SHIELDED JEWEL		◆
NYLON(M) & NYLON(J)	C-301	1.50	17	78	SHIELDED JEWEL		
Q(M)	C-308	1.00	9	78	PERMOMETAL	E	
Q(J)	C-327	1.50	8	78	SHIELDED JEWEL	E	◆
Q-33(M)	A-357	1.00	9	33⅓ & 45	PERMOMETAL	E	
Q-33(J)	A-305	1.50	8	33⅓ & 45	SHIELDED JEWEL	E	◆
Q-AG(M)	B-329	1.00	9	33⅓, 45 & 78	PERMOMETAL	F	
Q-AG(J)	B-328	1.50	8	33⅓, 45 & 78	SHIELDED JEWEL	F	◆
T(M)	C-344	1.00	10	78	PERMOMETAL	F	
T-33(M)	A-421	1.00	10	33⅓ & 45	PERMOMETAL		
U(M)	A-359	1.00	19	33⅓ & 45	PERMOMETAL	F	
U(J)	A-361	1.50	18	33⅓ & 45	SHIELDED JEWEL	F	
U-TR(J)	D-368	1.50	18	TRANSCRIPTION	SHIELDED JEWEL		
U-78(M)	C-358	1.00	19	78	PERMOMETAL		
U-78(J)	C-360	1.50	18	78	SHIELDED JEWEL		
ELECTRO-VOICE							
O-1(M)	A-337	1.00	25	33⅓ & 45	PERMOMETAL	F	
S-1(J)	A-339	1.50	24	33⅓ & 45	SHIELDED JEWEL	F	◆
O-2(M)	B-307	1.00	25	33⅓, 45 & 78	PERMOMETAL	E	
S-2(J)	B-346	1.50	24	33⅓, 45 & 78	SHIELDED JEWEL	E	◆
O-3(M)	C-340	1.00	25	78	PERMOMETAL	F	
S-3(J)	C-345	1.50	24	78	SHIELDED JEWEL	F	◆
O-13(M)	AC-367	2.00	16	33⅓ & 45 78	PERMOMETAL PERMOMETAL	F	
S-13(J)	AC-369	3.00	14	33⅓ & 45 78	SHIELDED JEWEL SHIELDED JEWEL	F	
SO-13(J & M)	AC-333	2.50	15	33⅓ & 45 78	SHIELDED JEWEL PERMOMETAL	F	◆
GENERAL ELECTRIC							
RPJ-001(J)	C-409	3.50	58	78	SHIELDED JEWEL	G	◆
RPJ-005(J)	A-407	3.50	58	33⅓ & 45	SHIELDED JEWEL	G	◆
RPJ-006(J)	D-408	3.50	58	TRANSCRIPTION	SHIELDED JEWEL		◆
RPJ-007(J & J)	DA-417	5.95	59	33⅓ & 45 TRANSCRIPTION	SHIELDED JEWEL SHIELDED JEWEL		◆
RPJ-010(J & J)	AC-410	5.95	59	33⅓ & 45 78	SHIELDED JEWEL SHIELDED JEWEL	G	◆
RPJ-013(D & J)	AC-422	31.00	60	33⅓ & 45 78	DIAMOND SHIELDED JEWEL		◆
MAGNAVOX							
560102(M)	C-352	1.50	26	78	PERMOMETAL	G	
560146(M & M)	AC-350	2.50	28	33⅓ & 45 78	PERMOMETAL PERMOMETAL	E	
560153(M & M)	AC-351	2.50	27	33⅓ & 45 78	PERMOMETAL PERMOMETAL	E	
PHILCO							
35-2638(J) 35-2661(J) 45-1552-1(J) 45-1596(J) 45-9610(J)	C-317	2.25	31	78	SHIELDED JEWEL	F	◆
35-2678(M) 45-1613(M) 45-9586(M)	A-316	1.00	30	33⅓	PERMOMETAL	E	
45-1650(J) 45-9587(J)	A-314	1.50	29	33⅓	SHIELDED JEWEL	E	◆
35-2693(M & M) 45-9588(M & M)	AC-315	2.00	33	33⅓ & 45 78	PERMOMETAL PERMOMETAL	E	
35-2693(M & M) 45-9588(M & M) 45-9589(J & J)	AC-313	2.50	32	33⅓ & 45 78	SHIELDED JEWEL PERMOMETAL	E	◆

*Matched Set, Upper and Lower Needles for Markel Changers.
◆Diamond Tip. Prices Quoted On Request.

Sales Code: (Turnover) "E" for Excellent, "G" for Good, "F" for Fair.

SPECIAL TYPE REPLACEMENT NEEDLES

PERMO, INC.

CHICAGO 26, ILLINOIS

CARTRIDGE ORIGINATOR'S NAME AND NEEDLE NUMBER	PERMO NEEDLE NUMBER	PERMO LIST PRICE	FIGURE NUMBER	TYPES OF RECORDS PLAYED	PERMO TIP MATERIAL	SALES CODE	DIAMOND TIPS AVAILABLE
PICKERING							
S-20(J)	D-411	$1.50	55	.002" (TRANSCRIPTION)	SHIELDED JEWEL	....	◆
S-25(J)	D-412	1.50	55	.0025" (TRANSCRIPTION)	SHIELDED JEWEL	....	◆
S-30(J)	C-413	1.50	55	78	SHIELDED JEWEL	....	◆
RADIO CORP. OF AMERICA							
38449(J)	C-399	2.00	49	78	SHIELDED JEWEL	E	◆
39863(J)	C-400	2.00	51	78	SHIELDED JEWEL	E	◆
70915(J)	C-399	2.00	49	78	SHIELDED JEWEL	E	◆
72345(J)	C-400	2.00	51	78	SHIELDED JEWEL	E	◆
74068(J)	A-396	2.00	50	45	SHIELDED JEWEL	E	◆
74622(D)	A-407	3.50	58	45	SHIELDED JEWEL	G	◆
74818(J)	A-398	2.00	52	45	SHIELDED JEWEL	E	◆
74985(M)	A-304	1.00	7	45	PERMOMETAL	G	....
75045(M)	A-322	1.00	2	33⅓	PERMOMETAL	E	....
75046(M)	C-320	1.00	2	78	PERMOMETAL	E	....
75496(M)	A-397	2.00	54	33⅓	SHIELDED JEWEL	G	◆
75497(M)	C-401	2.00	53	78	SHIELDED JEWEL	G	◆
75770(J)	A-398	2.00	52	45	SHIELDED JEWEL	E	◆
76323(M)	A-319	1.00	4	45	PERMOMETAL	E	....
76374(M)	A-322	1.00	2	45	PERMOMETAL	E	....
SHURE BROS.							
A52A(M)	C-414	1.00	56	78	PERMOMETAL	F	....
A52A WITH JEWEL TIP	C-420	1.50	57	78	SHIELDED JEWEL	F	◆
A53MG(M)	A-415	1.00	56	33⅓ & 45	PERMOMETAL	F	....
A53MG WITH JEWEL TIP	A-418	1.50	57	33⅓ & 45	SHIELDED JEWEL	F	◆
A56U(M)	B-416	1.00	56	33⅓, 45 & 78	PERMOMETAL	F	....
A56U WITH JEWEL TIP	B-419	1.50	57	33⅓, 45 & 78	SHIELDED JEWEL	F	◆
A61A(J)	C-318	1.50	1	78	SHIELDED JEWEL	E	◆
A62A(M)	C-320	1.00	2	78	PERMOMETAL	E	....
A63MG(M)	A-322	1.00	2	33⅓ & 45	PERMOMETAL	E	....
A64MG(M)	A-311	1.50	48	33⅓ & 45	SHIELDED JEWEL	....	....
A65MG(J)	A-300	1.50	1	33⅓ & 45	SHIELDED JEWEL	E	◆
A66U(M)	B-306	1.00	2	33⅓, 45 & 78	PERMOMETAL	E	....
A67U(J)	B-335	1.50	1	33⅓, 45 & 78	SHIELDED JEWEL	E	◆
SONOTONE							
W-7590-1(J)	A-304	1.00	7	33⅓ & 45	PERMOMETAL	G	....
	A-332	1.50	6	33⅓ & 45	SHIELDED JEWEL	G	◆
W-7590-2(M)	B-326	1.00	7	33⅓, 45 & 78	PERMOMETAL	G	....
	B-334	1.50	6	33⅓, 45 & 78	SHIELDED JEWEL	G	◆
W-7590-3(J)	C-331	1.00	7	78	PERMOMETAL	G	....
	C-330	1.50	6	78	SHIELDED JEWEL	G	◆
WEBSTER—CHICAGO							
NE-215(M & M)	AC-336	2.00	34	33⅓	PERMOMETAL	G	....
				78	PERMOMETAL	....	....
NE-316(M & M)	AC-338	2.00	35	33⅓ & 45	PERMOMETAL	G	....
				78	PERMOMETAL	....	....
WEBSTER ELECTRIC—RACINE							
A(J)AG	B-380	1.50	37	33⅓, 45 & 78	SHIELDED JEWEL	....	....
A(M)AG	B-381	1.00	36	33⅓, 45 & 78	PERMOMETAL	....	....
A(J)1	A-376	1.50	37	33⅓ & 45	SHIELDED JEWEL	F	....
A(M)1	A-378	1.00	36	33⅓ & 45	PERMOMETAL	F	....
A(J)3	C-375	1.50	37	78	SHIELDED JEWEL	F	....
A(M)3	C-377	1.00	36	78	PERMOMETAL	F	....
AJ(M)	A-423	1.00	38	33⅓ & 45	PERMOMETAL	....	....
C9(M)2	B-379	1.00	38	33⅓, 45 & 78	PERMOMETAL	G	....
F7P(M)	C-392	1.00	45	78	PERMOMETAL	....	....
F7P-2(M)	C-393	1.00	46	78	PERMOMETAL	....	....
F11(M)1	A-322	1.00	2	33⅓ & 45	PERMOMETAL	E	....
F11(M)3	C-320	1.00	2	78	PERMOMETAL	E	....
F13(M)1	A-394	1.00	46	33⅓ & 45	PERMOMETAL	....	....
F14(M & M)	AC-371	2.00	40	33⅓ & 45	PERMOMETAL	F	....
				78	PERMOMETAL	....	....
F15(M)1	A-302	1.00	41	33⅓ & 45	PERMOMETAL	G	....
F15(M)3	C-372	1.00	41	78	PERMOMETAL	F	....
F16(M)	C-303	1.00	42	78	PERMOMETAL	G	....
F16(M)1	A-374	1.00	43	33⅓ & 45	PERMOMETAL	....	....
F16(M)3	C-373	1.00	43	78	PERMOMETAL	....	....
F18(M)3	C-303	1.00	42	78	PERMOMETAL	G	....
G1(M)	A-384	1.00	39	33⅓ & 45	PERMOMETAL	F	....
G2(M)	B-385	1.00	39	33⅓, 45 & 78	PERMOMETAL	....	....
G3(M)	C-383	1.00	39	78	PERMOMETAL	F	....
M1(M)	C-386	1.00	44	78	PERMOMETAL	....	....
Q1(M)	C-392	1.00	45	78	PERMOMETAL	....	....
Q2(M)	C-393	1.00	46	78	PERMOMETAL	....	....
Q3(M)	B-395	1.00	46	33⅓, 45 & 78	PERMOMETAL	....	....
WS(M)	C-382	1.00	38	78	PERMOMETAL	....	....
WILCOX-GAY							
D-10(M & M)	DB-424	2.50	47	33⅓, 45 & 78 (CUTTING POINT)	PERMOMETAL	....	....
				33⅓, 45 & 78 (PLAYING POINT)	PERMOMETAL	....	....
D-11(M & M)	DC-425	2.50	47	78 (CUTTING POINT)	PERMOMETAL	....	....
				78 (PLAYING POINT)	PERMOMETAL	....	....

*Matched Set, Upper and Lower Needles for Markel Changers.
◆Diamond Tip. Prices Quoted On Request.

Sales Code: (Turnover) "E" for Excellent, "G" for Good, "F" for Fair.

Illustrations of PERMO SPECIAL TYPE PHONOGRAPH NEEDLES

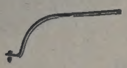


Fig. 1 Jewel

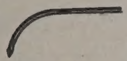


Fig. 2 Metal

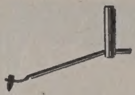


Fig. 3 Jewel

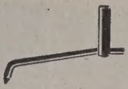


Fig. 4 Metal

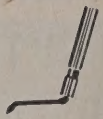


Fig. 5 Metal

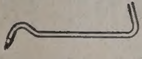


Fig. 6 Jewel

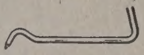


Fig. 7 Metal

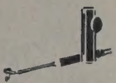


Fig. 8 Jewel

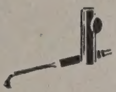


Fig. 9 Metal

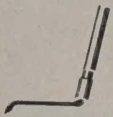


Fig. 10 Metal

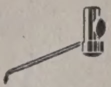


Fig. 11 Metal

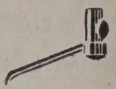


Fig. 12 Metal

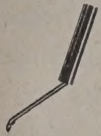


Fig. 13 Metal

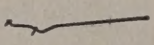


Fig. 14 Jewel

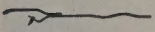


Fig. 15 Jewel and Metal

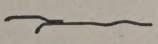


Fig. 16 Metal

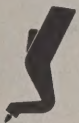


Fig. 17 Jewel

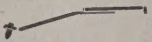


Fig. 18 Jewel

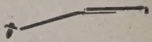


Fig. 19 Metal

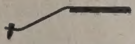


Fig. 20 Jewel

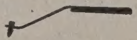


Fig. 21 Metal

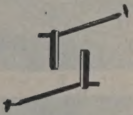


Fig. 22 Jewel

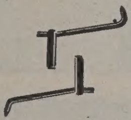


Fig. 23 Metal

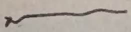


Fig. 24 Jewel

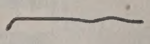


Fig. 25 Jewel

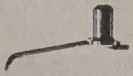


Fig. 26 Metal

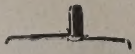


Fig. 27 Metal

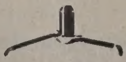


Fig. 28 Metal

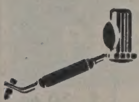


Fig. 29 Jewel

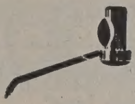


Fig. 30 Metal

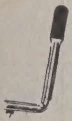


Fig. 31 Jewel

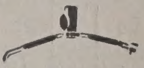


Fig. 32 Jewel and Metal

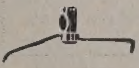


Fig. 33 Metal

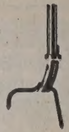


Fig. 34 Metal

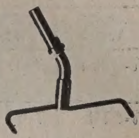


Fig. 35 Metal

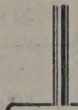


Fig. 36 Metal

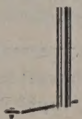


Fig. 37 Jewel

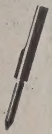


Fig. 38 Metal

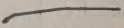


Fig. 39 Metal

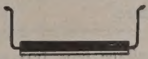


Fig. 40 Metal

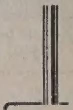


Fig. 41 Metal

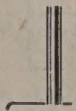


Fig. 42 Metal

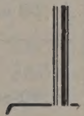


Fig. 43 Metal

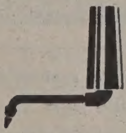


Fig. 44 Metal

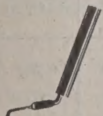


Fig. 45 Metal

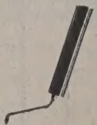


Fig. 46 Metal

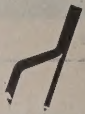


Fig. 47 Metal

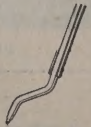


Fig. 48 Jewel

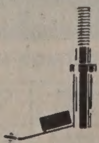


Fig. 49 Jewel

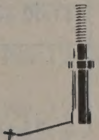


Fig. 50 Jewel

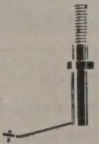


Fig. 51 Jewel

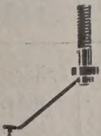


Fig. 52 Jewel

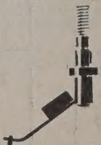


Fig. 53 Jewel

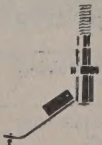


Fig. 54 Jewel

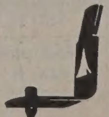


Fig. 55 Jewel

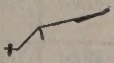


Fig. 56 Metal

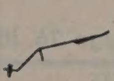


Fig. 57 Jewel

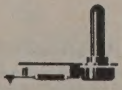


Fig. 58 Jewel

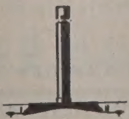


Fig. 59 Jewel

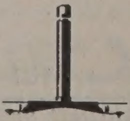


Fig. 60
Diamond & Jewel

PERMO

PERMO, INC.

MANUFACTURERS OF "FIDELITONE",
"PERMO-POINTS" AND "PERMO PRODUCTS"

6401-33 RAVENSWOOD AVE., CHICAGO 26, ILL.

PERMO RECORDING TAPE

PROFESSIONAL QUALITY
FOR ALL USES

THE LEADING TAPE IN THE AUDIO-VISUAL FIELD

The same long years of design, engineering and production experience that have made PERMO the world's largest and oldest maker of long life phonograph needles are your assurance of highest professional standards in Permo Recording Tape and Accessories.

Permo Recording Tape is packed 12 individually boxed reels to the carton. Plastic Reels are standard. Metal reels should be specified, if desired.

DESIGNED
USED
RECOMMENDED
ALL MAGNETIC TAPE RECORDERS
PERMO MAGNETIC
RECORDING TAPE
1200 FT. PLASTIC BASE

PLASTIC BASE — Red Oxide Coating — Plastic Reels

CATALOG NUMBER		DESCRIPTION	LIST PRICE
INSIDE WIND	OUTSIDE WIND		
T-3PL-I	T-3PL-O	3-inch plastic reel containing 150 ft. of tape*	$1.00 ea.
T-61-I	T-61-O	4-inch plastic reel containing 300 ft. of tape*	$2.25 ea.
T-66-I	T-66-O	5-inch plastic reel containing 600 ft. of tape*	$3.50 ea.
T-68-I	T-68-O	7-inch plastic reel containing 1200 ft. of tape*	$5.50 ea.

**Note: All reels packed in a sturdy album type box with indexing, logging, and filing features.*

PAPER BASE — Red Oxide Coating — Plastic Reels

CATALOG NUMBER		DESCRIPTION	LIST PRICE
INSIDE WIND	OUTSIDE WIND		
T-3PA-I	T-3PA-O	3-inch plastic reel containing 150 ft. of tape*	$ .75 ea.
T-62-I	T-62-O	4-inch plastic reel containing 300 ft. of tape*	$1.75 ea.
T-86R-I	T-86R-O	5-inch plastic reel containing 600 ft. of tape*	$2.25 ea.
T-88R-I	T-88R-O	7-inch plastic reel containing 1200 ft. of tape*	$3.50 ea.

**Note: All reels packed in a sturdy album type box with indexing, logging, and filing features.*

ACCESSORIES — Plastic and Metal Reels — Splicing Tape

CATALOG NUMBER	DESCRIPTION	LIST PRICE
T-3-PM	Empty 3-inch plastic reel for 150 ft. of Recording Tape*	$ .30 ea.
T-4-PM	Empty 4-inch plastic reel for 300 ft. of Recording Tape*	$ .50 ea.
T-5-PM	Empty 5-inch plastic reel for 600 ft. of Recording Tape*	$ .50 ea.
T-7-PM	Empty 7-inch plastic reel for 1200 ft. of Recording Tape*	$ .60 ea.
TM-35-PM	Empty 5-inch metal reel for 600 ft. of Recording Tape*	$ .90 ea.
TM-37-PM	Empty 7-inch metal reel for 1200 ft. of Recording Tape*	$1.00 ea.
T-20-PM	Splicing Tape 100-inch roll, ½ inch wide, specifically designed for splicing recording tape	$ .35 ea.

**Note: All empty reels furnished in a sturdy album type box.*

PERMO

PERMO, INC. 6401-33 Ravenswood Avenue • Chicago 26, Ill.

MANUFACTURERS OF "FIDELITONE", "PERMO POINT" AND "PERMO" PRODUCTS
LONG-LIFE PHONOGRAPH NEEDLES, RECORDING TAPE AND WIRE, RECORD BRUSHES

PERMO *Lubri-Lo* RECORDING WIRE

The Quietest Magnetic Recording Wire Ever Produced!

BECAUSE—Permo Recording Wire combines a new low D-C noise wire with *Lubri-Lo.* Permo's exclusive wire lubrication process achieves new professional standards of high fidelity in wire recording. An improvement of fully 10 db. over competitive wires.

DESIGNED USED RECOMMENDED ALL MAGNETIC WIRE RECORDERS
PERMO-MAGNETIC
LUBRI-LO
RECORDING WIRE
160-36N 1-HOUR SPOOL
PERMO-MAGNETIC THE ULTIMATE RECORDING WIRE

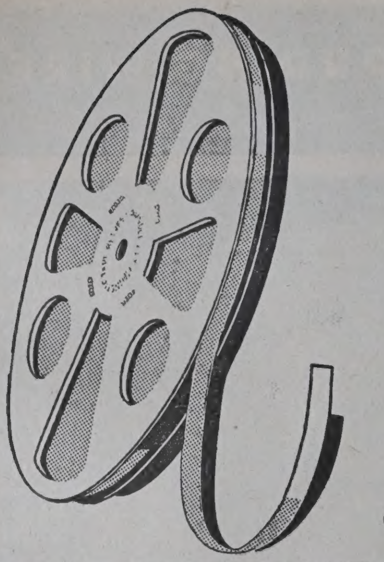
PERMO RECORDING WIRE and ACCESSORIES

Catalog No.	Description		List Price
	RECORDING WIRE with PLASTIC LEADERS ATTACHED		
160-36N	1 Hour Spool, 7,200 Ft. of Wire on Metal Spool		$4.50
260-36N	½ Hour Spool, 3,600 Ft. of Wire on Metal Spool		2.75
360-36N	¼ Hour Spool, 1,800 Ft. of Wire on Metal Spool *(2 Nylon Leaders Included Loose in Each Box)*		1.85
	RECORDING WIRE with NYLON LEADERS ATTACHED		
160N-36	1 Hour Spool, 7,200 Ft. of Wire on Metal Spool		$4.50
260N-36	½ Hour Spool, 3,600 Ft. of Wire on Metal Spool		2.75
360N-36	¼ Hour Spool, 1,800 Ft. of Wire on Metal Spool *(2 Plastic Leaders Included Loose in Each Box)*		1.85
	ACCESSORIES		
PM-121N7	Empty Metal Spool for Up to 1 Hour of Wire with 2 Plastic and 2 Nylon Leaders in Box		$ .75
PM-125	Long Plastic Leader (17″ Long)	Each	.15
PM-122	Short Plastic Leader (6″ Long)	Each	.10
PM-123	3′ Nylon Leaders per Pair	Pair	.10

A convenient box designed for use as a wire album is supplied at no extra charge when wire is purchased 5 rolls at a time.

PERMO, INC. 6401-33 Ravenswood Avenue • Chicago 26, Ill.

MANUFACTURERS OF "FIDELITONE", "PERMO POINT" AND "PERMO" PRODUCTS
LONG-LIFE PHONOGRAPH NEEDLES, RECORDING TAPE AND WIRE, RECORD BRUSHES



REEVES Soundcraft

CONSTANT OUTPUT

MAGNETIC SOUND-RECORDING TAPE

FOR ALL MAKES OF TAPE RECORDERS

- **CONSTANT OUTPUT** assured by new electronic monitoring method. The playback level of a continuously recorded tone during coating controls compensating adjustments to the coating machinery.
- **GREATER DYNAMIC RANGE,** high output with minimum background rumble results from combining the highly uniform oxide dispersion with tape surfaces specially polished in production to eliminate even microscopic irregularities.
- **HIGH FREQUENCY RESPONSE** of Soundcraft tape conforms to the standards set by the industry and, due to elaborate control methods, remains constant from one production lot to the next.
- **POLISHED SURFACE** of Soundcraft tape by a specially-developed buffing process insures maximum head life and eliminates the mechanical "squeal" caused occasionally by excessive tension of the tape on the heads.
- **HIGH OUTPUT** assured by Soundcraft's highly-engineered, uniform oxide dispersion giving maximum sensitivity.
- **LONG LIFE** for thousands of recordings and replayings at high output is assured by complete erasability without special equipment and by Soundcraft's absolute adherence oxide coating.
- **LONG HEAD LIFE.** Low-friction oxide-coating vehicle covers each of the uniform-sized particles of oxide with a tough microscopic film that prevents any abrasive material from touching magnetic heads. This vehicle or binder, moreover, contains nothing that can rub off and gum head surfaces.
- **LONG STORAGE LIFE** is guaranteed by safety film type plastic and high tensile paper base materials. Under average indoor temperatures and humidities, Soundcraft tapes will not become brittle, stretch, or shrink.
- **HIGH ADHERENCE** of the coating to the base is effected by preprocessing the base material before coating. This method assures that Soundcraft oxide coating will neither flake nor rub off.
- **MECHANICAL UNIFORMITY** is assured by precision, rotary shearing of the wide stock into individual tapes and by the special coating formulation that prevents curling. Soundcraft tape tracks straight and winds flat.

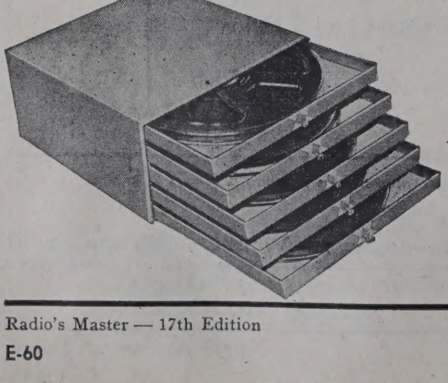
PRICE LIST

PLASTIC BASE

TYPE	OXIDE WOUND	LENGTH	REEL	STD. PKG.	LIST
SPN 1	In	150′	3″ Plastic	10	$1.00
SPO 1	Out				
SPN 3	In	300′	4″ Plastic	10	2.25
SPO 3	Out				
SPN 6	In	625′	5″ Plastic	10	3.50
SPO 6	Out				
SPN 12	In	1250′	7″ Plastic	10	5.50
SPO 12	Out				
SPN 25	In	2500′	Standard Aluminum NAB HUB		10.00
SPO 25	Out		Complete 10½″ Aluminum Reel		12.85
SPN 33	In	3300′ (1000 Meters)	Standard Aluminum NAB HUB		13.00
SPO 33	Out				
SPN 50	In	5000′	Standard Aluminum NAB HUB		20.00
SPO 50	Out		Complete 14″ Aluminum Reel		28.00

PAPER BASE

TYPE	OXIDE WOUND	LENGTH	REEL	STD. PKG.	LIST
RKN 1	In	150′	3″ Plastic	10	$ .75
RKN 1	Out				
RKN 3	In	300′	4″ Plastic	10	1.75
RKO 3	Out				
RKN 6	In	625′	5″ Plastic	10	2.25
RKO 6	Out				
RKN 12	In	1250′	7″ Plastic	10	3.50
RKO 12	Out				
Empty Reels Individually Boxed			3″ Plastic		.30
			4″ Plastic		.65
			5″ Plastic		.65
			7″ Plastic		.75
			10½″ Complete Aluminum Reel		4.75



REEVES SOUNDCRAFT TAPE CHEST

A PERMANENT FILING CABINET with five drawers, constructed of durable, lined boxboard, for 625′ and 1250′ size reels.

Available in Plastic Base only.

(Standard Package: 2)

Type {**SPNC 5**, **SPOC 5**} for 5″ reels (625 ft.)............**List Price $17.50**

Type {**SPNC 7**, **SPOC 7**} for 7″ reels (1250 ft.)..........**List Price $27.50**

REEVES Soundcraft

RECORDING DISCS
Soundcraft

FAMOUS NAME SOUND RECORDING DISCS

"THE BROADCASTING STATION STANDARD"

---

10 SOUNDCRAFT FEATURES

- **Greater dynamic range of Soundcraft discs exceeds highest broadcasting requirements.**
- **Inaudible surface noise. Soundcraft microscopically filters all impurities out of coating materials and dries wet coatings with conditioned, dust-free air.**
- **High-frequency response to 15,000 cps. Soundcraft coating formulation combines proper physical texture with wax-like low cutting-friction.**
- **Dependability from batch to batch regardless of season. The Soundcraft disc plant makes its own weather, eliminates mysterious humidity troubles.**
- **Uniform cutting for both conventional and micro-groove recording. Soundcraft discs, to minimize minute variations in groove depth, are manufactured with the flattest, smoothest, aluminum bases obtainable.**
- **Long stylus-life assured. Soundcraft coating purity and low-friction reduce stylus wear and eliminate recording failures from stylus damage.**
- **1,000 or more playings. Soundcraft's sealed-in lubricant for low needle-friction reduces wear to the point where dust in grooves and needle quality are chief controlling factors.**
- **Long storage-life, recorded or new. Under normal conditions Soundcraft discs cut and play after years of storage.**
- **Improved diameter effects. Soundcraft's superior coating formula minimizes high frequency loss and actually lowers surface noise as diameter decreases.**
- **Easy-to-pick-up thread. The Soundcraft coating is compounded with an exclusive ingredient to make thread throw toward center, and to minimize static charge.**

DEALER PRICE LIST

The "PLAYBACK"

The standard broadcast-quality disc for all professional applications in radio stations, recording and motion picture studios. Physical and sound properities assure the finest quality of recorded sound.

Size	Standard Package	List Price Each
6½"	20	.65
8"	20	.90
10"	20	1.25
12"	20	2.05
16"	20	3.75

The "PLAYBACK" — Single Face

The same quality as the "Playback" but intended for economy applications requiring the use for only one side. Both sides of the disc are coated, and the useable side is identified by the Soundcraft embossing.

Size	Standard Package	List Price Each
10"	20	1.00
12"	20	1.65
16"	20	2.95

The "AUDITION"

A double face disc, selected from the regular runs, suitable for less important station and studio applications, for schools, amateur, and better home recording. Paper labelled for greater convenience.

Size	Standard Package	List Price Each
6½"	20	.55
8"	20	.75
10"	20	1.00
12"	20	1.65
16"	20	2.90

The "BROADCASTER"

A MASTER selection in instantaneous sizes for vitally important and critical recordings. A premium product guaranteeing absolute perfection. Available only in double face type.

Size	Standard Package	List Price Each
10"	20	1.40
12"	20	2.20
16"	20	3.95

The "MAESTRO"

Oversize MASTER discs for originals in making phonograph records and transcriptions. Best available for either regular microgroove recording. Available either with standard one drive hole or with center hole only for 45 rpm masters. Processed regularly by all of the foremost phonograph record and transcription manufacturers.

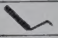
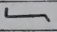
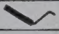
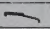
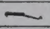
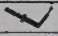
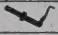
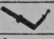
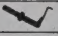
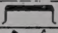
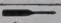
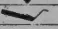
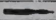
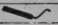
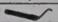
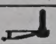
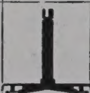
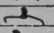
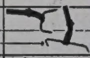
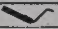
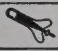
THE "MAESTRO" — DOUBLE FACE

Size	Standard Package	List Price Each
12"	20	2.55
13¼"	20	3.40
17¼"	20	5.60

THE "MAESTRO" — SINGLE FACE

Size	Standard Package	List Price Each
12"	20	2.00
13¼"	20	2.40
17¼"	20	4.10

Jensen NEEDLES for the replacement trade

CARTRIDGE MFG	CART MFG NEEDLE NO	JENSEN NEEDLE NO.	ILLUSTRATION (Actual Size)	CARTRIDGE NUMBERS	POINT MATERIAL	POINT SIZE
Astatic	Q(M)	A-80		QT-M; QT2-M; QT3-M; LQD; LQD-1	Osmium	Standard
Astatic	Q-33(M)	A-80-LP		QT-33-M; CQ-M; LQD; LQD-1	Osmium	Micro-Groove
Astatic	Q-AG(M)	A-802		CQ-AG-M; CQ-AG-J	Osmium	All Groove
Astatic	Q(J)	A-81		QT-J; QT2-J; QT3-J; LQD; LQD-1	Sapphire	Standard
Astatic	Q-33(J)	A-81-LP		QT-33-J; CQ-J; LQD; LQD-1	Sapphire	Micro-Groove
Astatic	D(M)	A-83		LT-3D; LT-4D; LT-4D1; MD	Osmium	Standard
Astatic	D-33(M)	A-83-LP		LTD-3D; LT-4; LT-4D; LT-4D1	Osmium	Micro-Groove
Astatic	D-AG(M)	A-832		LT-4-AG	Osmium	All Groove
Astatic	G-78(M)	A-84		GC-78-M; MG-78-M	Osmium	Standard
Astatic	G(M)	A-84-LP		GC-M; GC-1M; MG-1M	Osmium	Micro-Groove
Astatic	G-AG(M)	A-842		GC-AG-M; MG-AG-M	Osmium	All Groove
Astatic	T(M)	A-86		LT-1M; LT-2M; LT-3M	Osmium	Standard
Astatic	T-33(M)	A-86-LP		LT-33	Osmium	Micro-Groove
Astatic	C-3(M)	A-87		MD-3	Osmium	Standard
Astatic	C-1(M)	A-87-LP		MD-1	Osmium	Micro-Groove
Astatic	U-78(M)	A-88		U-78-M	Osmium	Standard
Astatic	U(M)	A-88-LP		UM	Osmium	Micro-Groove
Astatic	C-3(J)	A-89		MD-3	Sapphire	Standard
Astatic	C-1(J)	A-89-LP		MD-1	Sapphire	Micro-Groove
Astatic	A-3(M)	A-85		AC-78; ACD Series	Osmium	Standard
Astatic	A-1(M)	A-85-LP		AC; ACD Series	Osmium	Micro-Groove
Astatic	A-AG(M)	A-852		AC-AG-M; AC-AG-J	Osmium	All Groove
Astatic	Nylon 1-M	A-82		Nylon 1J; Nylon 1M	Osmium	Standard
Shure	A62A	JP-30		P-30; P-57; P-70; P-72; P-74AD; P-76; P-77; P-79; P-85; P-88; P-89; P-94; PN-30; W-22AB; W-23B; W-60B; W-60HS; W-60PN; W-61B; W-65B Admiral 409A11	Osmium	Standard
Shure	A-63MG	JP-30-LP		Admiral 409A11; P-73; P-74AD; P-72V; P-76V	Osmium	Micro-Groove
Shure	A-66U	JP-312		Admiral 409A13-1; P-71; P-81; P-37	Osmium	Unipoint
Shure	A-61A	JPS-30		P-30; P-57; P-70; P-72; P-74AD; P-76; P-77; P-79; P-85; P-88; P-89; P-94; PN-30; W-22A; W-23A; W-60A	Sapphire	Standard
Shure	A-65MG	JPS-30-LP		P-73; P-74AD; P-72V; P-76V; W-21A; W-21AR; W-22A; W-22AB	Sapphire	Micro-Groove
Shure	A67U	JPS-312		P-71; P-81; P-37	Sapphire	Unipoint
RCA	72345	M-70		70338; 70339	Sapphire	Standard
RCA	74068	M-70-LP		74067	Sapphire	Micro-Groove
RCA	75046	M-71		70338; 70339	Osmium	Standard
RCA	75045	M-71-LP		74067	Osmium	Micro-Groove
RCA	39863	M-72		72551; 9890; 39919; 39550; 38598; 70332; 39851	Sapphire	Standard
RCA	38449	M-73		72551; 9890; 39919; 39550; 38598; 70332; 39851	Osmium	Standard
RCA	75497	M-74		75475	Sapphire	Standard
RCA	75496	M-74 LP		75475	Sapphire	Micro-Groove
RCA	75497	M-75		75475	Osmium	Standard
RCA	75496	M-75 LP		75475	Osmium	Micro-Groove
Electro-Voice	S-3	E-90		M12-S; H12-S; L12-S	Sapphire	Standard
Electro-Voice	S-1	E-90-LP		14-S; 22-S; 34S	Sapphire	Micro-Groove
Electro-Voice	S-13	E-91		16TT; 22TT	Sapphire	Twin Point
Electro-Voice	O-13	E-93		16TT; 22TT	Osmium	Twin Point
Electro-Voice	O-3	E-95		M12; H12; L12	Osmium	Standard
Electro-Voice	O-1	E-95-LP		14; 34;	Osmium	Micro-Groove
Electro-Voice	O-2	E-962		33; 33S	Osmium	All Purpose
Columbia	101	M-60-LP		45-1609	Sapphire	Micro-Groove
Columbia	102 & 103	A-81-LP		CQ	Sapphire	Micro-Groove
Webster-Electric	M	W-02		M-1	Osmium	Standard
Webster-Electric	F-14	W-05		F14; F14-1; F14-2; F14-3; F14-4	Osmium	Dual
Webster-Electric	A3S	W-14		A1; A8	Sapphire	Standard
Webster-Electric	A1S	W-15		A1; A2; A3; A4; A5; A6; A8	Sapphire	Micro-Groove
Webster-Electric	A3O	W-16		A1M; A1M-1; A5M; A6M	Osmium	Standard
Webster-Electric	A1O	W-17		A1M; A1M-1; A2M; A5M; A6M	Osmium	Micro-Groove
Webster-Electric	Q1	W-30		Q1	Osmium	Standard
Webster-Electric	G3	W-36		G3M	Osmium	Standard
Webster-Electric	G1	W-36-LP		G1M	Osmium	Micro-Groove
Webster-Electric	G2	W-362		G2M	Osmium	All Purpose
Webster-Electric	WS	W-37		WS	Osmium	Standard
Webster-Electric	AJ	W-37-LP		AJ4	Osmium	Micro-Groove
Webster-Electric	A9	W-38		A9M	Osmium	All Purpose
Webster-Electric	A2	W-412		Q3; A9; F-13	Osmium	All Purpose
Webster-Electric	C9	W-422		C9	Osmium	All Purpose
Webster-Electric	Q2	W-49		Q2	Osmium	Standard
Webster-Electric	F16-3	W-72		F16; F16-1; F16-2	Osmium	Standard
Webster-Electric	F16-1	W-73		F16; F16-1; F16-2	Osmium	Micro-Groove
Webster-Electric	F15-3	W-81		F15; F15-1	Osmium	Standard
Webster-Electric	F15-1	W-82		F15; F15-1	Osmium	Micro-Groove
Webster-Electric	F7	15-LP		F7; F7-1; F7-2; Q2; F13	Osmium	Micro-Groove
Webster-Electric	F10	JP-30		F10; F11; F11-1	Osmium	Standard
Webster-Electric	F10-1	JP-30-LP		F11; F11-1	Osmium	Micro-Groove
General Electric	RPJ-001	GE-10		RPX-040; RPX-041; RPX-046	Sapphire	Standard
General Electric	RPJ-005	GE-10-LP		RPX-040; RPX-041; RPX-046	Sapphire	Micro-Groove
General Electric	RPJ-010	GE-11		RPX-050	Sapphire	Dual
Philco	45-1596	PH-10		Dynamic Reproducer 76-1622	Sapphire	Standard
Philco	45-1613	PH-11		45-1609	Osmium	Micro-Groove
Philco	35-2693	PH-12		76-4649	Osmium	Dual
Philco	45-1613	M-60-LP		45-1609	Sapphire	Micro-Groove
Philco	45-1597	PH-14		35-2671	Osmium	Standard
Philco	45-1651	PH-15		35-2671	Sapphire	Standard
Webster-Chicago	NE-215	NE-215		21P247; 21P402; 21P403	Osmium	Dual
Webster-Chicago	NE-316	NE-368		21P404	Osmium	Dual
American Microphone	S-1	AM-20		S-1; S-1A; S-2; S-2A	Osmium	Standard
American Microphone	CO-3	AM-21		C-3	Osmium	Standard
American Microphone	CO-1	AM-21-LP		C-1	Osmium	Micro-Groove
American Microphone	CO-2	AM-212		C-2	Osmium	All Purpose
Crosley	145720	C-99		145749	Sapphire	Standard
Magnavox	560102	M-02		560101	Osmium	Standard
Magnavox	560138	M-46		560133	Osmium	Twin Point

Free! Send for your free Wall Chart (above), which shows in actual size all Jensen Replacement Needles.

JENSEN NEEDLES FOR ALL RECORD PLAYERS

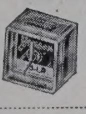
Jensen
Royal
Jewel

ROYAL JEWEL
A long life top quality needle with a genuine sapphire tip; 13 needles to a display.

NYLON
The finest Nylon Needle with either sapphire or osmium tip for any record player.

SWEET
High in quality, low in cost with genuine osmium tip, straight shank notched.

CLASSIC
Osmium tipped needle with an exclusive spring action that absorbs needle noise and reduces shock.



LONG PLAYING
A needle with either sapphire or osmium tip for 33⅓ and 45 RPM record players.

FIFTY
Jensen's lowest priced quality needle with osmium tip. Twelve needles to a display card.

CONCERT
A popular priced needle with osmium tip and exclusive flexible shank that protects records.

ALL PURPOSE
Plays micro-groove as well as regular at all three speeds; 33⅓, 45 and 78 RPM.

COIN MACHINE NEEDLES
Assure long satisfactory playing. Available with either curved or straight shank, sapphire or osmium tip.

JENSEN ACOUSTIC TAPE

Jensen's latest development . . . Magnetic Recording Tape, available with either plastic or paper base on 150, 600 and 1200 ft. plastic reels. An outstanding tape made to exacting specifications.

Acoustic Tape
Jensen

To round out the line Jensen offers the Symphonette Steel Needle, packaged 30 needles to an envelope, 50 envelopes to a counter display carton. Handle the complete line of Jensen Needles and be assured of never losing a sale.

Jensen INDUSTRIES, INC.
Chicago 12, Ill.

REG. U. S. PAT. OFF.

irish *Tape* BRAND | FOR HIGH QUALITY SOUND RECORDING

THERE IS A GRADE OF IRISH SOUND RECORDING TAPE FOR EVERY NEED AND PURPOSE. USE THE BEST GRADE SUITED FOR YOUR REQUIREMENTS!

STOCK NUMBER	DESCRIPTION	600 ft. REEL	1200 ft. REEL	2400 ft. NAB 10½"
		List Price	List Price	List Price
211RPA	**GREEN-BAND (plastic base) Sensitive LONG LIFE. "SOFTERIZED"**	**$3.50**	**$5.50**	**$11.00**
211BPA	**GREEN-BAND (plastic base) BLACK OXIDE**	**3.50**	**5.50**	**11.00**
205RPA	**YELLOW-BAND (plastic base) UTILITY-STANDARD for general purpose, professional use**	**2.75**	**4.50**	**9.00**
205RKA	**YELLOW-BAND (Kraft base) same as 205RPA**	**2.25**	**3.50**	**7.00**
200BKA	**ORANGE-BAND (Kraft base) BLACK OXIDE**	**2.25**	**3.50**	**7.00**
195RPA	**BROWN-BAND Domestic (plastic base) RED OXIDE**	**2.25**	**3.50**	**7.00**
195RKA	**BROWN-BAND Domestic (Kraft base) RED OXIDE**	**1.75**	**2.50**	**5.00**
195BPA	**BLACK-BAND Domestic (plastic base) BLACK OXIDE**	**2.25**	**3.50**	**7.00**
195BKA	**BLACK-BAND Domestic (Kraft base) BLACK OXIDE**	**1.75**	**2.50**	**5.00**

NOTE: 4,800 ft. lengths of ALL types may be supplied upon request.

EXPLANATION OF NOMENCLATURE — STOCK ITEMS

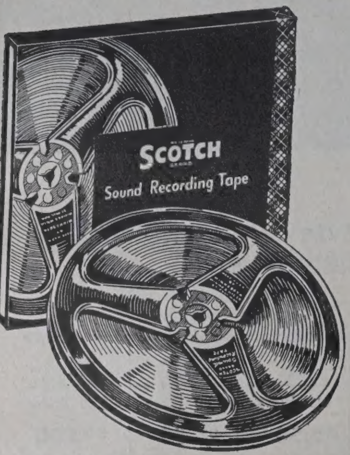
RPA: Red oxide, plastic base, coating wound inside
BPA: Black oxide, plastic base, coating wound inside
BKA: Black oxide, Kraft base, coating wound inside
RKA: Red oxide, Kraft base, coating wound inside

When it is required that active side of tape be wound outside, specify "B" in place of "A" as suffix, example: BKB would indicate Black Oxide, Kraft base, wound with active material outside.

MADE IN U. S. A. BY ORRADIO INDUSTRIES, INC., OPELIKA, ALABAMA

● PRICES SUBJECT TO CHANGE WITHOUT NOTICE ●

for professional-like recordings use the tape the professionals use...



REG. U. S. PAT. OFF.

SCOTCH

BRAND

Sound Recording Tape

In radio stations and recording companies all over the country—where QUALITY sound recording is a must—you'll find "SCOTCH" Brand Sound Recording Tape being used exclusively. Test reels of "SCOTCH" Sound Recording Tape have lasted through more than 10,000 recording cycles—are still going strong.

Rigid manufacturing standards, continuous research and testing . . . analyzing . . . testing . . . analyzing . . . over and over again always adds up to the same answer. "SCOTCH" Brand Sound Recording Tape is the No. 1 sound recording tape on the market. Ask for it . . . look for it in the distinctive plaid decorated box. It costs no more and the brand name "SCOTCH" is your assurance of sound quality. Insist on "SCOTCH" Brand Sound Recording Tape.

"SCOTCH" Sound Recording Tape is available in the following sizes.

No. 101 (*A or **B) "SCOTCH" Brand Sound Recording Tape (Paper Base—Red Oxide Coating).

SIZE	LIST PRICE
¼" x 150 ft. plastic reel..............	$0.75
¼" x 300 ft. plastic reel..............	1.75
¼" x 600 ft. plastic reel..............	2.25
¼" x 1200 ft. plastic reel..............	3.50

No. 111 (*A or **B) "SCOTCH" Brand Sound Recording Tape (Plastic Base—Red Oxide Coating) (This is a tape designed for the professional and more critical user.)

SIZE	LIST PRICE
¼" x 150 ft. plastic reel............	$ 1.00
¼" x 300 ft. plastic reel............	2.25
¼" x 600 ft. plastic reel............	3.50
¼" x 1200 ft. plastic reel............	5.50
¼" x 2400 ft. NAB hub.............	11.00
¼" x 2400 ft. NAB reel.............	13.85
¼" x 4800 ft. NAB hub.............	22.00

*A Magnetic Coating wound facing in.
**B Magnetic Coating wound facing out.
All reels of tape are individually boxed.

"SCOTCH" Sound Recording Tape has the lowest coefficient of friction of any sound recording tape. This means increased tape life, longer use of recorder heads and guide mechanisms. Tape glides smoothly past heads with no distortion, no oxide rub-off, absolutely no gumming of heads.

"SCOTCH" Sound Recording Tape can be stored for an indefinite time with no danger of physical distortion. No stickiness or layer to layer adhesion. Freedom from cupping and curling under extremes of temperature and humidity assures the user a tape with maximum fidelity—no loss in high frequency response due to poor head contact.

"SCOTCH" Sound Recording Tape No. 111 has the greatest tensile strength of any sound recording tape on the market. This added toughness and strongness means longer tape life.

"SCOTCH" Sound Recording Tape has extremely low modulation noise due to new processing and manufacturing techniques. Tape has an increased dynamic range or signal to noise ratio, i.e. the difference between the loudest and softest notes it is possible to record.

"SCOTCH" Sound Recording Tape is manufactured under rigid quality control and manufacturing standards. This insures tape that is always uniform within each reel and from reel to reel.

"SCOTCH" Sound Recording Tape will track perfectly and wind flat due to accurately controlled slitting standards and methods.

"SCOTCH" Sound Recording Tape has excellent frequency response. Laboratory tests show this is especially apparent at slower recording speeds.

"SCOTCH" Sound Recording Tape has the greatest sensitivity of any sound recording tape—this means increased performance on all tape recording machines.

"SCOTCH" Sound Recording Tape is attractively packaged in a rugged, handsome, hinged-type box with recording suggestions printed on the inside covers—ample space for labeling and indexing.

"SCOTCH" Brand Splicing Tape No. 41

This is a special pressure-sensitive tape designed for splicing sound recording tape. It has a special white adhesive which will not ooze and cause sticky splices when spliced to sound recording tape. ½" x 100" length on metal utility dispenser......................list price 29c

"SCOTCH" Brand Leader and Timing Tape No. 43

This is a tough ¼" plastic treated paper tape that can be spliced to sound recording tape for protection, for cueing and exact timing. ¼" x 150 ft. length..................................list price 50c
Empty reels and boxes may also be purchased.

Made in U.S.A. by **MINNESOTA MINING & MANUFACTURING COMPANY** St. Paul 6, Minn.

Chicago INSTRUMENTS

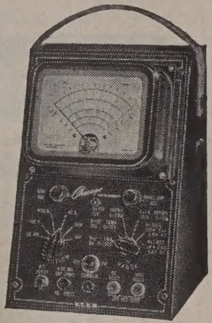
Since 1933 we have been manufacturing a quality line of test equipment. For high accuracy and rugged dependability, Chicago Instruments are without compare in the service field. They represent the greatest test equipment values on the market!

ELECTRONIC MULTITESTER
For TV and FM

The new Chicago Vacuum Tube Volt Meter is the Industry's Greatest Value! More Ranges — Greater Accuracy — Laboratory Quality — Exclusive Design.

30 RANGES

- AC & DC Volts
- Ohms
- Output
- DC Milliamperes
- Capacitance



Precision calibrated 1% Multipliers. Capacitance and Milliampere ranges add versatility found only in instruments costing more than twice as much. Rotary Switching and one Zero adjustment for all ranges are designed for convenience. Exclusive slanted case front and big 5½" meter offer new scale reading ease. Zero Center for TV and FM discriminator alignment. Size: 10" x 7" x 6". Shipping Weight: 10 lbs.

Model 504 VTVM Electronic Multitester. Complete with DC Probe and Test Leads. Net $39.00

MODEL 504 V.T.V.M. ACCESSORIES

Model P505 R.F. Probe: Extends AC range to 100 megacycles. Net $5.00

Model P506 High Voltage Probe: Extends the DC Voltage range to 30,000 VDC. Net $9.00

RANGES

DC VOLTS: (7 ranges)
0-5/10/50/100/500/1000/5000
AC VOLTS: (7 ranges)
0-5/10/50/100/500/1000/5000
DECIBELS: —20 to +16
OHMS: (6 ranges)
0-1000/10K/100K/1 Meg/100 Meg/1000 Meg
Ohms readings at center scale
10/100/1000/10K/1 Meg/10 Meg

CAPACITANCE: (6 ranges)
50 mmf to 5000 mmf
.0005 mf to .05 mf
.05 mf to 5 mf
.5 mf to 50 mf
5 mf to 500 mf
50 mf to 5000 mf
DC MILLIAMPERES (4 ranges)
0-1/10/100/500

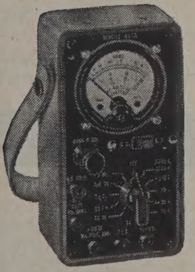
PORTABLE BENCH-TYPE VOLT-OHM-MILLIAMMETER
Exclusive Design Slanted Case for Better Visibility

Multiplex Model 458A. Volt-Ohm-Ammeter. Net $26.00

Modernized brown hammerloid finished case with flexible leather strap handle, featuring broader coverage. 1000 ohms per volt.
Volts AC-DC: 0-2.5/10/50/250/1000/5000
Milliamperes AC-DC: 0-1/10/100
Amperes: AC: 0.05/1/5/10
Amperes: DC: 0-1/10
Ohms Full Scale: 1000/200,000/2,000,000
Ohms Center Scale: 50/2250/22,500
Size: 10⅛" x 6¾" x 5½"

Multiplex Model 458. Volt-Ohm-Milliammeter. 1000 Ohms per volt. Net $21.00

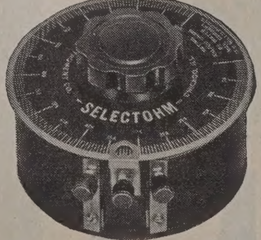
Volts DC: 0-5/10/50/100/500/2000
Volts AC: 0-12.5/25/125/250/1250
Milliamperes: DC: 0-1/10/100
Milliamperes AC: 0-2.5/25/250
Ohms Full Scale: 1000/200,000/2,000,000
Ohms Center Scale: 50/2250/22,500
Output: —5 to +55 Decibels
Size: 10⅛" x 6¾" x 5½"



PORTABLE VOLT-OHM-MILLIAMMETERS

Portaplex Model 431A. 1000 Ohms per Volt. Aluminum Case with Grey Hammerloid Finish. Leather Strap Handle. Complete with Test Leads. Size 6⅛" x 3¼" x 2¾". Net $16.60

Volts AC-DC: 0-15/30-150/300/1500/3000
Ohms Center Scale: 60/600/6000
Amperes DC: 0-7.5
Ohms Full Scale: 0-10,000/100,000/1 meg.
Portaplex Model 421D. 5000 Ohms per Volt. Aluminum Case and Cover with Grey Hammerloid Finish. Size: 6⅛" x 3¼" x 3¼". Net $20.00
Volts AC-DC: 0-4/10/40/100/400/1000
Milliamperes DC: 0-4/40/100/400
Ohms Full Scale: 0-10,000/100,000/1 Meg.
Ohms Center Scale: 60/600/6000



SELECTOHM
CALIBRATED POTENTIOMETER

Model 501 Selectohm. Net $7.50

100,000 Ohm 25 watt precision wire-wound, linear scale potentiometer is designed for a resistance substitute or for accurately calibrating resistance in a circuit. The Selectohm may be used as a decade box or in groups for quick set-ups as a divider network. It has many service and laboratory applications. Wire wound. Molded Bakelite. Protected windings. Precision laboratory construction throughout.

DRY BATTERY TESTER

A counter type merchandising tester that indicates the condition of dry cells at a glance. The customer can see for himself. Boosts battery sales.

Model 471. Dry Batter Tester. Complete with Test Leads. Net $16.00

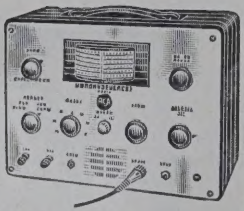
Tests 1½ Volt-10 Volt and 10 Volt to 150 Volt batteries under specified load. Big easy-to-read 5½" rectangular meter.

CHICAGO INDUSTRIAL INSTRUMENT CO.

RCA TEST AND MEASURING EQUIPMENT

for SERVICE • LABORATORIES • INDUSTRY • SCHOOLS

TELEVISION CALIBRATOR (WR-39C)



Now—in one compact, portable unit—the new RCA WR-39C provides crystal-controlled markers for all TV frequencies—included in this one instrument is a crystal-calibrated variable frequency oscillator, two crystal-controlled oscillator stages with three crystals supplied, a wide-band modulator stage for internally modulating the output at audio and rf frequencies, and an audio amplifier with speaker.

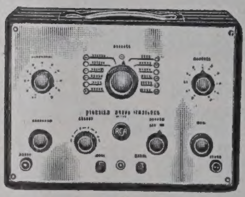
In addition to its function as a marker generator, the WR-39C can be used as a heterodyne frequency meter to identify unknown frequencies. The vfo, when tuned to any TV channel and modulated with the 0.25-Mc crystal oscillator, will put vertical bars on the raster; or when modulated with an external audio oscillator will put horizontal bars on the raster. Thus the instrument can be used for making linearity adjustments in the absence of a test pattern.

The WR-39C may also be modulated by the video signal from a television set, which makes it in effect a 12-channel miniature TV transmitter. Sugg'd User Price: **$242.50***

Check these important features!

- √ Crystal-controlled markers, 4.5 Mc removed from main marker for television if alignment
- √ Crystal-controlled markers, 250 kc removed from main marker for sound-discriminator alignment
- √ Provision for injection of external marker
- √ Internal audio and rf modulation of variable frequency oscillator
- √ Crystal-calibrated heterodyne frequency meter
- √ Crystal-controlled 4.5-megacycle output for alignment of TV receivers employing inter-carrier sound
- √ Marker oscillator operates on fundamental on all bands
- √ Sound and picture carriers marked on dial

TV SWEEP GENERATOR (WR-59B)



The WR-59B is a high-quality sweep generator which is used extensively for the design, manufacture and servicing of TV sets. It generates fundamental oscillator sweep-frequencies, preset on switch positions for TV channels 2 to 13. IF and video frequency coverage is produced by a separate calibrated control with continuous tuning from 300 kc to 50 Mc.

Sweep width is continuously variable, and output level is exceptionally flat in all positions. The rf output cable termination can be adjusted to match balanced or unbalanced loads; the rf output level is variable over wide limits by means of a coaxial-type piston attenuator. The unit develops a sweep signal for a scope; a phasing control is provided. An additional feature is return-trace blanking which produces a zero-reference line on the cathode-ray tube for measurement of instantaneous voltages. The unit is complete with rf and if output cables. Shipping weight, 35 lbs. Sugg'd User Price: **$274.50***

CHARACTERISTICS

Frequency Ranges:
RF (TV Channels 2-13):
54-60, 60-66, 66-72, 76-82, 82-88, 174-180, 180-186, 186-192, 192-198, 198-204, 204-210, 210-216 Mc. Sweep width: 10 Mc max.
IF: 0.3 to 50 mc, continuous tuning. Covers video band, FM if, prewar if's, all present sound and picture if's. Sweep width continuously variable 0-10 mc.

Output Impedance (at cable terminals):
RF Ranges: 300 ohms balanced
IF Range: 100 ohms

Maximum Attenuator Ratio:
RF Ranges: 20000/1
IF Range: 4000/1

Maximum Amplitude Variation of Sweep Envelope: All ranges, less than ±1.5 db

Horizontal Sweep: Phase Range, 0-160°; Power-line Frequency; Amplitude, 5.6 peak-to-peak (2 RMS) volts

RACK-ADAPTER PANEL (WS-18A)

WS-18A Rack Adapter Panel for mounting any of the matched RCA Test Instruments in standard 19-inch relay racks . . . adds convenience and standardization to industrial test setups.

Dimensions: 10½ inches high, 19 inches wide, ⅛ inch thick.
Finish: Umber Gray.
Price: 9.50 *

RCA TV ISOTAP (WP-25A)

Here's a really useful tool for better, faster, and safer TV servicing. The RCA TV ISOTAP is an essential piece of test equipment for every television technician.

Consisting of a 500 volt-ampere autotransformer winding and a 275 volt-ampere isolated secondary winding, the TV ISOTAP has all the advantages of an isolation transformer—plus the extra value of a heavy-duty transformer.

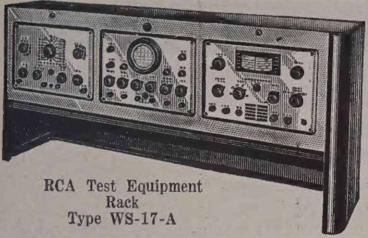
Sugg'd User Price: $17.95*

Electrical (all voltages within ±5%)

Primary Winding:	
Line-Voltage Range	105-130 volts
Switch Positions	Off, 130, 125, 120, 115, 110, 115 volts
Frequency	50-60 cycles
Secondary Winding:	
With selector set to power line voltage and no load on secondary	109, 120, 135 volts
With selector set to 130 volts, and with a secondary load of 275 volt-amperes	105, 115, 130 volts
Continuous Operation (at ambient temperature of 40° C)	
Primary (autotransformer)	500 Max. Va.
Secondary (isolation)	275 Max. Va.

RCA TEST AND MEASURING EQUIPMENT

for SERVICE • LABORATORIES • INDUSTRY • SCHOOLS


RCA Test Equipment
Rack
Type WS-17-A

TEST-EQUIPMENT RACK WS-17A

Cash in on the lucrative television service market! Modernize your work bench for efficient TV service with this new RCA 3-Place Test Rack. . . . Instruments are at your fingertips for quick, accurate service. Accommodates any three matched RCA Test Instruments to meet your individual TV, FM, or AM service needs. Dimensions: 48 x 21½ x 12. Sugg'd User Price: **$59.50**

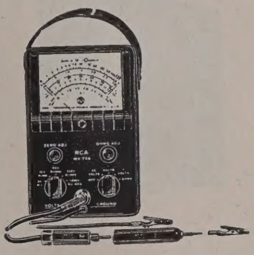
JUNIOR VOLTOHMYST ** (WV-77A)

Here again, the famous RCA Junior VoltOhmyst** at an amazing low price, embodying all the features that made its predecessor famous plus many new extras. Measures dc from 50 millivolts to 1200 volts—even in presence of ac. Less than 2 $\mu\mu$f input capacitance. Excellent for making measurements in AVC, bias, oscillator, and other high-impedance circuits. Measures ac voltages from 100 millivolts to 1200 volts (rms). High-impedance vacuum tube diode used as rectifier . . . all electronic operation. Measures resistance from .2 ohm to 1 billion ohms. Only **$47.50*** (Suggested User Price) complete with tubes, battery, probes and cables.

**Reg. U. S. Pat. Off.

FEATURES YOU WANT . . .

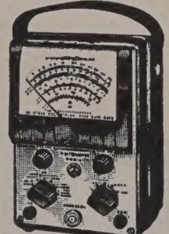
- High input resistance all ranges....11 megohms dc; .2 to 2 megohms ac
- Flat frequency response (30 cps to 3 Mc) 50 kc to 250 Mc with WG-264 Probe
- Meter electronically protected against burn-out all functions
- Durable 4½" plastic meter case....full view design
- Carbon-film 1% multiplier resistors....lasting accuracy and dependability
- Sturdy 200 microampere movement....standard for all VoltOhmyst** Meters
- Completely shielded metal case....stable in rf fields
- Negative-feedback bridge circuit....freedom from line voltage changes
- DC polarity reversing switch.....eliminate test lead switching
- Zero-centering facilities....for discriminator alignment
- Ohms probe always positive........quickly check "electrolytics"



SENIOR VOLTOHMYST (WV-97A)

The WV-97A, especially designed as a television signal tracer, features a high-impedance, full wave rectifier for direct readings of peak-to-peak voltages on all scales up to 4200 volts. Frequency response is flat to 3 Mc. The Senior VoltOhmyst also reads dc voltages, resistance values, and rms voltages of sine waves. Instrument measures ac in presence of dc and vice-versa. Shipping weight: 5½ lbs. Suggested User Price: **$67.50***

DC (seven continuous ranges)............0 to 1.5, 5, 15, 50, 150, 500, 1500
Input resistance........11 megohms constant
AC (fourteen continuous ranges):
Peak-to-peak ranges...........0 to 4, 14, 42, 140, 420, 1400, 4200 volts
RMS ranges (for sine waves)...........0 to 1.5, 5, 15, 50, 150, 500, 1500
OHMMETER (seven continuous ranges)....0 to 1000 megohms
METER MOVEMENT (DC current for full scale deflection).....................200 ua
DIMENSIONS...........7⅞"H, 5¾"W, 4½"D
FINISH...........blue-gray hameroid case—satin-aluminum panels

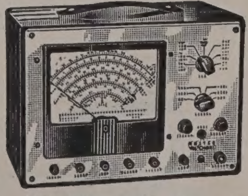


MASTER VOLTOHMYST WV-87A

"Master" is truly the word for this deluxe member of the RCA VoltOhmyst family. The WV-87A combines all the outstanding features of the Junior and Senior VoltOhmysts **plus** greater accuracy, more ranges, more functions, and a large 8½" meter. The instrument measures directly peak-to-peak values of unsymmetrical complex waves from 0.2 volt to 2,000 volts and peak-to-peak values of symmetrical complex waves up to 4,200 volts. It measures rms values of sine waves from 0.1 to 1,500 volts; dc voltages from 0.02 volt to 1,500 volts; and resistance over the range of 0.2 ohm to 1,000 megohms. The Master VoltOhmyst also directly measures dc currents from 10 microamperes to 15 amperes in nine ranges.

Suggested User Price: **$112.50**

DC ......0 to 1.5, 5, 15, 50, 150, 500, 1,500 volts
Input Resistance ....11 megohms constant
AC ......(peak-to-peak ranges) 0 to 4, 14 volts on LO AC scales—0 to 42, 140, 420, 1400, 4200 volts
(RMS ranges for sine waves) 0 to 1.5, 5 volts on LO AC scales—0 to 15, 50, 150, 500, 1500 volts
OHMMETER ......seven continuous ranges 0 to 1000 Megohms
DIRECT-CURRENT METER ....0 to 0.5, 1.5, 5, 15, 50, 150, 500 milliamperes; 0 to 1.5, 15 amperes
MERCHANICAL SPECS ....8 lbs. wgt., 10" H, 13½" W, 7" D, blue-gray hameroid case, satin-aluminum panel


RCA MasterVolt Ohmyst
Type WV-87A

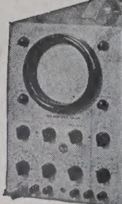
*All Prices Subject to Change Without Notice

RCA TEST AND MEASURING EQUIPMENT

for SERVICE • LABORATORIES • INDUSTRY • SCHOOLS

5" OSCILLOSCOPE (WO-88A)

High Gain . . . Wide Band . . . Direct Coupled

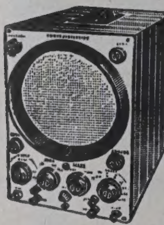


Two WO-88A features a direct-coupled, push-pull, vertical amplifier to give a response flat from 0 cycles to 500 Kc within —3 db. Excellent reproduction of square waves and sync pulses is thus assured, with fidelity heretofore unobtainable in moderately priced service-type 'scopes. A sensitivity of 25 millivolts rms per inch permits use in low-level circuits where high gain is needed. Hum pickup, noise, and other distortion is minimized by a CRT shield and all-steel case. Internal adjustments are easily accessible without removing the case. Green graph screen is calibrated for peak-to-peak voltage measurements. A frequency compensated, calibrated step attenuator maintains uniform response over a wide range of input signal levels. Approximate trace expansion of 2 X screen diameter . . . in conjunction with large 5" CR tube permits detailed observation of small sections of waveforms. Complete with shielded direct probe and cable, low capacitance probe, ground lead, and slip-on alligator clip.

Frequency Response:	
Vertical Amplifier:	
From 0 to 500 kc	within —3 db
From 0 to 1 Mc	within — 10db
Deflection Sensitivity:	
Vertical Amplifier	25 Millivolts rms per 1"
Input Resistance and Capacitance:	
Vertical Amplifier:	
At Input Terminals	1 megohm shunted by 30 μμf
With WG-218 Direct Probe and Cable	1 megohm shunted by 75 μμf
With WG-216B Low-Capacitance Probe	10 megohms shunted by 9.5 μμf
Sweep-Circuit Frequency	15 cps to 30 Kc
Power Requirements:	
Voltage	105-125 volts
Frequency	50-60 cps
Mechanical	
Width	9 inches
Height	13½ inches
Depth	16½ inches
Weight	(Approx.) 25 lbs.
Finish	Blue-gray hameroid case, frosted-aluminum panel, black knobs and bezel

Sugg'd User Price: **$159.50**

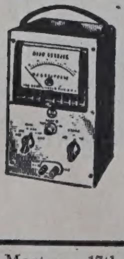
7" OSCILLOSCOPE (WO-56A)



Designed with the user in mind, the WO-56A combines the advantages of high-sensitivity, wide-frequency range, and a large 7" cathode-ray tube into a compact, service-size cabinet. Dual controls for coarse and vernier adjustments save valuable servicing time. This instrument features identical vertical and horizontal push-pull amplifiers with frequency compensated and voltage - calibrated attenuator networks. Peak-to-peak calibrating voltage source on panel. "Plus" and "minus" sync for easy lock-in of "upright" and "inverted" pulse waveforms. Complete with matched probes and cables — **$217.50*** (Suggested User Price).

Frequency Response (Vertical Amplifier):	
Flat from 0 to 500 kc	within —2 db
Flat from 0 to 1 kc	within —6 db
Sweep Frequencies:	
Variable	3 cps to 30,000 cps
Preset	30 cps & 7875 cps for "TV/V" and "TV/H"
Deflection Sensitivity:	
Vertical Amplifier	10.6 rms millivolt per inch
Horizontal Amplifier	21.2 rms millivolt per inch
Power Supply	105/125 volts, 50/60 cps
Dimensions	13⅜"H, 9"W, 16⅝"D
Weight	31 lbs. (approx.)
Finish	blue-gray hameroid case anodized satin-aluminum panels

ULTRA-SENSITIVE DC MICROAMMETER (WV-84A)



Reads from 0.001 to 1000 microamperes in six separate ranges. Useful for measuring high values of resistance; may be used as high resistance voltmeter. Approaches galvanometer sensitivity. Electronic protected non-burnout meter. Accuracy, 0.01 range, ±5% of full scale reading; other ranges ±4%. Ideal for weak-current measurements in phototubes, multiplier phototubes, etc. Sugg'd User Price (less batteries): **$100.00***

Readings	0.001 μa to 1 ma full scale
Six ranges	0.01; 0.1; 1.0; 10; 100; 1000μa
Voltage Drop at Full Scale (all ranges)	0.5 volts
Power Supply (Batteries)	2—1½ volts A (RCA VS106) 2—22½ volts B (RCA VS102)
Dimensions	6¼"W, 9½"H, 5¾"D
Weight (including batteries)	9½ lbs.

RCA TEST AND MEASURING EQUIPMENT

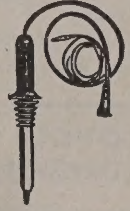
for SERVICE • LABORATORIES • INDUSTRY • SCHOOLS

HIGH VOLTAGE PROBES WG-289, WG-290

Add Important Extra Servicing Value to Your Volt-ohm-meter. Measure DC Voltages Up to 50 Kilovolts in High Resistance Circuits.

- Measure DC Voltages in Television Sets, X-Ray Machines, and other High-Voltage Electronic Devices.
- Increase Input Resistance of Volt-Ohmyst Meter to at least 1,000 Megohms.
- Multiply VTVM Scale by a factor of 100 times.
- Multiplier Resistors available for all popular Volt-ohm-meters.

The WG-289 and WG-290 Probes are identical except for their connectors. The WG-289 is provided with a microphone-type connector; the WG-290 is equipped with phone-tip connectors. Each Probe comes complete with cable, alligator-clip ground lead, and a complete instruction booklet. Five multiplier resistors are available (WG-206-207-208-209-210) and the proper type should be specified, using the type number recommended for your instrument in the instruction book. Sugg'd User Price: **$9.95 complete***

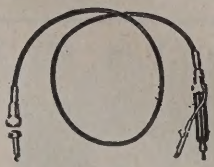


CRYSTAL PROBE (WG-263)

Input Voltage	22 rms volts (max.)
Frequency Range	1000 cycles at 175 Mc
Frequency Response	±10% from 1 kc to 100 mc
Overall Accuracy	±7.5% at full scale
Input Capacity	3.5 $\mu\mu$f

Makes any VoltOhmyst a VHF Voltmeter. Reads flat to 100 Mc. Adapts VoltOhmyst for HF, FM or TV test needs, within sensitivity range of the instrument. Withstands DC loads of 250 volts.

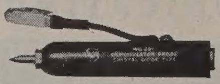
Sugg'd User Price: **$8.95***



DEMODULATOR PROBE (WG-291)

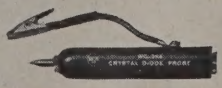
The WG-291 Demodulator Probe has an input frequency range of 500 Kc to 250 Mc with an input capacitance of approximately 2 $\mu\mu$f. A "slip-on" probe designed especially for use with oscilloscopes, it separates the modulation from the rf carrier in an ampltitude modulated wave by means of a rectifier and a filter having a short time constant and an output frequency range of 30 to 5000 cps. The WG-291 has a maximum ac input voltage of 20 rms volts and a maximum dc voltage rating of 250 volts.

Sugg'd User Price: **$7.95**



CRYSTAL-DIODE PROBE (WG-264)

The WG-264 Crystal-Diode Probe has a frequency range of 50 Kc to 250 Mc, with an input capacitance of approximately 2 $\mu\mu$f. It converts rf to dc by means of a long time constant filter and an attenuating network. The WG-264 is a "slip-on" probe which fits on the Direct Probe of VoltOhmysts, such as the WV-97A. The ac-voltage range extends from 20 millivolts to 20 volts rms; dc voltages up to 250 volts can be present. Sugg'd User Price: **$7.75**

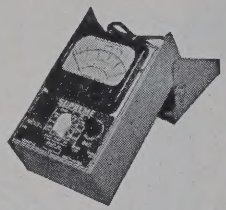


TEST EQUIPMENT
PANEL METERS

SUPREME

INSTRUMENTS
ACCESSORIES

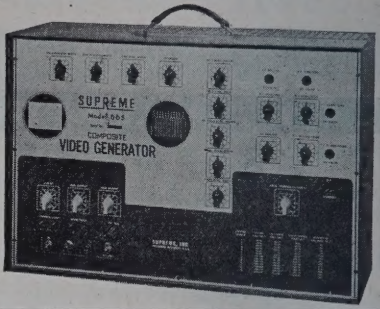
MULTI-METERS



SUPREME makes Volt-Ohm - Milliammeters to fit most every need and budget. Large and small meter types with 1000 or 20,000 ohms/volt sensitivity. Request Specification RM-542-640-2.

COMPOSITE VIDEO GENERATOR

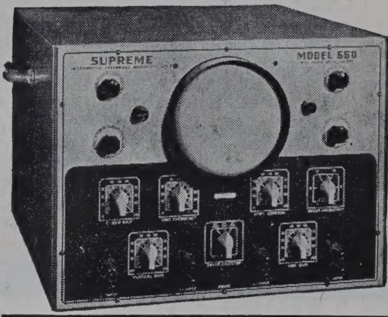
The SUPREME synchronizing and test pattern generator for testing and servicing television sets when the station pattern is off the air. Delivers the COMPOSITE video signal with all the sync, blanking, and equalizing pulses in the proper sequence to lock the raster into a frame of two interlaced fields. (This instrument should not be confused with the "cross-hatch" or "linearity pattern" type units). In addition to its synchronizing function, it has a built in VIDEO (picture signal) generator which produces a pattern of precision spaced dots. Pattern can be turned on or off without affecting the synchronization. For additional information, request data sheet RM-665-2.



KILOVOLT RANGE EXTENSION UNIT

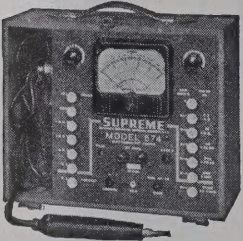
For checking high (DC) voltage in television sets. Extends range of Supreme 20,000 ohms/volt and higher sensitivity multimeters to read 25,000 Volts. Units also available for Supreme Vacuum Tube Voltmeters.

GENERAL PURPOSE & WIDE RANGE OSCILLOSCOPES



SUPREME oscilloscopes are years ahead in operation and design. Model 660 (illustrated) has virtually flat frequency response from 5 cycles to 5 megacycles making it the ideal instrument for checking video and high fidelity audio circuits. Shipped complete with professional type probe, filter screen, and frequency compensated attenuator. For additional data on all Supreme oscilloscopes request Spec. RM-650-5-60-2.

V.T.V.M. SET TESTER



SUPREME Electronic Set Tester is the preferred vacuum tube volt - ohmmeter among technicians and engineers. Full details on Model 574 (illustrated) available by requesting Spec-RM-574-2.

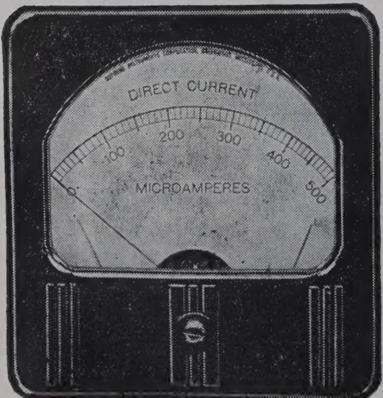
AF, RF, & TV SIGNAL GENERATORS

SUPREME has a most complete group of signal sources for testing and aligning radio and television sets including high fidelity sound amplifiers. AF and RF generators available as separate units or in combination. Supreme Television generators can be externally modulated with composite video signal. For additional data request Spec. RM-675-66-80-2.

SUPREME
MODEL 665

INDICATING INSTRUMENTS

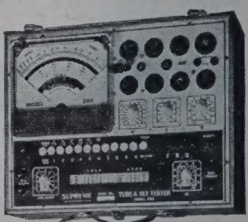
(Panel Meters)



SUPREME quality meters feature efficient Alnico Bar Magnet, Double Bridge construction, Selected Pivots and Jewels. Wide selection of stock models. Special dials available in quantity shipments.

TUBE & SET TESTERS

Dependable, field tested, time proven tube test circuit with design flexibility features to minimize obsolescence. SUPREME Tube and Battery testers are available as separate units or in combination with selected multi-meter functions. All models equipped with roll chart. Deluxe models with 7″ meters, standard models with smaller meters. Tube setting data on new tube types supplied free for first year to registered owners. Revised charts, listing new tube types, made available at small cost to owners after first year. Request Spec. RM-616-2 for additional information.



Write for Additional Data

IN ADDITION to the standard models shown above, **Supreme** builds special purpose test equipment and panel meters for industrial organizations and government services. During the past quarter-century **Supreme Instruments** have been the choice of Engineers, Technicians, and Amateurs in the ever expanding electronic industry. For a prompt reply, ADDRESS your inquiry to **Supreme, Inc., 1714 Carrollton Rd., Greenwood, Miss., U. S. A.**

MEASUREMENTS CORPORATION

Laboratory Standards

QUALITY ELECTRONIC
MEASURING INSTRUMENTS
FOR ACCURATE, DEPENDABLE SERVICE

SINCE 1939, MEASUREMENTS CORPORATION has developed and manufactured a precision line of Laboratory Standards designed for radio, television and other fields of the electronic industry. While our production departments are building instruments currently required by laboratories, manufacturers and the Armed Services, MEASUREMENTS' engineering division is engaged in extensive research on new equipment for the art.

Critical engineering control of all phases of manufacturing, from the selection of component parts, through the production departments, to the final mechanical and electrical inspection, assures every customer of quality instruments that are guaranteed to give accurate, dependable service.

STANDARDS ARE ONLY AS RELIABLE AS THE REPUTATION OF THEIR MAKER

STANDARD SIGNAL GENERATORS

MODEL	FREQUENCY RANGE	OUTPUT RANGE	MODULATION
65-B	75 Kc.-30 Mc.	0.1 microvolt to 2.2 volts	AM. 0 to 100% 400 cycles or 1000 cycles External mod., 50-10,000 cycles
78	15-25 Mc.; 195-225 Mc. 15-25 Mc.; 90-125 Mc. other ranges on order	1 to 100,000 microvolts	AM. 8200-400 cycles 625-400 cycles Fixed at approximately 30%
78-FM	86 Mc.-108 Mc.	1 to 100,000 microvolts	Deviation 0-300 kc, 2 ranges FM. 400-8200 cycles External modulation to 15 Kc.
80	2 Mc.-400 Mc.	0.1 to 100,000 microvolts	AM. 0 to 30% 400 cycles or 1000 cycles External mod., 50-10,000 cycles.
82	20 cycles to 200 Kc. 80 Kc. to 50 Mc.	0-50 volts 0.1 microvolt to 1 volt	Continuously variable 0-50% from 20 cycles to 20 Kc.
84	300 Mc.-1000 Mc.	0.1 to 100,000 microvolts	AM. 0 to 30%, 400, 1000, or 2500 cycles. Internal pulse modulator. External mod., 50-30,000 cycles.
90	20 Mc.-250 Mc.	0.3 microvolt to 0.1 volt	Continuously variable, 0 to 100% Sinusoidal modulation 30 cycles-5 Mc. Composite TV modulation.

U.H.F. OSCILLATOR

MODEL	FREQUENCY RANGE	OUTPUT RANGE	OUTPUT IMPEDANCE
112	300 Mc. — 1000 Mc.	Maximum varies between 0.3 volt and 2 volts. Adjustable over 40 db range	50 ohms

PULSE GENERATOR

MODEL	FREQUENCY RANGE	PULSE WIDTH	OUTPUT
79-B	60 to 100,000 cycles	Continuously variable from 0.5 to 40 microseconds	Approximately 150 volts positive with respect to ground. "Sync Output" 75 volts positive with respect to ground.

SQUARE WAVE GENERATOR

MODEL	FREQUENCY RANGE	WAVE SHAPE	OUTPUT
71	Continuously variable 6 to 100,000 cycles	Rise time less than 0.2 microseconds with negligible overshoot	Step attenuator: 75, 50, 25, 15, 10, 5 peak volts fixed and 0 to 2.5 volts continuously variable.

U.H.F. RADIO NOISE and FIELD STRENGTH METER

MODEL	FREQUENCY RANGE	INPUT VOLTAGE RANGE
58	15 Mc. to 150 Mc.	1 to 100,000 microvolts in antenna. 1 to 100 microvolts on semi-logarithmic output meter, balanced resistance attenuator with ratios of 10, 100 and 1000 ahead of all tubes.

VACUUM TUBE VOLTMETERS

MODEL	VOLTAGE RANGE	FREQUENCY RANGE	INPUT IMPEDANCE
62	0-1, 0-3, 0-30 and 0-100 volts AC or DC	30 cycles to over 150 Mc.	Approximately 7 mmfd.
62-U.H.F.	0-1, 0-3, 0-30 and 0-100 volts AC or DC	100 Kc. to 500 Mc.	Approximately 2 mmfd,
67	.0005 to 300 volts peak-to-peak	5 to 100,000 sine-wave cycles per second	1 megohm shunted by 30 mmfd.

MEGACYCLE METER

MODEL	FREQUENCY RANGE	FREQUENCY ACCURACY	MODULATION
59	2.2 Mc. — 400 Mc.	Within ±2%	CW or 120 cycles fixed at approximately 30%. Provision for external modulation

CRYSTAL CALIBRATOR

MODEL	FREQUENCY RANGE	FREQUENCY ACCURACY	HARMONIC RANGE
111	250 Kc. — 1000 Mc.	0.001%	.25 Mc. Oscillator: .25-450 Mc. 1 Mc. Oscillator: 1-600 Mc. 10 Mc. Oscillator: 10-1000 Mc.

BRIDGES

MODEL	INDUCTANCE (L)	CAPACITANCE (C)	AC RESISTANCE (R)
102	0.5 microhenry to 110 henries	1 mmf. to 110 mfd. Power factor 0-30%	1 ohm to 11 megohms

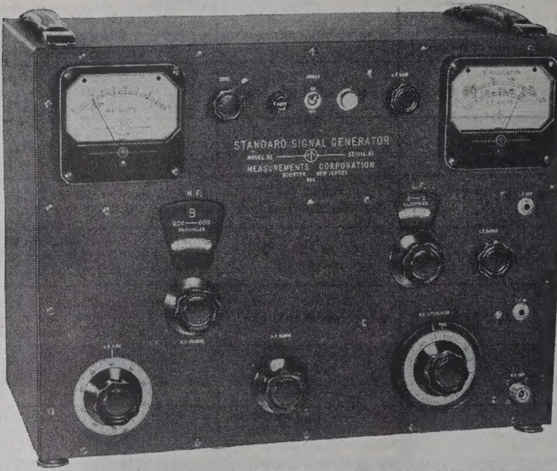
MEASUREMENTS CORPORATION • BOONTON, N. J.

MEASUREMENTS CORPORATION

Laboratory Standards

STANDARD SIGNAL GENERATOR - Model 82

20 CYCLES - 50 Mc.



FREQUENCY RANGE: 20 cycles to 200 kilocycles in four ranges. 80 kilocycles to 50 megacycles in seven ranges. Position available for special range.

FREQUENCY ACCURACY: Each range is individually calibrated. 20 cycles to 200 kilocycles, accurate to ±5%. 80 kilocycles to 50 megacycles, accurate to ±1%.

OUTPUT VOLTAGE AND IMPEDANCE: 0-50 volts across 7500 ohms from 20 cycles to 200 kilocycles. (The output voltage and impedance in this range can be reduced by an external attenuator). 0.1 microvolt to 1 volt across 50 ohms over most of the range from 80 kilocycles to 50 megacycles.

MODULATION: Continuously variable 0-50% from 20 cycles to 20 kilocycles from low frequency variable oscillator or external source.

HARMONIC OUTPUT: Less than 1% from 20 cycles to 20 kilocycles; 3% or less from 20 kilocycles to 50 megacycles.

LEAKAGE AND STRAY FIELD: Less than 1 microvolt from 80 kilocycles to 50 megacycles.

POWER SUPPLY: 117 volts, 50-60 cycles. 75 watts.

DIMENSIONS: 15" high x 19" wide x 12" deep overall.

WEIGHT: 50 pounds.

STANDARD SIGNAL GENERATOR - Model 80

2 Mc. - 400 Mc.

FREQUENCY RANGE: 2 to 400 megacycles in 6 bands, individually calibrated direct reading dial.

FREQUENCY ACCURACY: ± 0.5%.

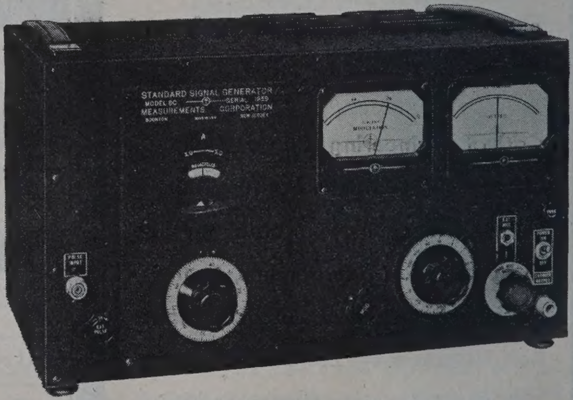
OUTPUT VOLTAGE: Continuously variable from 0.1 to 100,000 microvolts.

OUTPUT IMPEDANCE: 50 ohms.

MODULATION: Amplitude modulation is continuously variable from 0 to 30%. Modulation depth is indicated by a meter on the panel. Internal modulation, 400 and 1000 cycles. Modulation may also be applied from an external source. Pulse modulation may be applied to the oscillator from an external source through a special connector.

LEAKAGE AND STRAY FIELD: Attenuator leakage less than 0.1 microvolt. Power line leakage less than 0.5 microvolt. Stray fields less than two microvolts.

POWER SUPPLY: 117 volts, 50 to 60 cycles. 70 watts.



PULSE GENERATOR
MEASUREMENTS
BOONTON NEW JERSEY

PULSE GENERATOR MODEL 79-B

This instrument is specially adapted for plate pulsing of the Model 80 Standard Signal Generator.

REPETITION RATE: 60 to 100,000 pulses per second.

PULSE WIDTH: Continuously variable from 0.5 to 40 microseconds.

OUTPUT VOLTAGE: Approximately 150 volts positive with respect to ground.

"SYNC" OUTPUT: 75 volts positive with respect to ground. Displaced by ½ period from pulse output.

"SYNC" INPUT: May be synchronized with as little as 2 volts peak from an external source.

POWER SUPPLY: 117 volts, 50-60 cycles. 115 watts.

DIMENSIONS: 10" high x 13⅝" wide x 10½" deep, overall.

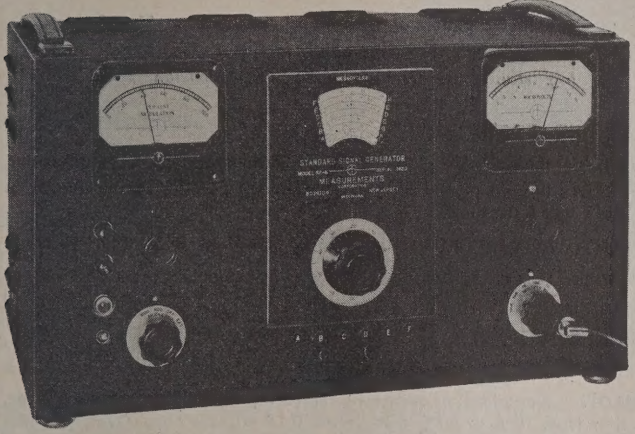
WEIGHT: Approximately 31 pounds.

MEASUREMENTS CORPORATION BOONTON · NEW JERSEY

MEASUREMENTS CORPORATION
Laboratory Standards

STANDARD SIGNAL GENERATOR - Model 65-B

75 Kc. - 30 Mc.



FREQUENCY RANGE: 75 kilocycles to 30 megacycles in 6 push button ranges.

FREQUENCY CALIBRATION: The frequency dial is direct reading and individually hand calibrated for each range. It is accurate to ± 0.5%.

OUTPUT VOLTAGE: Continuously variable from 0.1 microvolt to 2.2 volts.

OUTPUT IMPEDANCE: 5 ohms to 0.2 volt, rising to 15 ohms at 2.2 volts.

MODULATION: Continuously variable from 0 to 100%. Modulation depth is indicated directly by a meter on the panel. Modulation may be obtained either from an internal source of 400 or 1000 cycles or from an external source.

ENVELOPE DISTORTION: Less than 4% at 100% modulation at 1 megacycle.

LEAKAGE: Less than 0.1 microvolt leakage with attenuator set for 0 output.

POWER SUPPLY: 117 volts, 50-60 cycles. 115 watts.

DIMENSIONS: 11" high x 20" long x 10¼" deep, overall.

WEIGHT: Approximately 55 pounds.

FM STANDARD SIGNAL GENERATOR - Model 78-FM

86 Mc. - 108 Mc.

FREQUENCY RANGE: 86 to 108 megacycles, individually calibrated dials. Accurate to ± 0.5%.

OUTPUT VOLTAGE: 1 to 100,000 microvolts.

LEAKAGE: Less than 1 microvolt.

MODULATION: Deviation continuously variable from 0 to 300 kc. Indicated on directly calibrated dial. 400 cycle internal audio oscillator. Can be modulated from an external source providing 6 volts across 5000 ohms.

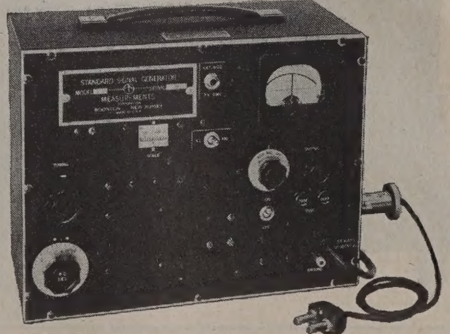
FIDELITY: Flat within two db from DC to 15,000 cycles. Distortion is less than 1% at 75 kilocycles deviation. Transient response is excellent.

POWER SUPPLY: 117 volts, 50 to 60 cycles. 36 watts.

DIMENSIONS: 10" high x 13" wide x 7" deep, overall.

WEIGHT: Approximately 25 pounds.

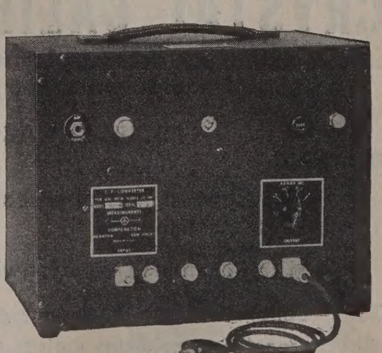
Special one-band Model 78-FM Signal Generators, with a tuning ratio of approximately 1.2 to 1, are available for use within the limits of 30 to 165 megacycles.



I. F. CONVERTER - Model M-275

This instrument was designed for use with the Model 78-FM Standard Signal Generator to provide carrier output at the IF frequencies used in FM and Television receivers.

(Special Frequencies up to 23 Mc. available on order)



CARRIER FREQUENCIES: 4.5, 10.7, 21.7 Mc.

OUTPUT VOLTAGE: 10 microvolts to 1.0 v. when used with Model 78-FM.

BAND WIDTHS: 5% down, ± 250 Kc. from center frequency.

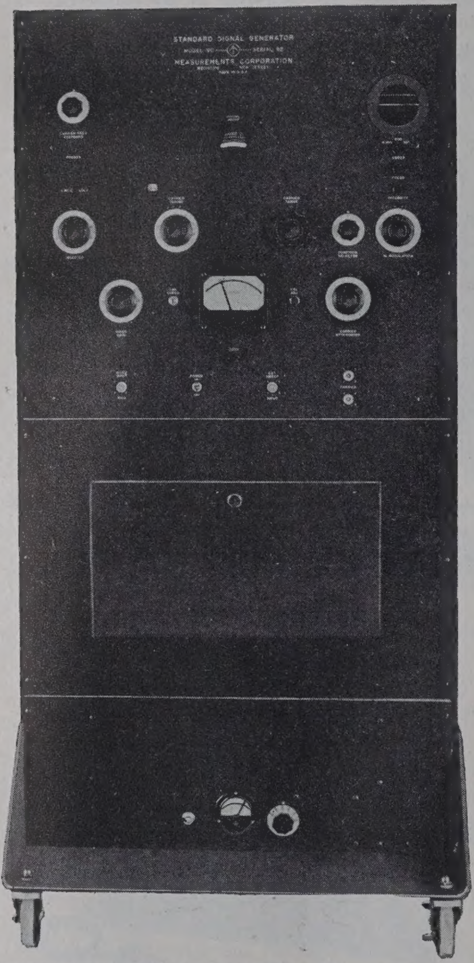
AMPLITUDE MODULATION: Provision for external AM up to approximately 80%, combined with, or exclusive of, FM. There is negligible spurious FM due to AM. The envelope distortion is less than 10% at 80% modulation.

MEASUREMENTS CORPORATION BOONTON · NEW JERSEY

MEASUREMENTS CORPORATION
Laboratory Standards

TELEVISION SIGNAL GENERATOR

MODEL 90


STANDARD SIGNAL GENERATOR
MODEL 90
SERIAL
MEASUREMENTS CORPORATION
BOONTON NEW JERSEY

The first commercial wide-band, wide-range Signal Generator to be developed to meet the exacting standards of high definition television use.

CARRIER FREQUENCY:

RANGE: Continuously variable from 20 to 250 megacycles, in eight ranges.

ACCURACY: Built-in crystal frequency standard permits setting to .01%. Dial scale may be set to 0.1%.

STABILITY: Warm-up drift less than .05%. Less than .01% after warm-up.

LEAKAGE: Less than 10 microvolts.

MODULATION:

Continuously variable from zero to 100%.

ENVELOPE: Sinusoidal, or composite television. Bandwidth to 3 db is 4 Mc. Rise time from 10% to 90% modulation 0.15 microsecond. Overshoot less than 5%. Slope less than 5% on 60 cycle square wave.

INPUT IMPEDANCE: 75 ohms ± 10% (RMA Standard)

INPUT LEVEL: 1.5 volts peak to peak minimum level for 100% modulation. Black negative polarity.

MODULATION PERCENTAGE: Zero to 110%; plate modulation.

OUTPUT:

LEVEL: Continuously variable from 0.3 microvolt to 0.1 volt balanced to ground (measured at 100% modulation level).

IMPEDANCE: (a) 107 ohms line to line (balanced).
(b) 53.5 ohms line to ground (unbalanced).
(c) Suitable pads may be employed to alter these impedances.

DIMENSIONS:

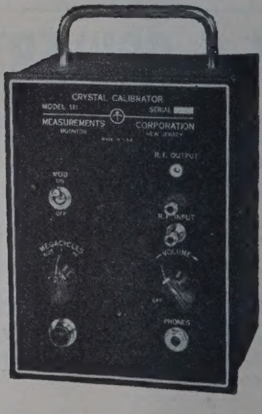
OVERALL: Height—58¾"; Width—28¼"; Depth—25½".

WEIGHT: Model 90—302 pounds.
External Voltage Regulator: 92 pounds.

POWER SUPPLY: 117 volts, 60 cycles. 700 watts.

CRYSTAL CALIBRATOR - Model 111

An extremely accurate instrument for the frequency calibration of equipment in the range of 250 Kc. to 1000 Mc.


CRYSTAL CALIBRATOR
MODEL 111
SERIAL
MEASUREMENTS CORPORATION
BOONTON NEW JERSEY
R.F. OUTPUT
MOD
ON
OFF
R.F. INPUT
MEGACYCLES
VOLUME
PHONES

FREQUENCY ACCURACY: 0.001%

FEATURES:

- Provides test signals of crystal-controlled frequency at .25, 1 and 10 Mc. intervals.
- Has self-contained detector with a sensitivity of 2 microwatts.

USES: Calibration and frequency checking of signal generators, transmitters, receivers, grid-dip meters and similar equipment where a high degree of frequency accuracy is required.

MEASUREMENTS CORPORATION BOONTON · NEW JERSEY

MEASUREMENTS CORPORATION
Laboratory Standards

STANDARD SIGNAL GENERATOR - Model 84

300 Mc. - 1000 Mc.

STANDARD SIGNAL GENERATOR
MODEL 84
MEASUREMENTS CORPORATION
BOONTON NEW JERSEY

FREQUENCY RANGE: 300 to 1000 megacycles, individually calibrated direct reading dial.

FREQUENCY ACCURACY: ± 0.5%.

OUTPUT VOLTAGE: Continuously variable from 0.1 to 100,000 microvolts.

OUTPUT IMPEDANCE: 50 ohms.

AMPLITUDE MODULATION: Continuously variable from 0 to 30% indicated directly on panel meter. Internal sine-wave oscillator; choice of 400, 1000, or 2500 cycles is provided. External modulation up to 30 kilocycles may be applied.

PULSE MODULATION: Repetition rate continuously variable from 60 to 100,000 cycles. Pulse width continuously variable from 1 to 50 microseconds indicated on directly calibrated dial. Pulse delay (with respect to synchronizing output) continuously variable from 0 to 50 microseconds indicated on directly calibrated dial. May be synchronized with an external sine-wave or pulse source.

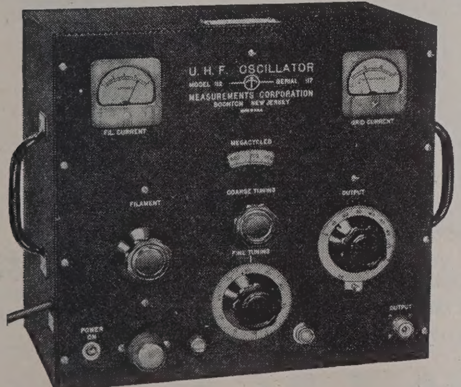
POWER SUPPLY: 117 volts, 60 cycles. 230 watts (with regulator).

DIMENSIONS: 12″ high x 26″ wide x 10″ deep, overall.

WEIGHT: Approximately 135 pounds, including external line voltage regulator.

ACCESSORIES: Included with each instrument are four connecting cables and external voltage regulator.

U. H. F. OSCILLATOR - Model 112



300 Mc. - 1000 Mc.

The Model 112 provides a signal source for the measurement of: standing waves on transmission lines; antenna patterns; filters; attenuators. Also for alignment and tracking of UHF receivers.

FREQUENCY RANGE: 300 to 1000 megacycles.

FREQUENCY CALIBRATION ACCURACY: ± 0.5%.

OUTPUT VOLTAGE: Maximum varies between 0.3 volt and 2 volts. Adjustable over 40 db range.

OUTPUT SYSTEM: 50 ohms.

POWER SUPPLY: 117 volts; 50-60 cycles; 60 watts.

DIMENSIONS: 12½″ x 13½″ x 8″. Weight 22 lbs.

VACUUM TUBE VOLTMETER - Model 62

RANGE: Push button selection of 5 ranges—1, 3, 10, 30 and 100 volts full scale AC or DC.

ACCURACY: ±2% of full scale on each range, both DC and sine-wave AC.

INDICATION: Linear for DC and calibrated to indicate RMS values of a sine-wave or 71% of the peak value of a complex wave on AC.

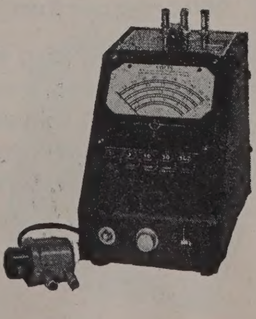
FREQUENCY ERROR: Less than 10% from 30 cycles to over 150 megacycles. Resonant frequency of the probe with input terminals shorted is 350 megacycles.

INPUT IMPEDANCE: The input capacitance is approximately 7 mmf. The input resistance is a function of frequency.

POWER SUPPLY: 117 volts AC, 50 to 60 cycles.

DIMENSIONS: 4¾″ wide x 6″ high x 8½″ deep overall.

WEIGHT: Approximately 8 pounds.



MEASUREMENTS CORPORATION BOONTON · NEW JERSEY

MEASUREMENTS CORPORATION
Laboratory Standards

INTERMODULATION METER - Model 31

FEATURES:

- Compact, completely self-contained unit with—
  - Test Signal Generator
  - Analyzer
  - Voltmeter
  - Power Supply
- Direct-reading meter indicates percentage of intermodulation.
- Accurate metering of input voltage to analyzer.
- Easy to operate.
- Quick, accurate measurements.
- May be mounted in standard 19" relay rack. (7" relay rack panel space.)
- Connection for oscilloscope.

INTERMODULATION METER
MEASUREMENTS CORPORATION

APPLICATIONS:

- Insuring peak performance from all audio systems.
- Correct adjustment and maintenance of AM and FM receivers and transmitters.
- Checking linearity of film and disc recordings and reproductions.
- Checking phonograph pick-ups and recording styli.
- Checking record matrices.
- Adjusting bias in tape recordings.
- For quality control of all audio components and equipment.

MODEL 30 INTERMODULATION METER

This model has a test generator providing: a low frequency range of 40, 70 and 100 cycles; a high frequency range of 2000, 7000 and 12,000 cycles, either separate or mixed in a 1/1 or 4/1 ratio.

The analyzer will operate from 20 cycles to 200 cycles and from 2000 cycles to 20,000 cycles.

A direct-reading meter measures intermodulation percentages from 0.1% to 30%; test generator output voltages from .01 to 100 v. (–30 to +20 DBM); analyzer input voltages from .0001 to 100 v. (–70 to +40 DBM).

SPECIFICATIONS:

GENERATOR:

LOW FREQUENCY: 60 cycles.
HIGH FREQUENCY: 3000 cycles.
LF/HF VOLTAGE RATIO: Fixed 4/1.
OUTPUT VOLTAGE: 10 v. max. into high impedance or +5 DBM matched to 600 ohms.
OUTPUT IMPEDANCE: 2000 ohms.
RESIDUAL INTERMODULATION: 0.2%.

ANALYZER:

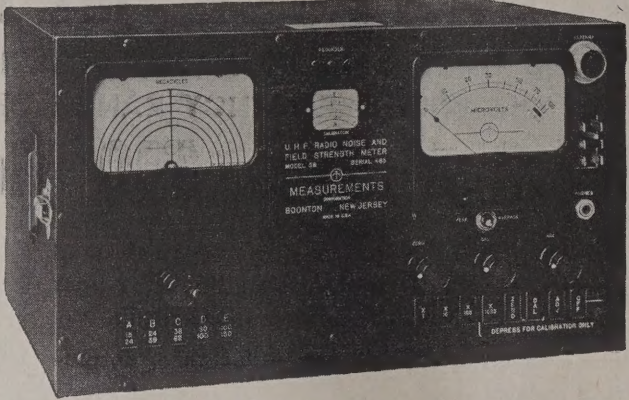
INPUT VOLTAGE: Full scale ranges of 3, 10 and 30 volts RMS. Less than one volt of mixed signal is sufficient for operation.
INPUT IMPEDANCE: Greater than 400 K ohms.
INTERMODULATION: Full scale ranges of 3, 10 and 30%.
ACCURACY: ±10% of full scale.
GENERAL: Power Supply 117 volts, 50/60 cycles. 30 watts. Dimensions: 8" high x 19" wide x 9" deep. Weight 16 lbs. Tubes: 1-12AX7, 1-12AT7, 1-6J5GT, 1-5Y3GT.

MEASUREMENTS CORPORATION BOONTON · NEW JERSEY

MEASUREMENTS CORPORATION
Laboratory Standards

U. H. F. RADIO NOISE and FIELD STRENGTH METER

MODEL 58



This versatile, portable instrument is useful in measuring signal-to-noise ratios, noise levels and for field strength surveys on TV, FM and AM transmitters.

FREQUENCY RANGE: 15 to 150 megacycles in five bands —dial directly calibrated in megacycles.

SENSITIVITY RANGE: 1 to 100,000 microvolts induced in antenna. 1 to 100 microvolts on semi-logarithmic output meter, balanced resistance attenuator with ratios of 10, 100 and 1000 ahead of all tubes.

GAIN STANDARDIZATION: Internal "shot noise" diode provides calibration standard. Special dial eliminates need for charts.

CIRCUIT: Superheterodyne circuit with tuned RF amplifier eliminates image response.

BAND WIDTH: 150 kilocycles @ 2X down.

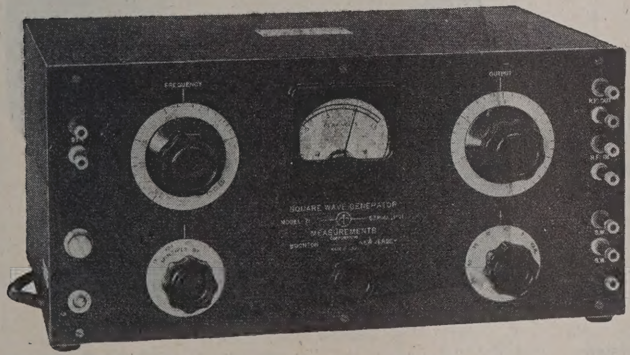
POWER SUPPLY: Built-in regulated dual power supply for operation from either 117 volts AC or 6 volts DC. 70 watts (on AC).

STANDARD EQUIPMENT: Power cables, 15 foot antenna cable, 9 inch loop antenna, carrying strap, and complete instruction book.

DIMENSIONS: 16" wide x 9" high x 11" deep, overall.

WEIGHT: 35 pounds.

SQUARE WAVE GENERATOR - Model 71



Recommended for television testing and many different applications in developing AM, FM and TV equipment where square-wave analysis is of great importance.

FREQUENCY RANGE: 6 to 100,000 cycles.

WAVE SHAPE: Rise time less than 0.2 microseconds with negligible overshoot at 75 peak volts output. At 5 volts or less rise time is less than 0.1 microsecond.

OUTPUT VOLTAGE: Step attenuator giving 75, 50, 25, 15, 10, 5 peak volts fixed and 0 to 2.5 volts continuously variable.

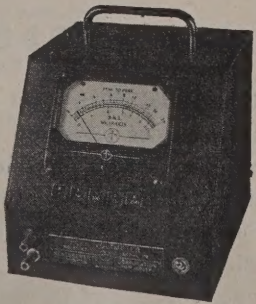
SYNCHRONIZING OUTPUT: 25 volts peak.

R. F. MODULATOR: 5 volts maximum carrier input. Translation gain is approximately unity—Output impedance is 600 ohms.

POWER SUPPLY: 117 volts, 50-60 cycles. 100 watts.
DIMENSIONS: 7" high x 15" wide x 7½" deep, overall.
WEIGHT: Approximately 20 pounds.

PEAK-TO-PEAK VOLTMETER - Model 67

Designed for audio and video level measurements and the measurement of audio electrical interference. The Model 67 is ideally suited for uses where the indication of true peak values is required.



VOLTAGE RANGE: 5 ranges; .0005 to 300 volts peak-to-peak. (Approximately .0002 to 100 r.m.s. volts.)

SEMI-LOGARITHMIC SCALES: Hand calibrated; 0 to 30 peak-to-peak and 0 to 10 r.m.s. equivalent.

FREQUENCY RANGE: 5 to 100,000 sine-wave cycles per second.

INPUT IMPEDANCE: 1 megohm shunted by 30 mmfd.

STABILITY: Less than 2% error with line variations from 110 volts to 120 volts.

RECORDER TERMINALS: For external one milliampere graphic recorder or milliammeter.

POWER SUPPLY: 117 volts; 50-60 cycles, 35 watts.

DIMENSIONS: 7½" high x 7" wide x 8½" deep.

WEIGHT: 10 lbs.

MEASUREMENTS CORPORATION BOONTON · NEW JERSEY

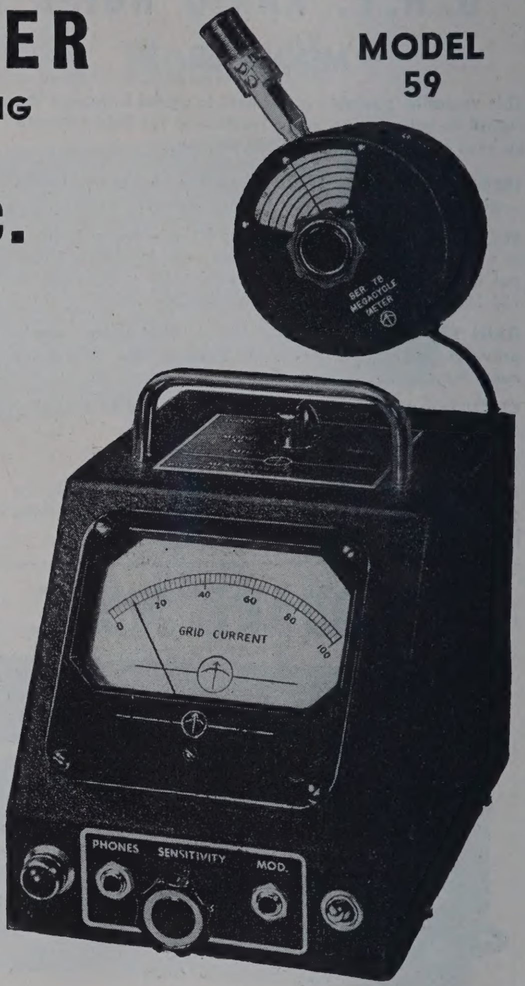
MEASUREMENTS CORPORATION
Laboratory Standards

MEGACYCLE METER

MODEL 59

THE ONLY GRID-DIP METER COVERING THE WIDE FREQUENCY RANGE OF

2.2 Mc. to 400 Mc.



- For determining the resonant frequency of tuned circuits, antennas, transmission lines, by-pass condensers, chokes or any resonant circuit.
- For measuring capacitance, inductance, Q, mutual inductance.
- For preliminary tracking and alignment of receivers.
- As an auxiliary signal generator; modulated or unmodulated.
- For antenna tuning and transmitter neutralizing, power off.
- For locating parasitic circuits and spurious resonances.
- As a low sensitivity receiver for signal tracing.
- As a beat-frequency oscillator in conjunction with a fixed frequency oscillator for measuring video or wide-band amplifier bandwidths.
- As an oscillating or absorption marker for use with a sweep-frequency oscillator.
- For transmitter or oscillator frequency checking by beat note method and absorption wave meter method.

And Many Other Applications.

TELEVISION

The Model 59 is most useful in the construction and servicing of television receivers. It can be used for aligning video amplifiers, for peaking coils, sound traps, filters, stagger-tuned i.f.s, stagger-tuned amplifiers, sound i.f.s, local oscillators, carrier circuits, grid mixing circuits, etc. It is very effective for locating interference and for making traps and filters.

FREQUENCY RANGE: 2.2 megacycles to 400 megacycles with seven plug-in coils.

FREQUENCY ACCURACY: Individually calibrated dial, direct reading to an accuracy of ± 2%.

OUTPUT: CW or MCW. Modulation fixed at approximately 30%, 120 cycles.

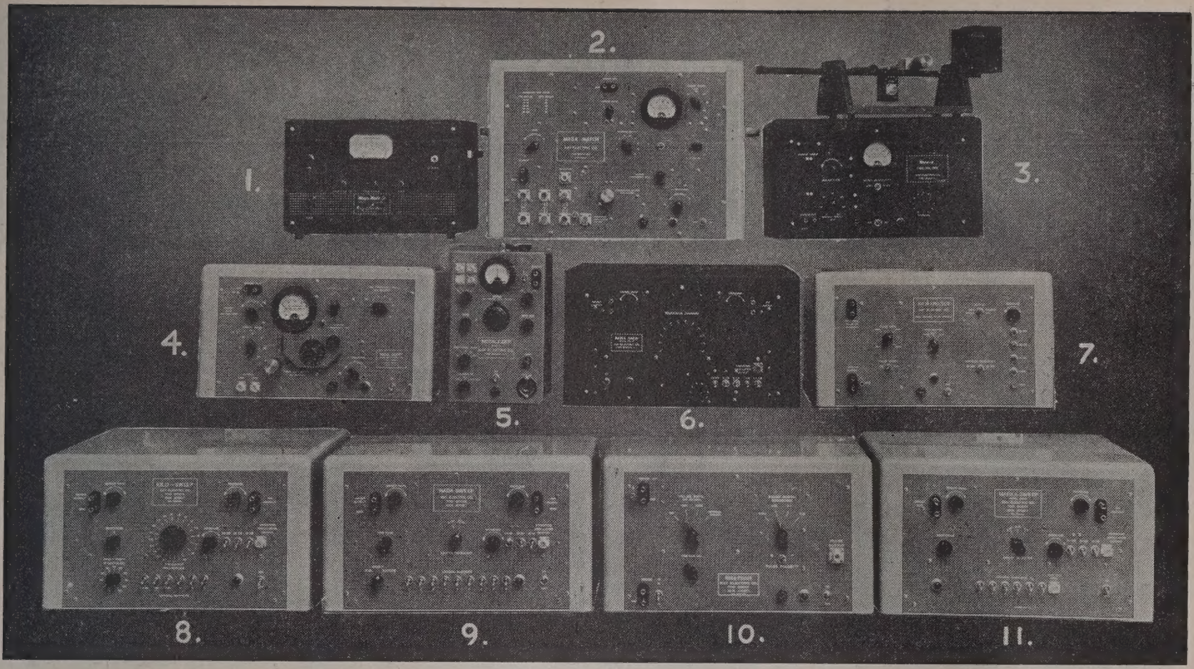
TUBES: 1—Type 955
1—Type OD3/VR150
1—Type 5Y3GT

DIMENSIONS: Power unit: 5⅛" wide, 6⅛" high, 7½" deep.
Weight: approximately 6½ lbs.
Oscillator unit: 3¾" diameter, 2" deep.
Weight: approximately 1 lb.

POWER SUPPLY: 117 volts, 50-60 cycles, 20 watts.

Step-down transformer available for 220 volts, 50 cycle operation.

MEASUREMENTS CORPORATION BOONTON · NEW JERSEY



THESE VERSATILE INSTRUMENTS CAN HELP YOU

1. MEGA-NODE SR.

A calibrated random noise source, 100-3000 mcs. Reads noise figure directly on panel meter.

2. MEGA-MATCH UHF Model

Displays reflection coefficient over 30 mc band from 10 to 1000 mcs.

3. MEGA-X

An X-band Signal Source, C.W. or Sweeping 8500 to 9700 mcs.

4. CALIBRATED MEGA-SWEEP

Wide range sweeping oscillator with single dial tuning.

5. ROTALYZER Model WB

Accurate measurements of instantaneous and average RPM as well as torsional vibration.

6. MARKA-SWEEP Model RF-P

An all-electronic sweep generator switch tuned to VHF TV channels. Narrow crystal-positioned pulse-type markers.

7. RADA-PULSER

A pulsed carrier generator for transient response testing of Radar IF amplifiers.

8. KILO-SWEEP

Narrow band sweep from 50 kc to 2 mc with crystal markers for aligning Radar IF amplifiers.

9. RADA-SWEEP

A wide band sweep generator with markers for aligning Radar IF amplifiers.

10. MEGA-PULSER

Ultra narrow pulse generator.

11. MARKA-SWEEP Model Video

Wide Range video sweep generator covering 50 kc to 20 mc in three bands with crystal markers.

OTHER INSTRUMENTS *(Not Illustrated)*

- **SONA-SWEEP** — Narrow band sweep from 5 kc to 200 kc with crystal markers.
- **MICROWAVE MEGA-MATCH** — Displays reflection coefficient over 30 mc band from 8500 to 9700 mcs.
- **MEGALYZER** — Sensitive visual RF voltmeter and spectrum analyzer.
- **MEGA-NODE** — A calibrated random noise source; 5-220 mc. Reads noise figure directly.
- **MICROWAVE MEGA-NODES** — Calibrated noise sources at microwaves.
- **MICRO-PULSER** — Provides pulses of selectable width over a wide range of repetition rates.
- **MEGA-PIX** — A crystal controlled TV picture and sound RF signal source.
- **ATTENUATORS** — High frequency switchable attenuators.
- **VIBRALYZER** — A vibration and noise frequency analyzer.
- **SONA-GRAPH** — A sound spectograph for the frequency analysis of audio energy.

★ WRITE FOR CATALOG and PRICES

KAY

KAY ELECTRIC COMPANY

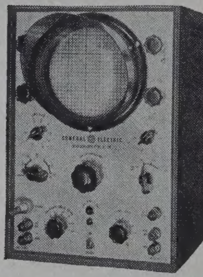
14 Maple Avenue
Phone CAldwell 6-4000
Pine Brook, New Jersey

Export Department: 13 East 40th Street,
New York 16, N.Y.

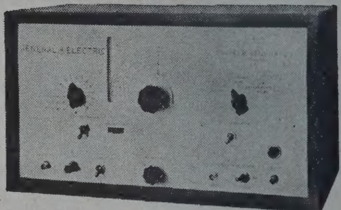
ELECTRONIC RESEARCH, ENGINEERING AND MAINTENANCE EQUIPMENT

TV TEST EQUIPMENT

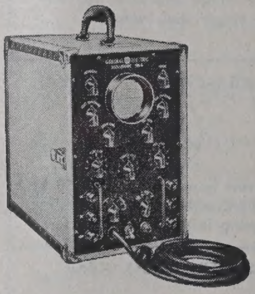
Sweep Generator, Type ST-4A This Variable Permeability Sweep is completely electronic, has no moving parts. Ideal for TV receiver maintenance, TV production and development laboratories, wide band amplifier study, transmission line impedance measurements.



Oscilloscope Type ST-2A Excellent for head-end position work. Unsurpassed for stability and fine trace . . . no bounce when shifting bands. Delivers maximum sensitivity without sacrifice of frequency response Use it to check hum, noise, distortion, modulation, phase relationships. Fits many applications where waveform study is essential.

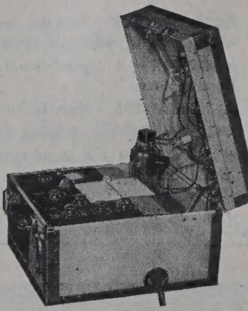


Marker Generator Type ST-5A Functions as a crystal referenced calibrator from 10 mc. to 300 mc. When used with the G-E sweep generator, it provides a multiple of markers spaced 1.5 or 4.5 mc. apart . . . or can be used to supply a marker or markers at any frequency up to from 10 mc. to 900 mc.



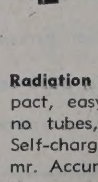
Industrial Oscilloscope Model YNA-4 . . . For tracing circuit trouble in electronic-control equipment, this scope is fast, accurate, and dependable. Ideal for checking welding machines, high wave capacitor discharge panels, variable speed motor controls. Set it down anywhere—the case is insulated . . . carry it easily—weighs only 27 pounds . . . use it in many ways—tests both AC and DC.

Industrial Tube Analyzer Type YTW-3 . . . This portable equipment is designed so that non-technical personnel can quickly and efficiently determine the performance of mercury vapor and gas rectifier tubes by measuring the arc drop voltage under load. The periodic testing of rectifier tubes can help prevent equipment failure and loss of operating time.



NUCLEONICS EQUIPMENT

Alpha Survey Meter Type 4SN10A2 A "must" for anyone handling radium or other alpha emitting material. Light, portable, thoroughly reliable even in high humidity. Accuracy 10% of indicated reading. Developed from Navy Type AN/PDR10A and AEC Cat. No. SPC-2C.



Binary Scaler Model 4SN1A3 Provides scale of 2 in self-contained unit that cuts installation and maintenance to a minimum. Suitable for direct coupling — no intermediate stages necessary. Fits standard octal socket.

Radiation Monitor Type 4SN11A3 Compact, easy to use. Infinite shelf life, no tubes, no batteries to wear out. Self-charging, high sensitivity 0 to 20 mr. Accuracy 10% of radium calibration.

GENERAL ELECTRIC

FOR DEVELOPMENT LABS., TV RECEIVER TESTING, INDUSTRIAL TESTING AND BROADCAST STATIONS

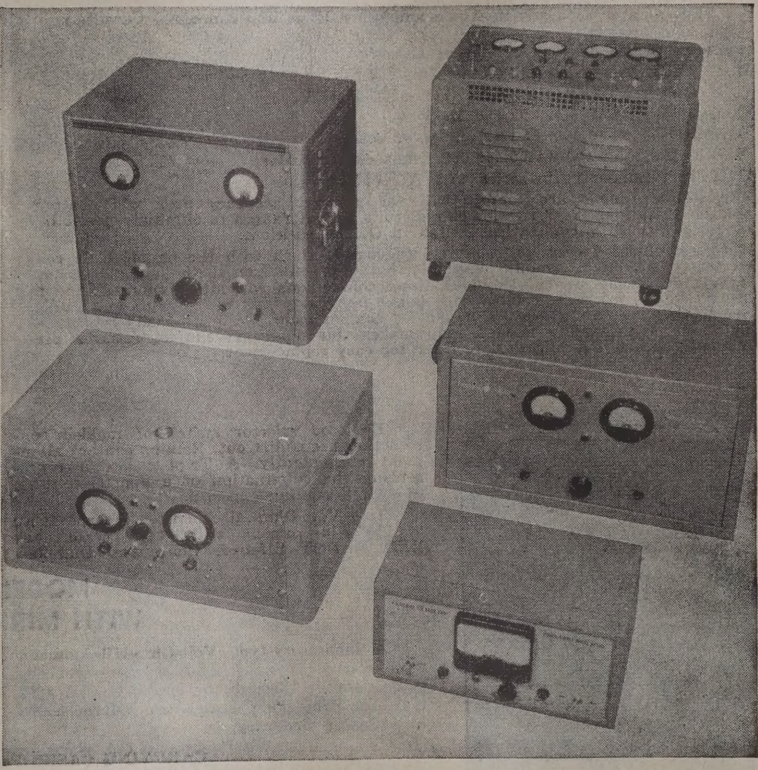
REGULATED POWER SUPPLIES

YPD-4 This General Electric regulated power supply provides a convenient adjustable source of DC voltage from 160 to 1500 volts, 125 milliamperes maximum, which is constant despite changes in load or supply voltage. Its exceptionally wide range of output voltage makes it a versatile power supply for laboratory work.

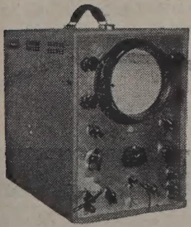
YPD-2 A high-quality, electronically regulated unit designed for use in laboratories, broadcast stations, and wherever a closely regulated variable DC voltage source at medium current consumption is required. DC output 250 to 450 volts (positive or negative may be grounded to the chassis), current output 0 to 300 milliamperes max.

4ST1A1 A superior quality, electronically regulated unit capable of supplying 180 to 300 volts, 60 milliamperes maximum, for general laboratory, development, and production use and wherever a closely regulated DC voltage of low ripple content is required.

4ST9A1 This unit has two separate regulated outputs continuously variable, 0 to 500 volts, 200 milliamperes maximum. Designed for use in laboratories and wherever a closely regulated and well filtered DC voltage is required.



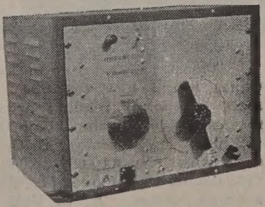
GENERAL PURPOSE



Oscilloscope ST-2C A new 5" scope for general purpose work. Particularly useful for maintenance of microwave installations and TV stations. Wide frequency response without recourse to peaked amplifier coupling circuits, resulting in excellent response. Power requirements: 105-125 volts AC, 50-60 cycles, 120 watts.

TV CHANNEL SWEEP

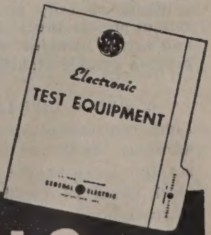
Type ST-11A Designed for production line use, this turret type sweep and marker covers 12 VHF TV channels. Sweep width: Max. at least 8.5 mc to 13 mc channels 2 to 13 respectively. Width internally adjustable from 0 to max. in 7 steps. Output voltage open circuit .28v with isolating pad.



The instruments shown on these pages represent the complete line made by General Electric at Electronics Park. The catalog at right includes specification sheets and descriptions of all units.

Write for FREE Catalog

Your copy will be sent on request. General Electric Company, Electronics Park, Syracuse, N. Y.



GENERAL ELECTRIC

Radio TRIPLETT Testers

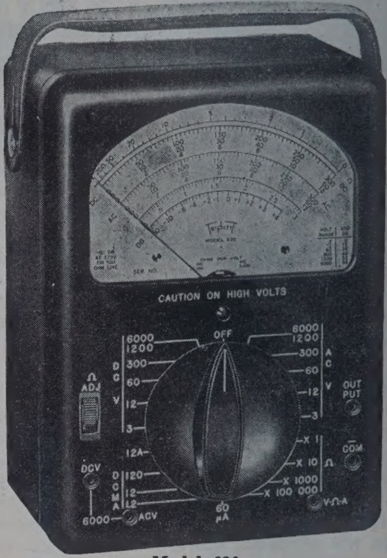
MODEL 630 VOLT-OHM-MIL-AMMETER

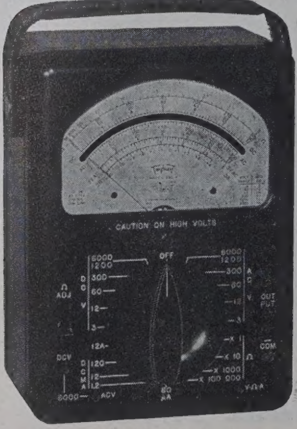
RANGES

D. C. VOLTS: 0-3-12-60-300-1200-6000, at 20,000 Ohms/Volt
(For greater accuracy on TV and other High Resistance Circuits.)
A. C. VOLTS: 0-3-12-60-300-1200-6000, at 5,000 Ohms/Volt
(For greater accuracy in Audio and other High Impedance AC Circuits.)
DB.: —30, +4, +16, +30, +44, +56, +70
(For Direct Reading of Output Levels.)
D. C. MICROAMPERES: 0-60, at 250 M. V.
D. C. MILLIAMPERES: 0-1.2-12-120, at 250 M. V.
D. C. AMPERES: 0-12, at 250 M. V.
*OHMS: 0-1000-10,000 (4.4-44 at center scale)
*MEGOHMS: 0-1-100 (4400-440,000 Ohms center scale)
OUTPUT: Condenser in series with AC Volt ranges.

*Resistance ranges are compensated for greatest accuracy over wide battery voltage variations. Series Ohmmeter circuits for all ranges to eliminate possibility of battery drain when leaving switch in OHMS position.

Streamlined Tester with large 5½" meter, flush with the panel. Unit construction—Resistors, shunts, rectifier, batteries—all housed in a molded base integral with the switch. Provides direct connections without cabling. Simple to operate—only one switch, flush with panel surface, selects both circuit and range. Special 1% resistors are sealed in molded compartment. Batteries easily replaced—Balanced double-spring tension grip makes this operation simple. Assures permanent contact. Precalibrated rectifier for easy replacement.


Model 630


Model 630-A

Enclosed selector switch of molded construction keeps dirt out. Retains contact alignment permanently. A Triplett design representing the culmination of a quarter-century of switch making experience.

This Volt-Ohm-Mil-Ammeter incorporating a 5½" instrument with 4⅜" scale, has RED ● DOT Lifetime Guarantee. Dial has black markings on white except AC and OHM are red. A completely insulated, molded, black case, 3$\frac{7}{32}$" x 5½" x 7½", and panel with engraved white markings. Leather strap handle.

Weight: 4 lbs.

MODEL 630. U.S.A. DEALER NET $39.50

MODEL 630-A WITH MIRROR SCALE

A laboratory-type Volt-Ohm-Mil-Ammeter with mirrored scales and greater accuracy made possible through the use of special ½% resistors. The long scales are mirror-scaled for greater accuracy.

Model 630-A has the same ranges and other advanced design features as Model 630 described above.

Weight: 4 lbs.

MODEL 630-A. U.S.A. DEALER NET $49.50

CARRYING CASES For Models 630 and 630-A

CARRYING CASE MODEL 639-P, black leather, has adequate space for Model 630 or 630-A, instructions and accessories. Padded lining of ⅜" sponge rubber. Strong leather strap handle.

MODEL 639-P. U.S.A. DEALER NET $13.50

CARRYING CASE MODEL 639, black leather, strap handle. Adequate space for Model 630 or 630-A, instructions and accessories.

MODEL 639. U.S.A. DEALER NET $8.50

MIRROR SCALE VOLT-OHM-MIL-AMMETER

Widest range tester of its type with additional brand new features: Long 5" mirror scale for better reading accuracy; Resistance ranges to 40 Megohm; Low Ohm Range 0-2000 (12 ohms center scale); D. C. Volt ranges with dual sensitivity (10,000/20,000 Ohm/Volt) provide double the number of full scale readings of average testers. A. C. Volt ranges at 10,000 Ohm/Volt permit checking many audio and high impedance A. C. circuits where a vacuum tube voltmeter usually is required. Low voltage ranges permit direct measurement of many bias and output voltages. Special film type resistors provide greater stability on all ranges.

6" RED ● DOT Lifetime guaranteed meter. Long mirror scale guarantees greater reading accuracy. Insulated, black molded case with removable strap handle, 2½"×5½"×6". Molded black panel with white markings. Leads and instructions furnished.

Weight: Approx. 3 lbs.

39 RANGES

D. C. VOLTS: 0-1.25-5-25-125-500-2500, 20,000 Ohm/Volt
0-2.5-10-50-250-1000-5000, 10,000 Ohm/Volt
A. C. VOLTS: 0-2.5-10-50-250-1000-5000, 10,000 Ohm/Volt
D. C. MICROAMPS: 0-50, at 250 Millivolts
D. C. MILLIAMPS: 0-1-10-100-1000, at 250 Millivolts
D. C. AMPERES: 0-10, at 250 Millivolts
OHMS: 0-2,000-200,000 (12-1200 center scale)
MEGOHMS: 0-40 (240,000 ohms center scale)
DECIBELS: —30, +3, +15, +29, +43, +55, +69.
(Reference level "0" DB at 1.73 V. on 500 Ohm line.)
OUTPUT: Condenser in series with A. C. Volt ranges

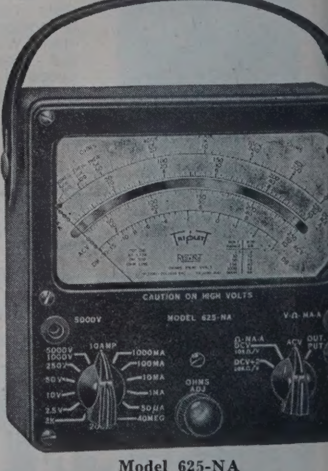
Accessories available to special order for extending ranges: External pin jack shunts for D.C. Current ranges, resistors for A.C.-D.C. volt ranges.

MODEL 625-NA. U.S.A. DEALER NET $49.50

CARRYING CASE

Attractive black leather carrying case with strap handle. Leather flap folds over the top and snaps in place.

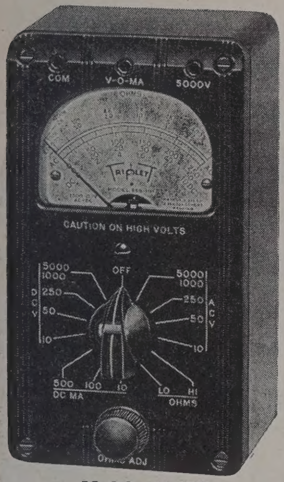
MODEL 629 CASE. U.S.A. DEALER NET $6.50


Model 625-NA

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION

Radio TRIPLETT Testers

POCKET-SIZE VOLT-OHM-MILLIAMMETER



Model 666-HH

A precision-manufactured marvel of compactness that provides a complete miniature laboratory for D. C. and A. C. voltage, Direct Current and Resistance analyses. Its many ranges, attractive appearance and other unique features provide an answer to the Volt-Ohm-Milliammeter requirements of radio service-men and amateurs, industrial engineers, laboratory technicians, etc. Refinements in design feature:

Greater scale readability on the 3" RED • DOT Lifetime guaranteed instrument with black and red scale markings.

Simplified switching provides greater ease in changing ranges.

Lower jack contact resistance and trouble-free plug-in connections by use of banana-type jacks. Banana jacks at top of panel reduce possibility of connecting leads over panel controls or meter scales.

Greater stability on voltage ranges by use of special resistors throughout and on current ranges by use of 250 M. V. instrument.

RANGES

D. C. VOLTS: 0-10-50-250-1000-5000, 1000 Ohm/Volt

A. C. VOLTS: 0-10-50-250-1000-5000, 1000 Ohm/Volt

D. C. MA: 0-10-100-500, at 250 Millivolts

OHMS: 0-2000-400,000 (12-2400 center scale)

Attractive new streamlined black molded case, completely insulated, 3 1/16"×5⅞"×2 9/16". Black molded panel with white markings. Battery self-contained, plug-in type, 1.5 V. Eveready No. 935 or equivalent. 50" test leads with clips and plugs furnished.

Weight: 1½ lbs.

Accessories available to special order for extending ranges: External pin jack shunts for Direct Current ranges, resistors for A.C.-D.C. volt ranges, battery and resistors for Ohms ranges.

MODEL 666-HH. U.S.A. DEALER NET $24.50

CARRYING CASE

Attractive black leather carrying case with strap handle. Leather flap folds over the top and snaps in place.

MODEL 669 CASE. U.S.A. DEALER NET $5.50

POCKET-SIZE VOLT-OHM-MIL-AMMETER

RANGES

D.C. VOLTS: 0-10-50-250-1000-5000, at 1000 Ohms per volt

A.C. VOLTS: 0-10-50-250-1000-5000, at 1000 Ohms per volt

D.C. M.A.: 0-10-100, at 250 M.V.

D.C. AMP.: 0-1, at 250 M.V.

OHMS: 0-3000-300,000 (20-2000 center scale)

MEGOHM: 0-3 (20,000 Ohm center scale) (Compensated Ohmmeter circuit.)

A New Pocket-Size Volt-Ohm-Mil-Ammeter with these latest specialized features meet your needs for A.C. and D.C. Voltage, Direct Current and Resistance analyses.

Enclosed selector switch of molded construction keeps dirt out. Retains contact alignment permanently. A Triplett design representing the culmination of a quarter-century of switch making experience. UNIT CONSTRUCTION—All resistors, shunts, rectifier and batteries housed in a molded base integral with the switch. Eliminates chance for shorts. Direct connections. No Cabling. All precision film or wire-wound resistors are mounted in their own compartment—assures greater accuracy.

3" 0-200 Microammeter, 250 M.V., RED• DOT Lifetime guaranteed against defects in materials or workmanship. Red and black markings on a white background. Easy-to-read scale.

Precalibrated rectifier unit and batteries easily replaced. One 1.5 Volt Eveready #935 and two 1.5 Volt Eveready #915, or equivalent, self-contained.

Handy and pocket-size, black molded case is completely insulated. Size: 3 1/16" x 5⅞" x 2 9/16". Leather strap handle. Black molded panel with engraved white markings.

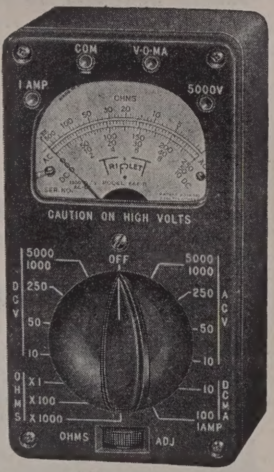
Furnished complete with batteries, 50" test leads and instruction book at an amazingly low price.

Weight: 1½ lbs.

MODEL 666-R . U.S.A. DEALER NET $26.50

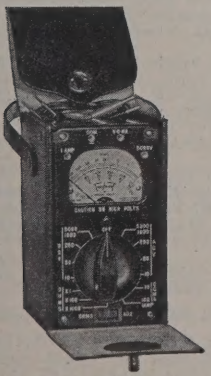
CARRYING CASE

MODEL 669, black leather strap handle, snap cover. . . . U.S.A. DEALER NET . . . $5.50



Model 666-R

PORTABLE VOLT-OHM-MIL-AMMETER



Model 666-RL

This is the popular Model 666-R in camera-type black leather case, particularly designed for anyone who wants a completely portable instrument readily accessible for instant use. Among those who like this style are maintenance and repairmen whose work requires equipment with an accent on portability. With the tester hung up by the leather strap handle, the operator is permitted the use of both hands in his work and the tester is kept within easy reach.

When the case is opened, the lower front flap drops down and the top folds back, exposing the entire tester panel and meter dial so that readings can be taken easily from clear, legible black and red markings on the meter dial. Only one switch adjustment is needed to select the range for any A.C. or D.C. Voltage up to 5000, at 1000 Ohms per volt; Direct Current from 0 to 100 Ma. and 1 Amp. The completely enclosed selector switch of molded construction keeps dirt out and retains alignment permanently. Unit construction whereby all resistors, shunts, rectifier and batteries are housed in a molded base provides direct connections, eliminating chances for shorts.

All precision film or wire-wound resistors are mounted in their own compartment assuring greater accuracy.

RANGES AND OTHER TECHNICAL DATA ARE THE SAME AS FOR MODEL 666-R LISTED ABOVE.

MODEL 666-RL. U.S.A. DEALER NET $32.50

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION

Radio TRIPLETT Testers

TUBE TESTER

A Triplett Tube Tester with new improved testing flexibility permitting checking any type radio receiving tube, miniature hearing aid tubes, pilot lamps, flashlight bulbs and TV picture tubes. The tester gives both "short" and "open" circuit check of each element of every tube — an accurate analysis of the condition of all tube elements, connections, taps, etc. TV picture tubes are checked without removing them from the receiver, by use of an adapter that may be purchased separately. "Continuity" test is provided for checking electrical appliances, motors, etc.

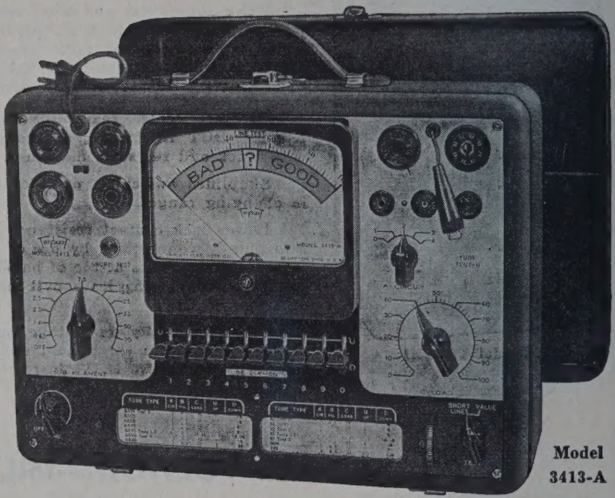
Model 3413-A has flexible 3-position lever switches for complete coverage of present and future tube connections. RMA pin numbering of tube element levers makes for quick reference of tube base connections. Illuminated, easy-to-read roll type tube chart is built into the tester. Simplified test procedure makes it possible for user to add new tube data to chart when desired.

Line Voltage indication on center of meter dial permits observation and adjustment for line fluctuations. Filament voltage: 0.63 volts to 110 volts in 14 steps.

Large 6″ meter, RED ● DOT Lifetime guaranteed, has 3-color easy-to-read GOOD—?—BAD scale.

Portable metal case, 15¹¹⁄₃₂″ x 11¹⁄₃₂″ x 6⅛″, black satin wrinkle finish, with removable, hinged cover and leather handle. Panel attractively etched in black, silver and red. Complete instructions supplied. Power: 115 V., 50-60 cycle A.C. Wt. 20 lbs.

MODEL 3413-A . . U.S.A. DEALER NET . . $79.50

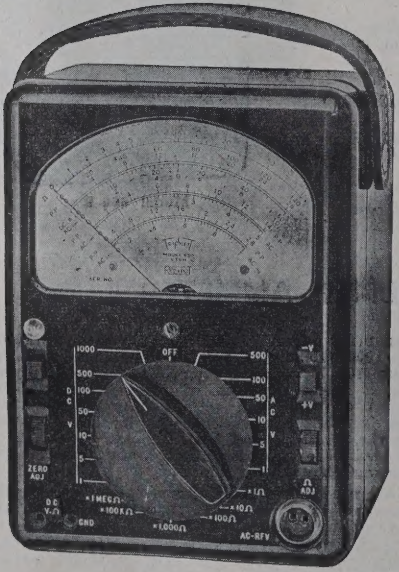


Model 3413-A

PICTURE TUBE ADAPTER

BV Adapter for 3413-A permits testing picture tube right in the receiver or in a shipping carton . . Dealer Net . . $7.90

PORTABLE VACUUM TUBE VOLTMETER — MODEL 650



32 RANGES

D.C. VOLTS: 0-1-5-10-50-100-500-1000

A.C.-R.F. VOLTS: 0-1-5-10-50-100-500

PEAK to PEAK VOLTS: 0-2.8-14-28-140-280-700 (Read on 0-1400 scale)

Peak to Peak value of sine wave to 1400 V.

OHMS: 0-1000-10,000-100,000

MEGOHMS: 0-1-100-1000

DECIBELS: Tabled in instruction book for different impedances.

Galvanometer Center mark "—0+" for discriminator alignment on all DCV ranges —.5 to +.5 volts on 0-1 DCV range.

FREQUENCY RANGE—A.C.-R.F.: 15 cps. to 110 MC at 30%.

MODEL 650 OUTSTANDING FEATURES

1—Peak to Peak ACV and RF measurements made with one probe eliminates troublesome change of probe when changing from ACV to RF measurement. 3—Complete frequency coverage from 20 cps to over 110 MC with one probe. 3—ONE selector switch for all ranges. 4—One volt full scale reading on both AC and DC. 5—Especially designed and insulated, but still shielded RF probe with short leads for high frequency measurements. 6—Zero center mark for FM discriminator alignment plus other Galvanometer measurements. 7—High input impedance 11 Megohms on DC for accurate measurements. 8—Special means for making adjustment for ACV zero shift with line voltage variation. 9—High precision resistors throughout. 10—Separate 1 ACV and 5 ACV scales for greater accuracy. 11—Special circuit arranged so that OFF position shorts meter for greater damping and meter safety during transportation. 13—RED ● DOT Lifetime Guaranteed meter, 2-color scale 4⅜″ long.

Insulated molded case and panel, dimensions, 3¾″x5½″7½″. Removable black leather strap handle. Wt. 5 lbs. (complete with battery and accessories).

Accessories supplied with 650: 1 each AC Power Cord, DC Volt-Ohm lead (Shielded); AC-RF Volt shielded tube probe; 2 alligator clips for probe tips.

MODEL 650 USA DEALER NET $69.50

Accessories available: DC High Voltage Probe: 50 KV-500 DC Volt range, 10 KV-100 DC Volt range, 5 KV-50 DC Volt range, $14.50; Stand for holding tester at about a 45° angle, $.50 net.

CARRYING CASE MODEL 659, black leather strap handle.

USA DEALER NET $9.50

CARRYING CASE MODEL 659-P, black leather, lined with ⅜″ sponge rubber. Strap handle. USA DEALER NET $14.50

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION

Radio TRIPLETT Testers

Triplett
MADE IN U.S.A.
MODEL 3432
SIGNAL GENERATOR
RANGE SELECTOR
TUNING
AUDIO
INT MOD
EXT MOD
UN MOD
A.F. OUTPUT
CIRCUIT SELECTOR
EXT. MOD. A.F. OUTPUT
HI RF
LO RF
R.F. SELECTOR
ATTENUATOR
OFF
ON
R.F. OUTPUT

Model 3432

RANGES

A—165-525 KC
B—500-1750 KC
C—1700-6200 KC
D—6-18.5 MC
E—18-40 MC
Harmonics to 120 MC
E2—36-80 MC
E3—54-120 MC

TEST OSCILLATOR

A wide-range oscillator with uniformly illuminated dial. Seven long scales with widely separated divisions easily read, have five fundamental ranges—165 KC to 40 MC, and two harmonic ranges directly calibrated 36 to 120 MC.

Unique new feature is the brightly illuminated dial providing distinct illumination of scale markings without the least possibility of glare. Lighting also provides an "ON-OFF" indicator.

The dial is big (330°) with seven scales quickly readable at a glance. It has 10 to 1 ratio vernier tuning for ease of adjustment.

RANGE SELECTOR — 5 position follow-up coil switching with complete shielding.

R. F. SELECTOR — Provides High and Low R. F. Output.

OUTPUT ATTENUATOR — Provides fine control of R. F. Output to Coaxial output cable connector.

CIRCUIT SELECTOR — Provides for internally modulated signal (Variable 0 to 100% at 400 cycles). Variable amplitude of external modulation 40 to 15,000 cycles, unmodulated signal or variable audio 0-10 Volts at 400 cycle.

DOUBLE SHIELDING—All R. F. and audio circuits are double shielded with copper plated steel shields.

Metal case, 15$\frac{11}{32}$"×11$\frac{1}{32}$"×6¼", with black enamel finish. Has leather strap handle for ease in carrying. Power: 115 volt, 50-60 cycle A. C. (electrostatic shielded transformer).

Weight: 14½ lbs.

MODEL 3432 . . . U.S.A. DEALER NET . . . $79.50

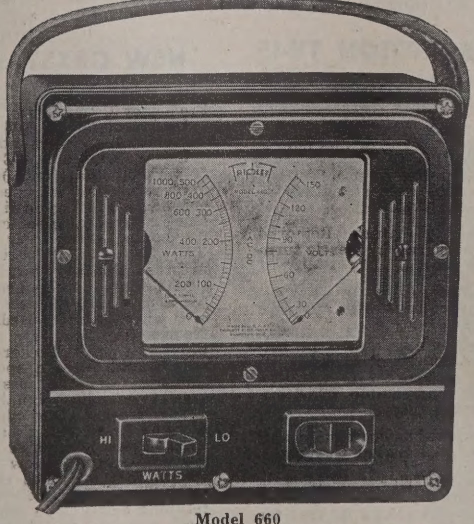
RADIO & TV SERVICING WITH LOAD-CHEK

RANGES

WATTS—AC or DC:
0-500 (50 division scale)
0-1000 (50 division scale)

VOLTS—AC or DC:
0-150 (65 division scale)

The LOAD-CHEK for the first time makes it possible for every technician to utilize what is perhaps the simplest and quickest of all service methods—servicing by Power Consumption Measurements, long proven by auto-radio servicemen as a rapid method of localizing troubles in auto radios. Triplett Model 660 is the first Wattmeter to be produced at moderate cost, and with the proper ranges, to bring this short-cut method within the reach of every radio and TV serviceman.



Model 660

Following are only two of many time-saving uses of this new instrument:

Locating A Short—The chassis tag may show a normal consumption of 225 Watts. Simply plug the power cord of the chassis into LOAD-CHEK (no loose ends to connect or be in the way). Note the reading—which should be possibly 350 Watts. By removing the rectifier tube you can determine at once which side of the tube the short is on. With a soldering iron and long-nosed pliers you can check through the chassis, locate and correct the trouble without having to lay down tools or to check with lead wires!

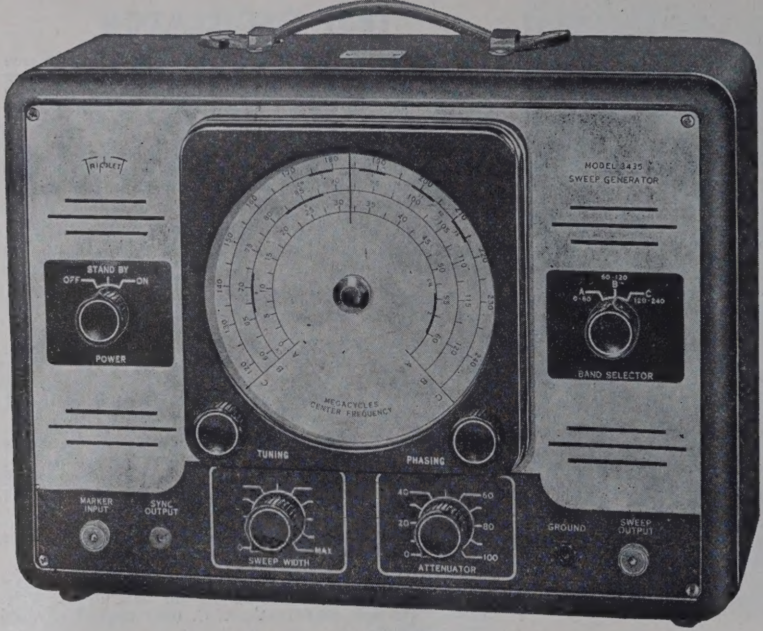
Replacing Burned-Out Resistors—With the chassis to be repaired plugged into a LOAD-CHEK MODEL 660, note the wattage reading with the burned out resistor circuit open. Now replace the resistor. Should the increase in watts be greater than the resistor rating, it indicates an extra load has caused the trouble which has not been cleared. LOAD-CHEK is made-to-order for the busy serviceman because it's a Time-Saver; and at its moderate cost can be standard equipment on every service bench.

Black, molded, insulated case, 2½" x 5½" x 6", with removable black leather strap handle. Black molded panel with white markings. Wt. — 2 lbs.

MODEL 660 . . U.S.A. DEALER NET . . $29.50

Model 629 Leather Carrying Case
U.S.A. DEALER NET $ 6.50

Radio TRIPLETT Testers



QUALITY-ENGINEERED, LOW COST TV-FM SWEEP SIGNAL GENERATOR

MODEL 3435 answers your needs for a quality engineered TV-FM Sweep Signal Generator at an unusually low price. Designed particularly for the service engineer who has his own provision for an external Marker (any good AM Generator).

Buying this sensational new Model will enable you to materially reduce your investment in a Sweep Signal Generator, if you have a good AM Signal Generator to use as the Marker. Connection of external Marker is made simply and quickly through a panel connector. If you do want an external Marker see Triplett Models 1235 Variable Marker or 1236 Crystal Marker.

Model 3435 provides continuous range coverage to 240 MC for all TV Carrier and IF frequencies. No gaps in frequency. Continuous tuning is provided over all TV-FM bands. Continuously variable sweep width control. Sweep at any width between .1 to 12 MC. Phase controlled sweep voltage for scope horizontal input. Main frequency dial marked with channels as well as frequencies. Uniformly lighted dial—large and easy to read. Standby switch for temporary silencing of Generator during other work on equipment under test. Shielding and wiring designed for good control over output. Copper plated steel construction throughout. Miniature tubes used for high frequency circuits. Stability increased by use of ceramic trimmers, zero temperature coefficient capacitors, silver plated coils, and rugged construction.

Metal case with black suede enamel finish, 15$\frac{11}{32}$" x 11$\frac{1}{32}$" x 6¼". Leather handle. Copper plated feet for improved grounding when working over metal work bench top. Panel has black, white and red characters etched on aluminum.

Accessories — Co-Axial cables for low-loss RF output. Heavy braid ground strap. Rubber covered lead for Sync output or additional ground. Balanced 300 ohm output cable.

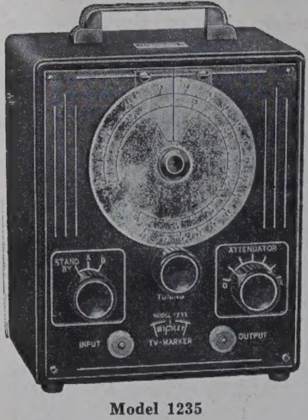
Power — 105-115 Volts, 50-60 Cycles, 25 Watts. Wt.: 15 lbs.

MODEL 3435—U.S.A. DEALER NET $114.50

Model 3435
FREQUENCY COVERAGE

Sweep Center Frequency:
Range 1— 0- 60 MC (Fundamental)
Range 2— 60-120 MC "
Range 3—120-240 MC (Harmonic)

Sweep Width: .1-12 MC (Continuously Variable)



Model 1235

ABSORPTION TV-IF MARKER

Frequency Coverage:
9.5 to 50 MC in two bands.

Triplett first to provide:
- Control over amplitude of Marker dip.
- Standby feature. Removed from circuit by merely turning switch.

Other special features:
- May be used with any type Sweep Generator.
- Two tuning ranges providing complete coverage of all present TV-IF frequencies and ample provision for the future.
- Designed as companion unit for 3435 Sweep Generator.

Although designed as a companion unit for Triplett Model 3435 Sweep Signal Generator, it can be used with any Sweep Generator as an external Marker. There are no complications in use, for connection is made quickly and easily through a panel connector. A standby switch is provided for temporary silencing of Generator during other work on equipment under test. Attenuation—continuously variable from 0 to maximum of Marker dip.

Copper plated steel construction throughout. Large 4" dial has two easy-to-read scales etched on the dial.

Metal case, with black suede enamel finish, 7⅞" x 6⅝" x 4½". Metal handle. Copper plated feet for improved grounding when working over metal work bench top. Panel is black and red etched on aluminum.

Accessories—Co-Axial cable for low-loss connection to Sweep Generator. Coaxial cable for connection to test setup.

Power: None required. Weight: 4 lbs.

MODEL 1235 . . . . U.S.A. DEALER NET . . . $29.50

NEW CRYSTAL MARKER

Frequency Coverage:
Up through 19 MC on crystal (fundamentals)
Up through 216 MC on crystal (harmonics)
(Crystals not included.)

Model 1236 provides Marker frequencies of crystal controlled accuracy for TV, IF or RF requirements. By purchasing ONLY those crystals needed for a particular TV service area and the most-used IF frequencies, this new unit provides utmost Marker accuracy and offers a speedy selection of the desired crystal-controlled signal.

This Marker saves plenty of time in checking bandpass characteristics of curves — simply throw the switch to the desired crystal — eliminating delays resulting from constant tuning and retuning required in the use of variable markers. Signals for the most accurate and fastest means of aligning local oscillators in TV receivers and many other applications. When using a 1 MC crystal, Model 1236 becomes a standard for checking other signal generators or receivers.

Designed as a companion unit to Triplett 3435, it receives its power by plugging into a panel jack in the Sweep Generator.

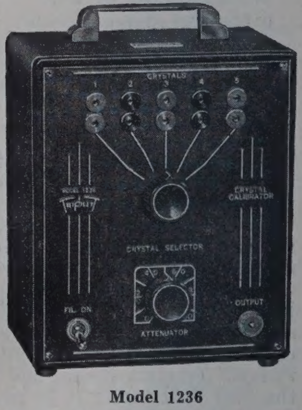
Attenuation—Low impedance single control T-pad attenuator, continuously variable. Shielding—Copper plated steel construction throughout. Stability—Increased by use of latest high-frequency techniques.

Metal case, black suede enamel finish, 7⅞" x 6⅝" x 4½". Metal handle. Copper plated feet. Silver, black, and red etched aluminum panel.

Accessories — Coaxial cable for low-loss connection to Sweep Generator.

WEIGHT: 3¾ lbs.

MODEL 1236 . . . . U.S.A. DEALER NET . . . $24.50



Model 1236

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION

Radio TRIPLETT Testers

TV-FM SWEEP SIGNAL GENERATOR WITH BUILT-IN MARKERS

FREQUENCY COVERAGE

Sweep Center Frequency: Range 1- 0- 60 MC
Range 2- 60-120 MC
Range 3-120-240 MC

Sweep Width: .1-12 MC
(Continuously Variable)

Marker Frequency:
3.5- 4.9 MC (Fundamental)
19.5-29.3 MC (Fundamental)
29 -48.6 MC (Fundamental)
Usable to 241 MC on Harmonics

Crystal Frequency: To 20 MC (Fundamental) Can be used to produce Harmonics up to 216 MC. (Plug-in Crystals not included.)

Modulation: 600 Cycle on Both Crystal and Marker frequencies.

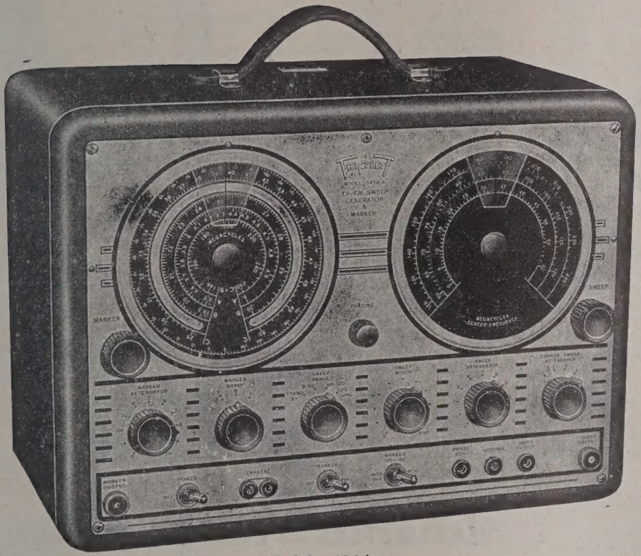
Audio: 600 Cycles.

Model 3434-A provides a complete service laboratory for TV-FM servicing and other electronic requirements. No gaps in frequency. Continuous tuning over all TV-FM bands. Provisions for simultaneous presentation of two Markers. Audio output for quick check on video and sound amplifiers. Ladder type attenuator for coarse and fine output adjustment. Provision for simultaneous presentation of Crystal and Variable Markers. Illuminated, mirror-scaled Marker dials for precise adjustment. Smooth action dial drive with vernier scale. Balanced network for balanced input receivers. Sweep standby switch for temporary silencing of Generator during other work on equipment under test. Line filter. Regulated power supply. Completely shielded. Copper plated steel construction throughout.

Attractive steel case, black enamel finish, $15\frac{11}{32}$" x $11\frac{1}{32}$" x 8¼". Copped plated feet for improved grounding. Leather handle. Black, white and red etched markings on aluminum panel. Accessories — Two Co-Axial cables; heavy braid grounding strap; Polystyrene covered, shielded leads for audio, Phase 60 cycle output and additional ground.

Power: 105-115 volt, 50-60 cycle, 55 Watts. Wt. 23 lbs.

MODEL 3434-A—U.S.A. DEALER NET . . . $199.50



Model 3434A

A FEW REASONS YOU'LL WANT MODEL 3434-A

★ Continuously variable sweep width from 100 KC to 12 MC.

★ Illuminated Frequency dial marked with channels and frequencies.

★ Variable Marker provides continuous tuning over all present TV Video and Sound IFs. Illuminated Mirrored dial.

★ Designed to provide HIGH OUTPUT for stage-by-stage alignment.

★ Self-contained Horizontal Bar Generator covers all channels on Marker Harmonics.

MODEL 3441 TV-FM OSCILLOSCOPE

Push-Pull vertical and horizontal output amplifiers.

VERTICAL AMPLIFIER—Response usable beyond 4.0 MC. Shows a 300 KC square wave with no distortion. Two frequency response ranges with four-range compensated attenuator.

SENSITIVITY: .01 RMS Volts/Inch with switch in 2 MC position.
.02 RMS Volts/Inch with switch in 4 MC position.

HORIZONTAL AMPLIFIER—Frequency Range
Flat within ±20% from 20 Cycle to 150 KC. Deflection Sensitivity—.15 RMS Volts/Inch.

INPUT IMPEDANCE—Vertical Amplifier
2 Megohms in parallel with 20 MMF. with low capacity probe.
2 Megohms in parallel with 45 MMF. at input terminals.

CALIBRATING METER (ILLUMINATED)—Reads peak to peak voltages from 0 to 1000 Volts in 8 ranges, the low range being 0-0.3 volt peak to peak. Reading peak to peak voltages with Triplett Model 3441 makes it possible to view the percentage of positive and negative; plus reading peak to peak voltage direct. Where reading peak to peak voltage on a VTVM only peak to peak voltage is known.

PHONE JACK is on front panel connected to the output of the vertical amplifier so you can hear as you see. This makes a convenient way to familiarize the visual pattern with the familiar audio sounds. Having a high gain amplifier system available also is ideal for tracing audio circuits and checking for noisy components.

LINEAR TIME BASE—10 CPS to 60 KC/Second linear, available at panel.

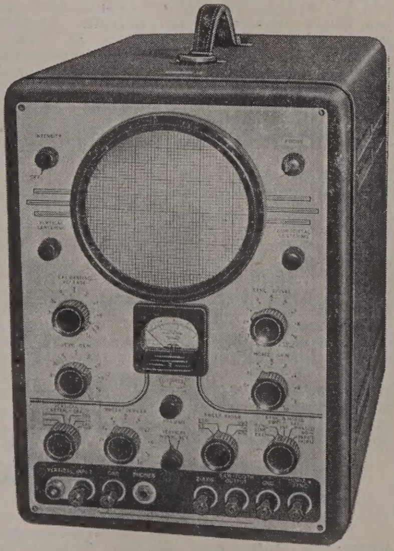
TUBE COMPLEMENT—5UP1, 2-7A5, 5Y3, VR150, 6AC7, 12AT7, 3-6SN7, 2X2. Total 11.
Wide frequency range provide for Television servicing requirements.
Phased 60 CPS horizontal sweep and return trace eliminator for use with Sweep Generators.
Synchronizing and horizontal Sweep Selector combined in same control for simplicity in operation.

CASE—Metal, with black suede enamel finish, $15\frac{11}{32}$" x $11\frac{1}{32}$" x 16". Leather handle. Metal feet for improved grounding.

PANEL—Black, red and white characters etched on aluminum.

ACCESSORIES—Two Co-Axial leads for Vertical Input. Rubber covered leads to plug into Binding Post. Low capacity probe.

POWER—105-115 Volts, 50-60 Cycles, 80 Watts. Wt.: 38 lbs.



Model 3441

MODEL 3441 U.S.A. DEALER NET $199.50

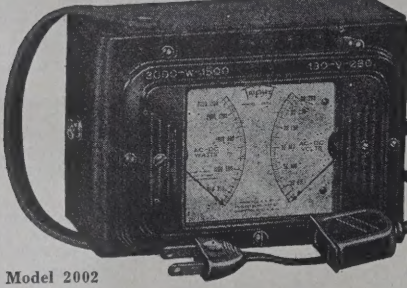
No. 9989 CRYSTAL (Demodulating or Signal Tracing PROBE, for use with MODELS 3441 or 3440. U.S.A. DEALER NET $9.50

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION

Net

Radio TRIPLETT Testers

APPLIANCE TESTERS



Model 2002

MODEL 2002

RANGES: 0-1500-3000 Watts AC-DC at 10 Amp. normal, 20 Amp. Max., 40 Amp. momentary; 0-130-260 Volts AC-DC.

Model 2002 shows power consumption of industrial equipment, radios, electric ranges, refrigerators, washers, etc., under actual running conditions, on either DC or AC between 25 and 133 cycles. Wattmeter on the left and Voltmeter on the right permit Watts and Volts to be read simultaneously or independently. Shows if voltage remains within limits under operating loads. Shows faulty power lines. Heavy inner construction. Heavy leather case, with snap cover and leather handle, 6½" x 4½" x 3¼". Storage space for cord and plug furnished. Wt. 2 lbs.

MODEL 2002 . . . . U.S.A. DEALER NET $39.50

MODEL 2006

RANGES 0-25 AC-DC Amperes; 0-130-260 AC-DC Volts.

Model 2006 is designed for those who prefer the Voltmeter-Ammeter method of testing electric ranges, refrigerators, washers and other household appliances, plus many industrial uses. Simultaneous readings of line voltage and current drain. Compact, portable, heavy leather case, with strap handle, 6½" x 4½" x 3¼". Adequate storage space for cord and plug furnished. Wt. 2 lbs.

MODEL 2006 . . . . U.S.A. DEALER NET $34.50

VU METER DB METER

Volume Unit and Decibel Meters are used to measure sound or noise levels in amplifiers for Public Address, Theatres, Broadcasting Studios, Broadcasting Static Equipment, etc.

VU Meters are used for volume level measurements—including broadcast monitoring. Ballistic characteristics comply with standardization recommendations of NBC and CBS and Bell Telephone Laboratories. Internal impedance 3900 Ohms. Steady state reference 1 Milliwatt. For 600 Ohm line. Dynamic characteristics provide for 99% full scale deflection in .3 seconds. Specify scale type when ordering:

Type "A": 0-100 (black) —20 to +3 VU on top arc (red).
Type "B": 0-100 (black) —20 to +3 VU on bottom arc (red).

	Net Price
Model 426 VU	$16.50
Model 426 VU (Illuminated)	18.00
Model 327-T VU	15.50
Model 327-T VU (Illuminated)	17.00

DB Meters permit the operator of public address systems, etc., to make instant adjustments to prevent sound blasting or distortion. General purpose type reads up 6 and down 10 decibels. Zero decibel = 1.73 Volts. Calibrated for use on a 500 Ohm line. Reference level 6 Milliwatts. Resistance: 5000 Ohms. They consist of a sensitive D. C. instrument coupled to a copper-oxide rectifier. Standard damping is provided unless highly damped instruments are specified. Quotation on request.

	Net Price
Models 321-T or 327-T	$12.40
Models 321-T or 327-T (Illuminated)	14.00
Models 421 or 426	13.40
Models 421 or 426 (Illuminated)	15.00

HIGH RANGE D.C. VOLTMETERS FOR AMATEURS

Designed particularly for radio amateurs. High range 3" D. C. Voltmeters—1000 ohms per volt. Provided with special external metalized multipliers mounted on bakelite strip. Specify this type when ordering, or standard voltmeters will be furnished. Available 3" case, Models 321-T, 327-T:

Range	Price	Range	Price
0-1000	$13.10	0-4000	$13.10
0-2000	13.10	0-5000	13.10
0-3000	13.10		

RADIO AMATEUR EQUIPMENT

FREQUENCY METER

Model 3256

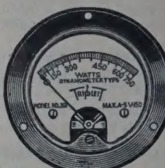
A new band-switching, tuned Absorption type Frequency Meter covering five amateur bands. Incorporates the new germanium crystal and a D. C. Milliameter indicator for greater sensitivity. Direct calibration on panel—no coils to change; switching permits instantaneous band change. Audio jack is provided for monitoring of phone signals—another new feature. Fully shielded. Calibration is in megacycles in the following bands: 3.5-4 MC; 7-7.3 MC; 14-14.4 MC; 20-21.5 MC; 28-30 MC. Coil is removable and other coils may be substituted for special bands. if desired.

USEFUL FOR CHECKING: (1) Fundamental frequency of oscillating circuits. (2) Presence, order and amplitude of harmonics. (3) For parasitic oscillations. (4) Neutralization of R. F. amplifiers. (5) Standing wave ratio on transmission lines. (6) Presence of undesirable or small quantities of R. F. (7) Monitoring of phone signals.

A fully shielded unit of compact pocket size. Overall height, including coil, 7½"; width 2½"; depth 2¼". Attractive gray "hammered" enamel finish with black trim.

MODEL 3256 . . . . U.S.A. DEALER NET $17.50

WATTMETERS — ELECTRODYNAMOMETER



These instruments can be used on single phase A. C. or D. C. as Wattmeters. On special order they can be made up as voltmeters or ammeters. Instruments are self-contained to 300 Volts—10 Amperes. Over that external connection can be made. For use on frequencies up to 133 cycles per second. Available in three-inch model 361. Case dimensions same as 321-T, except for depth, 2" back of the flange (2⅛" over studs). Wattmeters can be combined in the Triplett Twin case with a voltmeter or Ammeter. Accuracy within ±2%. Standard ranges as follows:

MODEL 361 — SINGLE PHASE

Range Watts	Normal Voltage	Normal Amps.	Sc. Div.	Net Price
0-75	150	½	75	19.50
0-150	150	1	75	19.50
0-300	150	2	60	19.50
0-750	150	5	75	19.50
0-1500	150	10	75	19.50
0-150	300	½	75	21.50
0-300	300	1	60	21.50
0-600	300	2	60	21.50
0-1500	300	5	75	21.50
0-3000	300	10	60	21.50

DOUBLE RANGE WATTMETERS (Double Voltage Limits Only)

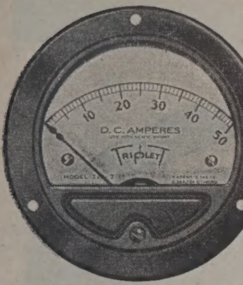
0-75-150	150-300	½	75	26.00
0-150-300	150-300	1	75	26.00
0-300-600	150-300	2	60	26.00
0-750-1500	150-300	5	75	26.00
0-1500-3000	150-300	10	75	28.50

SENSITIVE RELAYS

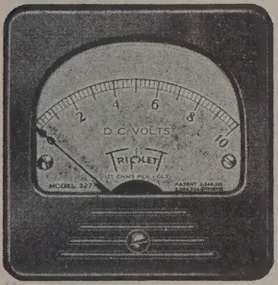
Highly sensitive Triplett relays of the D'Arsonval moving coil type, are carefully designed to give dependable, satisfactory performance. Since relays cover such a wide field and most of them are made to special order, no standard models are listed. Contacts are normally rated at 25 Milliamperes, 25 Volts; higher ratings if required. Instrument relays are provided in 2", 3" or Twin cases. Years of instrument experience are available to every relay user through Triplett's extensive service. Send us your applications with information specifying maximum and minimum currents and voltages which will pass through relay coil and contact points, etc.

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION

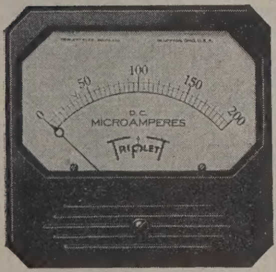
Indicating TRIPLETT Instruments



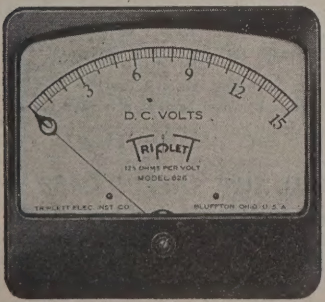
Models 221-T, 231-S, 241-T; 222-T, 232-S, 242-T; 321-T, 331-S, 341-T; 322, 332, 342



Models 227-T, 237-S, 247-T; 327-T, 337-S, 347-T



Models 426, 436, 446 and 466



Models 626, 636, 646; 726, 736, 746

Models		Scale Lengths		Flange	Body Dia.	Body Depth		Case Material
D. C.	A. C.	D. C.	A. C.			D. C.	A. C.	
221-T	231-S	1.76"	1.58"	2$\frac{11}{16}$" Dia.	2$\frac{7}{32}$"	$\frac{15}{16}$"	1$\frac{5}{16}$"	Molded
222-T	232-S	1.76"	1.58"	2$\frac{9}{16}$" Dia.	2$\frac{1}{16}$"	1$\frac{1}{16}$"	1$\frac{7}{16}$"	Metal*
223-T	233-S	1.76"	1.58"	2$\frac{5}{16}$" Dia.	2$\frac{1}{16}$"	1$\frac{1}{16}$"	1$\frac{7}{16}$"	Metal*
227-T	237-S	1.76"	1.58"	2⅜" Sq.	2$\frac{5}{32}$"	1"	1⅜"	Molded
321-T	331-S	2.49"	2.22"	3½" Dia.	2¾"	$\frac{15}{16}$"	1⅝"	Molded
322	332	2.49"	2.22"	3¼" Dia.	2$\frac{9}{16}$"	1$\frac{13}{32}$"	1$\frac{13}{32}$"	Metal*
324	334	2.49"	2.22"	3$\frac{1}{16}$" Dia.	2¾"	1$\frac{17}{32}$"	1$\frac{17}{32}$"	Metal*
327-T	337-S	2.49"	2.22"	3" Sq.	2¾"	1"	1⅜"	Molded
421	431	3.11"	2.78"	4¼" x 3$\frac{15}{16}$"	2¾"	$\frac{15}{16}$"	$\frac{15}{16}$"	Molded
421-A	431-A	3.11"	2.78"	3½" x 3$\frac{3}{16}$"	2¾"	$\frac{15}{16}$"	$\frac{15}{16}$"	Molded
422	432	3.11"	2.78"	4⅜" Dia.	3$\frac{9}{16}$"	1$\frac{11}{32}$"	1$\frac{11}{32}$"	Molded
426	436	3.11"	2.78"	4¼" x 4"	3⅛"	$\frac{15}{16}$"	$\frac{15}{16}$"	Molded
420	430	4.28"	3.6"	4⅝" x 4$\frac{3}{16}$"	2¾"	$\frac{27}{32}$"	$\frac{31}{32}$"	Molded
521	531	3.11"	2.78"	5¼" Dia.	4⅜"	1$\frac{9}{16}$"	1$\frac{9}{16}$"	Molded
524	534	3.11"	2.78"	4¾" Dia.	4⅜"	1⅝"	1⅝"	Molded
626	636	5.6"	5.3"	6" x 5⅝"	3⅛"	1$\frac{1}{32}$"	1$\frac{1}{32}$"	Molded
726	736	6"	5.75"	7$\frac{17}{32}$" x 6$\frac{29}{32}$"	3½"	$\frac{15}{16}$"	$\frac{15}{16}$"	Molded

*Molded base.

D.C. VOLTMETERS — 125 Ohms per Volt

Range	Models 221-T, 222-T, 223-T, 227-T	Models 321-T, 322, 324, 327-T	Models 420, 421, 421-A, 422, 426	Models 521, 524	Model 626	Model 726
0-5	$ 7.50	$ 8.50	$ 9.50	$11.00	$11.50	$14.50
0-10	7.50	8.50	9.50	11.00	11.50	14.50
0-25	7.50	8.50	9.50	11.00	11.50	14.50
0-50	7.50	8.50	9.50	11.00	11.50	14.50
0-100	7.50	8.50	9.50	11.00	11.50	14.50
0-150	7.50	8.50	9.50	11.00	11.50	14.50
0-300	9.30	10.30	11.30	12.80	13.30	16.30

D.C. VOLTMETERS — 1000 Ohms per Volt

0-10	$ 9.90	$10.90	$11.90	$13.40	$13.90	$16.90
0-150	10.30	11.30	12.30	13.80	14.30	17.30
0-300	12.60	13.60	14.60	16.10	16.60	19.60
0-500	14.10†	15.10	16.10	17.60	18.10	21.10
0-1000	28.40*	29.40*	30.40*	31.90*	32.40*	35.40*

125 Ohms/Volt sensitivity supplied unless otherwise specified on order. † Instruments supplied with External wire-wound series resistors at prices shown. * Supplied with external resistor boxes at prices shown above. All other instruments are self-contained.

D.C. MICROAMMETERS

0-20	$13.50	$14.50	$15.50			
0-50	10.50	11.50	12.50	$14.00	$14.50*	$17.50*
0-100	10.00	11.00	12.00	13.50	14.00*	17.00*
0-200	8.50	9.50	10.50	12.00	12.50	15.50
0-500	8.00	9.00	10.00	11.50	12.00	15.00

* Supplied with knife-edge pointer.

D.C. MILLIAMMETERS

0-1	$ 7.50	$ 8.50	$ 9.50	$11.00	$11.50	$14.50
0-15	7.50	8.50	9.50	11.00	11.50	14.50
0-25	7.50	8.50	9.50	11.00	11.50	14.50
0-50	7.50	8.50	9.50	11.00	11.50	14.50
0-100	7.50	8.50	9.50	11.00	11.50	14.50
0-150	7.50	8.50	9.50	11.00	11.50	14.50
0-200	7.50	8.50	9.50	11.00	11.50	14.50
0-250	7.50	8.50	9.50	11.00	11.50	14.50
0-300	7.50	8.50	9.50	11.00	11.50	14.50
0-500	7.50	8.50	9.50	11.00	11.50	14.50

D.C. AMMETERS

0-1	$ 7.50	$ 8.50	$ 9.50	$11.00	$11.50	$14.50
0-10	7.50	8.50	9.50	11.00	11.50	14.50
0-25	7.50	8.50	9.50	11.00	11.50	14.50
0-50	7.50	8.50	9.50	11.00	11.50	14.50

A.C. VOLTMETERS

Range	231-S, 232-S, 233-S, 237-S	331-S, 332-S, 334, 337-S	430, 431, 431-A, 432, 436	531, 534	636	736
0-5	$ 7.50	$ 8.50	$ 9.50	$11.00	$11.50	$14.50
0-10	7.50	8.50	9.50	11.00	11.50	14.50
0-150	8.50	9.50	10.50	12.00	12.50	15.50
0-300	10.30	11.30	12.30	13.80	14.30	17.30

A.C. AMMETERS

0-3	$ 7.50	$ 8.50	$ 9.50	$11.00	$11.50	$14.50
0-5	7.50	8.50	9.50	11.00	11.50	14.50
0-10	7.50	8.50	9.50	11.00	11.50	14.50
0-25	7.50	8.50	9.50	11.00	11.50	14.50

A.C. MILLIAMMETERS

0-10	$ 7.50	$ 8.50	$ 9.50	$11.00	$11.50	$14.50
0-15	7.50	8.50	9.50	11.00	11.50	14.50
0-50	7.50	8.50	9.50	11.00	11.50	14.50
0-100	7.50	8.50	9.50	11.00	11.50	14.50
0-200	7.50	8.50	9.50	11.00	11.50	14.50
0-500	7.50	8.50	9.50	11.00	11.50	14.50

R.F. AMMETERS (with internal couples)

0-.5	$ 8.50	$ 9.50	$10.50	$12.00	$12.50	$15.50
0-1	8.50	9.50	10.50	12.00	12.50	15.50
0-1.5	8.50	9.50	10.50	12.00	12.50	15.50
0-2.5	8.50	9.50	10.50	12.00	12.50	15.50
0-5	8.50	9.50	10.50	12.00	12.50	15.50
0-10	8.50	9.50	10.50	12.00	12.50	15.50

Also available with external couples; prices on request. Models 241-T, etc. correspond to D.C. Models 221-T, 341-T to 321-T, etc.

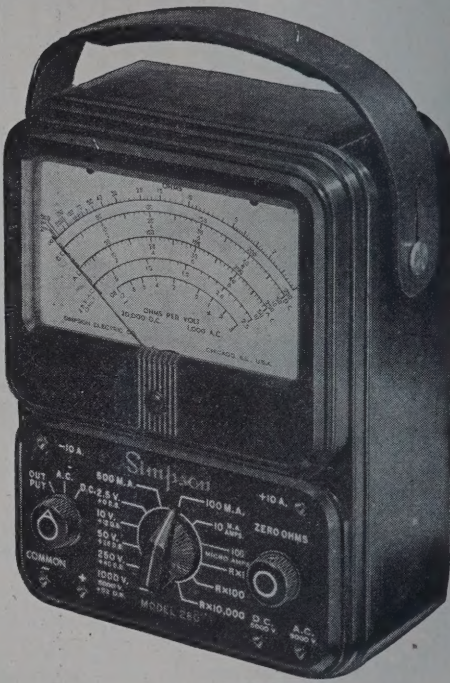
ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION — OTHER RANGES AVAILABLE

★ **Simpson**

INSTRUMENTS THAT STAY ACCURATE

MODEL 260
Set Tester

World's Most Popular High Sensitivity Set Tester For RADIO and TELEVISION



There are more Simpson 260 high sensitivity volt-ohm-milliammeters in use today than all others combined. No other instrument of its kind has approached the world-wide popularity of the Simpson 260. In no other tester of its kind will you find the combination of useful ranges, accuracy, ruggedness, beauty and sensitivity developed to such a high degree of perfection.

Removal of the Model 260 from its heavy, handsome case of molded bakelite, will disclose how it differs from most set testers. You will see a sub-panel with a score of small recesses each holding a separate resistor or other component. You will notice complete absence of cable wiring. All connections are short and direct, thus offering a strength and firmness of assembly and the finest of insulation to reduce chances of shorts. All components are readily accessible. The front panel is a thing of beauty and long life. Pin jacks are recessed so no metal parts are exposed. All figures and symbols are molded into a heavy Bakelite panel and filled with durable white for long wear and legibility.

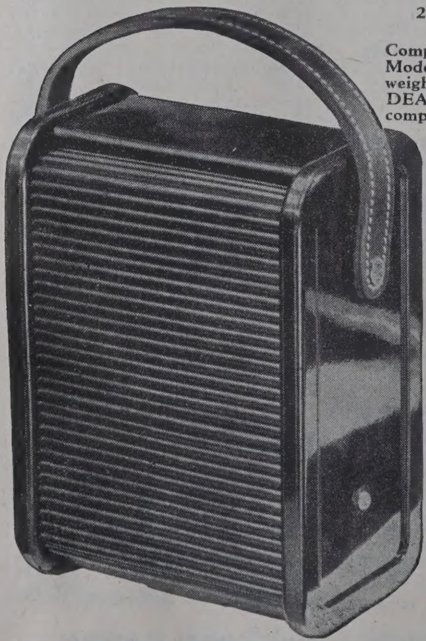
At 20,000 ohms per volt the 260 is highly dependable, rugged and accurate. Its practically negligible current consumption assures remarkably accurate voltage readings. It provides DC current readings as low as 2 microamperes and up to 10 amperes. Dependable resistance readings can be made up to 20 megohms and as low as 1/5 ohm. With the 260 you can measure automatic frequency control diode balancing circuits, grid currents of oscillator tubes and power tubes, bias of power detectors, automatic volume control diode currents, high-mu triode plate voltage, as well as a wide range of other measurements which cannot be checked with ordinary servicing instruments.

RANGES

Model 260 Volt-Ohm-Milliammeter
20,000 Ohms per Volt DC, 1,000 Ohms per Volt AC
Volts, AC and DC: 2.5, 10, 50, 250, 1000, 5000
Output: 2.5, 10, 50, 250, 1000
Milliamperes, DC: 10, 100, 500
Microamperes, DC: 100
Amperes, DC: 10
Decibels (5 ranges): —12 to +55 DB.
Ohms: 0-2000 (12 ohms center), 0-200,000 (1200 ohms center), 0-20 megohms (120,000 ohms center).

25,000 VOLT DC PROBE FOR TELEVISION TESTING

Complete, nothing to add, for use with Model 260. Weight: 6 oz. Shipping weight: 8 oz.
DEALER'S NET PRICE
complete with Instructions..........$9.95



DEALER'S NET PRICES

Model 260, complete with test leads and Operator's Manual (Size: 5¼"x7"x3⅛". Weight: 3½ lbs. Shipping Wt.: 5 lbs.)	$38.95
Leather Carrying Case	6.75
Eveready Leather Carrying Case	8.75
Model 260RT in Roll Top Safety Case, complete with test leads and Operator's Manual (Size: 6⅜"x9"x4¾". Weight: 6½ lbs. Shipping Wt.: 9 lbs.)	46.90

Model 260 available in standard all black or two tone tan and brown, at above prices. Specify color desired.

←

MODEL 260RT SET TESTER IN ROLL TOP SAFETY CASE

The Model 260, when placed inside our patented housing of heavy molded bakelite and permanently fastened in position, offers the highest degree of efficient, economical instrument protection. Now you can buy the famous 260 complete in this roll top safety carrying case with its built-in lead compartment at less than the price of a 260 and an Eveready leather carrying case. A flick of the finger rolls the top up and the instrument is ready to use. A downward flick rolls the top down and your instrument is fully protected.

* Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 480 FM-TV GENESCOPE

Ideal For Servicing Ultra Sensitive TV Receivers

In addition to a signal source, the Model 480 Genescope includes a high sensitivity oscilloscope of unique advanced design, complete in every detail and equipped with a high frequency crystal probe for signal tracing.

The variable oscillator sections are mounted one on each side of the oscilloscope section and are provided with large precision vernier dials having a 20:1 ratio and 1000 division logging scales. They are easy to read and can be quickly set to an exact frequency.

Modern FM and TV development and servicing requires the use of test equipment made to exacting standards. With this in mind we offer you the Genescope with the assurance that everything possible has been done to make it the most accurate, flexible and convenient instrument available.

Multiple shielding, generous bypassing of all power leads entering oscillator enclosures and adequate line input filtering eliminates excessive leakage and oscillator interaction.

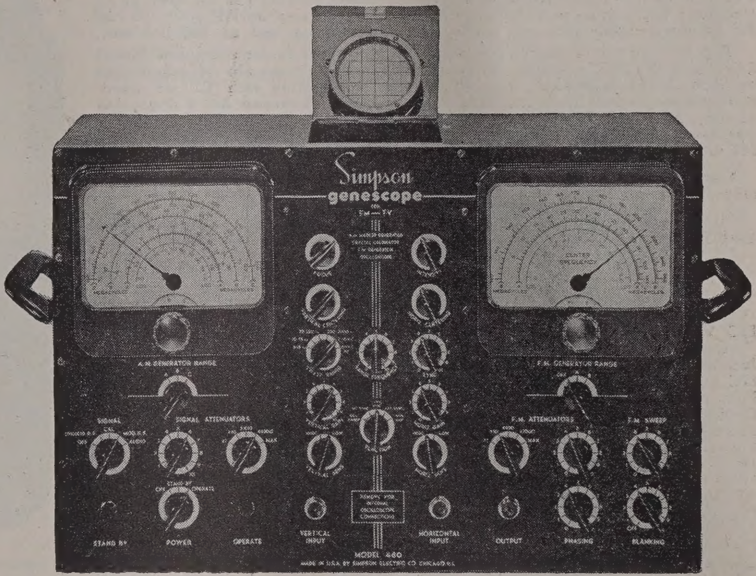
Step and continuously variable attenuators on both AM and FM sections provide minutely controlled signal levels from a few microvolts for fringe area peaking operations to a magnitude suitable for single stage alignment.

A self contained impedance matching network is adjustable to any receiver input, balanced or unbalanced, in a matter of seconds.

Values available include 300 ohm and 75 ohm termination with or without an intermediate attenuator pad and with or without an isolating condenser, open termination for maximum voltage output with or without isolating condenser and many other useful combinations.

The center section of the Genescope contains the oscilloscope and all associated controls. The cathode ray tube of the oscilloscope is mounted vertically in the case in order to conserve bench space. The pattern on the tube is brought into view by use of a highly polished adjustable mirror at the top of the cabinet. The mirror may be quickly adjusted for any position of the operator. The tube face is placed well below the top surface of the cabinet in order to shield it from incident light thus producing a clear, sharp image unhampered by narrow angle light shields. The mirror when closed provides adequate protection for the cathode ray tube when not in use.

Direct connection to vertical and horizontal deflection plates and other internal functions are available through removable cover on the front panel.

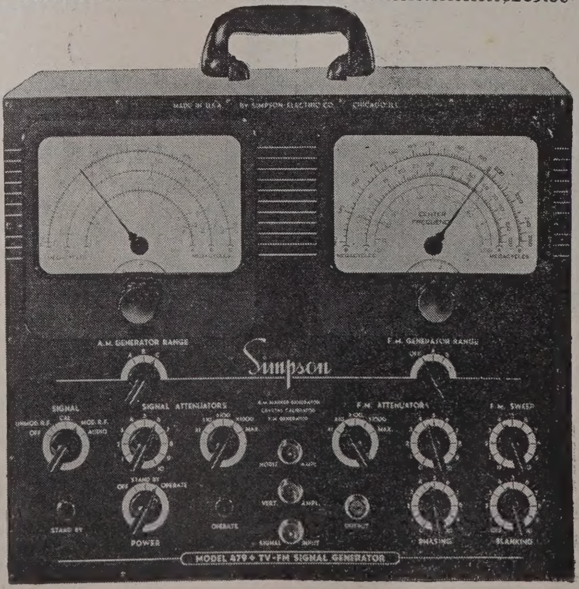


Model 480

MODEL 479 TV-FM SIGNAL GENERATOR

A modern instrument for today's TV-FM problems. Exactly the same circuits, ranges and functions as the Model 480, described above, with the exception of the oscilloscope.

Size 17" x 14" x 7½". Weight 29 lbs. Shipping Weight 35 lbs.
Line Voltage: 105-125 volts, 60 cycles, 50 watts
DEALER'S NET PRICE with Test Leads and Operator's Manual $269.00



Model 479

MODEL 480 RANGES

AMPLITUDE MODULATED OSCILLATOR
Band A—3.2-15.6 megacyles
Band B—15-76 megacycles
Band C—75-250 megacycles
30% modulation at 400 cycles or unmodulated
Continuously variable and step attenuators
Visual method of beat frequency indication

FREQUENCY MODULATED OSCILLATOR
Band A—2-120 megacyles
Band B—142-260 megacycles
Sweep width variable from zero to 15 megacycles
Sweep rate 60 cycles per second
Specially designed frequency sweep motor
Continuously variable and step attenuators

Crystal calibrator — 5 megacycles ± .05%
Audio Oscillator 400 cycles
AM and FM oscillator sections provided with large, easy to read dials with 20-1 vernier control and 1000 division logging scale.
Impedance matching RF output cable

OSCILLOSCOPE

Vertical sensitivity—35 mv per inch
Horizontal sensitivity—70 mv per inch
Linear sweep frequency—3 cycles to 60 kilocycles
60 cycle sine sweep
Frequency essentially flat to 200 KC. usable to over 3 megacycles
Size: 22"x14"x7½". Weight 39 lbs. Shipping Weight 48 lbs.
LINE VOLTAGE: 105-125 volts, 60 cycles, 90 watts
MODEL 480 DEALER'S NET PRICE complete with Test Leads and Operator's Manual $395.00

*Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 303 VACUUM TUBE VOLT-OHMMETER

The new Simpson 303 really is a versatile instrument. It can be used as an electronic DC voltmeter, an ohmmeter, an AC voltmeter, an AF voltmeter, an RF voltmeter (with accessory probe), an output-meter, and an FM indicator.

The 303 truly is a worthy companion of the world famous Simpson Model 260 Volt-Ohm-Milliammeter. Simpson engineers spent months of painstaking research in the laboratory, working in close co-operation with TV set manufacturers to produce the 303. This ruggedly built instrument has a dimension of only 120 cubic inches, and is 60 to 70% more compact than any similar instrument. In achieving this compactness for greater portability Simpson did not sacrifice accuracy or functional value. Its large 4½-inch meter is easy to read.

Features such as low current consumption and wide voltage and resistance ranges make the 303 an extremely versatile instrument.

Like all other instruments bearing the Simpson name, the 303 is of the highest quality construction throughout, but sells at an amazingly low price.

SPECIFICATIONS

DC VOLTAGE: Ranges—1.2, 12, 60, 300, 1200 (30,000 with Accessory High Voltage Probe)
Input Resistance—10 megohms for all ranges
DC Probe—with one megohm isolating resistor
Polarity reversing switch
OHMS: Ranges—1000 (10 ohm center)
100,000 (1000 ohms center)
1 megohm (10,000 ohms center)
10 megohms (100,000 ohms center)
1000 megohms (10 megohms center)
AC VOLTAGE: Ranges—1.2, 12, 60, 300, 1200
Impedance (with cable) approx. 200 mmf shunted by 275,000 ohms
AF VOLTAGE: Ranges—1.2, 12, 60
Frequency Response—Flat 25 to 100,000 cycles
DECIBELS: Ranges— −20 to +3, −10 to +23, +4 to +37, +18 to +51, +30 to +63
Zero Power Level—1 M. W., 600 ohms
GALVANOMETER: Zero center for FM discriminator alignment and other galvanometer applications
R. F. VOTAGE: (Signal tracing with Accessory High Frequency Crystal Probe)
Range—20 volts maximum
Frequency—Flat 20 KC to 100 M.C.

LINE VOLTAGE: 105-125 V. 50-60 cycles
SIZE: 5¼"x7"x3⅜" (bakelite case). Weight: 4 lbs. Shipping Wt.: 6½ lbs.
DEALER'S NET PRICE: Model 303, including DCV Probe, ACV —Ohms probe and Ground Lead with Operator's Manual—$58.75
Accessory High Frequency Probe, $7.50
Accessory High Voltage Probe, $9.95
Also available with roll top case, Model 303RT—$66.70

MODEL 266 VACUUM TUBE VOLTMETER

Ideal for TV - AM - FM

Extremely accurate and packed full of important features. This fine Simpson instrument offers a 1 volt range for the full scale deflection necessary in measuring low RF voltages; a zero center switch embracing all DC voltage ranges for discriminator circuit alignment; a special probe with low input capacitance of approximately 4 micro-microfarads for checking RF voltages.

DC volt input resistance ranges from 50 to 200 megohms; AC volt input impedance at 60 cycles is approximately 10 megohms. The primary of the power transformer is well-regulated—holding close control over filament as well as plate voltage, and the DC input circuit is filtered so that the pressure of superimposed alternating currents does not affect DC measurements.

Model 266 is housed in a sturdy case with lead compartment in rear of case. There is a large, clearly marked 4½" meter for quick, easy readings.

25,000 Volt DC Probe for Television Testing

Complete, nothing to add, for use with Model 266
Weight: 6 oz. Shipping Weight: 8 oz.
DEALER'S NET PRICE, complete with Instructions........$11.35

RANGES

Volts: (AC and DC) 0-1, 5, 10, 50, 100, 250, 500, 1000, 5000
Milliamperes, DC: 0-1, 5, 10, 50, 100, 250, 500
Amperes DC: 0-10
Ohms: 0-1000 (10 ohms center)

0-10,000 (100 ohms center)
0-100,000 (1000 ohms center)
0-1 megohm (10,000 ohms center)
0-10 megohms (100,000 ohms center)
0-100 megohms (1 megohm center)
0-1000 megohms (10 megohms center)

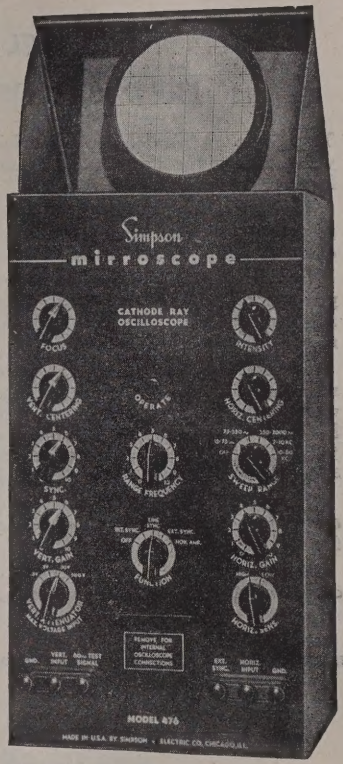
For 105-125 volts, 50-60 cycle.
Size: 8½"x9½"x8". Weight: 10¼ lbs.
Shipping Weight: 14 lbs.
DEALER'S NET PRICE, complete with Leads, AC Probe and Operator's Manual $125.40

Net

* Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 476 MIRROSCOPE


Simpson
mirroscope
CATHODE RAY OSCILLOSCOPE
FOCUS
INTENSITY
VERT. CENTERING
HORIZ. CENTERING
OPERATE
SYNC.
RANGE FREQUENCY
SWEEP RANGE
VERT. GAIN
FUNCTION
HORIZ. GAIN
VERT. ATTENUATOR
HORIZ. RANGE
GND.
VERT. INPUT
TEST SIGNAL
REMOVE FOR INTERNAL OSCILLOSCOPE CONNECTIONS
EXT. SYNC.
HORIZ. INPUT
MODEL 476
MADE IN U.S.A. BY SIMPSON ELECTRIC CO. CHICAGO, ILL.

Simpson takes pleasure in presenting the new and revolutionary Model 476 Mirroscope.

The objectives behind the design of the Model 476 were to eliminate certain inherent disadvantages found in the conventional type of oscilloscope.

By use of the Mirroscope principle the 5″ cathode ray tube is mounted in a vertical position. This construction reduces bench space requirement to an area of only 9″ x 8″ thereby permitting better concentration of associated equipment for any type of test procedure.

The cathode ray image is reflected from a high grade mirror mounted in the adjustable cover at the top of the cabinet, thus the viewing surface is brought near eye level when the instrument is used on benches of normal height. The mirror angle is quickly and easily adjusted to any position of the operator.

The cover with integral side wings forms an effective shield against external light sources or may be closed down for protection of the tube and mirror when the instrument is not in use.

The upright construction permits location of controls and connections for maximum convenience and allows for internal cathode ray tube connections at the front of the panel instead of the rear.

These and many other advantages will be disclosed when the construction and specifications of the Model 476 Mirroscope are considered fully.

SENSITIVITY:

Vertical direct — 12 volts rms per inch.
Vertical amplifier — 20 millivolts rms per inch.
Horizontal direct — 14 volts rms per inch.
Horizontal amplifier — 38 millivolts rms per inch.

Horizontal trace expansion is over 4 times tube diameter. This makes it possible to examine minute portions of a response pattern for finer detail.

Linear Sweep frequency is continuously adjustable in five overlapping ranges from 15 cycles to 60,000 cycles. Internal, external or line frequency synchronization with variable amplitude is available.

Means for intensity or "Z axis" modulation is provided. Approximately 14 volts peak will blank a trace of normal intensity.

The vertical amplifier frequency response is within 3DB from 20 cycles to over 300,000 cycles and is usable to well over four megacycles Square wave slant and overshoot is held to less than 5 per cent of amplitude. This response will be found adequate for all phases of television receiver service including observation and diagnosis of Sync. signals.

INPUT IMPEDANCE:

Vertical direct - 10 megohms, 15 mmf.
Horizontal direct - 10 megohms, 15 mmf.
Vertical amplifier - 300,000 ohms, 30 mmf.
Horizontal amplifier - 500,000 ohms, 15 mmf.

TUBE COMPLEMENT:

5UP4	Cathode Ray Tube.
4—6J6	Horizontal and Vertical Amplifiers.
1—12AU7	Vertical pre-amplifier.
1—6J6	Linear Sweep oscillator and Sync. injector.
2—6X4	High voltage rectifiers.

LINE VOLTAGE: 105-125 volts, 50-60 cycles.

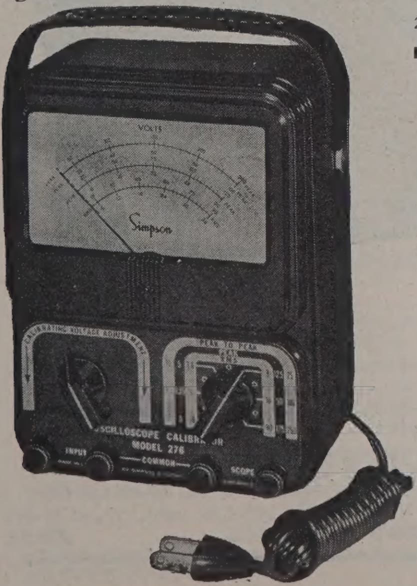
SIZE: Height 16¼″ Width 9⅛″ Depth 8″ over all

WEIGHT: 24 lbs.; Shipping weight 30 lbs.

High Frequency Crystal Probe........$7.50

DEALERS NET PRICE including operators manual $179.50

MODEL 276 OSCILLOSCOPE CALIBRATOR


VOLTS
Simpson
CALIBRATING VOLTAGE ADJUSTMENT
PEAK TO PEAK
PEAK
RMS
OSCILLOSCOPE CALIBRATOR
MODEL 276
INPUT
COMMON
SCOPE

The Simpson Model 276 Oscilloscope Calibrator adapts your oscilloscope for quick and accurate voltage measurements by comparative methods.

A twelve position switch provides six ranges each of RMS, Peak and Peak to Peak voltage with six alternate neutral positions for viewing the signal under observation.

Continuously variable calibrating voltage of power line frequency is supplied by the Model 276 and is indicated on a large 4½ inch meter which indicates RMS values from 0.06 volt to 90 volts, peak values from 0.1 volt to 125 volts and peak to peak values from 0.2 volt to 250 volts.

Housed in a rich black molded bakelite case identical to Models 260 and 303 this instrument will prove a worthy addition to the service dealer's equipment.

RANGES

RMS:
.36 - .9 - 3.6 - 9 - 36 - 90

PEAK:
.50 - 1.25 — 5 - 12.5 - 50 - 125

PEAK to PEAK:
1.0 - 2.50 - 10 - 25 - 100 - 250

LINE VOLTAGE:
105-125 V. 50-60 cycles

SIZE:
5¼″x7″x3⅛″

WEIGHT:
2½ pounds Shipping weight 5 pounds

DEALER'S NET PRICE........$29.50

* Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 488

FIELD STRENGTH METER

The Simpson Model 488 Television Field Strength Meter provides means for the measurement of Television signals in any locality.

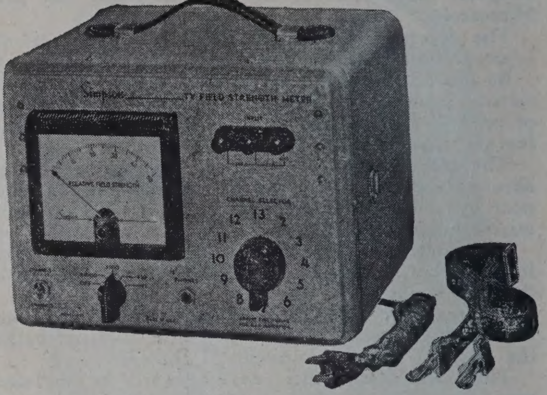
Although special consideration was given to fringe area applications in the design of this instrument it will be found of extreme value in all types of installations.

Location of maximum signal areas, antenna orientation, comparison of antenna systems, adjustment of boosters and checking antenna and lead-in installations are only a few of the many functions available.

Full scale sensitivity of the lowest range is approximately 50 microvolts and is an outstanding feature for those concerned with fringe area installations where maximum efficiency must be attained. Three additional ranges of approximately 500, 5000 and 50000 microvolts extends the usefulness of the Model 488 into areas of higher signal strength.

The large 4½ inch modernistic meter is easily read from a considerable distance and all controls and connections arranged for greatest accessibility.

Model 488 is housed in a beautiful gray hammerloid finished case with heavy leather handle for greater portability.



SIZE: 8″ x 11″ x 8½″.
WEIGHT: 11½ lbs. Shipping wt. 15 lbs.
LINE VOLTAGE: 105-125 volts, 50-60 cycles, 45 watts.
DEALER'S NET PRICE, including operating instructions and shoulder strap..$98.50

MODEL 381

CAPACITY BRIDGE

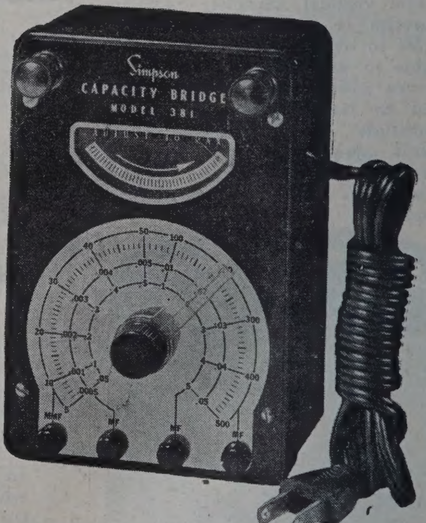
Once again Simpson has demonstrated its leadership in the industry by introducing an entirely new, small, compact, easy to use capacity bridge.

The Model 381 embodies a new and revolutionary circuit which enables even the inexperienced to make capacity measurement with ease and assurance.

Simplicity and ease of operation are features of this new instrument. You merely press a button for the desired range, adjust the bridge arm for maximum meter deflection and read the capacity on the scale.

The small size of this tester, together with its wide range of capacity measurement and low price makes the Model 381 the ideal instrument for Radio and Television service dealers, broadcast engineers, electric repair shops, X-ray servicing, industrial maintenance departments or any other service where condensers are tested.

Housed in a beautiful bakelite case with a durable etched aluminum panel and many specially designed parts, the Model 381 Capacity Bridge exemplifies the usual high quality construction found in all Simpson instruments.



RANGES

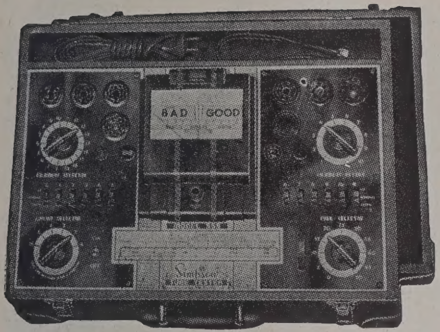
Range 1	20 mmfd. to 500 mmfd.
Range 2	.0005 mfd. to .05 mfd.
Range 3	.05 mfd. to 5 mfd.
Range 4	5 mfd. to 500 mfd.

SIZE: 3⅝″ x 5½″ x 2⅜″.
WEIGHT: 1¾ lbs. Shipping weight: 3 lbs.
LINE VOLTAGE: 105-125 volts, 50-60 cycle.
DEALER'S NET PRICE $28.50

*Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 555 Tube Tester



For 100-130 volts, 50-60 cycles.
Size: 16¾"x12½"x6". Weight: 14 lbs.
Shipping Weight: 19 lbs.
DEALER'S NET PRICE, complete with
Operator's Manual $79.50

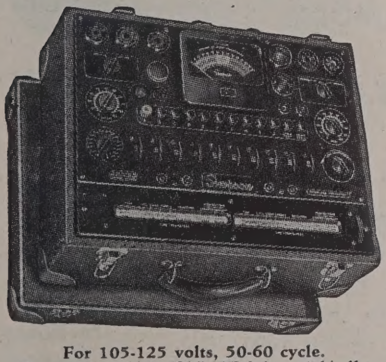
Here is a tube tester Simpson engineered to test all tubes for today's radio and television receivers and any that may be developed within the foreseeable future. It is outstanding in its simplicity of operation and its attractive appearance.

Check These Many Features

- Basic RMA recommended circuit. Tests any tube regardless of base connections or internal connections of elements.
- Simpson designed 3-position lever operated toggle switches with molded rotor carrying silver plated contacts, self-cleaning through wiping action.
- Sockets for all receiving tubes on the market.
- Provision for future tube developments.
- No adapters or special sockets required.
- Properly fused, provides for line adjustment from 100 to 130 volts; smooth vernier control.
- Beautiful modern panel of shining, silver and black anodized enduring aluminum.
- Large illuminated meter for easy readings.
- Unique jewel-like molded lucite housing encloses Neon bulb indicating shorts and inter-element leakages.
- Line adjustment control below dial opening. Easy to operate.
- Case of sturdy plywood with heavy fabricoid covering, slip hinges.
- Simpson Patented "No Backlash" Roll Chart.

MODEL 335 Plate Conductance Tube Tester

With Simpson Patented "No Backlash" Roll Chart



For 105-125 volts, 50-60 cycle.
Size: 16"x12½"x6¾". Weight: 17½ lbs.
Shipping Weight: 27 lbs.
DEALER'S NET PRICE, complete with
Operator's Manual $108.50

Model 335 tests tubes under conditions simulating actual use in a radio set. The dial indicates percentage of rated plate conductance which is closely related to mutual conductance since amplification factor remains constant throughout the life of a tube. With a minimum of settings a reading is quickly obtained which is a percentage of the tube's rated value.

Each tube element is individually connected to the proper potential. Reliable short test is provided and Diodes are tested on low voltage. When you have finished a tube test, the Simpson one button automatic reset returns all switches to the normal position.

Test all receiving tubes, including 9 pin miniatures, and sub-miniatures as used in hearing-aids, etc. Space is provided for new sockets.

THE SIMPSON PATENTED "NO BACKLASH" ROLL CHART

The exclusive "No-Backlash" feature automatically takes up the slack in the paper chart and, by keeping the chart in constant tension, makes it impossible to turn the selector wheel without moving the chart. This results in precision selection at all times. The "No-Backlash" feature also prevents the paper chart from tearing, insures proper alignment, and presents at all times a neat, flat surface.

The selector wheel gear ratio makes it possible for tube selections to be obtained with a minimum of effort.

The entire Roll Chart mechanism is securely fastened to the instrument panel. Quick access to the roll chart can be obtained by removing four panel screws, so that the addition of tube data or the mounting of a new chart is a matter of a few minutes.

In addition to the neat, flat reading surface made possible by the "No-Backlash" feature, the lucite window was designed so that only two settings appear, which is especially convenient for the settings of multi-purpose tubes.

★ Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 340 SIGNAL GENERATOR

75 Kilocycles to 120 Megacycles—fundamentals to 30 Megacycles. From its lustrous black anodized panel to the big nine-inch dial and knife edge pointer that mean easy readability, the Model 340 is an instrument packed with Simpson engineering refinements for greatest utility and long-lasting accuracy.

An electron coupled circuit, using three tubes—full wave rectifier, modulator, and oscillator — and standard 30% modulation at 400 cycles, assures extreme stability and output uniformity. Close settings are permitted by a smooth vernier control.

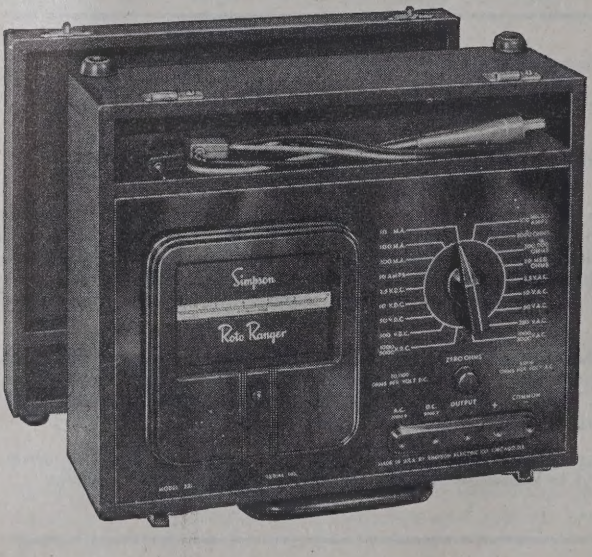
RF coils provide range of 75-220; 200-600; 550-1700 KC; and 1.5-4.5, 4.2-14; 9-30; 36-120 megacycles. Fundamentals range to 30 MC, and the dial is direct reading to 120 MC.

Shielding in the Model 340 is complete; coils, attenuator, and signal selector being individually shielded. The oscillator and modulator are sealed in a rigidly welded, entirely closed chassis. In addition, the line cord is shielded, thus reducing leakage to a negligible point.

The signal output is controlled through a step attenuator and non-inductive potentiometer, providing smooth and complete control of the signal output. A special jack is provided in the Model 340 to obtain high output on the 120 MC band.

Simpson
Signal Generator
Signal
Multiplier
Range
Output

For 105-130 volts, 50-60 cycles.
Size: 16″x10″x6″. Weight: 15¼ lbs.
Shipping Weight: 20 lbs.
DEALER'S NET PRICE, complete with Operator's Manual $84.50



MODEL 221

ROTO RANGER

(High Sensitivity AC-DC Volt-Ohm-Milliammeter)

RANGES

20,000 ohms per volt DC, 1000 ohms per volt AC.
Volts, AC: 2.5, 10, 50, 250, 1000, 5000.
Volts, DC: 2.5, 10, 50, 300, 1000, 5000.
Milliamperes, DC: 10, 100, 500.
Microamperes, DC: 100.
Amperes, DC: 10.
Output: 2.5, 10, 50, 250, 1000.
Ohms: 0-2000 (12 ohms center), 0-200,000 (1200 ohms center), 0-20 megohms (120,000 ohms center).
Size: 12¾″x10⅛″x5⅜″.
Weight: 9 lbs. Shipping Weight: 13 lbs.
DEALER'S NET PRICE, complete with Test Leads and Operator's Manual $69.85

Twenty-five separate meters at the turn of a switch. That is what you get in the new Simpson Model 221 Roto Ranger. The necessity of reading numerous scales, so common in ordinary volt-ohm-milliammeters, is forever eliminated when you own a Roto Ranger. The chances for errors in making readings are reduced to a minimum. The Model 221 provides a separate direct reading scale for each range and does it automatically. Calibrations are not cramped. Each scale is full size, the same as it would be for a separate instrument. As the selector switch on the panel is moved to the range desired, an ingenious mechanism rotates the proper range into position behind the meter window.

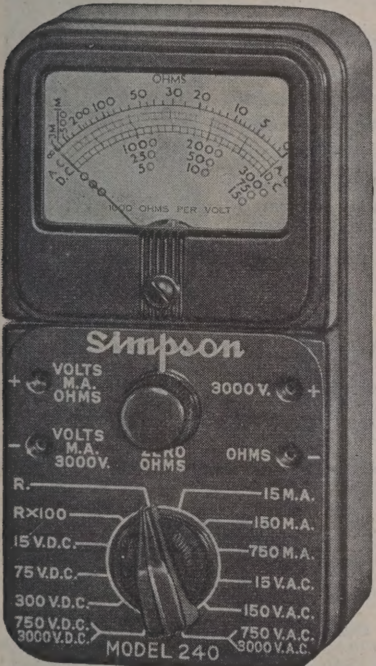
HIGH VOLTAGE PROBE AVAILABLE FOR TELEVISION SERVICING

30,000 V. DC — 20,000 ohms per volt.
Weight: 6 oz. Shipping Weight: 8 oz.
DEALER'S NET PRICE, complete with Instructions ....$ 9.95

★ Simpson

INSTRUMENTS THAT STAY ACCURATE

MODELS 240 and 230 VOLT-OHM-MILLIAMETERS



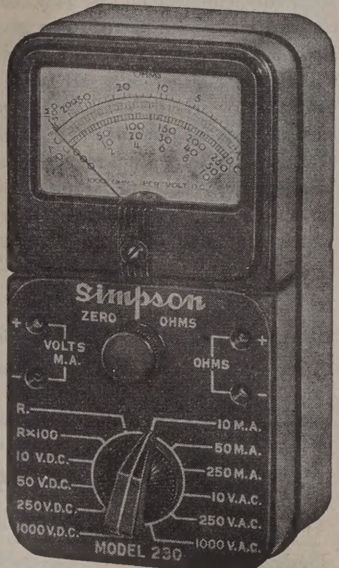
These two "Micro-Tester" portables are famous throughout the world for their ruggedness and built-in accuracy. They exemplify the construction features and utility that distinguish the entire Simpson line shown in this section.

Both are shock-proof and incorporate the celebrated Simpson movement with its FULL BRIDGE-TYPE CONSTRUCTION AND SOFT IRON POLE PIECES. Resistors are in matched pairs to provide the greatest possible accuracy for all ranges.

Model 240 — the "Hammeter" — was designed for the additional voltage and sensitivity demanded in radio testing. With its maximum voltage range of 3000 AC or DC, it was the first self-contained pocket portable instrument built expressly to check high voltage and all the component parts of transmitters and receivers.

Model 230, with a maximum voltage of 1000 volts AC or DC, is ideal for most industrial testing. Its ranges are adequate for most line voltages, for telephone, teletype, and general purpose testing.

Both models are housed in heavily molded bakelite cases, with all numbers and symbols recessed in the panel and filled with white enamel for greatest legibility and ease of reading. Both have full size 3″ meters.



MODEL 240

AC Volts: 0-15, 150, 750, 3000 (1000 ohms per volt)
DC Volts: 0-15, 75, 300, 750, 3000 (1000 ohms per volt)
DC Milliamperes: 0-15, 150, 750
Ohms: 0-3000 (center scale 30)
0-300,000 (center scale 3000)
Accuracy: DC 3% — AC 5%
Size: 3″x5⅞″x2½″. Weight: 1¼ lbs. Shipping Weight: 3 lbs.
DEALER'S NET PRICE, complete with Leads and Printed Instructions $26.35

MODEL 230

AC Volts: 0-10, 250, 1000 (400 ohms per volt)
DC Volts: 0-10, 50, 250, 1000 (1000 ohms per volt)
DC Milliamperes: 0-10, 50, 250
Ohms: 0-1000, 0-100,000
Accuracy: DC 3% — AC 5%

Size: 3″x5⅞″x2½″. Weight: 1¼ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE, complete with Leads and Printed Instructions $24.95

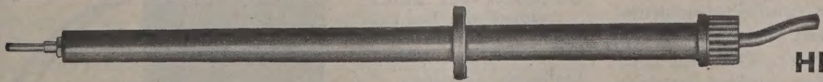
MODEL 351 TV ANTENNA COMPASS

TV ANTENNA COMPASS

Model 351 takes the physical form of a ruggedly built pocket-size meter which connects by a simple insulation-piercing alligator clip to the video input of the cathode ray tube in the television receiver. One man can do a better installation job in less time than it used to take two men.

By an extension cord, it is carried to the antenna site. With a test pattern tuned in on the area's weakest station, the antenna is simply located and rotated for maximum deflection of the TV Antenna Compass.

Size 4¾″x4¼″x1-9/16″. Weight 1 lb. Shipping Weight 4 lbs.
DEALER'S NET PRICE — Complete with Termination Box and Printed Instructions $16.35



HIGH VOLTAGE TV PROBE

Here are Simpson's four High Voltage Test Probes for Television servicing, each designed for use with the models listed here. They are molded of high temperature polystyrene to provide high dielectric strength and maximum insulation. Their small diameter permits reaching in small spaces and narrow openings.

Size diameter 9/16″, Length 11½″, Weight 6 oz. Shipping Weight 2 lbs.

DEALER'S NET PRICES

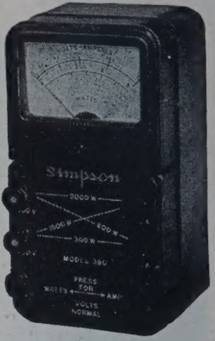
High Voltage Probe for 260 (25000 V) Complete, nothing to add	$ 9.95
High Voltage Probe for 221 (30000 V) Complete, nothing to add	9.95
High Voltage Probe for 303 (30000 V) Complete, nothing to add	9.95
High Voltage Probe for 266 (25000 V) Complete, nothing to add	11.35

*Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 390 VOLT-AMP-WATTMETER

Ruggedly constructed for full load, continuous operation, the Simpson Model 390 is the first tester of its size ever made to give you volt, ampere and wattage readings in one compact instrument. It embraces two ranges each of voltage and current, providing four wattage ranges which cover practically all types and makes of appliances. The panel has volt-ampere combinations clearly indexed to the proper wattage range on the scale, which makes the instrument easy to use. All readings are shown on one meter. In normal position, the meter indicates volts. Ampere and watt readings are obtained by depressing button on the panel. The widely separated binding posts make it possible for the Model 390 to be used as an individual voltmeter or as an ammeter. The Model 390 has a molded bakelite case with all figures recessed in the panel, which are filled with white enamel for better legibility.



RANGES
AC Current, 60 cycles
Volts: 0-150, 0-300
Amperes: 0-3, 0-15
Watts: 0-300, 0-600, 0-1500, 0-3000

Size: 3"x5⅞"x2½". Weight 1½ lbs. Shipping Weight: 4 lbs.

DEALER'S NET PRICE, complete with Break-in plug, leads and Operator's Manual $39.50

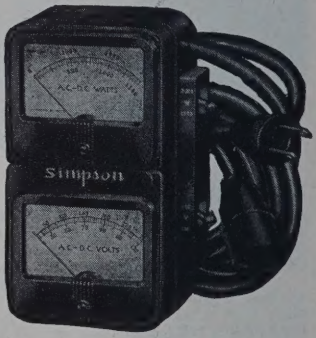
Leatherette Covered Carrying Case, with compartment for Break-in plug and leads 5.50

MODELS 391 and 392 AC-DC VOLT-WATTMETERS

Designed for simultaneous reading of volts and watts, each of these handy little testers has two separate 3" square meters, one for volts and one for watts. Each has a built-in cord and plug for connection to the line outlet, and a receptacle for connecting the appliance under test. The ranges for each meter are selected by separate toggle switches recessed in the molded bakelite case. The low power consumption combined with the high efficiency of these instruments results in negligible loss and error in reading.

Model 391 (3000 watts max.)
Ranges: AC or DC
Volts: 0-130, 0-260
Watts: 0-1500, 0-3000
Size: 3"x5⅞"x2½". Weight: 1½ lbs. Shipping Weight: 4 lbs.
DEALER'S NET PRICE, with Operating Instructions $30.00
Leatherette carrying case 5.50

Model 392 (5000 watts max.)
Ranges: AC or DC
Volts: 0-130, 0-260
Watts: 0-1000, 0-5000
Size: 3"x5⅞"x2½". Weight: 1½ lbs. Shipping Weight: 4 lbs.
DEALER'S NET PRICE, with Operating instructions $35.00
Leatherette carrying case 5.50



MODEL 385 TEMPERATURE INDICATOR

This is the newest addition to the Simpson Appliance Tester line. You will find this a compact instrument which is ideal for measuring temperatures from +70° F to as low as —50° F, where fast accurate temperature readings are important. The scale is designed so that the center portion is expanded, making the most widely used temperatures easy to read. The Model 385 is ideal for use in the refrigeration service field and wherever temperature readings are important, such as deep freeze units, home refrigerators, walk-in coolers and air conditioning units. The temperature readings can be taken at the end of the 15' lead which is supplied with the unit. The lead cord is small in diameter, making it possible to close the door of the equipment, thus obtaining temperature indications under actual conditions.

The probe can also be immersed in liquids where critical temperatures must be maintained.

Range: —5° to +70° F.
Battery, self-contained
Size: 3"x5⅞"x2½".
Weight: 1½ lbs.
Shipping Weight: 4 lbs.
DEALER'S NET PRICE, complete with Test Lead and Operating Instructions $30.00
Leatherette Carrying Case 5.50

Simpson
ADJUST
OFF
READ
MODEL 385

*Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 370 AC AMMETER

(With self-contained current transformer)

(For use on 60 cycles)

In the Model 370, a current transformer and indicating instrument have been combined in one small case to meet the consistent demand for a small multiple range AC ammeter, at a price that you can afford. Its many uses include the measurement of current drawn by all types of electric appliances and motors, heating elements, lamps, radio sets, etc.

Size: 3"x5⅞"x2½". Weight: 1½ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$19.95
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

RANGES

0-1, 0-2.5, 0-5, 0-10, 0-25
Amperes

MODEL 371 AC VOLTMETER

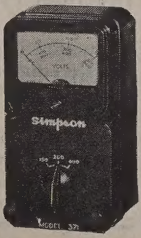
This instrument is a "must" for the industrial service kit or the lineman. Designed primarily for testing line voltages applied to motors, heating equipment or other industrial installations, the ranges are such that many additional applications will suggest themselves.

Size: 3"x5⅞"x2½". Weight: 1¼ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$18.40
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

RANGES

0-150, 0-300, 0-600
Volts



MODEL 372 OHMMETER

A complete instrument with self-contained batteries. Has a wide range from .2 ohms to 50 megohms. "Ohms" adjuster compensates for variations in battery voltages. Wire wound and matched metallized resistors are used throughout. The basic movement has a sensitivity of 85 microamperes.

Size: 3"x5⅞"x2½". Weight: 1½ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE, complete with Test Leads	$25.50

RANGES

0-500 ohms (5 ohms center)
0-5000 ohms (50 ohms center)
0-50,000 (500 ohms center)
0-500,000 (5000 ohms center)
0-5 Meg. (50,000 ohms center)
0-50 Meg. (500,000 ohms center)

MODEL 373 DC MILLIAMMETER

The Model 373 provides for DC current measurements from .02 to 1000 MA. This tester is ideal for radio servicing and experimental work; checking burglar alarm circuits, railroad signal systems, telephone work, etc.

Size: 3"x5⅞"x2½". Weight: 1¼ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$19.95
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

RANGES

0-1, 5, 10, 25, 50, 100, 250
0-1000 MA.

MODEL 374 DC MICROAMMETER

Incorporates a basic movement of 50 microamperes sensitivity with self-contained shunts for all other ranges. This tester can be used with external resistors or multipliers as a high sensitivity voltmeter at 20,000 ohms per volt. It is of particular value in photoelectric cell and other experimental work. The meter may be shorted out of the circuit by setting the selector knob to "short" position.

Size: 3"x5⅞"x2½". Weight: 1½ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$23.00
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

RANGES

0-50, 100, 250, 500, 1000
Microamperes

★ Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 375 DC AMMETER

(Self-Contained)

A new multi-range instrument which is extremely useful in testing the current in DC circuits. Provides a complete range from a fraction of an ampere to 25 amperes without the necessity of using auxiliary external shunts. Excellent for checking auto radios and experimental work in DC circuits.

Size: 3"x5⅞"x2½". Weight: 1½ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$19.95
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

RANGES

0-1, 2-5, 5, 10, 25
Amperes

MODEL 376 DC VOLTMETER

(Rectifier Type 1000 ohms per volt)

An AC Voltmeter, especially useful in circuits where a limited amount of current is present. Makes an excellent output meter when used with proper condenser. The wide variety of ranges covers both primary and secondary voltage ranges of transformers used in radio sets, toys and appliances.

Size: 3"x5⅞"x2½". Weight: 1¼ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$19.95
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

RANGES

0-5, 10, 25, 50, 100, 250,
500, 1000 AC volts

MODEL 377 DC VOLTMETER

(Resistance 1000 ohms per volt)

Measures all dry battery voltage, both A and B, for radio sets, also grid and plate voltage and filament voltage in battery-operated sets. High ranges may be used for checking DC line voltage.

Size: 3"x5⅞"x2½". Weight: 1½ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$19.95
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

RANGES

0-1, 2.5, 5, 10, 25, 50,
100, 250, 500, 1000
DC Volts

MODEL 378 AC MILLIAMMETER

(With self-contained current transformer)

Here is the instrument that answers your need for a low csot, handy size milliammtter that combines a current transformer and an indicating instrument in one case. It offers five separate ranges, making it suitable for a wide variety of testing jobs.

Size: 3"x5⅞"x2½". Weight: 1½ lbs. Shipping Weight: 3 lbs.

DEALER'S NET PRICE	$22.60
Test Leads with Prods	$1.25 extra
Test Leads with Alligator Clips and Insulated Sleeves	1.25 extra

RANGES

0-5, 25, 100, 250,
1000 MA.

MODEL 379 BATTERY TESTER

Designed in accordance with the engineering specifications of leading battery manufacturers, this compact instrument is so ruggedly built that it will stand a lifetime of hard usage. The loading resistors have an accuracy of 1% and properly load all radio and hearing aid A and B batteries.

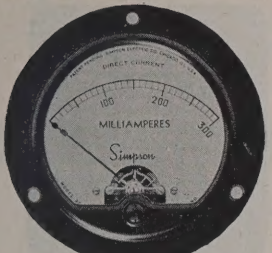
A single rotary switch selects the voltage of the battery under test and brings into line the correct loading resistor. The full 3" dial has three separate arcs, one for all radio A batteries, one for hearing aid A batteries, and one for all B batteries.

A percentage scale shows the exact condition of the battery in percentage of full voltage. The voltage reading can be quickly obtained by multiplying the percentage reading by the selector-switch voltage setting.

Size: 3"x5⅞"x2½". Weight: 1¼ lbs. Shipping Weight: 3 lbs.

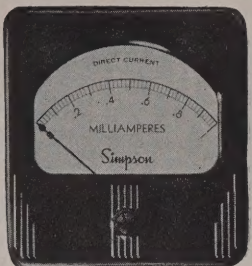
DEALER'S NET PRICE, including Test Leads and Operator's Manual	$23.70

Simpson PANEL INSTRUMENTS



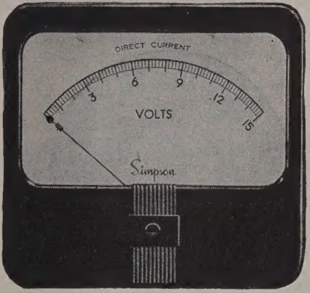
MODELS 25, 35, 45, 55

3½" ROUND CASE—OPEN FACE STYLE. Flange diameter, 3½"; depth overall, 2¼"; body diameter, 2¾"; scale length, 2 9/16". Bakelite case.



MODELS 27, 37, 47, 57

3½" RECTANGULAR CASE. Width, 3"; height, 3⅛". Mounts in round hole. Body diameter, 2¾". Scale length 2 9/16". Bakelite case.



MODELS 29, 39, 49, 59

4½" RECTANGULAR CASE. Width 4 21/32", height, 4 13/64". Mounts in round hole. Body diameter 2¾". Scale length 3 29/32". Bakelite case.

AMMETERS

MODEL→	125-127	25-27	29	155-157	55-57	59
RANGE		D. C.			A. C.	
0-1	$7.65	$8.70	$9.75	$7.50	$8.10	$ 9.90
0-1.5	7.65	8.70	9.75	7.50	8.10	9.90
0-2	7.65	8.70	9.75	7.50	8.10	9.90
0-3	7.65	8.70	9.75	7.50	8.10	9.90
0-5	7.65	8.70	9.75	7.50	8.10	9.90
0-10	7.65	8.70	9.75	7.50	8.10	9.90
0-15	7.65	8.70	9.75	7.50	8.10	9.90
0-25	7.65	8.70	9.75	7.80	8.40	10.50
0-50	7.65	8.70	9.75	....	9.30	12.60
15-0-15	7.65	8.70	9.75	....	....	.....
30-0-30	7.65	8.70	9.75	....	....	.....
50-0-50	7.65	8.70	9.75	....	....	.....

AC-DC ammeters are self-contained for ranges up to and including 50 amperes. Higher range DC ammeters can be supplied with external shunts and include 6 foot leads. Higher range AC ammeters can be supplied with external current transformers and include 7 foot leads.

WATTMETERS—DYNAMOMETER TYPE

RANGE WATTS	MAX. VOLTS	MAX. AMPS.	MODEL 175-177	MODEL 75-77	MODEL 79	RANGE WATTS	MAX. VOLTS	MAX. AMPS.	MODEL 175-177	MODEL 75-77	MODEL 79
0-75	150	.75	$18.60	$19.80	$25.80	0-600	300	3.0	$20.70	$21.75	$27.75
0-150	150	1.5	18.60	19.80	25.80	0-1500	300	7.5	20.70	21.75	27.75
0-300	150	3.0	18.60	19.80	25.80	0-3000	300	15.0	20.70	21.75	27.75
0-750	150	7.5	18.60	19.80	25.80						

A. C. VOLTMETERS—RECTIFIER TYPE

RANGE	MODEL→ APPROX. RESISTANCE	45-47	49
0-1	1000 ohms per volt	$12.75	$13.65
0-3		12.75	13.65
0-5		12.75	13.65
0-10		12.75	13.65
0-15		12.75	13.65
0-50		12.75	13.65
0-100		12.75	13.65
0-150		12.75	13.65
0-300		12.75	13.65
0-1	2000 ohms per volt	13.05	14.25
0-3		13.05	14.25
0-5		13.05	14.25
0-10		13.05	14.25
0-15		13.05	14.25
0-50		13.05	14.25
0-100		13.05	14.25
0-150		13.05	14.25
0-300		13.05	14.25

MILLIAMMETERS

0-1	600 ohms	$12.60	$13.65
0-2	400	12.60	13.65
0-5	200	12.60	13.65

MICROAMMETERS

0-100	3400 ohms	$15.15	$16.50
0-200	2400	13.50	14.85
0-300	1800	13.35	14.55
0-500	1200	13.05	14.25

D. C. GALVANOMETERS

SCALE	SENSITIVITY MICRO-AMPERES	MODEL→ RESIST.	125-127	25-27
50-0-50	500-0-500	46 ohms	$7.65	$ 8.70
50-0-50	75-0-75	2000	9.45	10.50

R. F. AMMETERS INTERNAL THERMOCOUPLE TYPE

MODEL→ RANGE	135-137	35-37	39
0-1	$9.30*	$10.50*	$12.75
0-1.5	9.30	10.50	12.75
0-2	9.30*	10.50*	12.75
0-2.5	9.30	10.50	12.75
0-3	9.30*	10.50*	12.75
0-5	9.30*	10.50*	12.75
0-8	9.30	10.50	12.75
0-10	9.30	10.50	12.75

RF MILLIAMMETERS

†0-115	....	$21.46	.....
0-150	....	12.60	$14.55
0-250	....	12.60	14.55
0-500	....	12.60	14.55

†0-100 linear scale—50 divisions.

VOLUME LEVEL INDICATORS—DECIBEL METERS

ZERO POWER LEVEL—6 MW. 500 OHM LINE

MODEL→ RANGE	145-147	45-47	49
GENERAL PURPOSE TYPE −10 to +6 db 5000 ohms	$11.25	$12.30	$13.95
HIGH SPEED TYPE −10 to +6 db 5000 ohms	.....	13.20	14.85
LOW SPEED TYPE −10 to +6 db 5000 ohms	.....	13.20	14.85

VOLUME LEVEL INDICATORS—VU METERS

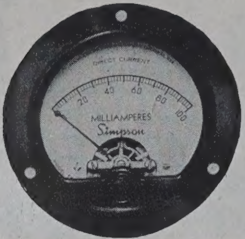
REFERENCE LEVEL—1 MW. 600 OHM LINE

Not illuminated A or B Scale—3900 ohms.........	.....	$15.90	$16.80
Illuminated A or B Scale—3900 ohms................	.....	.....	19.50

Model 142—4- Rectangular ▲

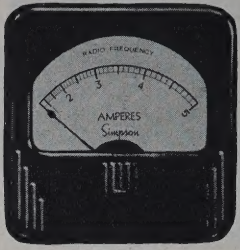
Net

Simpson PANEL INSTRUMENTS



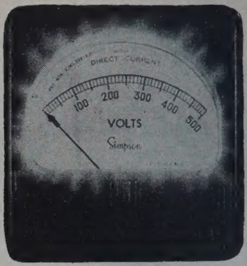
MODELS
125, 135, 145, 155

2½" ROUND CASE—OPEN FACE STYLE. Flange diameter, 2¾"; depth overall, 2 5/16"; body diameter, 2 11/64"; scale length., 1⅞". Bakelite case.



MODELS
127, 137, 147, 157

2½" RECTANGULAR CASE. Width 2⅜"; height, 2⅜". Mounts in round hole. Body diameter, 2 3/16". Scale length 1⅞". Bakelite case.



MODEL 27-37-57
ILLUMINATED

3½" RECTANGULAR CASE. Width 3"; height 3⅛". Mounts in round hole. Body diameter 2¾". Scale length 1 5/16". Bakelite case.

The 2½" and 3½" rectangular instruments indicated (*) are also carried in stock with lucite illuminated dials. Supplied complete with socket and 6 volt bulb for an additional cost of $1.50 dealer's net. R.F. ammeters lucite illuminated must be supplied with external thermocouple. Add $4.95 for couple. All instruments are calibrated for use on non-magnetic panels.

VOLTMETERS

MODEL→	125-127	25-27	29	155-157	55-57	59
RANGE		D. C.			A. C.	
0-1.5	....	....	....	$ 7.50	$ 8.10	$ 9.75
0-3	$ 7.65	$ 8.85	$ 9.75	7.50	8.10	9.75
0-5	7.65	8.85	9.75	7.50	8.10	9.75
0-8	7.65	8.85	9.75	....	....	....
0-10	7.65*	8.85*	9.75	7.50*	8.10*	9.75
0-15	7.65	8.85	9.75	7.50*	8.10*	9.75
0-25	7.65	8.85	9.75	7.50	8.10	9.75
0-50	7.95*	8.85*	9.75	7.50	8.10	9.75
0-100	7.95	8.85	9.75	7.50	8.10	9.75
0-150	7.95*	8.85*	9.75	8.85*	9.60*	10.50
0-200	7.95	8.85	9.75	....	....	.....
0-250	7.95	8.85	9.75	8.85	9.60	10.50
0-300	7.95*	8.85*	9.75	8.85*	9.60*	10.50
0-500	7.95	8.85*	9.75	12.75	13.50	14.40
0-750	7.95	8.85	9.75	12.75	13.50	14.40
0-1000	11.85	12.75*	13.65	12.75	13.50	14.40
0-1500	11.85	12.75	13.65	.....	.....	.....
0-2000	11.85	12.75*	13.65	.....	.....	.....
0-2500	11.85	12.75	13.65	.....	.....	.....
0-3000	11.85	12.75*	13.65	.....	.....	......
0-4000	11.85	12.75*	13.65	.....	.....	.....
0-5000	11.85	12.75*	13.65	.....	.....	.....

External resistors are furnished on A. C. meters having a range of 500 volts or higher. D.C. 1000 volts or higher.

MILLIAMMETERS

MODEL→	125-127	25-27	29	155-157	55-57	59
RANGE		D. C.			A. C.	
0-1	$7.65*	$8.70*	$9.75	....	....	....
0-1.5	7.65	8.70	9.75	....	....	....
0-3	7.65	8.70	9.75	....	....	....
0-5	7.65	8.70	9.75	....	....	....
0-10	7.65*	8.70*	9.75	$7.50	$8.10	$9.90
0-15	7.65*	8.70*	9.75	7.50	8.10	9.90
0-20	7.65	8.70	9.75	....	....	....
0-25	7.65*	8.70*	9.75	7.50	8.10	9.90
0-50	7.65*	8.70*	9.75	7.50	8.10	9.90
0-75	7.65	8.70	9.75	....	....	....
0-100	7.65*	8.70*	9.75	7.50	8.10	9.90
0-150	7.65	8.70*	9.75	....	....	....
0-200	7.65*	8.70*	9.75	....	....	....
0-250	7.65	8.70	9.75	7.50	8.10	9.90
0-300	7.65*	8.70*	9.75	....	....	....
0-500	7.65*	8.70*	9.75	7.50	8.10	9.90
0-750	7.65	8.70	9.75	....	....	....
0-1000	7.65	8.70	9.75	....	....	....

MICROAMMETERS

MODEL→	125-127	25-27	29
RANGE		D. C	
0-25	$13.65	$14.85	$17.10
0-50	10.80	11.85	13.05
0-100	10.20	11.25	12.60
0-200	8.55	9.60	10.95
0-500	7.95	9.15	10.35

MILLIVOLTMETERS

MODEL→	125-127	25-27	29
RANGE		D. C.	
0-50	$7.65	$8.70	$9.75
0-100	7.65	8.70	9.75

*Simpson

INSTRUMENTS THAT STAY ACCURATE

MODEL 880 DYNAMOMETER INSTRUMENTS
- A.C. - D.C. - Accuracy ½ of 1%

WATTS
ALTERNATING & DIRECT CURRENT
VOLTS
AMPS
300 V-5A
300 V-10A
150 V-10A
150 V-5A

These Simpson Precision Portable Instruments are offered in a wide selection of ranges, to meet practically every demand for general purpose testing. They provide a high degree of accuracy plus the stamina to maintain that accuracy. Large 4½-inch hand drawn scales, mirrored, with knife edge pointers. Cases are of heavily molded bakelite, with leather carrying handles.

SINGLE PHASE WATTMETERS

Max. Volts	Amperes Normal	Amperes Maximum	Watts Low Range	Watts High Range	Price
150-300	1	1.5	100	200	$60.45
150-300	2	3.0	200	400	60.45
150-300	5	7.5	500	1000	60.45
150-300	10	15.	1000	2000	60.45
150-300	20	30.	2000	4000	66.00
150-300	50	75.	5000	10000	66.00

DOUBLE CURRENT RANGES

Max. Volts	Amperes Normal	Amperes Maximum	Watts	Price
150-300	2.5- 5	3.75- 7.5	250-500-1000	$76.95
150-300	5-10	7.5 -15.	500-1000-2000	76.95

VOLTMETERS

Range	Price	Range	Price
0-150	$60.45	0-75-150-300 (Triple Range)	$76.95
0-150-300 (Double Range)	71.55	0-150-300-600 (Triple Range)	76.95

AMMETERS

Range	Price
0-1-2 (Double Range)	$66.00

MODEL 9 AND 10 SERIES

These Models are supplied in the same heavy molded bakelite cases used for Model 880 with a large 4½" hand drawn scale, mirrored, and knife edge pointer.

MODEL 9 - D'ARSONVAL MOVEMENT (ACCURACY ½ of 1%) — MODEL 10 - IRON VANE MOVEMENT (ACCURACY 1%)

Range	MODEL 9 (DC)	MODEL 10 (AC)
Volts		
50	$49.50	$43.95
100	49.50	43.95
150	49.50	43.95
300	55.00	49.50
Double Range Volts		
15-150	55.00	....
150-300	60-45	55.00
300-750	66.00	60.45
Triple Range Volts		
15-150-300	63.75	....
150-300-600	66.00	60.45

Range	MODEL 9 (DC)	MODEL 10 (AC)
Milliamperes		
1	$57.15	....
50	49.50	$43.95
100	49.50	43.95
500	49.50	43.95
Amperes		
5	49.50	43.95
15	49.50	43.95
30	49.50	43.95
50	49.50	43.95
100	49.50	....

Range	MODEL 9 (DC)
Double Range Milliamperes	
10-100	$55.00
25-250	55.00
100-500	55.00
Double Range Amperes	
2.5-5	55.00
5-10	55.00

Range	MODEL 9 (DC)
Triple Range Amperes	
2-5-10-25	$60.45
10-25-50	60.45
Microamperes	
50	$71.55
100	67.00
200	64.95

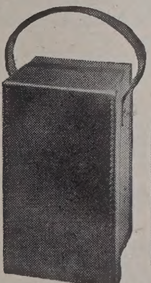
ALL PRICES DEALERS NET

All portable instruments above can be furnished in the Simpson Roll Top Safety Case at an additional price of $8.00.

LEATHER AND LEATHERETTE CARRYING CASES — TEST LEADS

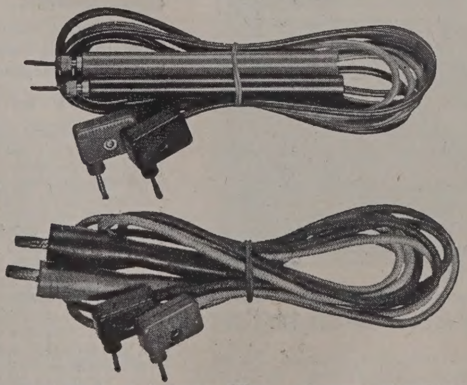
1-113011

1-111818


1-114299

1-114236

		Dealer's Net
1-111818	Leather Carrying Case for Model 260	$6.75
1-114236	Eveready Leather Carrying Case for Models 260-303-276	8.75
1-114299	Eveready Leather Carrying Case for Microtester	5.50
1-113011	Leatherette Covered Carrying Case for Microtester	5.50
1-113413	Leatherette Covered Carrying Case for 391-392	5.50



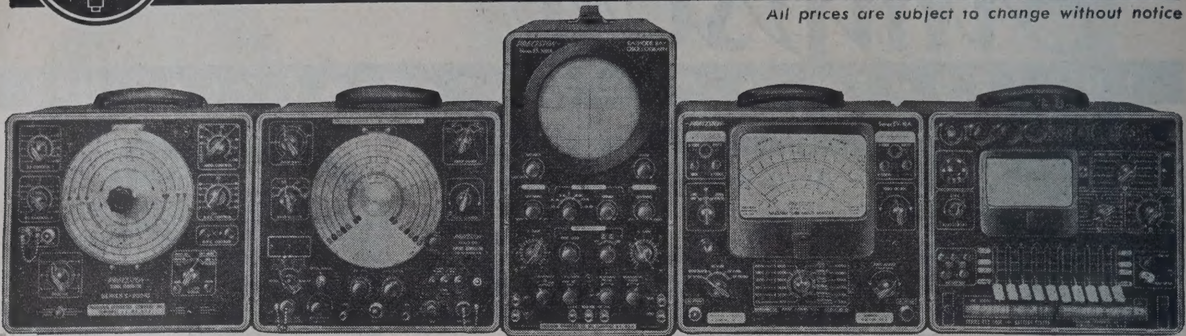
With Test Prods or Alligator Clips as shown. Colored red and black for easy identification. Length 48". Rubber insulated. Dealer's net prices.

0-008380	With Test Prods and Elbow Terminals	$1.25
0-008379	With Test Prods and Spade Terminals	1.25
0-008377	With Alligator Clips and Elbow Terminals	1.25
0-008376	With Alligator Clips and Spade Terminals	1.25

Net

-PRECISION- TEST EQUIPMENT
STANDARD OF ACCURACY

All prices are subject to change without notice



SERIES E-200-C
Modern Multi-band
SIGNAL and MARKER GENERATOR
(see page F-42)

SERIES E-400
Wide Range H.F.
SWEEP SIGNAL GENERATOR
(see page F-41)

SERIES ES-500A
5 in. Hi-Sensitivity
Wide Range
OSCILLOSCOPE
(see page F-41)

SERIES EV-10A
True Zero-Center
VTVM-MEGOHMMETER
with 7 in. Meter
(see page F-42)

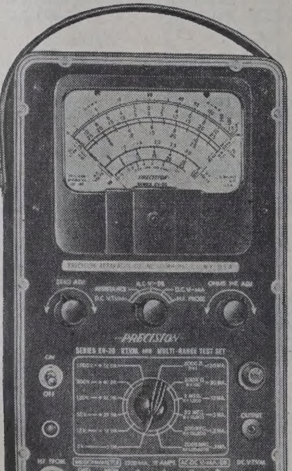
SERIES 612
Modern Free-point
TUBE and BATTERY TESTER
(see page F-46)

THESE FIVE MATCHED "PRECISION" INSTRUMENTS PROVIDE A COMPLETE MODERN BASIC LABORATORY FOR TV-FM-AM AT ONLY MODERATE COST

OTHER MATCHED COMBINATIONS

The instruments shown above, and other "Precision" equipments, are available in various enclosure styles...Panel Mounts, Portable, Counter Types, etc. . . . designed to suit individual applications, field or shop. The illustration shows only one of the many possible "matched combinations" of diversified "Precision" Test Equipment. Each combination provides a selected and Basic, modern, efficient Laboratory at moderate cost.

SERIES TV
THE SUPER HIGH VOLTAGE SAFETY TEST PROBE
for High D.C. Potential Measurements up to 60,000 volts.
(see page F-45)



★ SERIES EV-20 VTVM and MULTI-RANGE TEST SET

Complete with coaxial Circuit Isolating Test Probe, Shielded Ohmmeter Test Cable, Standard #227 Super-Flex Test Leads, Ohmmeter battery and full operating instructions.

In modern, black ripple finished cabinet. Size—10½"x6¼"x5".

CODE: Party Net Price $69.75

SERIES EV-20 VTVM and Multi-Range Test Set

TRUE ZERO — CENTER ON ALL VTVM RANGES
WITH DIRECT PEAK READING HIGH FREQUENCY SCALES
Plus Complete Standard 1000 Ohms/Volt Functions
48 Ranges to 1200 Volts*, 2000 Megohms, 12 Amperes, +63 DB

Series EV-20 is a compact, high sensitivity, laboratory-type, circuit-testing instrument, incorporating the most modern electrical and physical design. It provides unparalleled performance, accuracy and versatility required for AM-FM-TV and general electronic circuit analysis.

Functionally similar to the deluxe Series EV-10A VTVM, with extra large 7" meter, (described on Page F-47) the Series EV-20 (with 4½-inch meter) affords a highly efficient instrument at moderate cost.

RANGE SPECIFICATIONS

- ★ **SIX ALL-ZERO CENTER VTVM RANGES:** 13⅓ Megs. Constant Input Resistance. ±3, ±12, ±30, ±120, ±300, ±1200 volts. ***Direct Reading to ±60 KV** when used with Series TV-4 High Voltage Test Probe described on page F-45.
- ★ **SIX SELF-CONTAINED RESISTANCE RANGES:** 0-2000 - 200,000 **ohms.** 0-2-20-200-2000 **Megohms.**
- ★ **FOUR DIRECT PEAK READING HIGH FREQ. VTVM RANGES:** 0-3-12-30-120 volts. (Requires RF-10A High Freq. Vacuum Tube Probe, Net Price $14.40. No crystal rectifiers employed.)
- ★ **SIX AC-DC AND OUTPUT VOLTAGE RANGES** at 1000 ohms per volt. 0-3-12-30-120-300-1200 volts.
- ★ **EIGHT D.C. CURRENT RANGES:** 0-300 microamps. 0-1.2-3-12-30-120-1200 MA. 0-12 Amperes.
- ★ **SIX DECIBEL RANGES** from –20 to +63DB. Calibrated for 600 ohm, 1 mw., zero DB.
- ★ **ROTARY RANGE — FUNCTION SELECTORS** eliminate frequent and inefficient shifting of test leads.

IMPORTANT FEATURES

- ★ **VOLTAGE REGULATED — BRIDGE CIRCUIT**
- ★ **DIRECT READING, ALL ZERO-CENTER VTVM** Indicates **both** Polarity and Magnitude without switching or test lead reversal.
- ★ **SHIELDED CONNECTORS** for D.C.—VTVM **and** RF—VTVM. Permits simultaneous and non-interfering connection of both the Circuit Isolating Test Probe and optional H.F. Vacuum Tube Probe Series RF—10A.
- ★ **DUAL - BALANCED ELECTRONIC BRIDGE OHMMETER—MEGOHMMETER** uses two 1.5 volt cells easily replaced at rear of cabinet.
- ★ **ADDITIONAL 1000 OHMS/VOLT FUNCTIONS** permit routine AC-DC voltage, DB and current measurements free of power line.
- ★ **4⅝" RECTANGULAR METER** — 200 microamperes, ±2%. D'Arsonval construction.
- ★ 1% Film type, Metallized and Wire-Wound resistors for all shunts and multipliers.
- ★ Heavy gauge; round-cornered, louvred steel case with plastic handle. Etched, anodized, aluminum panel.

This equipment is Approved (and/or Tested) by the CSA Approval Laboratories.

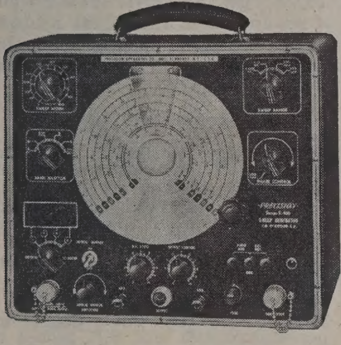
-PRECISION- TEST EQUIPMENT
STANDARD OF ACCURACY

All prices are subject to change without notice

Series E-400
Wide Range Sweep Signal Generator
Narrow and Wide Band Sweep

Direct Reading from 2 to 480 Megacycles

DIRECTLY COVERS UHF AND VHF I.F. ALIGNMENT REQUIREMENTS



Incorporating selected and true ultra-high frequency components and circuits, Series E-400 has been Application Engineered specifically for modern F.M. and TV oscillographic alignment methods.

Stressing utmost simplicity of operation, flexibility, stability and accuracy, Series E-400 affords an unparalleled standard of performance and value.

Through careful, intensive development, "Precision" engineers have "designed out" costly, extraneous elements that might lead to undue obsolescence. As a result, Series E-400 is a *fundamental requirement* for the efficient TV–F.M. Service Laboratory.

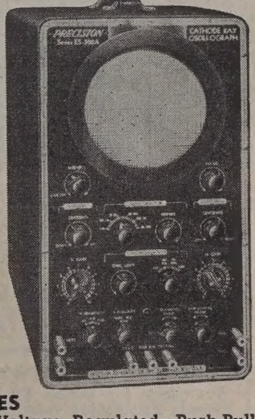
FEATURES

- ★ **Direct Frequency Reading** — 2 to 480 MC in 7 bands without skip. Harmonically calibrated from 240 to 480 MC. Directly covers frequency requirements for I.F. alignment of both UHF and VHF TV receivers.
- ★ **6 Position Rotary Band Switch** covers complete spectrum. No coil switching. Multiple oscillator B supply switch assures maximum frequency accuracy and stability.
- ★ **6½" Etched Aluminum Tuning Dial** — Engine turned finish.
- ★ **1500 Point Vernier Scale** permits close calibration and simple resetting of odd frequencies.
- ★ **Engraved Transparent Lucite Frequency Indicator** affords readings free from parallax.
- ★ **Voltage Regulated Oscillators** free of power supply variations.
- ★ **The Basic Circuit and Tube Complement** — Uses 2 separate 6C4 high frequency beat oscillators plus a 6J6 reactance-modulated high frequency oscillator. This positively minimizes generation of unwanted extraneous signals. Also employs a 6J6 mixer-buffer, a 6C4 multiple crystal oscillator and a 6J6 final marker-mixer amplifier. 6X5 full wave rectifier. VR-105 voltage regulator.
- ★ **Selected, True High Frequency Circuit Components** render high operating efficiency, stability and accuracy. Uses ceramic and air dielectric trimmers, coupling, by-pass and loading capacitors; rugged ceramic suspended, National Straight Line Frequency tuning condenser; modern miniature HF tubes; mica-filled low-loss sockets; shock mounted, compensated reactance modulator; multi-section copper-plate shielding; etc.
- ★ **Narrow and Wide Band Sweep — 0 to 1 MC and 0 to 15 MC** continuously adjustable. Permits easy band width setting for both F.M. and TV. requirements, directly at front of panel.
- ★ **Dual Continuous R.F. Attenuators** triple shielded. Smooth, stepless, effective control from **extra high output for single stage alignment** to minimum levels for multi-stage adjustments.
- ★ **Wide Range Phasing Control** for Hor. sweep of oscilloscope.
- ★ **Multiple Crystal Marker-Calibrator** built-in. Simultaneously accommodates 4 crystals individually rotary selected. .01% accuracy 4.5 MC and 2 MC crystals **furnished as standard equipment.** Crystal signal separately attenuated for internal or external use.
- ★ **Crystal Calibrated and Control** — Each instrument calibrated against crystal standards. The 2 MC crystal, as furnished, provides for crystal monitoring in addition to use as calibrator for external signal generators.
- ★ **Terminated RG/U Type Coaxial Output Cable** for efficient signal transmission with minimum standing wave effects. LOW-HIGH taps plus open line switch for extra high as well as normal output signal level requirements.
- ★ **8 Element Double Section Balanced Line Filter** plus **Thorough Multi-Section Copper Plate Shielding** of instrument assures minimum leakage and radiation.
- ★ **Simultaneous A.M. and F.M.** test facilities for anti-A.M. check of F.M. second detector circuits. A.M. input jacks also permit use as a modulated H.F. A.M. Generator.
- ★ **External Deviation** input facility for sweep repetition frequencies other than internal 60 cycle source.
- ★ **Fuse Protected** at panel extractor fuse post.
- ★ **Heavy Gauge, Etched-Anodized Aluminum Panel.**
- ★ **Fully Licensed** under W. E., A. T. & T. and Remco patents.
  - ★ **Series E-400** (illustrated)—In Louvred, portable, copper plated case. Size 10½" x 12" x 6". Complete with test cables, 2 crystals and elaborate Technical Manual.
    Code: Nancy. **Net Price $135.75**
  - ★ **E-400-PM** — Consists of E-400 on 12¼" x 19" steel panel for standard rack mount. Complete as above.
    Code: Niece. **Net Price $141.25**

Series ES-500A
High Sensitivity, Wide Range, 5" Oscilloscope
Push-Pull Vertical and Horizontal Amplifiers

20 MV. per inch "V" Sensitivity

SELF-CONTAINED 1 VOLT PEAK TO PEAK CALIBRATOR



Series ES-500A affords the ultimate in performance, visibility and operational flexibility at moderate cost. "Precision" engineers have incorporated every necessary basic feature which they have found to be required to meet the needs of the rapidly advancing art of electronics, A.M., F.M., and TV.

Series ES-500A provides an unparalleled combination of high sensitivity, extended frequency range and other essential operating features specifically desired for experimental and commercial visual circuit analysis.

FEATURES

- ★ **High Sensitivity, Wide Range, Voltage Regulated, Push-Pull Vertical Amplifier**—.02V. per inch deflection sensitivity. 10 cycles to 1 MC response. 2 megohms input resistance. Approx. 22 mmf. input capacity.
- ★ **Compensated Vertical Input Step Attenuator**—X1, X10, X100.
- ★ **Direct Peak to Peak Voltage Checks** thru use of internal, semi-square wave, regulated calibrator.
- ★ **Vertical Phase-Reversing Switch** permits inversion of all patterns at will. Non-frequency discriminating.
- ★ **Extended Range, Push-Pull Horizontal Amplifier**—150 MV (.15 V) per inch high deflection sensitivity adequate for most all "H" drive purposes. 10 cycles to 1 MC response at full gain. ½ megohm input resistance. Approx. 20 mmfd. input capacity.
- ★ **Linear Multi-Vibrator Sweep Circuit**—
  10 cycles to 30 KC plus internal line or external sweep.
- ★ **Amplitude Controlled, Four Way Synch. Selection**—
  Internal Positive, Internal Negative, External and Line.
- ★ **"Z" Axis Modulation** input facility for blanking, timing, etc.
- ★ **Internal, Phasable 60 cycle Beam Blanking** for elimination of alignment retrace; clean display of synch. pulses, etc.
- ★ **Sweep Phasing Control** for sinusoidal line sweep usage. Wide angle bridge circuit.
- ★ **Direct H and V Deflection Plate Connections** and Audio Monitoring phone jacks at rear. All four plates accessible.
- ★ **High Intensity CR Patterns** through use of adequate high voltage power supply with 2X2 rectifier.
- ★ **The Circuit and Tube Complement**—6C4 Vertical input cathode follower. 6CB6 first "V" amplifier. 6C4 "V" phase inverter. Push-Pull 6J6's vertical CR driver. 7N7 first "H" amplifier and phase inverter. Push-Pull 6AU6's horizontal CR driver. 7N7 Multi-vibrator internal linear sweep oscillator. 5Y3 low voltage rectifier. 2X2 high potential rectifier. VR-150 voltage regulator. 5CP1/A CR Tube.
- ★ **7 Four-Way Lab.-Type Input Terminals**—Take banana plugs, phone tips, bare wire or spade lugs.
- ★ **Light Shield and Mask** removable and rotatable.
- ★ **Extra Heavy-Duty Construction** and components to assure **"Precision"**-engineered performance.
- ★ **Heavy Gauge, Etched-Anodized, No-Glare, Aluminum Panel.**
- ★ **Fully Licensed** under Western Electric Co. patents.
  - ★ **Series ES-500A** (illustrated)—In louvred, black-ripple, heavy gauge steel case. Size 8¼" x 14½" x 18". Complete with light shield, calibrating mask and instruction manual.
    Code: Quick. **Net Price $173.70**

This equipment is Approved (and/or Tested) by the CSA Approval Laboratories.

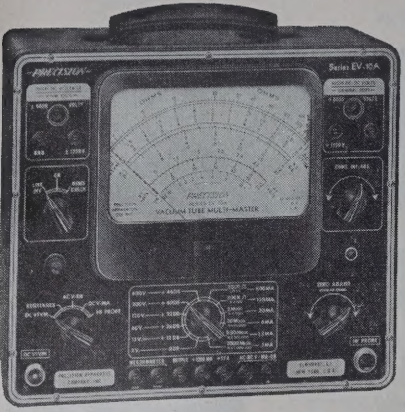
-PRECISION- TEST EQUIPMENT
STANDARD OF ACCURACY

PRECISION SERIES EV-10A VTVM—Megohmmeter

TRUE ZERO-CENTER VTVM WITH 7" FULL-VIEW METER
FOUR DIRECT PEAK READING HIGH FREQUENCY SCALES
Plus standard 1000 Ohms per Volt Functions.
Ranges to 6000 Volts, 2000 Megohms, 12 Amperes, +77 DB.

All prices are subject to change without notice

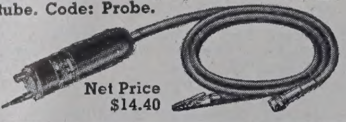
A WIDE-RANGE, TRUE ZERO-CENTER ELECTRONIC INSTRUMENT, stressing the utmost in performance, accuracy, and ease of manipulation. The Series EV-10A permits rapid check of voltage, current, and resistance conditions encountered in modern A.M., F.M., and TV Networks, without materially disturbing the performance of circuits under analysis.



- **EV-10A (MCP)** (illustrated) In black ripple finished, heavy gauge steel case. Size 10½" x 12" x 6". Complete with tubes, battery, and test probes. **Code: Place. Net Price $97.20**
- **EV-10A (P)** In hardwood portable case with tool compartment. Size 12" x 13" x 6". **Code: Phone. Net Price $99.95**
- **EV-10A (PM)** Consists of Series EV-10A on steel panel. Size 12¼" x 19", for standard rack mount. **Code: Panel. Net Price $102.70**

★ SERIES RF-10A VACUUM TUBE R.F. PROBE

Accessory for Series EV-10A & EV-20; affords direct high frequency peak voltage measurements. Connects directly to VTVM panel. Employs 9002 miniature tube. Code: Probe.



Net Price $14.40

RANGE SPECIFICATIONS

★ **Eight All Zero-Center VTVM Ranges.** ±3, ±12, ±60, ±120, ±300, ±600, ±1200, ±6000 volts D.C. self-contained.

★ **High Input Resistance —**
13⅓ megs. constant to 600 volts.
26⅔ megohms at 1200 volts.
133⅓ megohms at 6000 volts.

★ **4 Direct Reading High Freq. Ranges:**
0-3-12-60-120 peak volts.
(Requires Series RF-10A High Frequency Vacuum Tube Test Probe described and illustrated at left.)

★ **Extra-High Voltage Ranges to ±60 KV.** when employed with Series TV-4 High Voltage Probe described on page F-45.

★ **Six Ohmmeter-Megohmmeter Ranges:**
0-2000-200,000 ohms.
0-2-20-200-2000 megohms.

★ **Eight Extra A.C.-D.C.-Output Voltage ranges** at 1000 ohms per volt.
0-3-12-60-120-300-600-1200-6000 V.

★ **Eight D.C. Current Ranges:**
0-300 microamperes.
0-1.2-6-30-120-600-1200 MA. 0-12 amps.

★ **Eight DB Ranges** from –20 to +77DB. Calibrated for 1MW, 600 ohms zero DB.

IMPORTANT FEATURES

★ **Voltage Regulated–Bridge Type Circuit:** affords practical freedom from tube and line voltage variations.

★ **True Zero-Center VTVM**—Indicates **both** magnitude and polarity **without** reversal of test prods **on all ranges.**

★ **Rotary Range and Function Selectors** minimize shifting of test leads.

★ **Recessed 6000 volt Safety Jacks.**

★ **Shielded Coax Test–Cable Connectors** permit both D.C. and R.F. probes to be connected simultaneously.

★ **Duo-Balanced Electronic–Bridge Ohmmeter—Megohmmeter.** Uses 2 self-contained, standard 1.5 volt batteries.

★ **Special 1000 Ohms/Volt Functions** permit routine AC-DC circuit tests free of need for power line connection.

★ **Extra-large 7" Rectangular Meter.** 200 microampere, ±2% sensitivity.

★ **Highest Quality Components** employed throughout • 1% wire, film and matched resistors • Silverplated switch contacts • Leakage-resistant, plastic insulated hook-up wire • Etched-anodized aluminum panel • Heavy duty line cord.

Precision Series E-200-C Signal Generator

A Modern Multi-Band Signal and Marker Generator for A.M., F.M., and Television Alignment.

Featuring "Servicing by Signal Substitution." The Dynamic Speed Approach to Receiver Alignment and Adjustment Problems.

SPECIFICATIONS

★ FREQUENCY COVERAGE: 88 KC. to 120 MC., 30 MC. on fundamental. 6½" Dial direct reading in 8 bands to 120 MC. No charts required.

★ ACCURACY — CONSTANCY OF CALIBRATION: 1% accuracy on all bands. Uses "PRECISION" developed "UNIT-OSCILLATOR" turret construction.

★ 0-1000 POINT VERNIER SCALE, direct reading to one part in 1000.

★ THE CIRCUIT—single-ended 6SJ7 in stable E.C.O. circuit—modulated by a 6C5 sine-wave audio oscillator. 5Y3 Full wave rectifier.

★ 400 CYCLE SINE-WAVE AUDIO OSCILLATOR — over 50 volts output.

★ DUAL R.F. ATTENUATORS — smooth stepless control of R.F. signal.

★ SHIELDING — Compartment shielding of vital components — Power transformer electrostatically shielded—A.C. line is R.F. filtered.

★ SHIELDED COAXIAL OUTPUT CABLE and (LO-HI) cable connectors.

★ FOUR TYPES OF SIGNALS — "Unmod. R.F.", "400 cycle Mod. R.F.", "EXTERNALLY Mod. R.F.", "400 cycle Audio Output."

★ DIRECT READING VARIABLE MODULATION—0-100%—triples signal utility as against obsolete fixed or stepped modulation of only 30 or 40%.

★ BUILT-IN A.V.C.–A.G.C. SUBSTITUTION — Overcomes alignment troubles arising from varying receiver A.V.C. and A.G.C. voltage.

★ HAND CALIBRATED — Each instrument is INDIVIDUALLY calibrated.

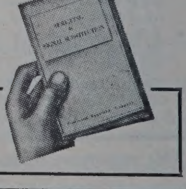
★ FULLY LICENSED under patents of A. T. & T. and W. E. Co's.

★ Not only an efficient Signal Generator for purposes of alignment but also specifically designed for "Servicing by Signal Substitution."

★ IDEAL MARKER GENERATOR — Exceptional stability and high accuracy renders Series E-200-C an excellent variable frequency Marker Generator for use with the Series E-400 or similar high quality Sweep Signal Generator.

★ **Series E-200-C** — (illustrated) In black ripple finished, portable steel case. Size 10½"x12"x6". Complete with tubes, output cable and FREE copy of "Servicing by Signal Substitution."
Code: Trade. Net Price $73.25

★ **Series E-200-C-PM**—Consists of E-200-C on steel panel size 12¼"x19", for standard rack mount.
Code: Trace. Net Price $78.75



"SERVICING BY SIGNAL SUBSTITUTION" 12th Edition . . . The modern ECONOMICAL solution to your daily service problems . . . Nothing complex to learn, no extraneous equipment to purchase . . . A systematic method of DYNAMIC SIGNAL ANALYSIS based entirely on fundamentals . . . Fully described in a bound illustrated text "Servicing by Signal Substitution." This highly valuable book is supplied with Series E-200-C at no charge.
Additional copies available at your Precision distributor or directly from factory at 40c per copy.

This equipment is Approved (and/or Tested) by the CSA Approval Laboratories

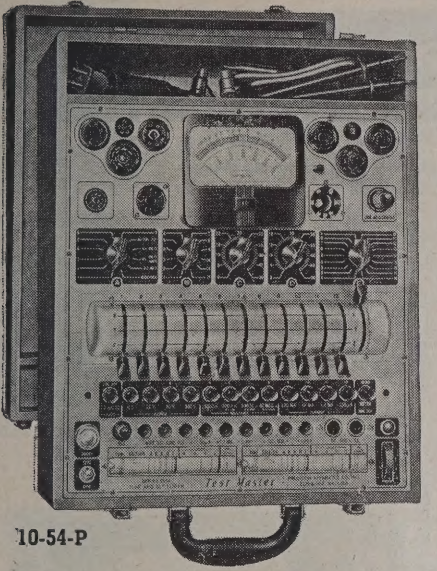
All prices are subject to change without notice

ELECTRONAMIC (Reg. U. S. Patent Office)

Series 10-54 *Electronamic Test Master*

Combination Tube Performance Tester, Battery Tester, and 35 Range, Push-Button Operated, Supersensitive, A.C.-D.C. Set Tester.

**Ranges to 6000 Volts, 60 Microamps, 12 amps, +70 DB, 60 Meg.
20,000 Ohms per Volt D.C.—1000 Ohms per Volt A.C.**



10-54-P

CIRCUIT TESTING FEATURES

A complete, wide-range, high speed, push-button operated, super-sensitive test set without any additional panel controls. Self-contained.

- ★ **Six D.C. Voltage Ranges:** 20,000 ohms per volt.
- ★ **Six A.C. Voltage Ranges:** 1000 ohms per volt.
- ★ **Six Output Ranges** at 1000 ohms per volt. 0-6-12-60-300-1200-6000 volts.
- ★ **Ranges to 30,000 Volts D.C.** when used with Series TV-2 Super high voltage test probe. Not included with 10-54. See page F-45.
- ★ **Seven D.C. Current Ranges:** 0-60-120 microamperes. 0-1.2-12-120-1200 MA. and 0-12 amperes.
- ★ **Four Self-Contained Resistance Ranges:** 0-6000-600,000 ohms; 0-6-60 megohms.
- ★ **Six Decibel Ranges** from —20 to +70 DB.
- ★ **Automatic Push-Button** range selection.
- ★ **1% Wire, Film and Metallized Resistors.**

The All-Inclusive, Positive Vacuum Tube Performance Test that is not limited to Mutual Conductance Alone.
(See technical details in main catalog)

Series 10-54 affords to the discriminating instrument purchaser, THE COMPLETE PORTABLE SERVICE LABORATORY; engineered to meet the expanding needs of modern radio electronics. Provides every necessary facility for high speed, reliable tube and circuit testing associated with Industrial Electronics, Communications, Radio (A.M.-F.M.), Television, Laboratory, etc. . . .

TUBE AND BATTERY TESTING FEATURES

- ★ A TUBE "PERFORMANCE" TESTER: "Precision" ELECTRONAMIC circuit, effectively tests all tubes over a complete "Path of Operation" not just at one arbitrary operating point or for just one inconclusive characteristic.
- ★ TESTS ALL MODERN TUBE TYPES: Noval 9 pin, 7 pin Acorn, dual capped H.F. tubes, Single-Ended TV. and F.M. amplifiers, low power transmitting tubes, sub-miniature types, etc. . . . **including direct facilities up to twelve element prongs!**
- ★ ABSOLUTE FREE-POINT LEVER ELEMENT SELECTION: Highest possible, practical order of obsolescence insurance. Locates every tube element regardless of base position.
- ★ ABSOLUTE FREE-POINT, INTER-ELEMENT SHORT-CHECK and Visible Filament Continuity System.
- ★ DUAL SHORT-CHECK SENSITIVITY: Permits selection of tubes for special applications.
- ★ INDIVIDUAL TUBE SECTION TESTS of multi-section tubes.
- ★ A.M. and F.M. CATHODE RAY TUNING INDICATORS directly tested.
- ★ FILAMENT VOLTAGES ¾ to 117 V.
- ★ BALLAST UNIT TESTS.
- ★ NOISE and CONDENSER TESTS.
- ★ MICRO-LINE ADJUSTMENT via continuously variable line voltage control.
- ★ PILOT AND SIGNAL LIGHT TESTS.
- ★ ACCURACY of test circuits closely maintained by use of individual, internal calibrating controls.
- ★ HIGH SPEED ROLLER TUBE CHART.
- ★ EXTRACTOR FUSE POST.
- ★ Test circuits completely transformer-isolated from power line.
- ★ TELEPHONE-TYPE, CABLED, plastic-insulated, moisture-resistant wire.
- ★ 4⅝" FULL VISION METER: 50 microampere, 2% accuracy.
- ★ TESTS RADIO A, B and C DRY BATTERIES via a "PRECISION" engineered circuit which performance checks each battery under actual load conditions. **Battery quality read directly on a 3-color scale.**

10-54-P (illustrated above) Hardwood, tapered, portable case, 13¾"x17¼"x6¾". With ohmmeter batteries and high voltage test leads.
Code: Habit. **Net Price $139.50**

10-54-C (see 10-12-C illustration and description below) In modern, attractively finished, steel counter cabinet.
Code: Handy. **Net Price $144.25**

10-54-PM (see 10-12-PM illustration and description below) In standard Panel Mount, with dust cover.
Code: Harem. **Net Price $144.25**

Series 10-12 *Electronamic Tube Master*

Truly Free-Point Tube and Battery Performance Tester.

The All-Inclusive, Positive Vacuum Tube Performance Test that is not limited to Mutual Conductance Alone.
(See technical details in main catalog)

The 10-00 Series of TUBE and TEST MASTERS represent the culmination of many years' development of tube testing equipment to meet the exacting needs of the rapidly advancing field of electronics.

Incorporating the "PRECISION" ELECTRONAMIC Tube Performance Testing Circuit, plus an advanced, "PRECISION" developed, multiple element, master lever selector system, it truly can be said that the MASTER 10-00 Series offers, to the discriminating equipment purchaser, the highest possible practical order of test results and anti-obsolescence insurance.

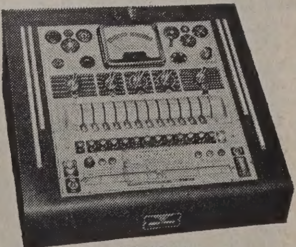
TUBE AND BATTERY TESTING FEATURES

The Series 10-12 Electronamic Tube Master incorporates the same time-proven circuit and exacting performance details described for the Series 10-54, above, under the heading: "Tube and Battery Testing Features."

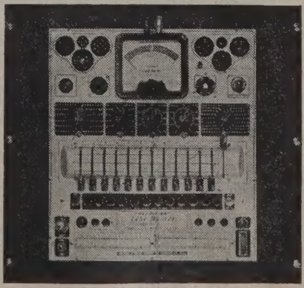
★ **10-12-P** (see 10-54-P illustration and description above) In hardwood, tapered, portable case with tool compartment. **Code: Facil.**
Net Price $104.50

★ **10-12-C** (illustrated at right) In modern, chrome-trimmed, round edged counter cabinet. Fine dull black ripple finish on heavy gauge steel. Size 17"x17⅞"x7½" sloping to 3" at front. **Code: Faith.**
Net Price $109.25

★ **10-12-PM** (illustrated at right) Consists of 10-12 chassis, mounted onto standard size steel panel, 17½"x19" with dust cover. Fine, dull black ripple finish. **Code: Favor.**
Net Price $109.25



10-12-C

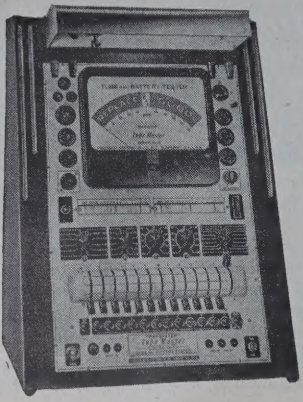


10-12-PM

-PRECISION- TEST EQUIPMENT
STANDARD OF ACCURACY

All prices are subject to change without notice

ELECTRONAMIC (Reg. U. S. Patent Office)



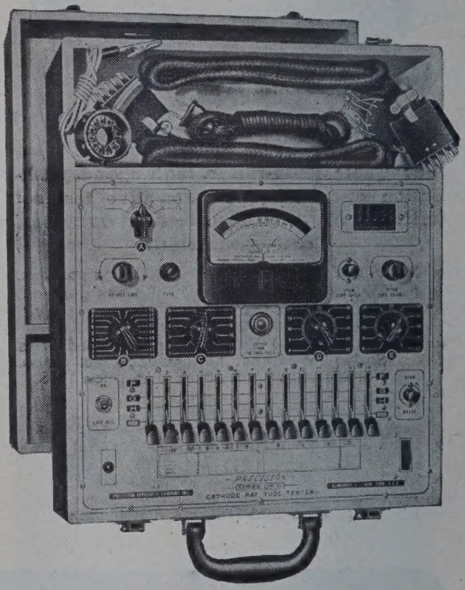
Series 10-15 *Electronamic Test Master*
DeLuxe Tube and Battery Merchandiser with Large 9" Meter

The All-Inclusive, Positive Vacuum Tube Performance Test that is not limited to Mutual Conductance Alone.

(See technical details in main catalog)

- ★ Incorporates the **Electronamic** tube performance and battery testing circuit, described for Series 10-54 on page F-43.
- ★ Designed particularly for equipment-conscious, progressive radio service-sales organizations, and tube-selling sections of department stores.
- ★ PROMOTE CUSTOMER CONFIDENCE and **tube sales** via this impressive **"Precision"** Tube Merchandiser.
- ★ DIRECT READING non-confusing tube performance indications in large, easy reading terms of Replace-Weak-Good.
- ★ ILLUMINATED by custom-built, highly polished, plated reflector.
- ● **10-15 Tube and Battery Merchandiser** (illustrated). Heavy gauge steel cabinet in fine, dull black ripple, with chrome trim and reflector. Size 24" high, 17½" wide, base depth 10" tapering to 4" at top.
  Code: Gable. **Net Price $144.25**
- ● **10-15PM**—On heavy gauge steel panel with dust cover. Panel 22¾" x 19" for standard rack mount. Fine, dull black ripple finish.
  Code: Gavot. **Net Price $139.00**

Series CR-30 CATHODE RAY TUBE TESTER
TESTS ALL TV PICTURE TUBES
(Magnetic and Electrostatic)
OSCILLOSCOPE AND INDUSTRIAL CATHODE RAY TYPES



SERIES CR-30 IS A COMPLETE, SELF-CONTAINED INSTRUMENT particularly engineered for the very special needs of reliable, rapid and economical cathode ray tube testing, in the field, shop or laboratory.

Series CR-30 is indispensible to the efficient TV Service-Installation Technician, TV Service Laboratory and wherever one is called upon to answer the performance question, "IS IT THE CATHODE RAY TUBE OR IS IT THE CHASSIS?"

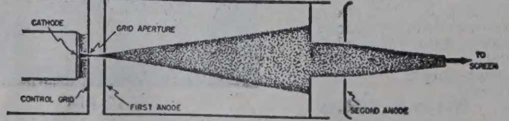
Series CR-30 incorporates a BEAM CURRENT TEST CIRCUIT which checks overall electron-gun performance for Proportionate Picture Brightness. Additional direct testing facilities are provided for positive check of accelerating anodes and deflection plate elements.

The Precision CR-30 should not be confused with mere adapters connecting to ordinary receiving tube testers which were never designed to meet the very specialized needs of CR tube checking. Similarly, it is not to be confused with neon lamp units or similar devices of limited technical merit and which do not check all CR tubes or all tube elements.

GENERAL AND TECHNICAL SPECIFICATIONS

- ★ **Tests All Modern Cathode Ray Tubes**—Magnetic and Electrostatic picture tubes, 'Scope Tubes and Industrial Types without removal from carton or TV chassis.
- ★ **Tests All CR Tube Elements**—Not just a limited few.
- ★ **Absolute Free-Point 14 Lever Element Selection System** for Short-Check, Leakage Testing and Quality Tests. Independent of multiple base pin and floating element terminations. Affords maximum anti-obsolescence insurance.
- ★ **Beam Current Test Circuit** checks all CR Tubes and Electron-gun in operation. It is the Electron Beam (and NOT total cathode emission) which traces the pictures or patterns on the face of the CR tube.

  Total cathode emission can be very high and yet Beam Current (and picture brightness) unacceptably low. **The CR-30 will reject such tubes** because it is a **Beam Current tester.** Conversely, total cathode emission can be low and yet Beam Current (and picture brightness) perfectly acceptable. **The CR-30 will properly pass such tubes** because it is a **Beam Current tester.** The significance of the above rests in the fact that Beam Current (and picture brightness) is primarily associated with the condition of the **center** of the cathode surface and not the overall cathode area. (See illustration below.)



- ★ **Voltage Regulated, Bridge Type VTVM** provides the heart of the super-sensitive, tube quality test circuit. Such high sensitivity is also required for positive check of very low current anodes and deflection plates.
- ★ **Multiple Test Sensitivities** plus selectable element test potentials permit proper accommodation of all CR tube types, Magnetic and Electrostatic.
- ★ **Micro-Line Voltage Adjustment,** which is **Meter-monitored** at filament supply, provides required close control of operating voltages.
- ★ **Accuracy** of test circuits closely maintained by use of factory adjusted internal calibrating controls; plastic insulated, telephone type cabled wiring; highest quality, conservatively rated components.
- ★ **Built-in, High Speed, Roller Tube Chart.**
- ★ **Test Circuits** Transformer isolated from power line.
- ★ **4⅝" Full Vision Meter** with special scale-plate expressly designed for CR tube testing requirements.
- ★ **Heavy Gauge Aluminum Panel,** etched and anodized.
- ★ **PLUS** many other **special "PRECISION"** details and features.

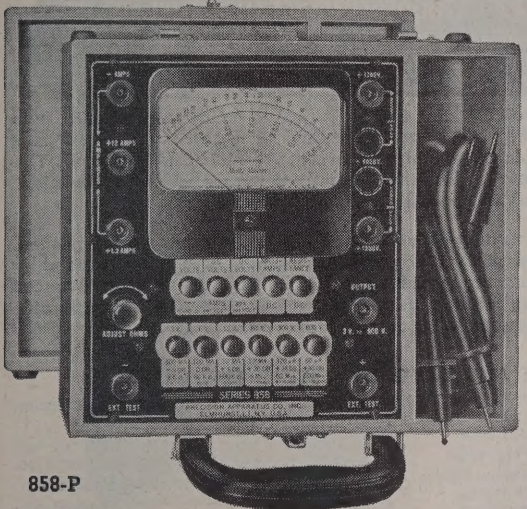
SERIES CR-30—In hardwood, tapered portable case, with hinged removable cover. Extra-Wide Tool and Test Cable Compartment. Overall Dimensions 17¼" x 13¾" x 6¾". Complete with standard picture tube cable, universal CR Tube Test Cable and detailed Instruction Manual.
Code: Daisy. **Net Price $99.75**

This equipment is Approved (and/or Tested) by the CSA Approval Laboratories.

-PRECISION- TEST EQUIPMENT
STANDARD OF ACCURACY

All prices are subject to change without notice

Series 858 High Sensitivity *Multi-Master*
HIGH SPEED, A.C.-D.C. MULTI-RANGE TEST SET
54 Ranges to
6,000 Volts, 60 Microamperes, 12 Amps., 600 Megs. +70DB.
20,000 and 1,000 Ohms per Volt D.C., 1,000 Ohms per Volt A.C.



858-P

Series 858 MULTI-MASTER features a "PRECISION" designed, positive action Push-Button Range and Function selection system, affording the ultimate in operational efficiency.

Designed for reliable measurements in modern TV, F.M., A.M. and other critical electronic circuits where only minute current drain of the measuring instrument can be tolerated.

The dual-range sensitivity feature provides the equivalent of another instrument at standard 1000 ohms per volt sensitivity, in conformance with many point to point voltage readings listed by receiver service manuals.

When employed in conjunction with the Series TV-2 super-high voltage safety test probe (described below), direct reading facilities to 30,000 volts are provided. 60,000 volt multiplier is also available.

SPECIFICATIONS

- EIGHT D.C. VOLTAGE RANGES both 20,000 and 1000 ohms per volt. 0-3-6-12-60-300-600-1200-6000 volts.
- EIGHT A.C. and OUTPUT VOLTAGE RANGES at 1000 ohms per volt. 0-3-6-12-60-300-600-1200-6000 volts.
- EIGHT D.C. CURRENT RANGES: 0-60-120 microamperes. 0-1.2-12-120-600 MA. 0-1.2-12 amps.
- SIX RESISTANCE RANGES self-contained to 60 megohms. 0-6000-60,000-600,000 ohms. 0-6-60-600 megohms.
- EIGHT DB RANGES: –26 to +70DB. 600 ohm, 1 mw., zero DB reference level.
- Two Pin Jacks for all standard ranges.
- 4⅝" 50 microampere meter, ±2% accuracy. Rugged, double-jewelled D'Arsonval construction.
- Safety Jacks for 6000 volt ranges.
- HIGHEST GRADE MATERIALS and plastic insulated wiring employed.
- ETCHED AND ANODIZED, heavy gauge aluminum panels: resistant to moisture and wear.

- **858-P** (illustrated) In hardwood, portable case, with tool compartment. Size 9"x10"x4½". Complete with ohmmeter batteries and high voltage test leads. **Code: Judge. Net Price $61.50**
- **858-L** In modern bakelite case with plastic carrying handle. Size 7½" x 8½" x 3". Complete with ohmmeter batteries and high voltage test leads. **Code: Jetty. Net Price $58.75**

Series TV Super High Voltage SAFETY TEST PROBES*
Voltage Ranges to 60,000 Volts D.C.
With standard V.T.V.M.
or high sensitivity V-O-M

* U. S. Patent No. Des. 162813

"PRECISION"* engineering solves the high voltage test problem with utmost safety to the operator. *Series TV has been custom designed and patent protected for YOUR safety FIRST.* Cartridge style high voltage tubular multiplier permits use of a single "TV" probe with many high sensitivity test sets and V.T.V.M.'s. *Full details on reverse side of "PRECISION" catalog price sheet.

IMPORTANT FEATURES

- **Custom Molded Polystyrene Head,** heavy duty bakelite handle and triple-ring barrier, specially machined internal lucite components, all spell out "HIGH VOLTAGE ENGINEERED."
- **High Dielectric Anti-Leakage Paths** and wide, multi-channelled guard-barrier reiterate "HIGH VOLTAGE ENGINEERED."
- **Internal and External Protective Grounding** — Full handle length grounded internal flash-over-shield. External, grounded arc-back barrier. HIGH VOLTAGE ENGINEERED!
- **Heavy Duty, Grounded-Shielded Connecting Cable.**
- **Ceramic, Helical Film-Type, Cartridge Multiplier** manufactured specifically for VERY HIGH VOLTAGE APPLICATION. **Removed and changed quickly, conveniently and without tools!**
- **Positive Grounds and High Voltage Connections** through high compression contact springs.

SERIES TVP—Test Probe less multiplier cartridge, with .080" pin plug terminations. **Code: Ebony. Net Price $12.35**

SERIES TVP-A—Similar to TVP above, except terminates in standard screw-on connector for use with most VTVM's. (Less multiplier cartridge.) **Code: Early. Net Price $12.35**

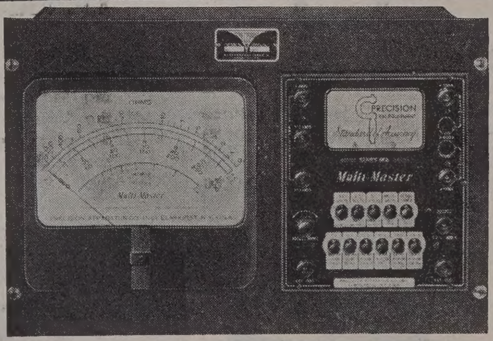
SERIES TV2—With 30 KV cartridge for "Precision" (or any) 20,000 Ω/V. test set with 6000 V. range. **Code: Every. Net Price $14.75**

SERIES TV-4—With cartridge for ranges to 60 KV for use with "Precision" EV-10A and EV-20. **Code: Excel. Net Price $14.75**

SERIES TV-4A—Same as TV4 above, except with special adapter for Model EV-10, not EV-10A. **Code: Exact. Net Price $14.75**

TVM—Cartridge Multipliers only for Series TV. See reverse side of "Precision" catalog price sheet for complete listings.

Series 866 De Luxe *Multi-Master*
Panel-Mounted A.C.-D.C. Test Set,
with 9" Meter and Remote-Control Selector Unit
5000 and 1000 Ohms per V., D.C., 1000 Ohms per V., A.C.



A LABORATORY TYPE, HIGH SENSITIVITY TEST SET INDISPENSABLE TO THE WELL EQUIPPED, MODERN TEST LABORATORY AND ELECTRONICS CLASSROOM.

The extra-large 9" meter and remote-control selector unit afford unparalleled operational efficiency with maximum physical meter protection via panel mounting above the work level.

RANGE SPECIFICATIONS OF SERIES 866 are similar to those described for Series 858 above.
5000 and 1000 ohms per volt D.C. 1000 ohms per volt A.C.
54 Ranges to
6000V., 300 Microamps, 12 Amps., 200 Megs., +70 DB.

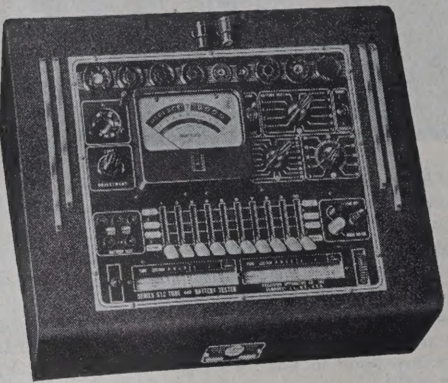
- **866** (illustrated) In standard panel mount, size 19"x12¼" with dust cover. Complete with high voltage test leads and ohmmeter batteries. **Code: Novel. Net Price $78.00**

Net

PRECISION TEST EQUIPMENT
STANDARD OF ACCURACY

All prices are subject to change without notice

Series 612 CATHODE CONDUCTANCE TUBE TESTER
A Modern, Free Point, Lever-Operated TUBE and BATTERY TESTER



The very popular "600" Series brings to modern electronic tube checking ***the highest practical order of obsolescence insurance with utmost simplicity of operation, AT MODERATE COST.*** This has been achieved with full conformity to the well-known "Precision" standards of quality, workmanship, and performance.

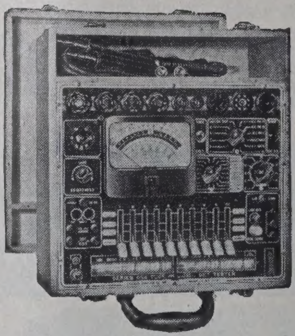
The "600" tube testing parameters are based upon the well-established, time-proven emission testing principles as have been recommended by both tube manufacturers and R.T.M.A. The "600" line affords advanced design features and performance which render it incomparable amongst instruments in its category and price range.

- ★ **612-C** (illustrated) In modern, chrome-trimmed, counter cabinet. Black ripple finish. Size 16" x 13½" x 7", sloping to 3" at front. **Code: Bison. Net Price $78.25**
- ★ **612-P** In hardwood, portable case (as illustrated for 654, below). Size 12" x 13" x 6". **Code: Begin. Net Price $75.50**
- ★ **612-MCP** Open style Metal Case Portable. Size 10½" x 12" x 6". **Code: Brine. Net Price $72.75**
- ★ **612-PM** In standard size panel mount 12¼" x 19" with dust cover. **Code: Blaze. Net Price $78.25**

TUBE AND BATTERY TESTING FEATURES

- ★ TESTS ALL MODERN TUBE TYPES including 7 pin Acorns, Noval 9 pin, dual capped H.F. tubes, F.M. and TV. amplifiers.
- ★ FILAMENT VOLTAGES ¾ to 117 volts.
- ★ ABSOLUTE FREE-POINT 10 element lever selection for merit and short tests.
- ★ DUAL SHORT-CHECK SENSITIVITY.
- ★ INDIVIDUAL TESTS OF MULTI-SECTION TUBES including tuning indicators.
- ★ BALLAST UNIT TESTS.
- ★ MICRO-LINE ADJUSTMENT.
- ★ 4½" METER, 2% ACCURACY.
- ★ NOISE and CONDENSER TEST pin jacks.
- ★ Pilot Light Test Socket.
- ★ DYNAMIC "UNDER-LOAD" TEST for all popular radio A, B, and C dry batteries.
- ★ Built-in, brass geared hi-speed roll chart.
- ★ Anodized, deep-etched, heavy gauge aluminum panel, resistant to wear.
- ★ Panel-mounted Fuse Extractor Post.
- ★ Telephone type cabled, plastic-insulated, moisture resistant hook-up wire.
- ★ Each instrument individually calibrated and sealed.

Series 654 COMBINATION TUBE, BATTERY & SET TESTER
20,000 OHMS PER VOLT D.C. 1,000 OHMS PER VOLT A.C.
Ranges to 6,000 V., 120 Microamperes, 12 Amps., 60 Megs., + 70 DB.



The Series 654 is available in the same four model types as described for the Series 612 above.

Model	Code	Net Price
654-P (Illus.)	Hardy	$109.75
654-MCP	Hurry	$107.00
654-C	House	$112.50
654-PM	Heart	$112.50

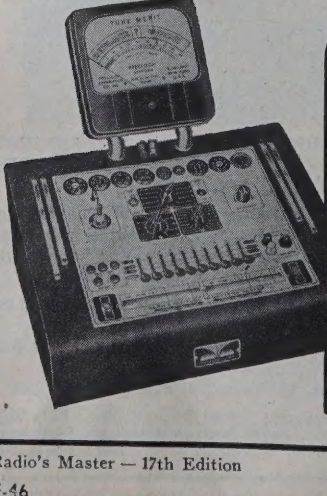
★ **SERIES 654 is an economical, compact, *High Sensitivity Service Laboratory* designed to meet the specific needs of modern electronics service, installation and maintenance, A.M., F.M., and T.V.**

Series 654 incorporates the identical tube and battery testing features as described for the Series 612 above, *PLUS* a complete wide range, high sensitivity, A.C.-D.C. circuit tester.

CIRCUIT TESTING FEATURES

- ★ **5 D.C. Voltage Ranges:** 20,000 ohms per volt.
- ★ **5 A.C. and Output Voltage Ranges:**
  1000 ohms per volt.
  0-12-60-300-1200-6000 volts.
- ★ **Ranges to 30,000 Volts D.C.** when used with Series TV-2 Super high voltage test probe. Not included with 654. See page F-45.
- ★ **6 D.C. Current Ranges:** 0-120 microamperes. 0-1.2-12-120 MA. 0-1.2-12 Amperes.
- ★ **3 Wide Resistance Ranges:** 0-600-600,000 ohms. 0-60 Megs. Self-contained batteries.
- ★ **5 Decibel Ranges** from —12 to +70 DB.
- ★ **Fully Rotary Selective** Ranges and Functions.
- ★ **Only 2 Pin Jacks** for all standard ranges.
- ★ Recessed 6,000 V. safety pin jacks.
- ★ 50 microampere, 4⅝" Wide-Angle meter.
- ★ 1% Wirewound and film-type resistors.
- ★ All circuits isolated from power line.

Series 614 DE LUXE TUBE & BATTERY MERCHANDISER
Counter Display Type Tube and Battery Tester with Large 7" Chrome Trimmed Meter.



The Series 614 has been designed for the progressive tube and battery department where an exceptionally attractive instrument is desired to step-up tube and battery sales with minimum investment.

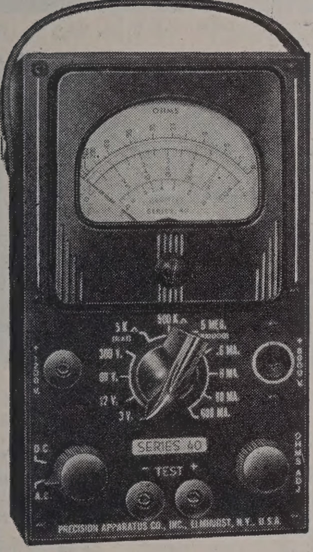
The extra-large, offset mounted 7" meter provides a full view of test results easily visible to both customer and operator.

The tube and battery testing circuit of Series 614 is electrically identical to that described for the Series 612 at top of this page.

★ **614 Tube and Battery Merchandiser** (illustrated)—In modern, chrome-trimmed, fine black ripple finished cabinet. Offset mounted meter. Cabinet size 16" x 13½" x 7", slopes to 3". **Code: Early. Net Price $97.25**

This equipment is Approved (and/or Tested) by the CSA Approval Laboratories.

-PRECISION- TEST EQUIPMENT
STANDARD OF ACCURACY



★ **Series 40** (illustrated) In molded bakelite case with plastic handle. 3¾"x 6¼"x2½". Complete with ohmmeter batteries and test leads. **Code: Visit.**
Net Price $26.95

Series 40 Compact Wide Range A.C.-D.C. Circuit Tester

31 Self-Contained Ranges to 6000 Volts, 600 MA, +70DB, 5 Megohms
with Full Size, easy reading 3" Rectangular Meter
1000 Ohms per Volt A.C. and D.C.

In molded bakelite carying case, Series 40 meets the need for a compact, yet rugged test set to withstand hard usage as is imposed by the service technician, maintenance engineer, production inspector, trouble-shooter, etc.

The Series 40 offers every advanced design feature and full-bodied components as are regularly incorporated in "Precision's" larger multi-range test sets, including: Rotary Range Selection—1% shunts and multipliers—heavy duty insulated pin jacks—Large numeralled, easy reading meter.

ALL RANGES, including 6000 volts and 5 Megohms, are SELF-CONTAINED NO EXTERNAL BATTERIES OR MULTIPLIERS ARE REQUIRED.

RANGE SPECIFICATIONS

- ★ 6 A.C.-D.C. AND OUTPUT VOLTAGE RANGES at 1000 ohms per volt. 0–3–12–60–300–1200–6000 volts.
- ★ 4 D.C. CURRENT RANGES: 0–.6–6–60–600 MA.
- ★ 3 RESISTANCE RANGES: 0–5000–500,000 ohms. 0–5 megs.
- ★ 6 DECIBEL RANGES —22 to +70 DB.
- ★ FULL SIZE 3" RECTANGULAR METER: 400 microamperes ±2% accuracy.
- ★ 1% WIRE & FILM-TYPE RESISTORS.
- ★ ONLY 2 PIN JACKS serve all standard ranges and functions.
- ★ Recessed 6000 volt safety jack.
- ★ Anodized, etched aluminum panel: resistant to moisture and wear.

LC-2 LEATHER INSTRUMENT CASE: Genuine top-grain heavy cowhide case, custom designed for the Series 40. Richly finished in dark brown. **Code: Young. Net Price $5.75**

Series 85 High Sensitivity Test Set

20,000 Ohms per Volt D.C. 1,000 Ohms per Volt A.C.
34 Self-Contained Ranges to 6000 Volts,
120 Microamperes, 12 Amperes, +70DB, 60 Megohms.

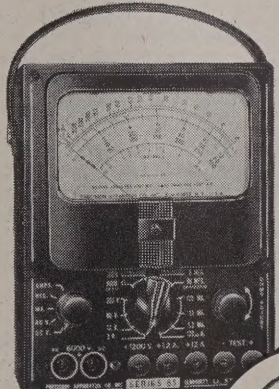
The Series 85 is a bakelite cased, laboratory styled, portable instrument.

Combining high sensitivity with small overall size, Series 85 is "Application Engineered" for production, lab., school and service-maintenance phases of modern electronics: A.M., F.M., and TV.

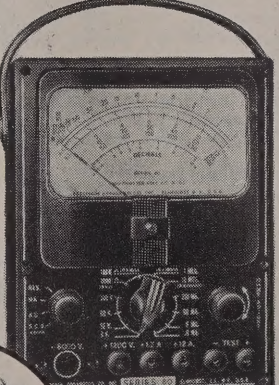
★ When used with the Series TV-2 super-high voltage test probe, D.C. voltage ranges up to 30,000 volts are provided for Television and similar high potential, low current circuits. See page F-45.

SPECIFICATIONS

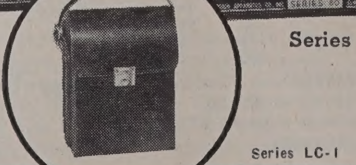
- ★ **6 D.C. Voltage Ranges:** 20,000 ohms per volt.
- ★ **6 A.C.-Output Voltage Ranges:** 1000 ohms per volt 0-3-12-60-300-1200-6000 volts.
- ★ **6 D.C. Current Ranges:** 0-120 microamps. 0-1.2-12-120 MA and 0-1.2-12 amps.
- ★ **4 Resistance Ranges:** Self-contained batteries. 0-6000-600,000 ohms; 0-6-60 megs.
- ★ **6 Decibel Ranges:** —26 to +70DB.
- ★ **4⅝" Rectangular Meter.** 50 Microampere. 2% accuracy.
- ★ **1% Wire & Film-type Resistors.**
- ★ **Rotary Range Selection:** All standard functions at only 2 tip jacks.
- ★ Recessed 6000 volt safety jacks.
- ★ Anodized, heavy gauge, etched aluminum panel: resistant to moisture and wear.
- ★ **Series 85** (illustrated) in molded bakelite carrying case with plastic handle. 5½" x 7⅛" x 3". Complete with ohmmeter batteries and test leads.
Code: Waist. Net Price $39.95



Series 85



Series 80



Series LC-1

LC-1 LEATHER INSTRUMENT CASE

Custom designed for the Series 80 and 85. Includes a tool and test lead compartment.

Genuine-top-grain heavy cowhide with waterproof lined suede interior. Adjustable hand or shoulder strap. Positive snap-lock. Richly finished in dark brown. **Code: Yearn.**
Net Price $9.50

Series 80 Wide Range Test Set

1000 Ohms per Volt A.C. and D.C.
34 Self-Contained Ranges to 6000 Volts,
12 Amperes, +70DB, 10 Megohms.

The Series 80, laboratory styled, rotary selective, multi-range circuit tester has been designed to meet the same high calibre performance standards as the Series 85 (at left) but is specifically intended for use wherein greater resistance to electrical and physical overload is of more importance than extremely high sensitivity.

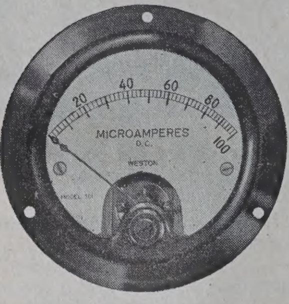
"Application Engineered" for general purpose industrial and radio service-maintenance-test requirements.

SPECIFICATIONS

- ★ **6 A.C.-D.C.-Output Voltage Ranges:** 1000 ohms per volt. 0-6-12-60-300-1200-6000 volts.
- ★ **6 D.C. Current Ranges:** 0–.6–6–60–300 MA and 0–1.2–12 amps.
- ★ **4 Resistance Ranges:** Self-Contained batteries. 0–1000–100,000 ohms. 0–1–10 megohms.
- ★ **6 Decibel Ranges:** —20 to +70DB.
- ★ **4⅝" Rectangular Meter:** 400 microampere, 2% accuracy.
- ★ **1% Wire and Film-type Resistors.**
- ★ **Rotary Range Selection:** All standard functions at only 2 tip jacks.
- ★ Recessed 6000 volt safety jack.
- ★ Anodized, heavy gauge, etched aluminum panel: resistant to moisture and wear.
- ★ **Series 80** (illustrated) In molded bakelite carrying case with plastic handle. 5½"x7⅛"x3". Complete with ohmmeter batteries and test leads. **Code: Weave.**
Net Price $34.95

All prices are subject to change without notice

Weston RADIO INSTRUMENTS

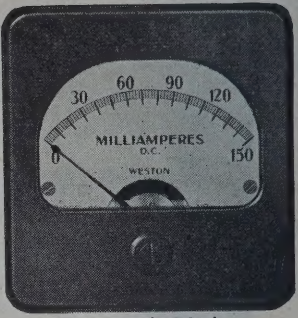


Round Style

PANEL INSTRUMENTS

These panel instruments reflect half a century of instrument skill, and the Weston tradition of building instruments to the highest standards of dependability and service.

Models 301, 425 and 476 are available in round flush bakelite cases 3½" or 3⅜", and 3¼" metal cases with black finish; also in round surface metal and rectangular flush bakelite cases. Models 301 and 425 supplied in round surface bakelite cases. Models 506, 507, 517 regularly supplied in round flush 2½" bakelite and black finished metal cases; flush narrow flange metal and rectangular flush bakelite cases with a clamp for panel mounting. Model 506 available in surface metal case. All are calibrated normally for use on non-magnetic panels. For magnetic panel use, instruments will be adjusted for steel panel thickness of .09". Order instruments in bakelite cases for use on circuits above 300 volts when it is not possible to connect in grounded side of line. For other instrument prices, write to Weston Electrical Instrument Corporation, Newark 5, New Jersey.



Rectangular Style

3½" PANEL INSTRUMENTS

MODEL 301 — D-C VOLTMETERS

Approximate resistance of Model 301 in ohms per volt — 1 to 40 volts, 62; 50 to 150 volts, 200; 200 volts, 250.

Range	Price	Range	Price	Range	Price
3	$14.25	15	$14.25	150	$15.75
5	14.25	30	14.25	200	16.50
8	14.25	50	14.25		
10	14.25	100	15.00		

With Resistance of 1,000 ohms per volt

Range	Price	Range	Price	Range	Price
50	$15.00	300	$18.75	1.5KV	$41.75*
100	15.75	500	23.25	2 KV	46.75*
200	17.25	1KV	30.75	3 KV	56.75*

* Supplied with external resistor.

MODEL 301 — D-C MILLIAMMETERS *

Range	Approx. Res. Ohms	Price	Range	Approx. Res. Ohms	Price
1	105	$14.25	30	1.2	$14.25
1.5	27	14.25	50	2.0	14.25
2	27	14.25	100	1.0	14.25
5	5.7	14.25	150	0.66	14.25
10	2.0	14.25	200	0.5	14.25
15	2.0	14.25	300	0.33	14.25
20	2.0	14.25	500	0.2	14.25

* Milliammeters with ranges above 40 MA. are shunted, and have a drop of approximately 100 MV.

MODEL 301 — D-C AMMETERS *

Single Ranges: 1/1.5/2/3/5/10/15/30/50 at $14.25

* Ammeters are supplied in self-contained ranges up to 50 amperes inclusive, and have a drop of 50 MV ±5%. Ranges above 50 amperes require external shunts.

MODEL 301 — D-C MICROAMMETERS

Range	Price	Range	Price
20	$30.00	100	$27.00
30	30.00	200	18.00
50	28.25	500	18.00

MODEL 301 — RECTIFIER TYPE A-C VOLTMETERS

Range	1000 ohms per volt	2000 ohms per volt	Range	1000 ohms per volt	2000 ohms per volt
1	....	$25.50	50	$22.50	$25.50
1.5	....	25.50	100	23.25	26.25
3	$22.50	25.50	150	24.00	27.00
5	22.50	25.50	300	26.25	....
15	22.50	25.50			

MODEL 301 — RECTIFIER TYPE A-C MILLIAMMETERS

Range	Price	Range	Price
0.5	$25.50	2	$21.75
1	21.75	5	21.75

MODEL 301 — RECTIFIER TYPE A-C MICROAMMETERS

Range	Price	Range	Price
100	$34.50	250	$25.50
200	25.50	500	25.50

MODEL 301 VU METER

A OR B SCALE..Price $35.00

MODEL 862 VU METER

A OR B SCALE ....Price $50.00

MODEL 476 — A-C AMMETERS

Single Ranges: 1/1.5/2/3/5/10/15/30/50 at $14.25

MODEL 476 — A-C VOLTMETERS

Single Ranges: 1.5/3/5/8/10/15/30/50 at $14.25

Range	Price	Range	Price
100	$15.00	250	$17.25
130	15.75	300	18.00
150	15.75	500	21.00

MODEL 425 — THERMOCOUPLE TYPE AMMETERS

Single Ranges: 1/1.5/2/3/5/8/10/15/20 at $21.00

MODEL 425 — THERMO MILLIAMMETERS

Ranges: 10/20/50 ....$52.50
100/115/120/150/200/300/500 ....$24.00

2½" PANEL INSTRUMENTS

MODEL 506 — D-C VOLTMETERS

Approximate resistance of Model 506 in ohms per volt: 3 to 150 volts, 125; 200 volts, 200; 300 volts, 1000.

Range	Price	Range	Price	Range	Price
3	$11.25	10	$11.25	100	$12.00
5	11.25	15	11.25	150	12.75
8	11.25	50	11.25	300	15.75

MODEL 506 — D-C AMMETERS

Single Ranges: 1/1.5/3/5/10/15/30/50 at $11.25

Ammeters, self-contained up to 50 amps., inclusive—drop 50 MV±5%

MODEL 506 — D-C MILLIAMMETERS

Range	Approx. Resis.	Price	Range	Approx. Resis.	Price
1	105	$11.25	30	1.2	11.25
1.5	18	11.25	50	1	$11.25
2	18	11.25	100	.5	11.25
3	18	11.25	150	.33	11.25
5	9.5	11.25	200	.25	11.25
10	3.2	11.25	300	.16	11.25
15	1.5	11.25	500	.1	11.25

Milliammeters above 40 MA are shunted — drop approximately 50 MV.

MODEL 507 — THERMO AMMETERS

For use on any frequency including radio frequency.
Single Ranges: 1/1.5/2/5/8/15/20 at $18.00

MODEL 517 — A-C AMMETERS

Range	Approx. Resis. in ohms	Price	Range	Approx. Resis. in ohms	Price
1	.17	$13.50	20	.0012	$13.50
3	.024	13.50	30	.00085	13.50
5	.01	13.50	50	.00072	13.50
10	.0037	13.50			

MODEL 517 — A-C VOLTMETERS

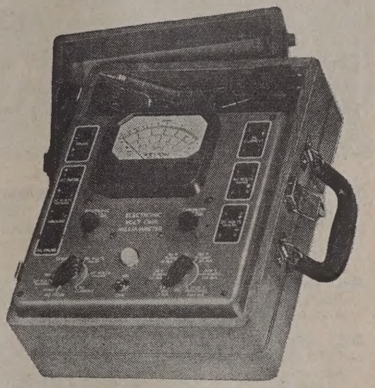
Range	Approx. Ohms per volt	Price	Range	Approx. Ohms per volt	Price
5	10	$13.50	50	52	$13.50
10	14	13.50	130	110	15.00
15	14	13.50	150	110	15.00
25	26	13.50	250	167	16.50
			300	167	17.25

SUBJECT TO PRICE CHANGE OR WITHDRAWAL WITHOUT NOTICE

WESTON INSTRUMENTS

MODEL 769 HIGH FREQUENCY ELECTRONIC ANALYZER

A versatile three-in-one instrument built to Weston standards of quality. Provides a conventional Volt-Ohm-Milliammeter, a high impedance Electronic Volt-Ohmmeter, and a stable, probe type Vacuum Tube Voltmeter for use to 300 megacycles. RF and special D-C probe supplied.
Complete stability is attained on all ranges from 3 to 1200 Volts and 200 Ohms to 2000 Megohms full scale.



MODEL 769

RANGES

VOLT-OHM-MILLIAMMETER

D-C VOLTS (at 10,000 ohms per volt):† 3/12/30/120/300/1200.

A-C VOLTS (at 1,000 ohms per volt): 3/12/30/120/300/1200.

DECIBELS: −6 to +62 in six ranges: 1 milliwatt, 0 level, 600 ohm line.

D-C CURRENT: 300 microamperes 1/1.2/6/30/120/600 ma.

RESISTANCE: 2,000 / 20,000 / 200,000 ohms full scale. 20/200/2,000 ohms center scale.*

ACCURACY: D-C ±3% A-C ±5%

† For higher ranges to 6000 volts d-c order Model 766 Type 4 Televerter at $21.00 list.

* Ranges from 2 to 2000 megohms operate electronically.

**300 volts a-c not usable above 50,000 cycles.

PROBE TYPE VACUUM TUBE VOLT METER

A-C VOLTS: 3/12/30/120/300**.

DECIBELS: −6 to +42 in four ranges. 1 milliwatt, 0 level, 600 ohm line.

ACCURACY: ±5% (direct reading) at 50 cycles to 150 megacycles.
±12% (direct reading) at 150 to 300 megacycles.
±8% (with correction curve) at 150 to 300 megecycles.

ELECTRONIC VOLT-OHMMETER

D-C VOLTS: ±3/12/30/120/300/1200.

RESISTANCE: 2,000 / 20,000 / 200,000 ohms full scale. 2/20/2,000 megohms full scale.
20/200/2,000/20,000/200,000 ohms center scale, 20 megohms center scale.

VOLTMETER RESISTANCE: 15 megohms on all ranges.

ACCURACY: ±4% of full scale on all ranges.

RF PROBE

FREQUENCY RANGE: 50 cycles to 300 megacycles.

INPUT RESISTANCE: 5 megohms.

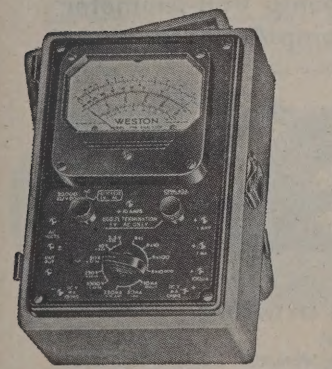
INPUT CAPACITY: Approximately 5 micromicrofarads.

DIMENSIONS: 3½″ x ¾″.

Size: 10″ x 13″ x 6⅛″.
App. Wgt. 13½ lbs.

PRICE..$247.50 List

MODEL 779 SUPER-SENSITIVE ANALYZER



MODEL 779

A compact 26 range ultra-sensitive analyzer with five d-c voltage ranges of a sensitivity of either 1,000 or 20,000 ohms per volt. A-C temperature compensated; precision resistors throughout. Supplied in a rugged solid oak case with a removable cover and convenient carrying handle.

Used for . . . measurement of tube circuits, as in electronic receivers, transmitters and electronic control equipment . . . television and wire communication systems . . . power level in decibels in audio equipment, P.A., telephone or speech lines . . . maintenance of electronic control and alarm systems . . . leakage of condensers . . . resistance of all types of circuits.

For application requiring higher d-c voltage measurements use Model 766 Televerters as listed on next page.

RANGES

Volts		Current	Decibels	Ohms
D-C	A-C	D-C Only		
2.5	2.5	.1 Ma	− 14 to + 2*	0-3000
10	10	1 Ma	− 2 to + 14*	0-30,000
50	50	10 Ma	+ 12 to + 28*	0-300,000
250	250	50 Ma	+ 26 to + 42†	0-30 Meg
1000	1000	250 Ma	+ 38 to + 54††	
		1 Amp	(6 milliwatts,	
		10 Amp	500 ohms, zero level)	

* Substantially flat to 10,000 cycles.
† Substantially flat to 3,000 cycles.
†† Substantially flat to 1,000 cycles.

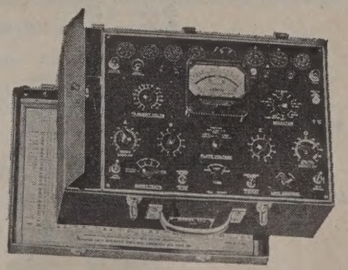
Accuracy: A-C within 3%; D-C within 2% to 250 volts; 3% on 1,000 volt range.

Size: 6⅜″ x 9⅛″ x 4⅞″
Approx. Weight: 6 lbs.

Model 779 Type 1 (Incl. Test Leads)..$127.50 List

MODEL 798 TUBE CHECKER

The Model 798 Tube Checker uses a new method of proportional mutual conductance testing . . . the differential frequency system which provides readings similar to actual operating conditions. This tube checker supplies mutual conductance and "Good-Bad" readings on all receiving tube types . . . tests all Voltage Regulator and low power type Thyratron tubes . . . has adjustable plate, screen, signal and grid bias voltages. Only six settings required for most tubes . . . switching flexibility provides for testing future tubes as they are announced.



MODEL 798

SPECIFICATIONS

Tube Checker ranges: 3000/6000/12000 micromhos.

Tube sockets: 4, 5, 6, and 7 prong, octal, loctal, miniature, acorn and 9 pin types. (Spare miniature socket provided.)

Power Requirements: 105/125 Volts, 50/60 Cycles A-C.

Size: 17¾″ x 11⅜″ x 6⅛″ — **Weight:** 23 Lbs.

Price..$291.50 List

SUBJECT TO PRICE CHANGE OR WITHDRAWAL WITHOUT NOTICE

WESTON INSTRUMENTS

MODEL 785 INDUSTRIAL CIRCUIT TESTER

Established in industry as the most complete single unit for general maintenance and ultra-sensitive test purposes, particularly on electronic equipment. Provides 28 ranges for measuring D-C voltage and current; A-C voltage and current; and resistance Current and voltage ranges can be extended for insulation testing Provisions for instantaneous current and voltage readings.

RANGES

D-C Volts: (Full scale) 1/10/50/200/500/1000 Volts (20,000 Ohms per volt), 100 Millivolts direct or with external shunt. Accurate within 2% to 500 V.; 3% at 1000 V.

A-C Volts: (Full scale) 5/15/30/150/300/750 Volts (1000 Ohms per volt). Accurate within 3%.

D-C Current: (Full scale) 50 Microamps; 1/10/100 Milliamps; 1/10 Amps. Accurate within 2%. Higher ranges with 100 mv. shunts.

A-C Current: (Full scale) .5/1/5/10 Amperes. Accurate within 3% on 60 cycles. Higher ranges with external current transformers.

Resistance: (Full scale) 3,000/30,000/300,000 Ohms; 3/30 Megohms. (Center scale) 25/250/2,500/25,000/250,000 Ohms. Accurate within 2% of linear arc length on any ohmmeter range.

Sizes: 13" x 12½" x 5½".
Weight (complete) 13½ Lbs.

Model 785 (Oak carrying case)	**$157.50 List**
Model 785 (Steel case)	**127.50 List**

MODEL 785 ACCESSORIES

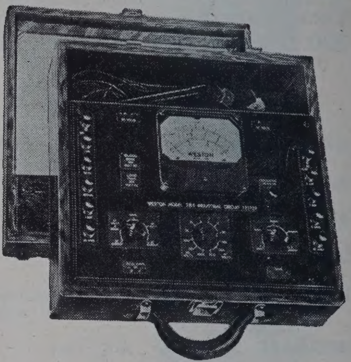
Model 766 Televerter — used with any 50 microampere D-C instrument or 20,000 ohm per volt analyzer to extend range to 5,000 or 10,000 volts.

Type 1 (5,000 volts)	**$18.00 List**
Type 2 (10,000 volts)	**24.00 List**

Model 792 Insulation Tester — for insulation and cable resistance measurements to 900 megohms at a test potential of 500 volts. Operates from any 100-130 volt, 50 to 60 cycle line. **$37.50 List**

Model 604 Current Transformer — inserted primary type used to increase A-C current. Type 1, accurate within 1% on frequencies from 25 to 125 cycles, capacity 2 volt-amperes. Type 2, accurate within 1% on frequencies from 50-215 cycles, capacity 5 volt-amperes. Ratios include 200:5, 300:5, 400:5, 500:5.

Type 1	(200:5, 300:5)	**$18.00** List;
	(400:5, 500:5)	**$16.50** List
Type 2	(200:5)	**$30.00** List;
	(400:5, 500:5)	**$28.50** List



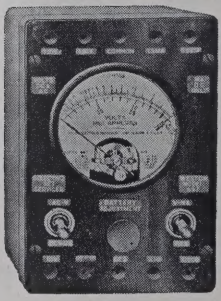
MODEL 785

100 MV External Shunt — used for extending D-C current ranges of Model 785 beyond 10 amperes.

Price	50 amp.,	**$12.75;**
	100 amp.,	**$12.75;**
	250 amp.,	**$14.00;**
	500 amp.,	**$24.00** List

WESTON POCKET-SIZE TESTERS

Model 697 Volt-Ohm-Milliammeter



MODEL 697

SPECIFICATIONS —

Accurate within 2% D-C
5% A-C

Scale: 2.36"

Ranges: 0-7.5/15/150/750 a-c and d-c (1000 ohms per volt)

Current: 0-7.5/75 milliamperes d-c

Resistance: Full scale 5,000/500,000 ohms. Center scale 35/3500 ohms

Size: $5\frac{9}{16}$" x 3 " x $3\frac{9}{16}$"

Approx. Wt.: 1¾ lbs.

Model 697 (Incl. Test Leads) **$49.50 List**

Model 564 Volt-Ohmmeter

SPECIFICATIONS — Accurate within 2%
Scale: 2.36"
Ranges: 3/30/300/600 volts d-c (1000 ohms per volt)
Resistance: Full scale — 1,000/10,000/100,000/1,000,000 ohms
Size: 5-33/64" x 3-45/64" x 2-9/16"
Approx. Wt.: 1¾ lbs.

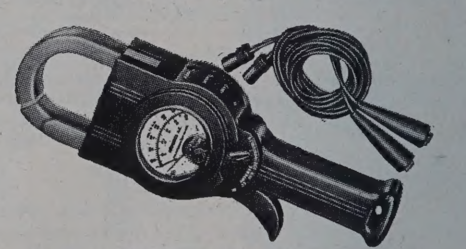
Model 564, Type 3-C (Incl. Test Leads)	**$54.00 List**

Model 689 Ohmmeters

SPECIFICATIONS — Accurate within 2%
Scale: 2.36"
Ranges: Type 1-E — double range 0-5,000 and 50,000 ohms-full scale.
Type 1-F — double range 0-10 and 0-1,000 ohms-full scale.
5" x 2⅞" x 1⅞"
Approx. Wt.: 1 lb.

Model 689, Type 1-E (Incl. Test Leads)	**$27.00 List**
Model 689, Type 1-F (Incl. Test Leads)	**$25.50 List**

Model 633 Clamp Volt-Ammeter and Clamp-Ammeter



MODEL 633 Type VA-1

Model 633 Type VA-1 (Incl. Potential Leads) — 1000/250/100/25/10 amperes a-c 700/350/175 volts a-c	**$ 95.00**
Model 633 Type A-1 — 500/250/100/50/25/10 amperes a-c	**$ 87.00**
Model 633 Type A-2 — 1000/500/250/100/25/10 amperes a-c	**$ 87.00**
Model 633 Type A-3 — 2000/1000/500/250/100/50 amperes a-c	**$ 95.00**
Model 9958, 50 Foot Extension Cable, Plug & Receptacle for Model 633 Types A-1, A-2, A-3	**$ 72.00**
Leather Carrying Case (Model 633 Types VA-1, A-1, A-2, A-3)	**$ 13.50**
Leather Carrying Case (Model 9958 — Cable, Plug and Receptacle)	**$ 22.50**

— NOTE —

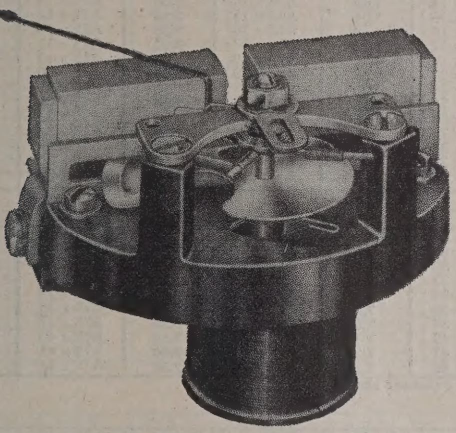
Model 633 instruments may be used for continuous duty up to 500 amperes.

Approximate Dimensions and Weights

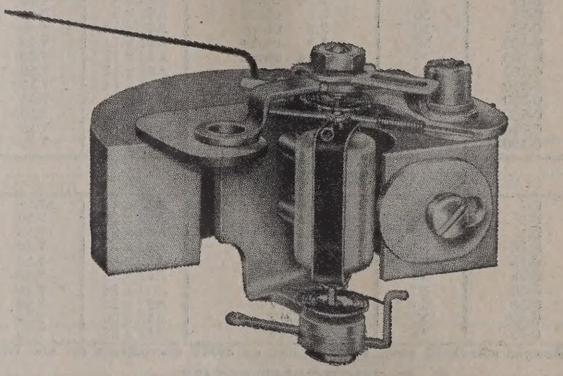
Model 633 Types VA-1, A-1, A-2, A-3	13⅝"x4⅜"x2½"	3¼ lbs.
Leather Carrying Case (Types VA-1, A-1, A-2, A-3)	14½"x5½"x3⅝"	2¼ lbs.
Model 9958, 50 Foot Extension Cable, Plug & Receptacle		4¼ lbs.
Leather Carrying Case (Model 9958—Cable, Plug & Receptacle)	14"x8½"x3¾"	4¼ lbs.

Prices Subject To Change Without Notice.

Burlington Improved PANEL INSTRUMENTS



Alternating Current



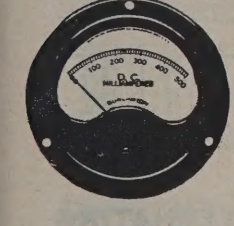
Direct Current

AC and DC types are accurate to within 2% of full scale value at any point on the scale.

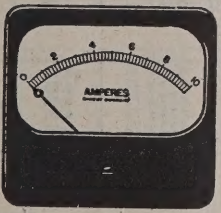
DC instruments combine extremely light weight moving elements and powerful alnico magnets to produce a torque to weight ratio which reduces frictional error to a minimum. This high torque to weight ratio permits use of pivots with ample pivot bearing surface to overcome effects of rough handling, shock, and vibration.

AC instruments are accurate over entire range of commercial power frequencies (25 to 125 cycles). These instruments are of repulsion vane type using carefully aged and impregnated field coils and multipliers which are wound with conductors of ample size so that temperature rise of the windings may be maintained at a minimum, even though instrument is subjected to continuous use in the circuit.

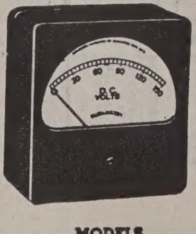
Alnico magnets are used to obtain perfected damping characteristics found in no other AC instrument.



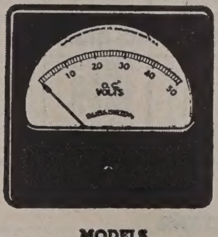
MODELS
Direct Current
221, 421, 431, 441
Alternating Current
222, 422, 432,



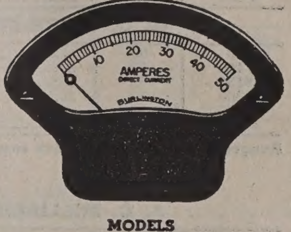
MODELS
Direct Current
731, 741
Alternating Current
732, 742



MODELS
Direct Current
141
Alternating Current
142



MODELS
Direct Current
521, 531
Alternating Current
522, 532



MODELS
Direct Current
841

***Request Catalog #47 for information on Hermetically Sealed Instruments in 1½", 2½", and 3½" types**

CASE DIMENSIONS

Model No.					Stud Length		
DC	AC	Body	Flange	Body Depth	AC	DC	Case
141	142		4" x 4¼"	2"	¾"	1"	Rectangular, front-of-board Bakelite
*311		1.500" Diam.	1.750" x 1.750"	1"	Solder type		Square, flush, Sealed
221	222	2.062" Diam.	2.740" Diam.	1 29/64"	⅝"	25/32"	Round, flush, Metal
*321	322	2.068" Diam.	2.695" Diam.	1 1/16"	Solder type		Round, flush, Sealed
421	422	2.156" Diam.	2.690" Diam.	1.4062"	⅝"	25/32"	Round, flush, Bakelite
*331	332	2.670" Diam.	3½" Diam.	1 9/64"	Solder type		Round, flush, Sealed
431	432	2.796" Diam.	3½" Diam.	1½"	¾"	¾"	Round, flush, Bakelite
441		3.5625" Diam.	4⅜" Diam.	1.4531"	¾"		Round, flush, Bakelite
521	522	2.156" Diam.	2⅜" x 2⅜"	1⅜"	⅝"	25/32"	Square, flush, Bakelite
531	532	2.796" Diam.	3" x 3"	1½"	¾"	¾"	Square, flush, Bakelite
731	732	2¼" Diam.	3 11/16" x 3 5/16"	1.0156"	¾"	⅝"	Rectangular, semi-flush, Bakelite
741	742	2¾" Diam.	4" x 4¼"	1"	¾"	¾"	Rectangular, semi-flush, Bakelite
841		2¾" Diam.		1.2187"	¾"		Fan-shaped, semi-flush, Bakelite

See following page for prices and specifications.

Burlington Improved

DIRECT

D. C. MILLIAMMETERS

Range	Scale Div.	Approx. Res.	MODEL 221		MODEL 421		MODEL 521		MODEL 531	
			Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
0-1	50	47 ohms	A82 x 5	$7.50	A72 x 11	$7.50	A73 x 11	$7.50	A75 x 11	$8.10
0-5	50	10 ohms	A82 x 6	7.50	A72 x 14	7.50	A73 x 14	7.50	A75 x 14	8.10
0-10	50	5 ohms	A82 x 7	7.50	A72 x 15	7.50	A73 x 15	7.50	A75 x 15	8.10
0-15	30	9.34 ohms	A82 x 8	7.50	A72 x 16	7.50	A73 x 16	7.50	A75 x 16	8.10
0-25	50	5.6 ohms	A82 x 9	7.50	A72 x 17	7.50	A73 x 17	7.50	A75 x 17	8.10
0-50	50	2.8 ohms	A82 x 10	7.50	A72 x 19	7.50	A73 x 19	7.50	A75 x 19	8.10
0-100	50	1.4 ohms	A82 x 11	7.50	A72 x 20	7.50	A73 x 20	7.50	A75 x 20	8.10
0-150	30	.94 ohms	A82 x 12	7.50	A72 x 21	7.50	A73 x 21	7.50	A75 x 21	8.10
0-200	40	.7 ohms	A82 x 13	7.50	A72 x 22	7.50	A73 x 22	7.50	A75 x 22	8.10
0-250	50	.56 ohms	A82 x 14	7.50	A72 x 23	7.50	A73 x 23	7.50	A75 x 23	8.10
0-300	30	.466 ohms	A82 x 15	7.50	A72 x 24	7.50	A73 x 24	7.50	A75 x 24	8.10
0-500	50	.28 ohms	A82 x 16	7.50	A72 x 25	7.50	A73 x 25	7.50	A75 x 25	8.10
0-750	75	.186 ohms	A82 x 17	7.50	A72 x 26	7.50	A73 x 26	7.50	A75 x 26	8.10
0-1000	50	.140 ohms	A82 x 18	7.50	A72 x 28	7.50	A73 x 28	7.50	A75 x 28	8.10

D. C. AMMETERS

0-1	50	50MV	A82 x 19	$7.50	A72 x 29	$7.50	A73 x 29	$7.50	A75 x 29	$8.10
0-3	30	50MV	A82 x 20	7.50	A72 x 84	7.50	A73 x 84	7.50	A75 x 84	8.10
0-5	50	50MV	A82 x 21	7.50	A72 x 30	7.50	A73 x 30	7.50	A75 x 30	8.10
0-10	50	50MV	A82 x 22	7.50	A72 x 33	7.50	A73 x 33	7.50	A75 x 33	8.10
0-15	30	50MV	A82 x 48	7.50	A72 x 34	7.50	A73 x 34	7.50	A75 x 34	8.10
0-25	50	50MV	A82 x 23	7.50	A72 x 36	7.50	A73 x 36	7.50	A75 x 36	8.10
0-30	30	50MV	A82 x 24	7.50	A72 x 37	7.50	A73 x 37	7.50	A75 x 37	8.10
0-50	50	50MV	A82 x 25	7.50	A72 x 40	7.50	A73 x 40	7.50	A75 x 40	8.10
0-60	30	50MV	A82 x 26	7.50	A72 x 41	7.50	A73 x 41	7.50	A75 x 41	8.10
0-75	75	50MV	A82 x 27	7.50	A72 x 44	7.50	A73 x 44	7.50	A75 x 44	8.10

Ranges above 60 amp. are supplied as 50MV movements for use with 50MV external shunts.

D. C. MICROAMMETERS

0-50	50	1150 ohms	A82 x 1	$11.85	A72 x 1	$11.85	A73 x 1	$11.85	A75 x 1	$12.45
0-100	50	1150 ohms	A82 x 2	10.50	A72 x 2	10.50	A73 x 2	10.50	A75 x 2	11.25
0-200	40	330 ohms	A82 x 3	8.55	A72 x 4	8.55	A73 x 4	8.55	A75 x 4	9.30
0-500	50	225 ohms	A82 x 4	7.95	A72 x 9	7.95	A73 x 9	7.95	A75 x 9	8.70

D. C. VOLTMETERS—200 Ohms Per Volt

0-3	30		A82 x 36	$7.50	A72 x 59	$7.50	A73 x 59	$7.50	A75 x 59	$8.10
0-5	50		A82 x 37	7.50	A72 x 60	7.50	A73 x 60	7.50	A75 x 60	8.10
0-10	50		A82 x 38	7.50	A72 x 61	7.50	A73 x 61	7.50	A75 x 61	8.10
0-15	30		A82 x 39	7.50	A72 x 62	7.50	A73 x 62	7.50	A75 x 62	8.10
0-25	50		A82 x 40	7.50	A72 x 64	7.50	A73 x 64	7.50	A75 x 64	8.10
0-50	50		A82 x 41	7.50	A72 x 67	7.50	A73 x 67	7.50	A75 x 67	8.10
0-100	50		A82 x 42	7.50	A72 x 70	7.50	A73 x 70	7.50	A75 x 70	8.10
0-150	30		A82 x 43	7.50	A72 x 71	7.50	A73 x 71	7.50	A75 x 71	8.10
0-300	30		—	—	—	—	—	—	A75 x 74	9.15

D. C. VOLTMETERS—1000 Ohms Per Volt

0-50	50		A82 x 44	$8.55	A72 x 70	$8.55	A73 x 70	$8.55	A75 x 75	$9.30
0-100	50		A82 x 45	8.85	A72 x 72	8.85	A73 x 72	8.85	A75 x 77	9.75
0-150	30		A82 x 46	9.30	A72 x 73	9.30	A73 x 73	9.30	A75 x 78	10.05
0-300	30		A82 x 47	9.60	A72 x 76	9.60	A73 x 76	9.60	A75 x 81	10.35
0-500	50		—	—	A72 x 78	9.90	A73 x 78	9.90	A75 x 82	10.65
0-1000	50		—	—	—	—	—	—	A75 x 83	10.95

Ranges above those listed are supplied for use with external resistors.

ALTERNATING

A. C. MILLIAMMETERS

			MODEL 222		MODEL 422		MODEL 522		MODEL 532	
0-10	50	2020 ohms	A100 x 2	$7.50	A90 x 1	$7.50	A91 x 1	$7.50	A93 x 1	$8.10
0-15	30	1120 ohms	A100 x 3	7.50	A90 x 33	7.50	A91 x 33	7.50	A93 x 25	8.10
0-25	50	370 ohms	A100 x 4	7.50	A90 x 2	7.50	A91 x 2	7.50	A93 x 2	8.10
0-50	50	83 ohms	A100 x 5	7.50	A90 x 3	7.50	A91 x 3	7.50	A93 x 3	8.10
0-100	50	20 ohms	A100 x 6	7.50	A90 x 4	7.50	A91 x 4	7.50	A93 x 4	8.10
0-250	50	4 ohms	A100 x 7	7.50	A90 x 34	7.50	A91 x 34	7.50	A93 x 26	8.10
0-500	50	.8 ohms	A100 x 8	7.50	A90 x 5	7.50	A91 x 5	7.50	A93 x 5	8.10

A. C. AMMETERS

0-1.5	30	.072 ohms	A100 x 9	$7.50	A90 x 27	$7.50	A91 x 27	$7.50	A93 x 27	$8.10
0-5	50	.0108 ohms	A100 x 10	7.50	A90 x 7	7.50	A91 x 7	7.50	A93 x 7	8.10
0-10	50	.0038 ohms	A100 x 11	7.50	A90 x 8	7.50	A91 x 8	7.50	A93 x 8	8.10
0-15	30	.0018 ohms	A100 x 12	7.50	A90 x 28	7.50	A91 x 28	7.50	A93 x 28	8.10
0-25	50	.0008 ohms	A100 x 13	7.50	A90 x 29	7.50	A91 x 29	7.50	A93 x 29	8.10
0-30	30	.00079 ohms	A100 x 14	7.50	A90 x 9	7.50	A91 x 9	7.50	A93 x 9	8.10
0-50	50	.00048 ohms	A100 x 15	7.50	A90 x 10	7.50	A91 x 10	7.50	A93 x 10	8.10
0-75	75	.00035 ohms	A100 x 16	*7.50	A90 x 11	*7.50	A91 x 11	7.50	A93 x 11	9.30

*** These and higher ranges are supplied as 5 amp. movement for use with current transformers.**

A. C. VOLTMETERS

0-1.5	30	3.3	A100 x 23	$7.50	A90 x 24	$7.50	A91 x 24	$7.50	A93 x 33	$8.10
0-3	30	10	A100 x 24	7.50	A90 x 25	7.50	A91 x 25	7.50	A93 x 34	8.10
0-5	50	10	A100 x 25	7.50	A90 x 16	7.50	A91 x 16	7.50	A93 x 16	8.10
0-10	50	13	A100 x 26	7.50	A90 x 17	7.50	A91 x 17	7.50	A93 x 17	8.10
0-15	30	13	A100 x 27	7.50	A90 x 18	7.50	A91 x 18	7.50	A93 x 18	8.10
0-25	50	26	A100 x 28	7.50	A90 x 26	7.50	A91 x 26	7.50	A93 x 35	8.10
0-50	50	50	A100 x 29	7.50	A90 x 20	7.50	A91 x 20	7.50	A93 x 20	8.10
0-100	50	110	A100 x 30	7.50	A90 x 21	7.50	A91 x 21	7.50	A93 x 21	8.10
0-150	30	110	A100 x 1	8.25	A90 x 22	8.25	A91 x 22	8.25	A93 x 22	8.85
0-300	30	165	A100 x 31	10.05	A90 x 23	10.05	A91 x 23	10.05	A93 x 23	10.65
0-500	50	165	—	—	—	—	—	—	A93 x 24	13.05
0-600	30	165	—	—	—	—	—	—	A93 x 36	15.60

Ranges above those shown require external resistors.

PANEL INSTRUMENTS

CURRENT

D. C. MILLIAMMETERS

MODEL 731		MODEL 431		MODEL 741		MODEL 141		** MODEL 441		MODEL 841	
Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
A76 x 11	$8.40	A74 x 11	$8.10	A79 x 11	$9.15	A78 x 11	$9.15	A77 x 11	$8.70	A80 x 11	$8.70
A76 x 14	8.40	A74 x 14	8.10	A79 x 14	9.15	A78 x 14	9.15	A77 x 14	8.70	A80 x 14	8.70
A76 x 15	8.40	A74 x 15	8.10	A79 x 15	9.15	A78 x 15	9.15	A77 x 15	8.70	A80 x 15	8.70
A76 x 16	8.40	A74 x 16	8.10	A79 x 16	9.15	A78 x 16	9.15	A77 x 16	8.70	A80 x 16	8.70
A76 x 17	8.40	A74 x 17	8.10	A79 x 17	9.15	A78 x 17	9.15	A77 x 17	8.70	A80 x 17	8.70
A76 x 19	8.40	A74 x 19	8.10	A79 x 19	9.15	A78 x 19	9.15	A77 x 19	8.70	A80 x 19	8.70
A76 x 20	8.40	A74 x 20	8.10	A79 x 20	9.15	A78 x 20	9.15	A77 x 20	8.70	A80 x 20	8.70
A76 x 21	8.40	A74 x 21	8.10	A79 x 21	9.15	A78 x 21	9.15	A77 x 21	8.70	A80 x 21	8.70
A76 x 22	8.40	A74 x 22	8.10	A79 x 22	9.15	A78 x 22	9.15	A77 x 22	8.70	A80 x 22	8.70
A76 x 23	8.40	A74 x 23	8.10	A79 x 23	9.15	A78 x 23	9.15	A77 x 23	8.70	A80 x 23	8.70
A76 x 24	8.40	A74 x 24	8.10	A79 x 24	9.15	A78 x 24	9.15	A77 x 24	8.70	A80 x 24	8.70
A76 x 25	8.40	A74 x 25	8.10	A79 x 25	9.15	A78 x 25	9.15	A77 x 25	8.70	A80 x 25	8.70
A76 x 26	8.40	A74 x 26	8.10	A79 x 26	9.15	A78 x 26	9.15	A77 x 26	8.70	A80 x 26	8.70
A76 x 28	8.40	A74 x 28	8.10	A79 x 28	9.15	A78 x 28	9.15	A77 x 28	8.70	A80 x 28	8.70
D. C. AMMETERS											
A76 x 29	$8.40	A74 x 29	$8.10	A79 x 29	$9.15	A78 x 29	$9.15	A77 x 29	$8.70	A80 x 29	$8.70
A76 x 84	8.40	A74 x 84	8.10	A79 x 84	9.15	A78 x 84	9.15	A77 x 84	8.70	A80 x 84	8.70
A76 x 30	8.40	A74 x 30	8.10	A79 x 30	9.15	A78 x 30	9.15	A77 x 30	8.70	A80 x 30	8.70
A76 x 33	8.40	A74 x 33	8.10	A79 x 33	9.15	A78 x 33	9.15	A77 x 33	8.70	A80 x 33	8.70
A76 x 34	8.40	A74 x 34	8.10	A79 x 34	9.15	A78 x 34	9.15	A77 x 34	8.70	A80 x 34	8.70
A76 x 36	8.40	A74 x 36	8.10	A79 x 36	9.15	A78 x 36	9.15	A77 x 36	8.70	A80 x 36	8.70
A76 x 37	8.40	A74 x 37	8.10	A79 x 37	9.15	A78 x 37	9.15	A77 x 37	8.70	A80 x 37	8.70
A76 x 40	8.40	A74 x 40	8.10	A79 x 40	9.15	A78 x 40	9.15	A77 x 40	8.70	A80 x 40	8.70
A76 x 41	8.40	A74 x 41	8.10	A79 x 41	9.15	A78 x 41	9.15	A77 x 41	8.70	A80 x 41	8.70
A76 x 44	8.40	A74 x 44	8.10	A79 x 44	9.15	A78 x 44	9.15	A77 x 44	8.70	A80 x 44	8.70
D. C. MICROAMMETERS											
A76 x 1	$12.75	A74 x 1	$12.45	A79 x 1	$13.95	A78 x 1	$13.95	A77 x 1	$13.50	A80 x 1	$13.50
A76 x 2	11.55	A74 x 2	11.25	A79 x 2	12.60	A78 x 2	12.60	A77 x 2	12.30	A80 x 2	12.30
A76 x 4	9.75	A74 x 4	9.30	A79 x 4	10.80	A78 x 4	10.80	A77 x 4	10.35	A80 x 4	10.35
A76 x 9	9.00	A74 x 9	8.70	A79 x 9	10.20	A78 x 9	10.20	A77 x 9	9.75	A80 x 9	9.75
D. C. VOLTMETERS - 200 Ohms Per Volt											
A76 x 59	$8.40	A74 x 59	$8.10	A79 x 59	$9.15	A78 x 59	$9.15	A77 x 59	$8.70	A80 x 59	$8.70
A76 x 60	8.40	A74 x 60	8.10	A79 x 60	9.15	A78 x 60	9.15	A77 x 60	8.70	A80 x 60	8.70
A76 x 61	8.40	A74 x 61	8.10	A79 x 61	9.15	A78 x 61	9.15	A77 x 61	8.70	A80 x 61	8.70
A76 x 62	8.40	A74 x 62	8.10	A79 x 62	9.15	A78 x 62	9.15	A77 x 62	8.70	A80 x 62	8.70
A76 x 64	8.40	A74 x 64	8.10	A79 x 64	9.15	A78 x 64	9.15	A77 x 64	8.70	A80 x 64	8.70
A76 x 67	8.40	A74 x 67	8.10	A79 x 67	9.15	A78 x 67	9.15	A77 x 67	8.70	A80 x 67	8.70
A76 x 70	8.40	A74 x 70	8.10	A79 x 70	9.15	A78 x 70	9.15	A77 x 70	8.70	A80 x 70	8.70
A76 x 71	8.40	A74 x 71	8.10	A79 x 71	9.15	A78 x 71	9.15	A77 x 71	8.70	A80 x 71	8.70
		A74 x 74	9.15	A79 x 74	10.20	A78 x 74	10.20	A77 x 74	9.75	A80 x 74	9.75
D. C. VOLTMETERS -1000 Ohms Per Volt											
A76 x 75	$9.75	A74 x 75	$9.30	A79 x 75	$10.50	A78 x 75	$10.50	A77 x 75	$10.05	A80 x 75	$10.05
A76 x 77	10.05	A74 x 77	9.75	A79 x 77	10.80	A78 x 77	10.80	A77 x 77	10.35	A80 x 77	10.35
A76 x 78	10.35	A74 x 78	10.05	A79 x 78	11.10	A78 x 78	11.10	A77 x 78	10.65	A80 x 78	10.65
A76 x 81	10.65	A74 x 81	10.35	A79 x 81	11.40	A78 x 81	11.40	A77 x 81	10.95	A80 x 81	10.95
A76 x 82	10.95	A74 x 82	10.65	A79 x 82	11.70	A78 x 82	11.70	A77 x 82	11.25	A80 x 82	11.25
		A74 x 83	10.95	A79 x 83	12.00	A78 x 83	12.00	A77 x 83	11.55	A80 x 83	11.55

CURRENT

A. C. MILLIAMMETERS

MODEL 732		MODEL 432		MODEL 742		MODEL 142	
A94 x 1	$8.40	A92 x 1	$8.10	A97 x 1	$9.15	A96 x 1	$9.15
A94 x 25	8.40	A92 x 25	8.10	A97 x 25	9.15	A96 x 25	9.15
A94 x 2	8.40	A92 x 2	8.10	A97 x 2	9.15	A96 x 2	9.15
A94 x 3	8.40	A92 x 3	8.10	A97 x 3	9.15	A96 x 3	9.15
A94 x 4	8.40	A92 x 4	8.10	A97 x 4	9.15	A96 x 4	9.15
A94 x 26	8.40	A92 x 26	8.10	A97 x 26	9.15	A96 x 26	9.15
A94 x 5	8.40	A92 x 5	8.10	A97 x 5	9.15	A96 x 5	9.15
A. C. AMMETERS							
A94 x 27	$8.40	A92 x 27	$8.10	A97 x 27	$9.15	A96 x 27	$9.15
A94 x 7	8.40	A92 x 7	8.10	A97 x 7	9.15	A96 x 7	9.15
A94 x 8	8.40	A92 x 8	8.10	A97 x 8	9.15	A96 x 8	9.15
A94 x 28	8.40	A92 x 28	8.10	A97 x 28	9.15	A96 x 28	9.15
A94 x 29	8.40	A92 x 29	8.10	A97 x 29	9.15	A96 x 29	9.15
A94 x 9	8.40	A92 x 9	8.10	A97 x 9	9.15	A96 x 9	9.15
A94 x 10	8.40	A92 x 10	8.10	A97 x 10	9.15	A96 x 10	9.15
A94 x 11	8.40	A92 x 11	9.30	A97 x 11	10.50	A96 x 11	10.50
A. C. VOLTMETERS							
A94 x 33	$8.40	A92 x 33	$8.10	A97 x 33	$9.15	A96 x 33	$9.15
A94 x 34	8.40	A92 x 34	8.10	A97 x 34	9.15	A96 x 34	9.15
A94 x 16	8.40	A92 x 16	8.10	A97 x 16	9.15	A96 x 16	9.15
A94 x 17	8.40	A92 x 17	8.10	A97 x 17	9.15	A96 x 17	9.15
A94 x 18	8.40	A92 x 18	8.10	A97 x 18	9.15	A96 x 18	9.15
A94 x 35	8.40	A92 x 35	8.10	A97 x 35	9.15	A96 x 35	9.15
A94 x 20	8.40	A92 x 20	8.10	A97 x 20	9.15	A96 x 20	9.15
A94 x 21	8.40	A92 x 21	8.10	A97 x 21	9.15	A96 x 21	9.15
A94 x 22	9.15	A92 x 22	8.85	A97 x 22	9.90	A96 x 22	9.90
A94 x 23	10.95	A92 x 23	10.65	A97 x 23	11.55	A96 x 23	11.55
—	—	A92 x 24	13.05	A97 x 24	14.10	A96 x 24	14.10
—	—	A92 x 45	15.60	A97 x 38	16.50	A96 x 36	16.50

Burlington Improved PANEL INSTRUMENTS

RUNNING TIME METERS

Model 538 3" Square Flush 0-9999.9 Hours	$16.50
Model 438 3½" Round Flush 0-9999.9 Hours	16.50

120 or 240 volt (specify when ordering)

POWER LEVEL INDICATORS

VU METERS

Model 745 4¼" Rectangular Semi-flush	$19.50
Model 535 3" Square Flush	18.00
Model 435 3½" Round Flush	18.00

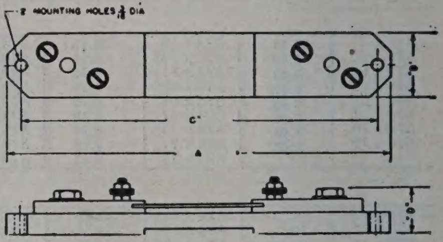
Supplied with "A" or "B" Scale (specify)
Illumination for Model 745 add **$3.00** extra. Complete with bulbs.

DB METERS

Model 425 2½" Round Flush	$14.40
Model 525 2½" Square Flush	14.40
Model 435 3½" Round Flush	15.00
Model 535 3" Square Flush	15.00
Model 735 3½" Rectangular Semi-flush	15.15
Model 745 4¼" Rectangular Semi-flush	16.50

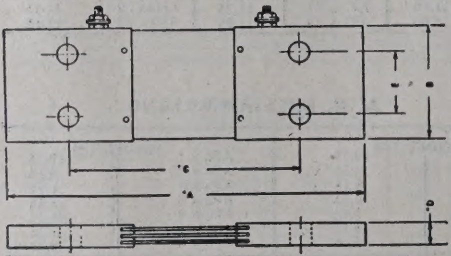
Illumination for Models 735-745 Add **$3.00** extra.
All other Models Add **$1.50** extra. Complete with bulbs.

EXTERNAL SHUNTS



25 to 100 Amp. Inclusive

Range	Part No.	"A"	"B"	"C"	"D"	Price
25 amp.	**A31 x 152**	7½"	1¼"	7"	61/64"	**$6.60**
30 amp.	**A31 x 153**	7½"	1¼"	7"	61/64"	**6.60**
50 amp.	**A31 x 156**	7½"	1¼"	7"	61/64"	**6.60**
60 amp.	**A31 x 157**	7½"	1¼"	7"	61/64"	**6.60**
75 amp.	**A31 x 158**	7½"	1¼"	7"	61/64"	**6.60**
100 amp.	**A31 x 160**	7½"	1¼"	7"	61/64"	**6.60**



150 to 1500 Amp. Inclusive

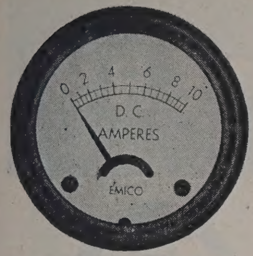
Range	Part No.	"A"	"B"	"C"	"D"	"E"	Mounting	Price
150 amp.	**A31 x 163**	5½"	1½"	4¼"	¼"	On CL	1-Hole Each End ⅜" Dia.	**$7.65**
200 amp.	**A31 x 164**	5½"	2"	4¼"	¼"	On CL		**7.65**
300 amp.	**A31 x 167**	5½"	1½"	4¼"	⅜"	On CL		**7.65**
400 amp.	**A31 x 169**	7"	2¼"	4½"	⅜"	1¼"	2-Holes Each End ⅜" Dia.	**9.60**
500 amp.	**A31 x 170**	7"	2¼"	4½"	⅜"	1¼"		**11.55**
600 amp.	**A31 x 171**	8"	3"	5"	½"	2"		**13.80**
1000 amp.	**A31 x 174**	8¼"	3"	6¾"	1½"	1½"		**22.50**
1200 amp.	**A31 x 175**	8¼"	3"	6¾"	1½"	1½"		**27.30**
1500 amp.	**A31 x 176**	8¼"	3"	6¾"	1½"	1½"		**33.60**

Shunts or other than 50MV drop or ranges not listed quoted on request. 4 foot leads are supplied.

CURRENT TRANSFORMERS DONUT TYPE

RATIO	PART No.	PRIMARY TURNS	PRICE
50/5	**A70 x 7**	1	$10.50
100/5	**A70 x 21**	1	7.80
150/5	**A70 x 25**	1	7.80
200/5	**A70 x 27**	1	7.80
250/5	**A70 x 29**	1	7.80
300/5	**A70 x 31**	1	9.50
400/5	**A70 x 35**	1	9.50
500/5	**A70 x 36**	1	10.50
600/5	**A70 x 37**	1	11.50
750/5	**A70 x 38**	1	13.75
1000/5	**A70 x 40**	1	14.50

If ranges or ratios other than those listed above are required, give full details as to range or ratio, length of leads, size etc., when ordering. 2 foot leads are standard.



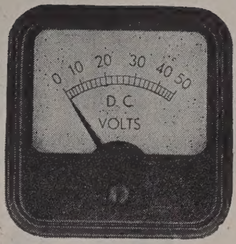
TYPE NF-2C

EMICO PRECISION INSTRUMENTS

FOR

PANELS AND TEST SETS

Electro Mechanical Instrument Co.
813 Chestnut Street, Perkasie, Pa.



TYPE RF-2C

EMICO panel and test meters are rugged and reliable instruments. Cases are of steel and finished in durable black. DC meters have the new HI-TORK magnetic movements and are accurate to well within 5%. AC meters are of the moving iron type and are also accurate to within 5%.

MOUNTING—All model NF-2C and RF-2C meters will fit into a 2 1/16″ diameter hole and are mounted by means of a U clamp.

DESIGN—EMICO meters are designed to give satisfactory service under the most severe conditions. They are styled to add to the prestige and appearance of electrical equipment.

CALIBRATION—Since the instruments are calibrated in steel cases, their accuracy is not affected by panels made of magnetic materials of nominal thickness.

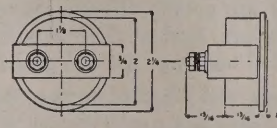
GUARANTEED—All EMICO instruments are guaranteed against defective material and workmanship for a period of one year after date of purchase, and will be repaired or replaced if sent to the factory postpaid with a 50c handling charge.

EMICO instruments are available in quantities to jobbers or manufacturers in the following sizes: NF-2″, RF-2″, RF-2½″, and RF-4½″ at 3% accuracy. We invite your inquiries on instruments for special application.

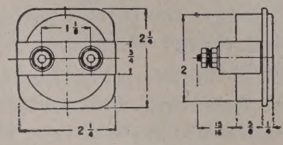
PRICES—Prices listed are net and include all hardware and individual boxing. Resistance approximate. If important request factory engineering confirmation.

DEALERS' PRICE LIST

		MODEL NF-2C		MODEL RF-2C	
Range	Approximate Resist. Ohms	Catalog Number	Dealers' Net Price	Catalog Number	Dealers' Net Price
DC AMMETERS					
0-1	.15	2101	$1.40	2201	$1.50
0-5	016	2102	1.40	2202	1.50
0-10	.00115	2103	1.40	2203	1.50
0-15	.00115	2103-A	1.40	2203-A	1.50
0-20	.00115	2104	1.40	2204	1.50
0-30	.00115	2105	1.40	2205	1.50
1-0-1	.08	2109	1.40	2209	1.50
3-0-3	.00115	2110	1.40	2210	1.50
6-0-6	.00115	2111	1.40	2211	1.50
10-0-10	.00115	2112	1.40	2212	1.50
15-0-15	.00115	2113	1.40	2213	1.50
20-0-20	.00115	2114	1.40	2214	1.50
30-0-30	.00115	2115	1.40	2215	1.50
DC MILLIAMMETERS					
0-1	1000	2120	$3.20	2220	$3.22
0-3	500	2121	2.00	2221	2.10
0-5	1250	2125	1.95	2225	2.05
0-10	430	2126	1.85	2226	1.95
0-20	70	2127	1.40	2227	1.50
0-30	60	2128	1.40	2228	1.50
0-50	15	2129	1.40	2229	1.50
0-100	8	2130	1.40	2230	1.50
0-150	2.75	2130-A	1.40	2230-A	1.50
0-300	2.75	2130-B	1.40	2230-B	1.50
0-300	.50	2131	1.40	2231	1.50
0-500	.35	2132	1.40	2232	1.50
DC VOLTMETERS (LOW RESISTANCE)					
0-1	33	2134	$1.40	2234	$1.50
0-3	100	2135	1.40	2235	1.50
3-0-3	30	2136	1.40	2236	1.50
0-5	140	2136-A	1.40	2236-A	1.50
0-8	225	2136-B	1.40	2236-B	1.50
0-10	280	2137	1.40	2237	1.50
0-15	450	2137-A	1.40	2237-A	1.50
0-50	1400	2138	1.40	2238	1.50
DC VOLTMETERS (HIGH RESISTANCE) (100 ohms/volt except 150 and 300 volt ranges are 200 ohms per volt)					
0-10	1050	2140	$2.10	2240	$2.20
0-30	2800	2141	2.35	2241	2.45
0-50	4000	2142	2.70	2242	2.80
0-150	28000	2143	2.80	2243	2.90
0-300	55000	2144	2.80	2244	2.90
AC AMMETERS					
0-1	.365	6101	$2.40	6201	$2.55
0-3	.078	6102	2.40	6202	2.55
0-5	.023	6103	2.40	6203	2.55
0-10	.013	6104	2.40	6204	2.55
0-25	.007	6105	2.70	6205	2.80
AC MILLIAMMETERS					
0-25	750	6125	$2.40	6225	$2.45
0-50	175	6126	2.40	6226	2.45
0-100	58	6127	2.40	6227	2.45
0-250	12	6128	2.40	6228	2.45
0-500	1.75	6129	2.40	6229	2.45
AC VOLTMETERS					
0-5	50	6135	$2.40	6235	$2.55
0-10	175	6136	2.40	6236	2.55
0-15	300	6137	2.40	6237	2.55
0-25	920	6137-A	2.40	6237-A	2.55
0-50	1800	6138	2.40	6238	2.55
0-150	9530	6139	3.50	6239	3.60
0-300	32000	6140	4.10	6240	4.15



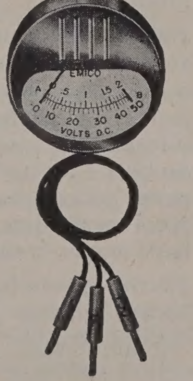
TYPE RF-2C



TYPE RF-2C

EMICO HEARING AID BATTERY TESTER

MODEL 103A



Note These Features:

- **Unbreakable Metal Case**
- **Beautifully Finished Case**
- **Powerful Mechanism**
- **Color-Fast Metal Dial**
- **Easily Read Dial**
- **Reliably Accurate**
- **Will Not Drain Batteries**

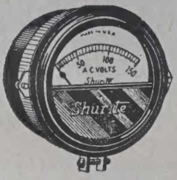
Designed to Test
All Types of
2 Volt "A" Batteries
and 22½, 30 and 45 Volt "B" Batteries

Available also in
0-9 and 0-90 Volt Range —
Specify Model 103B

Write to Factory for Prices

Net

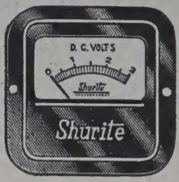
Shurite PANEL METERS



Model 550-AC

A.C. VOLTS
Shurite

Model 650-AC



Model 950-DC (or AC)

D.C. MILLIAMPERES
Shurite

Model 550-DC
with Zero Adjuster

Shurite panel meters are attractive, rugged, dependable instruments with accuracy well within 5%. All models have metal cases, telephone-black front; all require $2\frac{5}{32}$" hole. DC meters are polarized-vane solenoid type, AC meters are double vane repulsion type with jeweled bearing. All are guaranteed.

● **Guarantee:** All Shurite meters are guaranteed to users against defective workmanship and material, and will be repaired or replaced if sent to the factory postpaid with 40c handling charge within one year after date of purchase.

● **All-metal Dials**—age and moisture resistant, lithographed in black on white for high visibility.

● **Sturdy Design**—with new coil frames and attached insulators for greater rigidity, yet interchangeable in other respects with similar type of instrument formerly available.

● **Modern appearance**—with concealed coils, full view scales, and attractive styling and finish.

TYPICAL USES: Shurite products, with their rugged design, and ability to duplicate readings, enjoy wide acceptance in the electronic and electrical fields. Applications include transmitters, receivers, TV antenna rotator controls, battery indicators, appliances, power sources, battery eliminators, electric fence controllers, and the very popular basic meters in radio test kits.

Shurite products are also specified for battery voltage indicators on emergency lighting, burglar and fire alarm systems, output meters on rectifiers (copper oxide, tungar or selenium types), rate-of-charge indicators, testers for hearing aid and batteries and their chargers, ammeters for plating sets, and polarity indicators for metals analysis.

Other uses range from automotive test equipment to pin-ball circuit testers, and well depth indicators. Shurite has long been the favorite brand for those who take their hobbies and experiments seriously.

DC MILLIAMMETERS

RANGE	RESIST.#	MODEL 550*		MODEL 650*		MODEL 950	
Ma.	Approx. Ohms	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
0-3L**	500	5332Z	$2.80	6332Z	$2.90	9332Z	$2.95
0-3	5000	5301	2.15	6301	2.25	9301	2.30
0-5	2470	5302	1.95	6302	2.05	9302	2.10
0-10	557	5303	1.85	6303	1.95	9303	2.00
0-15	296	5304	1.50	6304	1.60	9304	1.65
0-25	87	5305	1.45	6305	1.55	9305	1.60
0-50	24	5306	1.45	6306	1.55	9306	1.60
0-100	6.2	5307	1.45	6307	1.55	9307	1.60
0-150	2.0	5308	1.45	6308	1.55	9308	1.60
0-200	1.5	5309	1.45	6309	1.55	9309	1.60
0-300	.90	5310	1.45	6310	1.55	9310	1.60
0-400	.46	5311	1.40	6311	1.50	9311	1.55
0-500	.25	5312	1.40	6312	1.50	9312	1.55

** Low internal resistance, sensitive type, using steel case. Moving magnet construction, patent pending. Scale arc, 75°. Price includes zero adjuster.
* For zero adjusters add 35c to price and Z to stock number.
No zero adjuster on Model 950 stock models; except 9332Z.

AC MILLIAMMETERS

RANGE	RESIST.	MODEL 550		MODEL 650		MODEL 950	
Ma.	Approx. Ohms	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
0-10	4800	5607	$2.85	6607	$2.95	9607	$3.00
0-25	750	5601	2.55	6601	2.65	9601	2.70
0-50	150	5602	2.55	6602	2.65	9602	2.70
0-100	37	5603	2.55	6603	2.65	9603	2.70
0-250	5.4	5604	2.55	6604	2.65	9604	2.70
0-500	1.34	5605	2.55	6605	2.65	9605	2.70

DC AMMETERS

RANGE	RESIST.#	MODEL 550*		MODEL 650*		MODEL 950	
Amps.	Approx. Ohms	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
0-1	.105	5201	$1.45	6201	$1.55	9201	$1.60
0-3	.02 Max	5202	1.45	6202	1.55	9202	1.60
0-5	.02 Max	5203	1.45	6203	1.55	9203	1.60
0-8	.02 Max	5204	1.45	6204	1.55	9204	1.60
0-10	.02 Max	5205	1.45	6205	1.55	9205	1.60
0-15	.02 Max	5206	1.55	6206	1.65	9206	1.70
0-25	.02 Max	5207	1.85	6207	1.95	9207	2.00
0-50	.02 Max	5208	2.15	6208	2.25	9208	2.30
1-0-1	.13	5209	1.55	6209	1.65	9209	1.70
3-0-3	.02 Max	5210	1.55	6210	1.65	9210	1.70
5-0-5	.022	5211	1.55	6211	1.65	9211	1.70
6-0-6	.02 Max	5212	1.55	6212	1.65	9212	1.70
10-0-10	.02 Max	5213	1.70	6213	1.80	9213	1.85
20-0-20	.02 Max	5214	1.75	6214	1.85	9214	1.90
30-0-30	.02 Max	5215	1.85	6215	1.95	9215	2.00
50-0-50	.02 Max	5216	2.00	6216	2.10	9216	2.15

* For zero adjuster, add 35c to price and Z to stock number.
No zero adjuster on Model 950 stock models.

AC AMMETERS

RANGE	RESIST.	MODEL 550		MODEL 650		MODEL 950	
Amps.	Approx. Ohms	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
0-1	.42 Max	5501	$2.55	6501	$2.65	9501	$2.70
0-3	.072 Max	5502	2.55	6502	2.65	9502	2.70
0-5	.041 Max	5503	2.55	6503	2.65	9503	2.70
0-10	.02 Max	5504	2.55	6504	2.65	9504	2.70
0-30	.02 Max	5505	2.85	6505	2.95	9505	3.00
0-50	.02 Max	5506	3.05	6506	3.15	9506	3.20

Resistance may be adjusted to meet government requirements. If this factor is important in your circuit, request factory engineering forecast.

Net

DC VOLTMETERS

RANGE	RESIST.#	MODEL 550*		MODEL 650*		MODEL 950	
Volts	Approx. Ohms	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
0-1	22	5101	$1.40	6101	$1.50	9101	$1.55
0-3	205	5102	1.45	6102	1.55	9102	1.60
3-0-3	265	5103	1.45	6103	1.55	9103	1.60
0-5	525	5104	1.45	6104	1.55	9104	1.60
0-6	570	5105	1.45	6105	1.55	9105	1.60
0-8	970	5106	1.45	6106	1.55	9106	1.60
0-10	1920	5107	1.50	6107	1.60	9107	1.65
0-15	4200	5108	1.60	6108	1.70	9108	1.75
0-20	1115	5121	1.65	6121	1.75	9121	1.80
0-25	1360	5109	1.60	6109	1.70	9109	1.75
0-25H**	6000	5110	2.30	6110	2.40	9110	2.45
0-50	2630	5122	1.75	6122	1.85	9122	1.90
0-50H**	12500	5111	2.45	6111	2.55	9111	2.60
0-75	4000	5112	1.80	6112	1.90	9112	1.95
0-100	5300	5113	1.90	6113	2.00	9113	2.05
0-100H**	25600	5114	2.60	6114	2.70	9114	2.75
0-150	8000	5115	2.00	6115	2.10	9115	2.15
0-150H**	37200	5116	2.70	6116	2.80	9116	2.85
0-300H**†	74200	5117	2.95	6117	3.05	9117	3.10
0-500H**†	124200	5118	3.90	6118	4.00	9118	4.05
0-750H**†	184200	5119	4.65	6119	4.75	9119	4.80
0-8-160	††	5120	2.40	6120	2.50	9120	2.55

*For zero adjuster, add 35c to price and Z to stock number. No zero adjuster on No. 950 stock models.
**H denotes high resistance.
†Supplied with external resistors.
††Approx. resistance 840 ohms at 8 volts. 17,340 ohms at 160 volts.

AC VOLTMETERS

RANGE	RESIST.	MODEL 550		MODEL 650		MODEL 950	
Volts	Approx. Ohms/Volts	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
0-4	11	5401	$2.55	6401	$2.65	9401	$2.70
0-6	15.8	5402	2.55	6402	2.65	9402	2.70
0-10	27	5403	2.55	6403	2.65	9403	2.70
0-15	32.3	5404	2.55	6404	2.65	9404	2.70
0-50	96	5405	3.05	6405	3.15	9405	3.20
0-150	135	5406	3.30	6406	3.40	9406	3.45
0-300*	100	5407	3.70	6407	3.80	9407	3.85
0-600*	100	5408	4.70	6408	4.80	9408	4.85
0-750*	100	5409	5.30	6409	5.40	9409	5.45

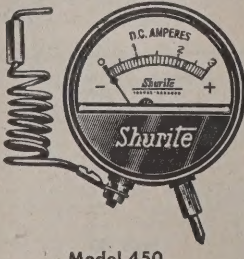
*Supplied with external resistors.

RESISTANCE METERS

RANGE		MODEL 550*		MODEL 650*		MODEL 950	
Ohms	Volts	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
10,000	4.5**	5701	$2.00	6701	$2.10	9701	$2.15

* For zero adjuster add 35c to price and Z to stock number. No zero adjuster on No. 950 stock models.
** Requires 3 flashlight cells for resistance readings but does not require resistor for voltage readings.
# Resistance may be adjusted to meet government requirements. If this factor is important in your circuit, request factory engineering forecast.

POCKET TYPE METERS



Model 450

Various Shurite pocket meters using the Model 450 case are in production. Model 450 has bright plated case, with two or three terminals, depending on ranges. Ranges suitable for pre-war and post-war batteries, portable radio batteries and many other electrical applications, including polarity indication types have been made, although they are not regularly stocked.

Stock numbers begin with 4 as the first digit. For example, the 0-3 DC Ammeter, as illustrated, is Stock No. 4202.

The bulletin, "Shurite Pocket Types", available on request, is periodically revised to indicate pocket meters which are authorized for production. Dealer net price is obtained by adding $0.40 to the price of 550 Model meters as shown in this catalog at $1.70 or less, or by adding $0.30 for meters at $1.75 or above.

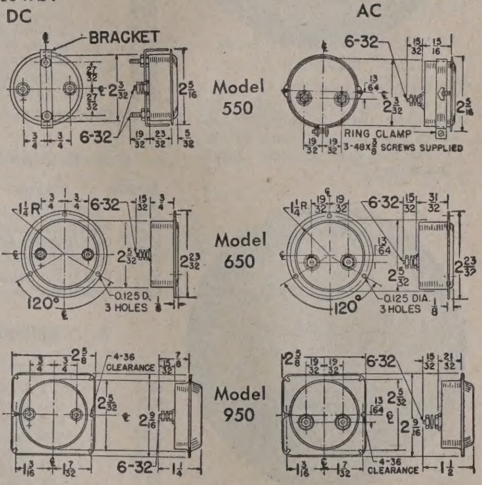
FLANGE ADAPTER RING

A sturdy flange ring for use with any Model 550 (round) Shurite meter where a flange mount is preferred. Makes appearance similar to Model 650. Wide flange, 2¾″ dia. Telephone black finish. Screws, lockwashers and nuts included.

Model 5-A, Net..**$0.18**

MOUNTING DETAILS

All Shurite Panel Meters have flush cases and require $2\frac{5}{32}$″ hole. Most standard ranges have 6-32 studs, and are mounted as follows:



IMPORTANT—HOW TO ORDER:

For all standard models, give: (1) Model Number, (2) Range, (3) Stock Number. If Model number and stock number are not stated, Model 550 will be supplied.

ZERO ADJUSTERS (Z)

Zero Adjusters are available only on Models 550-DC and 650-DC. No zero adjuster on models using 950 case. When ordering, add Z to stock number. Example: Stock number for Model 550-DC voltmeter, 0-1 volt range — without zero adjuster is 5101. With zero adjuster, it is 5101-Z.

PANEL CALIBRATION (S)

Meters are calibrated for non-magnetic panels. If for magnetic (steel) panel mounting, specify thickness and overall size of panel, and add -S to stock number when ordering, as 5101-S. If thickness of steel panel is not specified, meter will be supplied for .040 panel.

VISCOSITY DAMPING (V)

Careful application of new silicone compound on bearing surfaces damps pointer overtravel. Add -V to stock number, as 5406-V, and 5 cents to price. Not regularly stocked; available only on quantity orders.

SEE YOUR DISTRIBUTOR

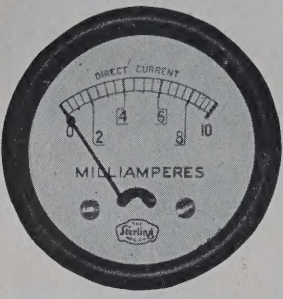
Besides carrying most types, and being able to obtain your other needs on reasonable notice, your authorized Shurite distributor of electronic parts is qualified to suggest the right meter for your need.

(PRICES SHOWN ARE U.S.A. DEALER NET FOR INDIVIDUALLY BOXED METERS)

SHURITE METERS

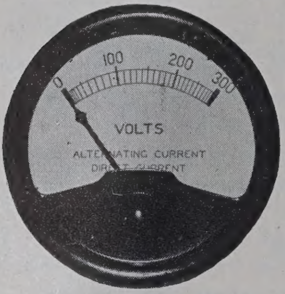
NEW HAVEN 8, CONNECTICUT

STERLING PANEL METERS



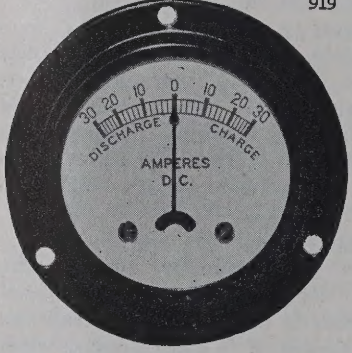
TYPE 80

Flush case, narrow flange, standard finish black enamel. Speed Nut Mounting. Diam. flange $2\frac{5}{32}$". Speed Diam. case 2". Depth case $\frac{31}{32}$" Requires hole $2\frac{1}{32}$" in diam. Length terminals $\frac{7}{16}$".



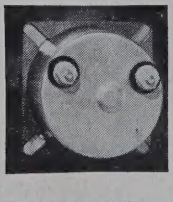
TYPE 88

Flush case, narrow apron flange. Standard finish black enamel. Same dimensions as Type 80. Speed Nut Mounting.

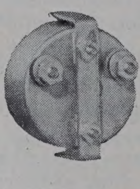


TYPE 70

Flush case, wide flange, standard finish black enamel. Screw holes in flange for mounting. Diam. flange 2⅝". Diam. case 2". Depth case ⅞". Requires hole $2\frac{1}{32}$" in diam.



STERLING'S NEW SPEED NUT CLAMP



REGULAR BACK CLAMP

ALTERNATING CURRENT METERS

A.C. VOLTMETERS

Number	Range	List Price
870	0-4 Volts	$3.50
871	0-6 Volts	3.50
872	0-10 Volts	3.50
873	0-15 Volts	3.50
910	0-30 Volts	3.50
879	0-50 Volts	4.00
911	0-75 Volts	4.00
874	0-150 VHR†	5.25
912	0-250 Volts	5.75
875	0-300 Volts	6.00
913	0-500 Volts	7.00
876	0-600 Volts	7.00
877	0-750 Volts	8.50
878	0-10-140 Volts	5.25

†VHR—Volts High Resistance

A.C. MILLIAMMETERS

Number	Range	List Price
880	0-25 Milliamperes	$3.50
881	0-50 Milliamperes	3.50
882	0-100 Milliamperes	3.50
883	0-250 Milliamperes	3.50
914	0-300 Milliamperes	3.50
884	0-500 Milliamperes	3.50

A.C. AMMETERS

Number	Range	List Price
886	0-1 Amperes	$3.50
915	0-2 Amperes	3.50
887	0-3 Amperes	3.50
888	0-5 Amperes	3.50
916	0-7½ Amperes	3.50
889	0-10 Amperes	3.50
917	0-15 Amperes	3.50
890	0-20 Amperes	3.75
918	0-25 Amperes	3.75
892	0-30 Amperes	3.75
891	0-60 Amperes	4.00
893	0-60 Amperes	4.25
894	0-75 Amperes	4.25
895	0-100 Amperes	4.25
919	0-125 Amperes	*

*Special Price on application.

DIRECT CURRENT METERS

D.C. VOLTMETERS

Number	Range	List Price
801	0-1 Volts	$2.00
802	0-3 Volts	2.00
803	3-0-3 Volts	2.00
804	0-5 Volts	2.00
805	0-6 Volts	2.00
806	0-8 Volts	2.00
807	0-10 Volts	2.00
808	0-15 Volts	2.00
809	0-25 Volts	2.00
810	0-25 Volts High Res.	3.50
811	0-50 Volts	2.00
812	0-50 Volts High Res.	4.00
823	0-75 Volts	2.25
813	0-100 Volts	2.25
814	0-100 Volts High Res.	4.00
815	0-150 Volts	2.50
816	0-150 Volts High Res.	4.00
817	0-300 Volts	4.00
818	0-500 Volts	5.50
819	0-750 Volts	6.50
820	0-8-160 Volts	3.50

RESISTANCE METERS

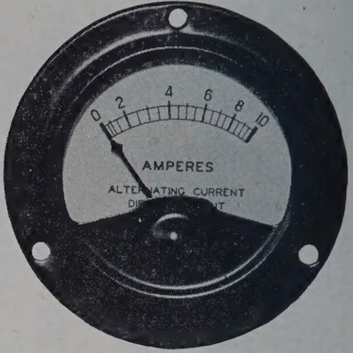
Direct Reading

901......4.5 Volts, 10,000 Ohms
3 Flashlight cells required
List Price $3.50

902....2 M.A., 9 Volts, 100,000 Ohms, 6 Flashlight cells required
List Price $5.00

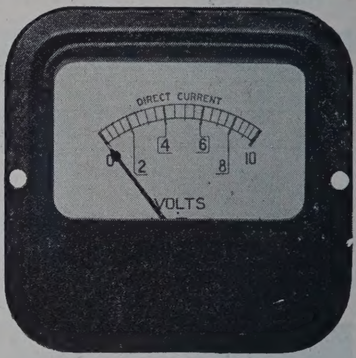
D.C. MILLIAMMETERS

Number	Range	List Price
835	0-2 Milliamps.	$4.50
836	0-5 Milliamps.	3.00
837	0-10 Milliamps.	2.50
838	0-15 Milliamps.	2.00
839	0-25 Milliamps.	2.00
840	0-50 Milliamps.	2.00
841	0-100 Milliamps.	2.00
842	0-150 Milliamps.	2.00
843	0-200 Milliamps.	2.00
844	0-300 Milliamps.	2.00
845	0-400 Milliamps.	2.00
846	0-20-100 Milliamps.	2.75
847	0-15-150 Milliamps.	2.75
848	0-500 Milliamps.	2.00



TYPE 78

Flush case, wide flange with apron. Standard finish black, screw holes in flange for mounting. Same dimensions as Type 70.

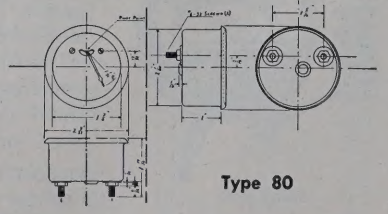


TYPE 68N

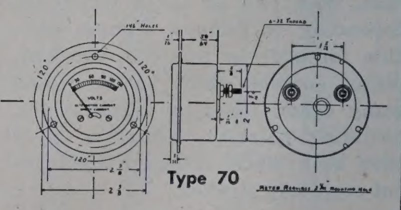
Flush case, square flange, standard finish black enamel. Screw holes in flange for mounting. Width flange 2⅝". Diam. case $2\frac{1}{32}$". Depth case ¾".

D.C. AMMETERS

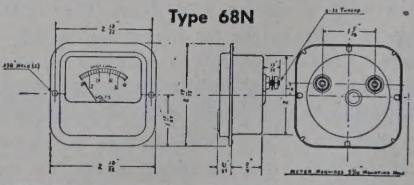
Number	Range	List Price	Number	Range	List Price
855	0-1 Amperes	$2.00	868	0-20 Amperes	$2.25
859	1-0-1 Amperes	2.00	863	20-0-20 Amperes	2.00
856	0-3 Amperes	2.00	865	0-30 Amperes	2.50
860	3-0-3 Amperes	2.00	867	30-0-30 Amperes	2.50
857	0-5 Amperes	2.00	869	0-40 Amperes	3.25
861	6-0-6 Amperes	2.00	866	0-50 Amperes	3.25
858	0-10 Amperes	2.00	925	50-0-50 Amperes	3.50
862	10-0-10 Amperes	2.00	926	60-0-60 Amperes	3.50
864	0-15 Amperes	2.00	927	75-0-75 Amperes	3.75



Type 80



Type 70

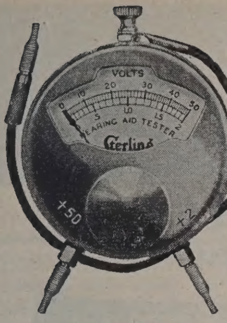


Type 68N

TYPE 70 PRICES LISTED

Note: Specify if for magnetic steel panel mounting.

Type 80, 88, 78, and 68N square flange case furnished for any range of meter at an additional list price of 25c each.



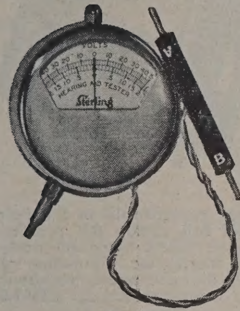
No. 31A

Sterling Hearing Aid Battery Testers

NO. 31A DOUBLE VOLTMETER—for special 30 or 45 v. "B" batteries and 1½ v. "A" batteries, scale 0-50 v. 1 v. div., scale 0-2 v., 1/10 v. divisions. Carefully engineered to impose the correct loads on the small delicate batteries used to operate vacuum tube hearing aids. Equipped with new STERLING flexible plugs................**Price $4.00**

NO. 32A DOUBLE VOLTMETER—for special 30 v. "B" batteries and 1½ v. "A" batteries, scale 0-35 v. 1 v. div. scale 0-2 v. 1/10 v. divisions. Equipped with new STERLING flexible plugs................**Price $4.00**

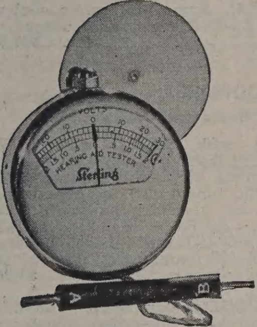
NO. 10 DUAL CONTACT PROD METER in pocket or desk model. Marked "A" at one contact and "B" at the other, the prod is simply inserted into the corresponding battery for quick and easy reading. No. 10 is for earlier type hearing aid batteries. Scale 50-0-50 v., 2 v. div. and 2-0-2 v., 1/10 v. div. No. 10 has one cord and one plug. **Price $4.75**



No. 10

NO. 11 Formerly called the 10S this tester is used on 22½ v. and 30 v. "B" batteries. The load requirement is proportionately less than 1 mil. No. 11 has one cord and one plug................**Price $7.50**

NO. 12 This new meter has no spur and a new voltage scale 30-0-30 v., 1 v. div. and 2-0-2 v., 1/10 v. div. Made extra sensitive for the latest type miniature batteries. Load: on 22½ v. batteries approx. 565 micro-amperes, on 15 v. batteries approx. 375 micro-amperes, on 1½ v. batteries approx. 40 mils................**Price $7.50**



No. 12

Sterling Pocket Meters

Standard Line Direct Current Pocket Ammeters, Voltmeters and Voltammeters.

Ammeters

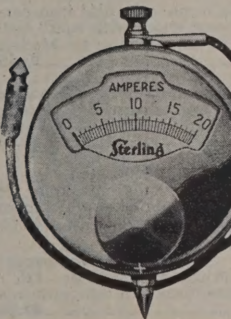
		LIST PRICE
No. 23	for photo-flash dry batteries. 0-20 amp. scale, ½ amp. div.	$2.50
No. 24	for testing No. 6 dry cells. 0-35 ampere scale, 1 ampere divisions	$2.25
No. 24A	for testing dry cells including the heavy-duty Ignition type of cell. 0-50 ampere scale, 1 ampere divisions	$2.30

Voltmeters

No. 33	for ordinary single cells and Flashlight" cells, 0-3 v. scale 1/10 v. div.	$2.30
No. 34	for "Hot Shot" and Radio batteries. 0-10 volt scale, 1/5 volt. div.	$2.30
No. 34A	for 12 volt batteries. 0-16 volt scale, ½ volt divisions	$2.50
No. 34B	for ordinary 22½ v. radio "B" batteries. 0-30 v. scale, 1 v. divisions	$2.50
No. 34C	for testing ordinary 45 v. radio "B" batteries. 0-50 v. scale, 1 v. div.	$3.00

Voltammeters

No. 44	for "Hot Shot" and Radio batteries and No. 6 dry cells, 0-35 ampere scale, 1 ampere divisions; 0-10 volt scale, 1/5 volt divisions	$2.75
No. 44A	for 12 volt batteries and No. 6 dry cells. 0-35 ampere scale, 1 ampere divisions; 0-16 volt scale, ½ volt divisions	$3.00
No. 45	for testing No. 6 dry cells and ordinary 45 volt radio "B" batteries. 0-35 ampere scale, 1 ampere divisions; 0-50 volt scale; 1 volt divisions	$4.00
No. 45A	for testing dry cells including the heavy-duty Ignition type and ordinary 45 v. radio "B" batteries. 0-50 amp. scale, 1 amp. div.; 0-50 v. scale, 1 v. div.	$4.25

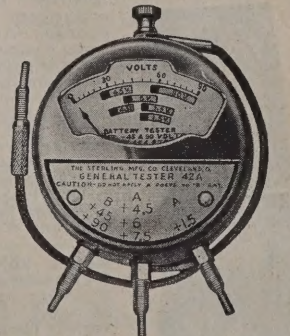


No. 23 AMMETER

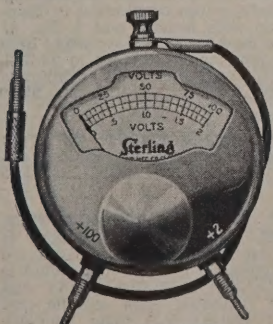
SPECIAL PURPOSE POCKET METERS

Voltmeters

No. 37A	for 45 v. "B" batteries and 1.5 "A" batteries. Scale 0-50 v., 1 v. div. Scale 0-2 v., 1/10 v. div. Tests 45 v. "B" and 1½ v. "A" batteries	$3.50
No. 38A	for 90 v. "B" batteries and 1.5 v. "A" batteries. Scale 0-100 v., 5 v. div. Scale 0-2 v., 1/10 v. div. Tests 45 v. and 90 v. "B" batteries and 1½ v. "A" batteries	$3.75
No. 39A	for 90 v. and 135 v. "B" batteries and 1.5 v. "A" batteries. Scale 0-150 v., 5-v. div. Scale 0-2 v., 1/10 v. div. Tests 90 v. and 135 v. "B" batteries and 1½ v. "A" batteries	$3.75
No. 40A	for 90 v. and 135 v. "B" batteries and 4.5 v., 6 v. and 7.5 v. "A" batteries. Scale 0-150 v., 5 v. div. Scale 0-10 v., 1/5 v. div. Tests 90 v. and 135 v. "B" batteries and 4½ v., 6 v. and 7½ v. "A" batteries	$4.00
No. 42A	Graphic General Tester. Red and Green color chart for all standard batteries including 45 v. and 90 v. "B" batteries and 1.5 v., 4.5 v., 6 v., and 7.5 v. "A" batteries. 0-100 v. scale for special sizes of "B" batteries, 5 v. div. Tests all Portable Radio batteries	$6.00

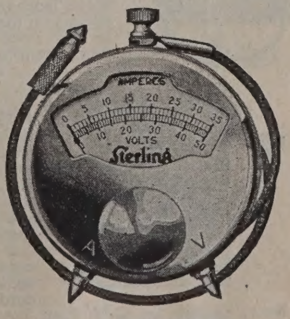


No. 42A GENERAL TESTER



No. 38A VOLTMETER

STANDARD LINE—Sterling's direct current pocket ammeters, voltmeters and voltammeters may be used in all kinds of battery testing, in railroad signal work, for photo flash purposes and in telephone and low-voltage electrical work generally. **They are polarity indicators.** Meters 2½" in diameter and ⅝" thick. Nickel finish. Standard package, ten instruments. Shipping Weight 4 lbs.



No. 45 VOLTAMMETER

Instruments J-B-T Testers

J-B-T INSTRUMENTS, INC.

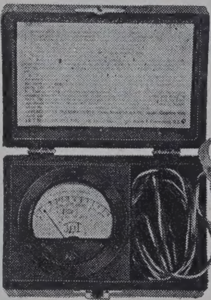
APPLIANCE TEMPERATURE TESTERS

A NEW IDEA IN TESTERS — The need for scientific but sturdy portable test equipment in the appliance service field is met by this exclusive line. Here the user profits from J-B-T's wide experience in building field test sets for many well-known manufacturers of ranges, irons, refrigerators, deep freeze units, and similar equipment. All J-B-T testers include the principle of remote reading of temperature,—and temperature measures the real usefulness of the appliance. Although called appliance testers, these handy portable testers have found a multitude of uses for trouble-shooting, experimenting and research in industry and in laboratories.

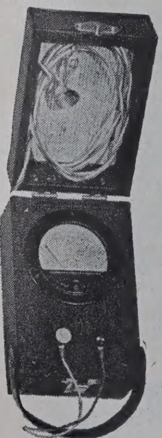
OVEN TESTERS

NEW

MODEL 23-JP-1. Latest addition to the widely-known family of J-B-T oven temperature testers is this modern and compact unit. Like the Models 32-JP-3 and 32-JP-4 described below, this indicating portable pyrometer is designed to save time and furnish reliable information in testing and setting thermostats on electric or gas ranges and other appliances by showing oven temperatures as they change. The same size of dial, 0-650°F., with 2⅜" scale arc reading, is used but covered by an all-plastic instrument front. The indicator is mounted on a black metal panel affixed inside a pocket-sized, black top-grain leather case 4½" x 2⅞" x 4¼" over hardware. Characteristic of more expensive pyrometers, the 23-JP-1 is automatically compensated for ambient temperature. Thus the tester eliminates calculations, avoids likelihood of serious error as temperatures change inside the instrument itself, and gives foolproof direct readings. Supplied with attached SA-116 5½' calibrated thermocouple, clip, and convection shield.........**$23.50**



MODEL 32-JP-3. This sturdy, fast reading portable is by far the most widely used oven tester in the country. The rigid outer carrying case 6" x 3⅞" x 3¾" is covered in black leatherette; the glass-covered indicator fits in a 3¼" flanged metal case. The dial shows 0-650°F. in 10° divisions readable to 2½°. Exceptionally fast, continuous response. Automatic compensation for ambient temperature is valuable feature whether the tester is used for service work, sales demonstrations, or inspection. More details on the 32-JP-3 are available in Bulletin JP-103. Price includes attached SA-116 5½' calibrated thermocouple, clip for attaching to grill, and convection shield for steady readings. **$25.05**



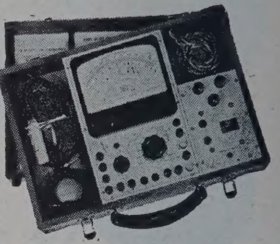
MODEL 32-JP-4. Companion tester to the 32-JP-3 with all the features of that tester, plus a leather carrying strap, and binding posts for quick attachment and interchanging of various thermocouples listed on this page, to check irons, washers, waffle-bakers, toasters, roasters, clothes dryers, etc. Range, 0-650°F; black leatherette case 6" x 3⅞" x 3¾". More details on the 32-JP-4 are available in Bulletin JP-104. Price includes SA-116 5½' calibrated thermocouple, clip and convection shield. **$26.15**

IRON TESTER

MODEL 32-JIT. Self-contained bench type tester; checks all makes of irons; measures thermostat temperatures; and shows open or short circuits. Automatically compensated for room temperature. Also indicates operating temperature of the sole plate (working surface) on non-electric or cordless irons. Black metal case; overall size 10" x 12" x 5½", scale 0—650°F, 15 amp. fuse, 6' cord, 110-volt, 50-60 cycles.........**$31.65**

Note: Orders for 32-JIT Iron Testers are occasionally filled with 23-JIT Iron Testers. Identical with 32-JIT illustrated, but using indicators with all-plastic front.

ALL-PURPOSE TESTER



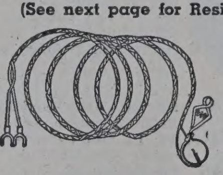
MODEL 61-JRT. This 9 - in - 1 tester speeds accurate temperature adjustment and current analysis of ranges, refrigerators, etc. Rapidly reads four cold zones, —100° F. to +80° F. up to 14' distant; two heat zones 0-600° F. up to 5½' distant; one voltage range 0-300 AC; and with transformer, two current ranges, 0-30 and 0-60 amps, AC. Sturdy, polished walnut case 15½" x 10 3/16" x 4¾" with handle and slip hinges. Two-color etched metal panel. Separate switches protect bulb and ammeter circuits. Requires one standard flash-light cell, replaceable in the field. Temperature scale accuracy ±2% of full scale. AC readings ±5% with rectifier. Accessories listed below may be added for testing irons, grills, roasters, washers, etc. Includes two SA-162 resistance bulbs, two SA-116 thermocouples, necessary electrical leads, and AS-TR-2 built-in transformer.........**$107.25**

For more details, see Bulletin JRT-349.

MODEL 61-JRT (LESS TRANSFORMER). Same unit, same scales, except does not read in amperes; AS-TR-2 transformer assembly omitted **$93.50**

THERMOCOUPLES

(See next page for Resistance Bulbs and Transformers)



SA-116 with SHIELD and CLIP. Standard flexible No. 22 gauge iron constantan, asbestos insulated, 5½', with attachment clip and convection shield as normally supplied with 23-JP-1, 32-JP-1, 32-JP-2, 32-JP-3, 32-JP-4, 60-JRT and 61-JRT Testers. (See SA-199 for extra quality, glass insulated type). **SA-116**.........**$1.80**

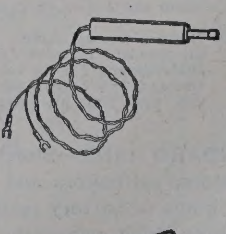
SA-170 (REPLACEMENT THERMOCOUPLE for IRON TESTERS 32-JIT and IT-1). Thermocouple and lead, including aluminum plate and special tip, quickly installed in the field.........**$2.10**

SA-175 (PLAIN TIP). For roasters, waffle irons, etc., 5½' iron constantan flexible No. 22 gauge, asbestos insulated, with small ball tip; used where clip and shield of SA-116 not suitable; for Models 32-JP-2, 32-JP-4, 60-JRT, and 61-JRT.........**$1.45**

SA-176 (for TOASTERS, etc.) 5½' iron constantan No. 22 gauge asbestos insulated, with special disc to collect heat; easily attached to 32-JP-2 and 32-JP-4 oven testers, also 60-JRT and 61-JRT **$2.55**

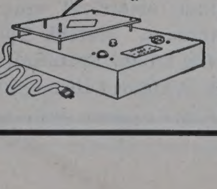
SA-188 (for AUTOMATIC WASHER TEMPERATURES, etc.) 3/16" diameter copper tube, 4" long, encloses thermocouple for insertion in pipe or sample of water. Has 6' leads for attachment to 32-JP-2 and 32-JP-4 oven testers, also 60-JRT and 61-JRT.........**$3.85**

SA-199 with SHIELD and CLIP. Same as SA-116 above, except duplex, non-fraying glass braid construction; diameter .115"; recommended for frequent use with these testers at temperatures above 400°F. **$2.25**



SA-300 (for SURFACE READINGS). Spring-type iron constantan in Transite tip with handle and 5' No. 22 gauge lead for extremely rapid heat readings; for attachment to 32-JP-2, 32-JP-4, 60-JRT and 61-JRT appliance testers **$5.50**

SA-301 (REPLACEMENT TIP FOR SA-300). Transite tip and thermal element only **$2.75**

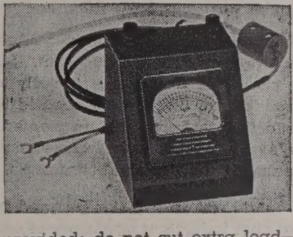


IRON TESTER THERMOCOUPLE, MODEL IT-1. This attachment is identical with the 32-JIT, except there is no meter. It is easily connected to Models 32-JP-2, 32-JP-4, 60-JRT and 61-JRT. Shows open circuits and shorts, checks sole plate temperatures and thermostats on all types of irons **$16.25**

TEMPERATURE INDICATORS

WHERE TO USE: To determine heat rise of motors, transformers and coils; for laboratory furnaces, inspection set-ups, for remote indication of infra-red and other oven temperatures; and to check temperatures in industrial processes such as heat treating and annealing. When used with selector switch, permits centralized reading of one to ten thermocouples, as in Diesel exhaust manifold applications.

MODEL 32-J



MODEL 32-J PYROMETER IN SN-3 STAND. Mounted in sloping front black metal stand, 4¼" high x 4⅜" deep x 4⅛" wide. Compensated for ambient temperature. Medium resistance system, damped for quick reading on 2⅜" scale, assures ruggedness and pointer stability. To retain the ±2% accuracy of the installation: use only the type and resistance of thermocouple and lead which are provided; do not cut extra lead—coil it—change in length changes calibration. A protection tube is not generally required. Many users find it convenient to keep an extra couple and lead on hand.

MODEL 32-J IN SN-3 STAND

0°— 650° F— 350° C, includes SA-91 thermocouple, SA-84 lead, and CB-1 connector block	$30.25
0°—1200° F— 650° C, includes SA-87, SA-82, and CB-1	30.25
0°—2000° F—1100° C, includes SA-87, SA-82, and CB-1	30.25

MODEL 32-J IN SN-5 STAND (not illustrated). With 3 binding posts to accommodate flexible extra lead and thermocouple for hard-to-reach locations.

0°—650° F with SA-91 thermocouple, SA-84 lead, CB-1 connector block, and SA-86 flexible lead and thermocouple	$34.10

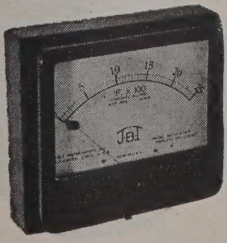
MODEL 60-JPS

MODEL 60-JPS. This portable makes it easy to **know** temperatures at **one to ten** locations. Excellent for study of heat in various parts of the same equipment, or in a battery of units. Knife-edge pointer, 5.6" scale. Heavy-duty thermocouple switch has average contact resistance of .00075 ohms or less. Automatically compensated for ambient temperature, indoors or outdoors. To retain accuracy of 1% full scale, use leads and thermocouples equal to resistance and e.m.f.vs-temperature characteristics for which instrument is calibrated. Medium resistance system assures portability. Housed in natural-finish wood case 11⅜" x 8⅝" x 4⅝" over rubber feet. A "must" for inspection, maintenance, and engineering.

60-JPS—0°—600° F with SA-86, 7' thermocouple and lead for small apertures	$101.85
60-JPS—0°—1200° F with SA-88, SA-82, and CB-1	104.50
60-JPS—0°—2000° F with SA-88, SA-82, and CB-1	104.50
60-JP—For one thermocouple only; furnished with thermocouple and lead same as 60-JPS, but without selector switch. 0°— 600° F, with SA-86	$74.35
60-JP—0°—1200° F, with SA-88, SA-82, and CB-1	77.00
60-JP—0°—2000° F, with SA-88, SA-82, and CB-1	77.00

Note: When ordering additional thermocouples, specify couples and leads as above. Centigrade equivalent scales available on order.

MODEL 70-J

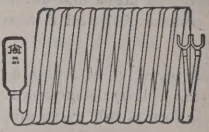


MODEL 70-J PYROMETER, for accurate reading at a distance, has full 6" scale and spade pointer, with accuracy of 1% of total scale deflection. Automatically compensated for ambient temperature. Molded case mounted in metal protecting shell 7⅜" x 8⅛" x 1½". Connections through bottom of case for wall or front-of-board mounting. When ordering, specify which standard scale range: 0°—600° F for 1938 std. I-C; 0°—1200° F for C-A; 0°—2000° F for C-A thermocouples.

PRICE, including 24" thermocouple and 26' lead $66.00

Note: Centigrade equivalent scales available on order.

RESISTANCE BULBS (FOR COLD TESTING)



SA-142. For use only with Model 60-JRT; calibration is not interchangeable with SA-162; has no embossed number $5.50

SA-162. For use only with Models 50-50 and 61-JRT; identified by embossed part number $5.50

CL-90 CLAMP. Metal clamp for holding SA-142 and SA-162 resistance bulbs in contact with surfaces up to ¼" $0.28

TRANSFORMERS

AS-TR-2. Attachment for compartment of 61-JRT all-purpose tester, completely housed, with jumper lead and panel; reads 30 and 60 AC amp. scales on tester $16.50

AS-TR-3. Attachment for increasing usefulness of 60-JRT all-purpose tester. Includes side rails for attaching inside compartment; fully housed. Reads 30 and 60 AC amp. by dividing volt scale by 10 or 5 $18.15

TEMPERATURE ACCESSORIES

LEAD WIRES. To bring the reference junction within the pyrometer, compensating or extension lead wires should always be used. See the instrument dial for (1) the kind of lead and (2) combined resistance of lead and thermocouple. Standard leads include:

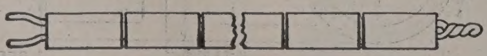
SA-82 6' compensating lead for chromel-alumel couples; duplex, stranded; asbestos-insulated, cotton-braid impregnated with moisture-proof and flame-proof compound; terminals at instrument end; other end tinned for connector block $1.55

SA-83 26' compensating lead for chromel-alumel as above $4.85

SA-84 6' extension lead for iron-constantan, 1938 calibration; duplex; moisture-proof and flame-proof; prepared as above $1.55

SA-85 26' extension lead for iron-constantan, 1938 calibration; similar to above $4.85

SA-86 7' iron-constantan thermocouple and lead combined; twisted pair No. 20 Ga., asbestos-insulated—for intermittent use on 650° F scales; terminals at meter end; other end welded. (Resistance not interchangeable with SA-84 or SA-85) $1.85



THERMOCOUPLES. For pyrometers and leads above, J-B-T thermocouples are carefully selected, standardized, and tested.

SA-87 12" No. 14 Ga. chromel-alumel, 2-hole ceramic beads, fits 5/16" hole; welded tip $3.10

SA-88 same except 24" No. 14 Ga. $3.85

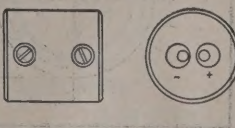
SA-89 12" No. 8 Ga. chromel-alumel, 2-hole ceramic beads, fits 7/16" hole; welded tip $3.10

SA-90 same except 24" No. 8 Ga. $3.85

SA-91 12" No. 14 Ga. iron-constantan, 1938 calibration; 2-hole ceramic beads, fits 5/16" hole; welded tip $2.60

Flexible Thermocouple, 7' length, see SA-86 lead wire.

CONNECTOR BLOCK Model CB-1. Lava connector block, withstands high temperatures, accommodates all thermocouples up to No. 6 Ga. Heavy brass connectors keep contact resistance low. Can be used independent of connector head. $1.65



Net

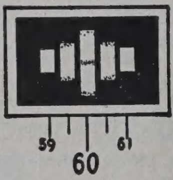
VIBRATING REED FREQUENCY METERS (PATENTED)

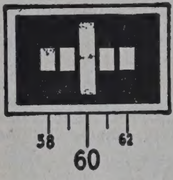
J-B-T Vibrating Reed Frequency Meters are used extensively in radio, telephone, and television service, on engine generator sets, in laboratories, in many types of electronic equipment, on panel and control boards in central stations and industrial plants—wherever constant or known frequency is important to efficient operation of equipment. More than ten years of continuous experience covering many thousands of these instruments are your assurance of quality for both commercial and defense applications.

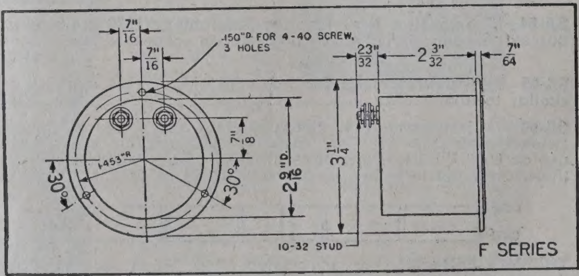
The response patterns differ with the increments of frequency between reeds. For example, at 60 cycles, half-cycle steps give the broad response shown below at left, whereas full cycle steps bring the sharp response at right.

The patented, simplified design used in the J-B-T meter operates on AC or interrupted DC. The instrument consists of a case, base, dial and central mounting frame, with a series of spring steel reeds screwed to a reed mounting bar, individual driving coil surrounding each bank of reeds, permanent magnet, series resistor and terminal studs.

Each reed is adjusted to respond by resonance to but one frequency. As the alternating current (or interrupted direct current) excites the driving coil, the one reed "in tune" with the frequency in the coils will respond by vibrating rapidly because of permanent magnet polarization and induced magnetism from the coil. The instrument is adapted to specified operating voltage by a series resistor. Frequency of the current is read on the graduated face of the instrument.

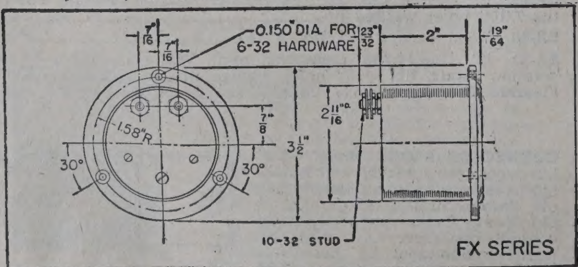






Above: Models 30-F, 31-F, 33-F, 34-F; 3¼" Metal Case

Below: Models 30-FX, 31-FX, 33-FX, and 34-FX; Molded Case Meets Mounting Dimensions of JAN-I-6; ASAC39.1-1951; and MIL-M-6A (Type MR35)

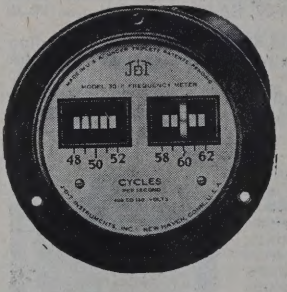


ADVANTAGES: Guaranteed accuracy at reference temperature of 77°F is ±0.3% or better of the frequency being measured, unless otherwise stated. High fatigue safety factor for continuous operation. Temperature compensations are not required as temperature coefficient of reeds is only approximately 75 parts per million per degree F., negative.

All meters are permanently calibrated at the factory and do not require subsequent adjustment. J-B-T reeds have relatively high Q characteristics, an especially desirable factor in electronic circuits. Accuracy is not affected by wave form or external magnetic fields. Built with no pivoted parts and with lock washers at every critical point, these rugged meters can take rougher treatment than many instruments.

CAUTION: If a meter plugged in on a 60 cycle AC power line does not indicate a frequency of exactly 60 cycles, trust the meter! Power supply may momentarily be off-frequency due to changing load conditions beyond the control of the Utility. All J-B-T Vibrating Reed Frequency Meters are accurately calibrated at the factory, entirely independent of frequency of power supply. Production and inspection equipment are checked regularly against National Bureau of Standard frequency signals.

MODEL 30-F



MODEL 30-F
(Operating at 60 cy.)

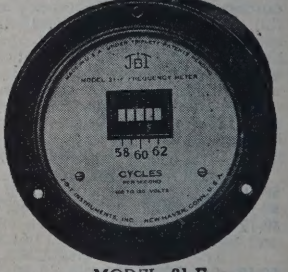
Range: 48-52 and 58-62 cycles. Double window for ease of reading frequency in either range. Often specified for export. 100-130 volts; 130 ohms per volt; 1 watt power consumption. Accuracy ±0.3% at reference temperature. Flush panel mounting.

30-F, 48-52 and 58-62 cy., 3¼" Metal Case	**$27.50**
30-FX, 48-52 and 58-62 cy., 3½" Molded Case, JAN-I-6 mtg.	**$27.50**

MODEL 31-F

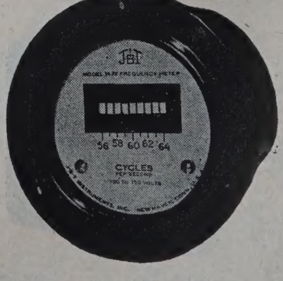
Used in standby power equipment. Handy for accurately measuring frequency of power source. Five reeds, 58-62 cycles 100-130 volts. Other characteristics same as Model 30-F.

31-F, 58-62 cy., 3¼" Metal Case	**$23.65**
31-FX, 58-62 cy., 3½" Molded Case, JAN-I-6 mtg.	**$23.65**



MODEL 31-F

MODEL 34-FX



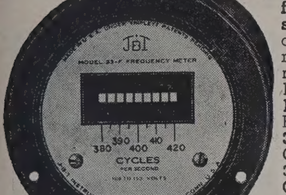
MODEL 34-FX

Used where a broader frequency band is desirable. Nine reeds, 56-64 cycles, or in half-cycle steps (accuracy ±0.2%) 58-62 cycles. 100-130 volts; 130 ohms per volt; 1 watt power consumption. Flush panel mounting.

34-F, 56-64 cy., 3¼" Metal Case	**$27.25**
34-FX, 56-64 cy., 3½" Molded Case, JAN-I-6 mtg.	**$27.25**
34-F, 58-62 cy., 3¼" Metal Case	**$28.90**
34-FX, 58-62 cy., 3½" Molded Case, JAN-I-6 mtg.	**$28.90**

Instruments J-B-T Testers

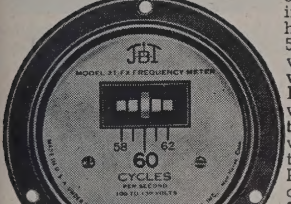
J-B-T INSTRUMENTS, INC.


JBT
MODEL 33-F FREQUENCY METER
380 390 400 410 420
CYCLES
PER SECOND

MODEL 33-F

400-cycle. Used for measuring frequency of high-cycle power sources, including new heavy aircraft. Accuracy ±0.3% at reference temperature. Nine reeds, 380 to 420-cycle range. 100-130 volts; 70 ohms per volt; **1.75 watts power consumption.** Flush panel mounting.

33-F, 380-420 cy., 3¼" Metal Case	**$34.10**
33-FX, 380-420 cy., 3½" Molded Case, JAN-I-6 mtg.	**$34.10**

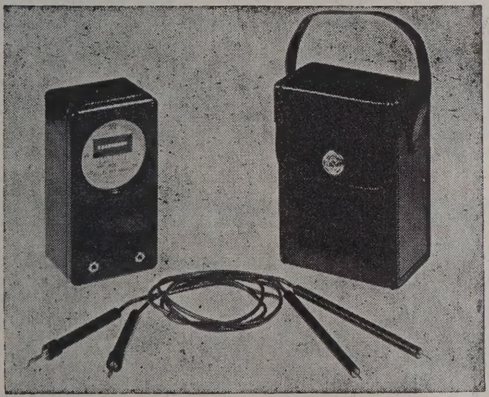

JBT
MODEL 21-FX FREQUENCY METER
58 62
60
CYCLES
PER SECOND

MODEL 21-FX

Matches other 2½" panel instruments. Meets ASA C39.1-1951 and MIL-M-6A (Type MR25) in depth of case as well as mounting dimensions and mounting hardware. Weighs only 4½ oz.; 5 reeds; 58-62 cycles; 100-130 volts; 190 ohms per volt; 0.6 watt power consumption. Also 116 to 124 cy.; 160 ohms per volt; 0.7 watt power consumption. **390 to 410 cy.;** 85 ohms per volt; 1.3 watts power consumption. Flush panel mounting, see Print MD-20. 400 cy. type also available 380-420 cy.

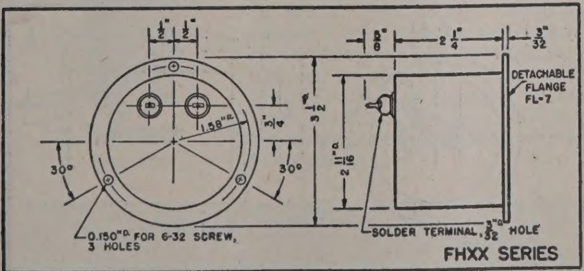
21-FX, 58-62 cy., 2-11/16" Molded Case	**$22.55**
21-FX, 116-124 cy., 2-11/16" Molded Case	**$25.30**
21-FX, 390-410 cy., 2-11/16" Molded Case	**$27.50**

PORTABLE FREQUENCY TESTERS



MODEL 33-FP-9L. Handy, compact, portable instrument of exceptional accuracy even under poor wave-form conditions, fluctuating voltage or external magnetic disturbances. Meets exacting test requirements of aviation, signal and communication equipment. Housed in sturdy molded case 5⅞" x 3$\frac{1}{16}$" x 2⅝" with leather carrying case 6$\frac{3}{32}$" x 4¼" x 2¾". 4' leads are supplied complete with sharp 5" insulated test picks and banana plugs. Electrical characteristics identical with 400 cycle 33-F. Model 34-FP-9L electrical characteristics are identical with 60-cycle 34-FX.

33-FP-9L, 380-420 cy., 100-130 volts, nine reeds	**$47.60**
34-FP-9L, 56-64 cy., 100-130 volts, nine reeds	**$40.70**

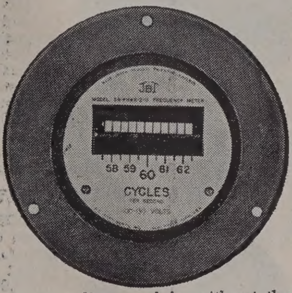

$\frac{1}{2}$"
$\frac{1}{2}$"
$\frac{5}{8}$"
2 $\frac{1}{4}$"
$\frac{3}{32}$"
DETACHABLE FLANGE FL-7
1.58" R.
$\frac{3}{4}$"
3 $\frac{1}{2}$"
2 $\frac{11}{16}$" D.
30°
30°
0.150" D. FOR 6-32 SCREW, 3 HOLES
SOLDER TERMINAL, $\frac{3}{32}$" D. HOLE
FHXX SERIES

All FHXX Type Frequency Meters;
Sealed Metal Case (Type MR36 of MIL-M-6A)

NOTE ON METER VOLTAGE

J-B-T Vibrating Reed Frequency Meters of all sizes normally are made with two studs and are designed to be connected across one phase of a multi-phase line. The single phase voltage where the meter will be used thus becomes the voltage to be specified for the meter. Special meters with extra studs are made only for the purpose of reading two or more voltages, not additional phases.

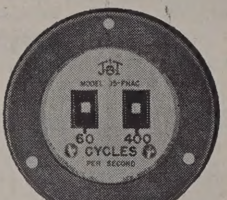
3½" SEALED METERS


JBT
MODEL 34-FHXX-Z-11 FREQUENCY METER
58 59 60 61 62
CYCLES
PER SECOND

FHXX TYPE METERS, sealed instrument, glass-to-metal construction, with solder terminals and detachable flange now supersede the FHX sealed meters (Print SK-24). While JAN-I-6 and MIL-M-6A (Type MR36) do not refer to frequency indicators, the FHXX series uses the front mounting dimensions, and meets or exceeds the sealing and electrical requirements including the 3000 volt breakdown. Mounting dimensions are shown below. Standard voltage is 100-130. Electrical characteristics and accuracy are the same as for corresponding models without the HXX designation. Every meter tested for 55,000 ft. altitude. While not regularly stocked, these meters are in production.

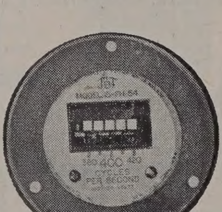
30-FHXX, 10 reeds, 48-52 cy. and 58-62 cy.	**$34.30**
31-FHXX, 5 reeds, 58-62 cy.	**30.45**
33-FHXX, 9 reeds, 380-420 cy.	**40.90**
34-FHXX, 9 reeds, 56-64 cy.	**34.05**
34-FHXX-11, 11 reeds, 55-65 cy.	**36.25**
34-FHXX-Z-11, illustrated, 11 reeds, 57.5-62.5 cy.	**37.90**

1½" SEALED METERS


JBT
MODEL 15-FHAC
60 400
CYCLES
PER SECOND

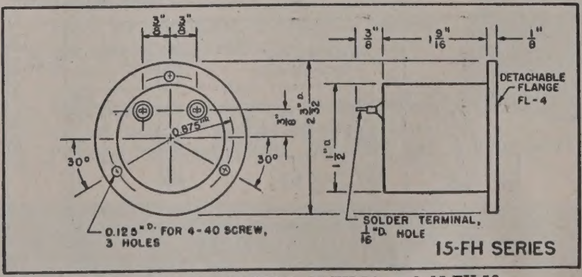
MODEL 15-FHAC. Now used extensively on audio-oscillators as the frequency standard, the model illustrated operates 2 reeds, 60 and 400 cycles, at approximately 8-10 volts for cathode follower circuit. Accuracy ±0.5% at 77°F. Steel case has black telephone finish; solder terminals. Barrel is 1½" diameter; 2.094" detachable flange covers glass-to-metal seal. See complete dimensions below.

15-FHAC	**$20.30**


JBT
MODEL 15-FH-54
390 400 410
CYCLES
PER SECOND

15-FH-5 METERS. Use the same 1½" black metal case, glass-to-metal seal, and 2.094" detachable flange as the Model 15-FHAC. The 15-FH-5 series provides 5 reeds in a row for 100-130 volt operation. Used where size and weight are design considerations. 100% inspected for 55,000 ft. altitude. Standard meter, but not regularly stocked. See complete dimensions below.

15-FH-54, 5 reeds, 390-410 cy.	**$25.85**
15-FH-56, 5 reeds, 58-62 cy.	**21.45**


$\frac{3}{8}$"
$\frac{3}{8}$"
$\frac{3}{8}$"
1 $\frac{9}{16}$"
$\frac{1}{8}$"
DETACHABLE FLANGE FL-4
0.875" R.
$\frac{3}{8}$"
2 $\frac{3}{32}$" D.
1 $\frac{1}{2}$" D.
30°
30°
0.125" D. FOR 4-40 SCREW, 3 HOLES
SOLDER TERMINAL, $\frac{1}{16}$" D. HOLE
15-FH SERIES

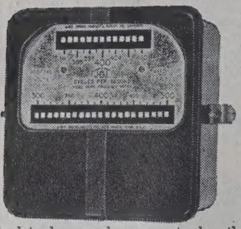
Sealed Models 15-FHAC, 15-FH-54 and 15-FH-56.
(Military specifications covering this size of instrument pending)

Instruments J-B-T Testers

J-B-T INSTRUMENTS, INC.

ELAPSED TIME METERS AND NEW FREQUENCY METERS

Now 400-cycle Total Time Meters — 400-cycle Broad and Vernier Indicator



MODEL 41-FX. This 2-window instrument is extensively used for electronic and aircraft testing in commercial and military applications. The lower window shows a broad range of 300-500 cycles, with 21 reeds in 10-cycle steps. The upper window gives a vernier effect with 13 reeds indicating 380-420 cycles in 4-cycle steps, with 2-cycle increments in the critical range of 396-404 cycles. Housed in black molded case with flush front 4" x 4", and 2 29/32" deep behind panel over studs, the instrument blends well with other types of panel meters. Made for 100-130 volt operation. Also available with 4 studs for 200-240, 115, and 30 volts as used in aircraft analyzers. Full dimensions on drawing SK-38.

41-FX, 100-130 V	**$120.00**
41-FX, triple voltage, without switch	**135.00**

ELAPSED TIME METERS—60 Cycles

MODEL 31-EX. To record operating time of AC electrical and electronic equipment, this self-starting instrument registers in 1/10th hour steps to 9,999.9 hours, then automatically re-sets. Shows tenths in red numerals, all others in black. Black molded case per diagram below matches FX, 3½" frequency meters, and fully encloses all parts. J-B-T engineers recommend AC elapsed time meters for superior accuracy, especially where voltage or ambient temperatures vary widely. Popular for tube life, TV equipment, punch presses, conveyors, oil burners, maintenance schedules, etc.

31-EX, 60 cy., 110-125 volts	**$15.95**
31-EX, 60 cy., 230 volt (not regularly stocked)	**$17.05**
MODEL 31-ES. Same as 31-EX except black molded, square case 3" x 3", per print SK-34; 60 cy., 110-125 volts (not regularly stocked)	**$17.05**

SEALED ELAPSED TIME METER—60 Cycles

MODEL 31-EHXX. Where rugged requirements make a completely sealed elapsed time meter desirable, this glass-to-metal construction, with flat glass front and 3½" diameter separable flange, often is specified. Heavy-duty solder terminals meet or exceed 3,000 volt breakdown test. Every instrument is inspected in a vacuum chamber. Overall dimensions and appearance match the FHXX series sealed frequency meters per drawing on preceding page. See print SK-53 for complete mounting data. The meter registers in 1/10 hour steps to 9,999.9 hours, then automatically re-sets. Tenths indicator is in red, all others in black.

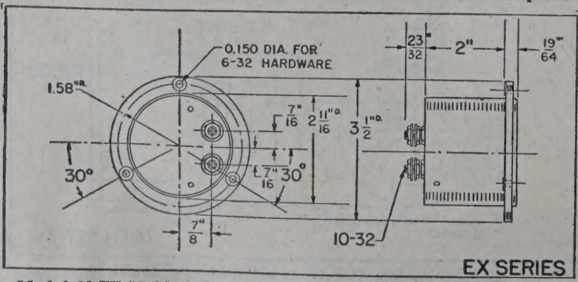
31-EHXX, 60 cy., 110-125 volts	**$19.75**

NEW

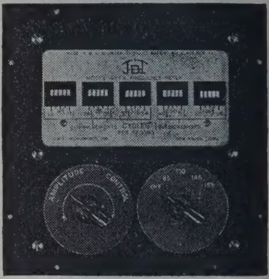
SEALED ELAPSED TIME METER—400 Cycles

MODEL 33-EHXX. The answer to the long-felt need for a stable 400-cycle elapsed time meter compact enough to fit in a 3½" flanged case, with all parts enclosed, is this new 400-cycle elapsed time meter. The instrument initially is being produced only in sealed construction, glass-to-metal, with separable flange, solder terminals, and flat glass front. External appearance matches FHXX series and Model 31-EHXX sealed, 60-cycle, elapsed time meter. A slightly larger case is used per drawing in the next column.

33-EHXX, 400 cy., 0-9,999.9 hours in 1/10 hour steps, 110-125 volts. **Price on Request**



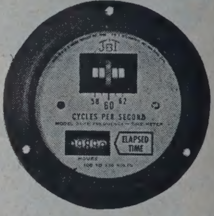
Model 31-EX Molded Case, meets type MR-35 flange dimensions of MIL-M-6A, also JAN-I-6 and ASA C39.1-1951



MODEL 61-FX. Telephone ringing circuits are among the frequencies checked regularly with this panel mounting, 25-reed, 5-window instrument. The first three bands cover 16 to 17-1/3 cycles, 24-1/3 to 25-2/3 cycles, and 32-2/3 to 34 cycles in 1/3 cycle steps. The last two bands show 48-2/3 to 51-1/3 cycles, and 65-1/3 to 68 cycles, with 2/3 cycle reeds. The selector switch provides taps for 85, 110, 145 and 165 volts. An amplitude control knob facilitates maximum reed vibration. Black bakelite front 6⅞" x 7⅛" x 3-1/16" deep behind panel. This instrument is typical of the specialized applications in panel and portable meters which J-B-T engineering and production know-how supply on special order.

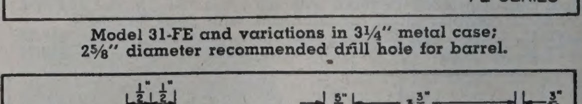
61-FX (not regularly stocked), mounting to Print MD-37	**$149.50**

ELAPSED TIME AND FREQUENCY METERS

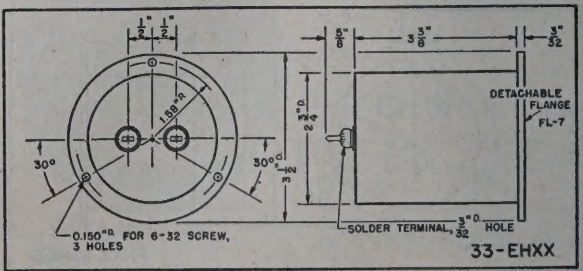


31-FE SERIES. To conserve panel space and centralize information, this panel instrument combines the elapsed time or running time meter with frequency reeds. It is used on motor generator sets and on electrical equipment where maintenance routine calls for periodic servicing. The J-B-T design, proved by years of field experience, uses a separate exciting coil for the reeds to achieve close control of reed amplitude and frequency. Reads 0-9,999.9 hours, and 58-62 cycles with 5 reeds, for 100-130 volt operation; self starting. Tenths shown in red, all other numerals in black. Black metal case with front mounting same as model 31-F. Other dimensions per drawing below. For variations having 7, 9, or 11 reeds, on special order only, see revised print SK-45.

31-FE, 3¼" metal case	**$33.00**
31-FEX-1, (per print SK-44—not regularly stocked) 3½" metal flange permanently attached	**$34.10**



Model 31-FE and variations in 3¼" metal case; 2⅝" diameter recommended drill hole for barrel.

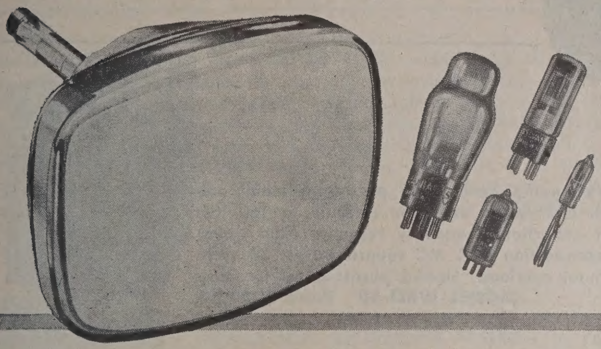


Model 33-EHXX elapsed time meter, 400 cycles only, 3½" metal case; meets type MR-36 flange dimensions of MIL-M-6A, also JAN-I-6 and ASA C39.1-1951

Net

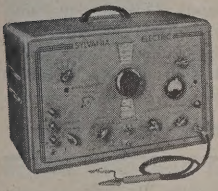
IMPROVE YOUR BUSINESS...

with famous Sylvania Tubes and Test Equipment



Your customers know about Sylvania's dependability and fine performance. So, whether it's tubes or test equipment, you'll enjoy the advantage of working with a recognized leader when you say SYLVANIA.

Sylvania Tubes are produced under the most rigid standards of quality control. Made in types for every need . . . from tiny subminiature receiving tubes to large glass, round and rectangular Television Picture Tubes.



Type 216

FM-AM Signal Generator. Useful as a TV Marker. A versatile AM-FM generator, doubly useful for peaking alignment of TV and as a TV marker. Calibrated to 0.05%. Fundamentals 80 kc to 120 mc; harmonics to 240 mc. Modulation: 0-100% AM; 0-30/150/700 kc FM. 1.0 volt max. output. Low leakage. Built-in crystal circuit. Size: 11⅜" x 17 1/16" x 10⅝". Price: $139.50.

Polymeter — a Vacuum Tube Voltmeter of high sensitivity for measuring ohms, DC volts, AC volts, RF volts and DC current. Input impedance is 17 megohms on DC volts, 2.7 megohms on AC and 2.3 megohms (with only $3\mu\mu f$ shunt capacitance) on RF. Special subminiature diode tube in RF probe gives flat response to 300 megacycles on scales from 3 volts to 300 volts in five ranges. Zero center seals for FM. Illuminated meter. Accessory probes (type 225) for 30,000 volts DC. Price: $99.50.

Type 221 Z

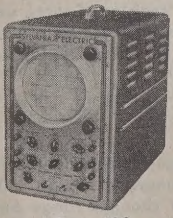
Type 500 Sweep Generator — No mechanical sweep. Uses reactance tube sweep in two ranges; 0-15 MC for TV, 0-600 KC for FM. Fundamentals from 2 to 230 MC. Special circuits to assure extreme linearity. Output 300 to 100,000 microvolts. Companion to 501 Marker. Price: $139.50.

Type 500

Tube Testers—219 counter type, 220 portable type. Composite mutual conductance and emission checker rejects tubes failing *either* requirement. Relative amount of heater-cathode and inter-element shorts or leakage shown on METER. Designed by a tube manufacturer to check tubes for modern applications. Price: $114.50.

Type 220

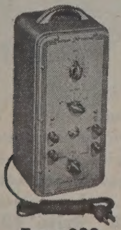
Television Oscilloscope. An exceptionally high-gain, wide-band oscilloscope designed for television. Accurately displays any TV pulse or wave-shape on a large, eye-saving 7" screen. Sensitivity: 0:01 v./in. Vert. response useful to 4.0 mc. Recommended for servicemen; laboratories; advanced schools and industry. Price: $249.50.



Type 400

Marker Generator (Type 501). Provides 2 separate signals for marking an oscilloscope trace of response curves. Accurate adjustment of traps, frequency spotting, measuring band width, and correct adjustment of the popular 4.5 mc. intercarrier sound circuits. VFO covers 15 to 240 mc range. Price: $129.50.

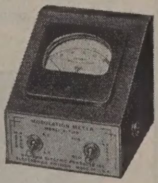
Type 501



Type 300

Voltage Calibrator — Type 300. Accurately measures peak to peak voltage of any wave-form displayed on scope. Uses voltage regulated clipper circuit to give extreme accuracy in spite of line voltage fluctuation. Switch feeds either calibrating voltage or signal voltage to scope. Essential instrument for better service shops and laboratories. Price: $44.50.

Modulation Meter. Directly indicates per cent of AM modulation. Compact; requires no direct connection to circuit Used by amateurs, transmitter builders and others. Indicates carrier shift. Price: $29.50.



Type X-7018

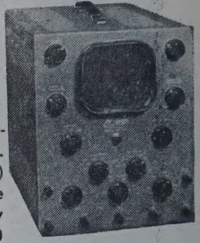
For full details concerning Sylvania Tubes or Test Equipment address: Sylvania Electric Products Inc., Dept. R-2952, Emporium, Pa.

RADIO TUBES; TELEVISION PICTURE TUBES; ELECTRONIC PRODUCTS; ELECTRONIC TEST EQUIPMENT; FLUORESCENT TUBES, FIXTURES, SIGN TUBING, WIRING DEVICES; LIGHT BULBS; PHOTOLAMPS; TELEVISION SETS

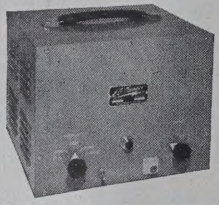
SYLVANIA

El-Tronics INC. Manufacturers of

LABORATORY TEST EQUIPMENT

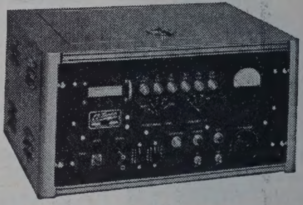


WIDE BAND LABORATORY OSCILLOSCOPE — A laboratory quality oscilloscope possessing many outstanding features. Has vertical amplifier with 5MC bandwidth and sweep oscillator variable to 150 KC. Sensitivity of vertical amplifier 20 millivolts RMS per inch of deflection. Frequency response (sine wave) 20 cycles to 5 megacycles. Down 3 DB at 5 MC. Excellent reproduction of 1 MC square waves. 30 cycle square wave tilt less than 5%. Full 4" vertical deflection without overload. Slotted plastic bezel for easy insertion of graduated screen and light filter. **MODEL WBO-50 Price $249.50**

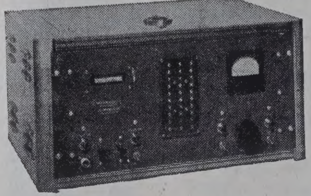


SQUARE WAVE GENERATOR — An inexpensive step frequency type square wave generator with 5 fixed output frequencies of 50, 1000, 10,000, or 500,000 PPS. Rise time .05 microseconds. Output amplitude variable 0.8 to 8V. peak to peak. This instrument is small, compact and portable. Entirely AC operated. A reliable accurate instrument at low cost for accurate high speed testing at wide band amplifier response. **MODEL SG5 Price $119.50**

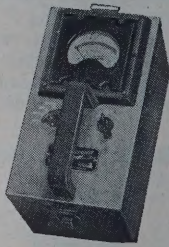
NUCLEAR INSTRUMENTS & ACCESSORIES



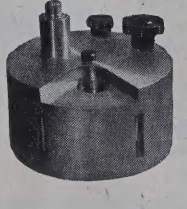
DELUXE LABORATORY SCINTILLATION SCALER — This extremely accurate Binary laboratory scintillation scaler makes precise measurements of radiation intensities. Employs reliable Higinbotham scaling circuit with a built-in impulse register. Incorporates wide band preamplifier followed by scale of 64 scaling circuit with predetermined counting features. Automatic shut-off at 1, 10, 100, and 1000 register counts. **MODEL LS64SS Price $475.00**



DECADE LABORATORY SCALER — Scale of 1000 decimal decade type laboratory scaler uses reliable Higinbotham circuit operating a built-in impulse register. Transformers are hermetically sealed for long life, and high voltage capacitors are oil filled. Counts up to one billion before recycling. Direct reading. The light bank is arranged for easy reading and close association with the impulse register. Counts over 10,000 evenly spaced pulses per second. Terminations for other instruments, such as pre-amplifier and running time meter, make this a reliable, versatile instrument for accurate laboratory counting. Built in high voltage supply for GM tube 700-1500V. **MODEL LS1000A Price $425.00**



IONIZATION CHAMBER TYPE SURVEY METER A wide range ionization chamber type gamma survey meter for rugged field or portable laboratory use. Five full ranges of 5, 50, 500, 5000, and 50,000 MR/HR are read directly from a large 4 inch meter. Meter scale changes range and color to correspond with position of range switch to eliminate visual error of reading range. Off, battery check, and zero adjust positions are provided. Construction is unique, in that the entire assembly can be removed from case for speedy service. This meter meets all requirements for Civil Defense. Constructed to military specifications. Will operate from — 10 to 115°F with a calibration accuracy of ± 15%. Commercial version of famous military Radiac Set AN/PDR-T1. **MODEL PR50 Price $225.00**

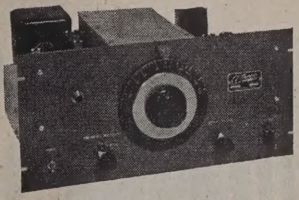


PREFLUSH GAS COUNTER — This new preflush gas counter for alpha and weak beta radiation has design characteristics to speed work and increase reliability of results. The gear driven platform is rotated by control knob which also provides automatic raising and lowering of sample at loading point. Load, preflush, and count positions are possible with the rotating sample holder. Preflush position has separate gas entrance, exit, and bubbler to prevent contamination backup from test chamber. A completely self-contained unit of brass construction, heavily chrome plated. **MODEL FGG3 Price $285.00**

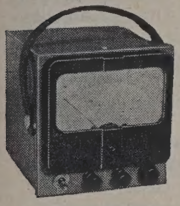
Write for a copy of our new comprehensive catalog which gives full information on the entire El-tronics instrument line. Also available is a separate bulletin on each individual instrument.

*Prices subject to change.

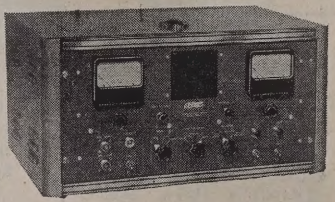
Precision Laboratory Instruments...



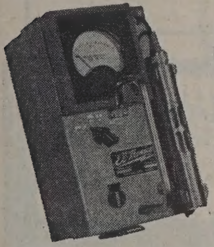
LABORATORY AUDIO OSCILLATOR — This wide range audio oscillator is designed for trouble-free operation under the most adverse conditions. Low distortion and extremely accurate dial calibration. Distortion below 1% throughout audio range. Thermal drift is minimized through use of low temperature coefficient elements in the resistance network. No electrolytic capacitors are used. All capacitors are hermetically sealed in oil or mica. Frequency response ± 1 DB from 20 to 200,000 C.P.S. Output voltage in 0 to 10 volts continuously variable. Covers from 20 cycles to 200,000 cycles in four ranges. Has electronically regulated power supply for stable operation. **MODEL TE200K Price $249.50**



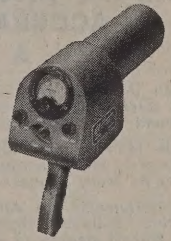
INSULATION RESISTANCE TESTER — A small compact portable battery operated insulation resistance tester, with a battery operated power supply as a source of high potential. Operates from two self-contained 1½ volt batteries. Resistance range 5000 megohms at 2000 volt DC potential. Large 4½" meter with easy-to-read calibrations in megohms. **MODEL MO5 Price $99.50**



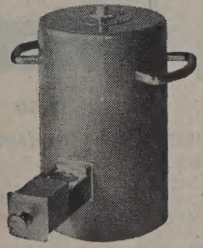
DELUXE COUNTING RATE METER — A complete counting rate meter of laboratory accuracy for use with Scintillation, Geiger or Flow Gas Counters has input sensitivity of ¼ volt. Gives fast indication of radiation intensity. Meter is calibrated in both counts per second and counts per minute. Ranges of 5, 50, 500, and 5000 counts per second and 300, 3000, 30,000 and 300,000 counts per minute are provided. A loudspeaker permits aural monitering. Regulated high voltage supply applies constant potential to the counter tube. Terminals provided for recording instruments and pre-amplifier. **MODEL RM4-B Price $350.00**



DELUXE GM SURVEY INSTRUMENT — Specially designed for portable field and laboratory use, this Radiation survey instrument offers 3 individual scales of .2, 2.0, and 20 MR/HR on 4" Navy type meter. Scales are in distinctive colors which change with range switch, automatically preventing visual reading error. Easily accessible battery compartment permits speedy change of inexpensive "A" and "B" batteries. A 30 inch probe cable permits measurements or searching places of difficult accessibility. Built-in regulated 900 V. power supply for GM tube. This instrument is rugged and lightweight — weighing only 8½ lbs. **MODEL PR3 Price $225.00**



"CUTIE-PIE" SURVEY METER — Compact portable instrument extremely sensitive to alpha, beta and gamma radiation. Three full scale ranges of 25, 250, and 2500 MR/HR are read directly on meter. Can also be had in ranges of 50, 500, 5000 MR/HR and 100, 1000, and 10,000 MR/HR. Easy access to batteries and tubes is provided, as well as a removable cover that exposes entire circuit for fast service. Weight less than 4 pounds. A fine portable instrument for laboratory or field use. New improved reliable and accurate design. Low drift. **MODEL CP-3 Price $245.00**



SHIELDED SAMPLE TEST CHANGER — Accurate readings through lowered background count make this shielded sample test changer unusually reliable. Two inches of lead at front and back of sample drawer cause sample to be completely enclosed when sample is inserted. GM tube readily accessible from top. The sample drawer is provided with removable shelves so that fast sample changes are possible. Samples may be placed on planchettes or filter paper rings. Inner shell is made of ⅛" aluminum tubing to minimize scattering. **MODEL LSC Price $225.00**

El-Tronics INC.

Precision Laboratory Instruments Since 1933

2647 N. HOWARD STREET, PHILADELPHIA 33, PA.

MARION ELECTRICAL INSTRUMENT CO., 410 CANAL ST., MANCHESTER, N. H.

marion meters

MANUFACTURERS OF MARION *Ruggedized* PANEL METERS

In Canada: H. Roy Gray, 44 Danforth Road, Toronto, Ontario

MARION TEST EQUIPMENT

METERTESTER

MARION MULTI-RANGE METERTESTER

With self-contained power supply and control equipment for operation on 110 volts, AC, 60 cycles . . . for production testing, and calibration of DC instruments. The MARION METERTESTER is designed with many operational features which will definitely improve the production rates of any meter inspection department. Moreover, its accuracy is such that it may be used for checking purposes in any department and all laboratories employing instruments. It may also be used as a precise source of DC current and voltage. Overall accuracy is better than ½ of 1%. Basic sensitivity of the Mirror Scale Standard Instrument is 10 milliamperes. The *complete unit is housed in a hand-rubbed, solid walnut* carrying case.

For use in any department and all laboratories where instruments are employed and their performance must be carefully checked.

With self-contained power supply and control equipment for operation on 110 volts, AC, 60 cycles . . . for production testing and calibration of DC instruments. No additional accessories are required. Merely connect the two clips to the instrument under test, and proceed to analyze its accuracy and general performance.

INCLUDES . . .

- Regulated Power Supply.
- Stepless Vacuum Tube Voltage Control.
- Large 8½" Mirror Scale Standard Instrument, Hand Calibrated.
- Decade of .1% Accurate Manganin Wire Wound Resistors.

Ranges of MeterTester

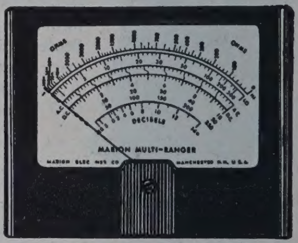
0-25 UA	0-800 UA
0-50 UA	0-1 MA
0-100 UA	0-5 MA
0-200 UA	0-10 MA
0-400 UA	0-100 Volts
0-500 UA	

BUILD YOUR OWN TEST EQUIPMENT

with the MARION MULTI-RANGER METER

ACCURATE DURABLE DEPENDABLE

A GREAT VARIETY OF SIZES



Model 56
List $19.25

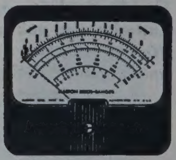
Model 57S
List $22.00

When it comes to TEST EQUIPMENT build your own with Marion Multi-Ranger Meters. They will solve your problem of finding reasonably priced instruments with the critical accuracy you demand for test equipment or other auxiliary equipment with multiple functions.

These Multi-Ranger Meters permit you to assemble a highly accurate instrument for use as a voltmeter, milliammeter, high and low resistance ohmmeter, AC voltmeter and decibel meter. — Build As Many Ranges As You Desire.

All instruments use Alnico Magnets, have full 100° three-color scales, feature the new, tough Marion "Bulldozer" moving system that insures long life under severe operating conditions plus the highest degree of accuracy.

Model 53SN
List $13.20



Model 55
List $16.50

MARION RESISTOR KIT LOW-PRICED! VERSATILE!

Contains: 18 Resistors Ranging from .4 Ohms to 750,000 Ohms. A Schematic Diagram for Constructing Your Own Test Equipment. It's easy to construct accurate, useful, versatile test equipment with the Marion Resistor Kit, used in conjunction with Marion Multi-Ranger Instruments.
List $13.75

SCALE RANGES POSSIBLE WITH STANDARD RESISTOR KIT

VOLTS AC-DC
0-10 Volts 0-50 Volts 0-250 Volts 0-1000 Volts

MILLIAMPERES
0-1 MA 0-10 MA 0-50 MA 0-500 MA

OHMS
0-500 Ohms 0-100 M 0-10 MEG 0-1 MEG

DECIBELS
−10 — +14 decibels +18 — +42 decibels
+ 4 — +28 decibels +30 — +54 decibels

ALSO AVAILABLE WITH VTVM SCALES

marion meters

MANUFACTURERS OF MARION *Ruggedized* PANEL METERS

MARION ELECTRICAL INSTRUMENT CO., 410 CANAL ST., MANCHESTER, N. H.

marion meters

MANUFACTURERS OF MARION *Ruggedized* PANEL METERS

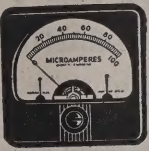
In Canada: H. Roy Gray, 44 Danforth Road, Toronto, Ontario

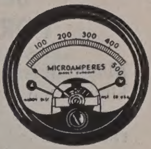
MARION STANDARD INSTRUMENTS

SERIES 52

Space saver, yet has superior damping characteristics. 2½" JAN Spec. round case (52N). Also available in standard 2½" square (Model 52S) or with narrow flange brass case for R.F. Shielding (Model 52RM). Dependable, extra strong — has well-aged Alnico magnet and heavy flanged construction. Popular for pocket test, portable radio, medical equipment and general electrical service where size and dependability count.

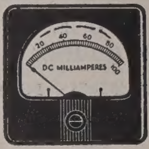
52N

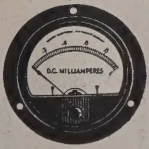

52S


52RM

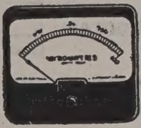
SERIES 53

Standard commercial 3½" rectangular type (53SN). Also available in 3½" JAN Spec., round case (53RN). All Alnico construction. Excellent scale distribution characteristics. Ideal for portable test equipment and general electronic equipment application.


53SN

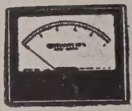

53RN

SERIES 55



Large, 4⅝" x 4⅛". Gives real microamp readability on 100° scale. Alnico V magnets for sensitive range; heavy Alnico for standard ranges. Extreme accuracy assured. Designed for permanent and portable test equipment.

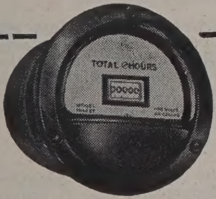
SERIES 56



New 6½" x 5¼" bakelite cased meter. Easy reading at a distance. Large open face has 100° scale in 5½" arc. Room for multirange scale if needed. Milliamp ranges are Alnico II constructed, Alnico V for microamps. Strong, accurate, efficient, dependable.

SERIES 57S

Superb milliameter — more than a mere overgrown 3 incher. 8½" x 7", open face, extra long scale. Enlarged pole shoes — higher torque movement — higher damping factor. Accurate within 1%. Used in large vacuum tube voltmeters, multitesters and production testing.



RUNNING TIME METER

Absolutely tamper-proof because it is hermetically sealed, glass to metal, in a drawn steel case, Marion's Running Time Meter registers operating time of machine tools, electronic, electrical or general industrial equipment. Registers in 1/10 hour steps to 9999.9 or hour steps to 99999. Moisture-proof, dust-proof. Powered by a durable, self-starting synchronous motor, available for 110-125, 220-250 volts . . . 50 or 60 cycle A.C.

RANGES—For The Models Illustrated

DC MICROAMPERES	DC MILLIAMPERES		DC AMPERES	DC MILLIVOLTS	DC VOLTS	AC VOLTS
0-20	0-1	0-250	0-1	0-15	0-1.5	0-5
0-30	0-1.5	0-250	0-1.5	0-25	0-3	0-15
0-50	0-3	0-800	0-3	0-50	0-5	0-50
0-100	0-5		0-5	0-100	0-10	0-150
0-200	0-10		0-10		0-15	0-250
0-500	0-15		0-15		0-25	0-500
0-800	0-25		0-25		0-50	
	0-50		Self-contained Shunts		0-150	
	0-100				0-250	
	0-200				0-500	

AVAILABLE IN ZERO CENTER AND OTHER RANGES ON SPECIAL ORDER

marion meters

MANUFACTURERS OF MARION *Ruggedized* PANEL METERS

MARION ELECTRICAL INSTRUMENT CO., 410 CANAL ST., MANCHESTER, N. H.

marion meters

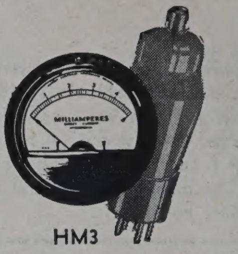
MANUFACTURERS OF MARION *Ruggedized* PANEL METERS

In Canada: H. Roy Gray, 44 Danforth Road, Toronto, Ontario

MARION HERMETICALLY SEALED METERS

SEALED LIKE A VACUUM TUBE FOR GUARANTEED PERFORMANCE

Magnetically shielded. 2½" x 3½". Dustproof and moistureproof. Unaffected by heat, cold, humidity. Made to JAN specifications, giving peak performance with critical accuracy. Interchangeable round and square colored flanges for different panel needs. One year unconditional guarantee on materials and workmanship. Extra guarantee for replacement of burned out or abused hermetically sealed meter. (On flat fee basis, $1.50 for 200 microamps upward; $2.50 if more sensitive than 200 microamps.)


HM3

HM2

RANGES

DC INSTRUMENTS

DC MICROAMPERES	DC MILLIAMPERES		DC MILLIVOLTS	DC VOLTS	
0-30	0-1	0-50	0-15	0-1.5	0-25
0-50	0-1.5	0-100	0-25	0-3	0-50
0-100	0-3	0-200	0-50	0-5	0-150
0-200	0-5	0-250	0-100	0-10	0-250
0-500	0-10	0-500		0-15	0-500
0-800	0-15	0-800			
	0-25				

AC INSTRUMENTS

0-5 Volts AC	0-150 Volts AC
0-15 Volts AC	0-250 Volts AC
0-50 Volts AC	0-500 Volts AC

MARION "4 FOR 1" FEATURE

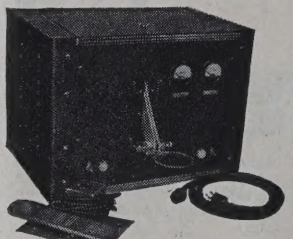
Interchangeable Round and Square Colored Flanges . . . one instrument can thus fill four different needs:

1. ROUND

2. ROUND FOR STEEL PANEL

3. RECTANGULAR

4. RECTANGULAR FOR STEEL PANEL



MARION PORTABLE BENCH TYPE INDUCTION SOLDERING UNIT

COMPACT . . . ADAPTABLE . . . EFFICIENT
ECONOMICAL . . . SAFE . . . EASY TO USE

FOR QUANTITY PRODUCTION

Use this low-cost, low-powered portable Marion Induction Heating Unit wherever production soldering of small metal parts and assemblies is required. It cuts costs by minimizing time, reducing labor, improving quality and eliminating the need for a high degree of skill. The unit has made a place for itself in the field of Radio, Electronics, Jewelry, Watches, Electrical Fixture Components, Toys, Automotive Parts, Household Fixtures and other fabrication applications requiring Small Part Assemblies.

FOR GLASS-TO-METAL SOLDERING

With the Marion Portable Bench-Type Induction Unit you can do glass-to-metal soldering on Resistors, Relays, Photo Cells, Meters, Capacitors, etc. It makes true hermetic sealing possible right in your own plant. Also, it is ideal for terminal, magnet and bearing assembly. It gives machinelike uniformity to a normally inexact operation.

ADVANTAGES

- Speeds soldering operations by generating heat within the work in localized area.
- Improves quality by producing cleaner work. Avoids oxidation and scaling.
- Prevents damage to surface finish. This is important in glass-to-metal applications.
- Permits soldering of an entire seam or several jig-located parts at one time.
- Provides complete control, timing or duplication of soldering processes.
- Prevents mistakes and reduces rejects.
- Provides local heat for otherwise inaccessible parts.
- Gives expert results with inexperienced operators.
- Saves time, money, effort. Draws only 775 watts and then only at full load. Only 100 watts are used on standby.
- Practically free from maintenance. No moving parts to wear out. Uses only low-priced, easily replaceable tubes. Has high safety factor.
- Offers less hazard but does a neater, cleaner, faster job. No danger of sparking or RF burns from output terminal or work coils.

SPECIFICATIONS

Power Supply: 115 volts, 60 cycle.
Size: 15¾" x 21½" x 15".
Mounting: Standard relay rack cabinet.
Weight: 150 pounds.
Power: 775 watts at full power output, 100 watts standby.
The entire unit is rigidly assembled and mounted to prevent arc-over and failure of components.

marion meters

MANUFACTURERS OF MARION *Ruggedized* PANEL METERS

MARION ELECTRICAL INSTRUMENT CO., 410 CANAL ST., MANCHESTER, N. H.

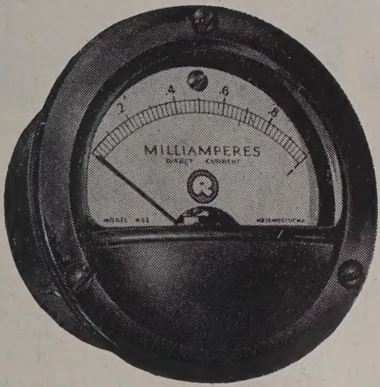
marion meters

MANUFACTURERS OF MARION Ruggedized PANEL METERS

In Canada: H. Roy Gray, 44 Danforth Road, Toronto, Ontario

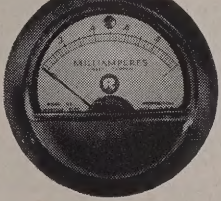
MARION RUGGEDIZED METERS

HERMETICALLY SEALED



New Marion ruggedized meters are an especially accurate and sensitive means for electrical measurement, even under extreme conditions of shock, vibration, mechanical stress and strain, weather conditions, and climate.

HS1 - 1½"

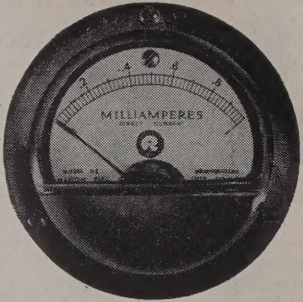


HS2 - 2½"

Ruggedized meters offer new freedom of application. They give faster response time, more sustained accuracy, lower bearing friction and longer life.

Ruggedized instruments meet the dimensional requirements of JAN I-6 and are completely interchangeable with existing 2½" and 3½" types. They are manufactured in standard 1½", 2½", and 3½" sizes.

When you want the finest in electrical instruments you can depend upon these new Marion ruggedized meters.



HS3 - 3½"

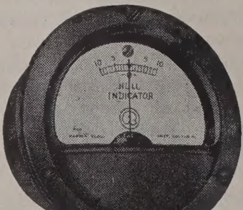
RANGES
DC INSTRUMENTS

DC MICROAMPERES	DC MILLIAMPERES	
0-30	0-1	0-50
0-50	0-1.5	0-100
0-100	0-3	0-200
0-200	0-5	0-250
0-500	0-10	0-500
0-800	0-15	0-800
	0-25	

DC MILLIVOLTS	DC VOLTS	
0-15	0-1.5	0-25
0-25	0-3	0-50
0-50	0-5	0-150
0-100	0-10	0-250
	0-15	0-500

AC INSTRUMENTS

0-5 Volts AC	0-150 Volts AC
0-15 Volts AC	0-250 Volts AC
0-50 Volts AC	0-500 Volts AC



NULL INDICATORS

Marion Ruggedized Hermetically Sealed Null Indicators are now available in models HS2 and HS3. They are used primarily as bridge and potentiometer balance indicators and in any application where an instrument with very high sensitivity about the zero or balance point is desired. The sensitivity at this point is 1 microampere per mm. or higher; the meter's shaded pole face and shielded core construction gives sharply logarithmic attenuation as it departs from null point, and provides ample overload protection. This Ruggedized meter opens up new applications for Null Indicators, for it permits use of the null system for precise measurement under field conditions that have been prohibitively severe up to now.

marion meters

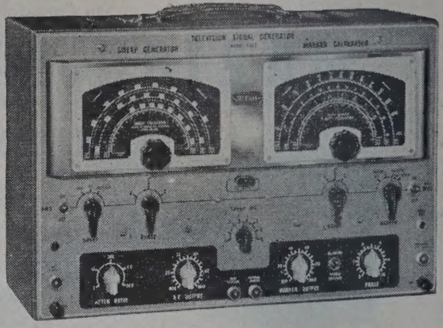
MANUFACTURERS OF MARION Ruggedized PANEL METERS

JACKSON "SERVICE ENGINEERED" TEST INSTRUMENTS

THE JACKSON ELECTRICAL INSTRUMENT CO., DAYTON 2, OHIO

TELEVISION SIGNAL GENERATOR

No other instrument has ever equaled the Model TVG-2 for quality, desirable and necessary TV alignment features. Just read these brief specifications and make comparisons.



Model TVG-2

Sweep Oscillator: Three convenient ranges, 2 MC thru 38 MC; 38 MC thru 108 MC; 174 MC thru 216 MC are all on fundamentals. Continuous tuning over all ranges. Large accurately calibrated dial with the TV channels clearly indicated. Reversible direction of sweep.

Sweep Width: Provided by electromechanical sweep. Adjustable from .1 MC thru 18 MC in 7 steps for fast resetability. Provides that extra width for badly detuned circuits.

Marker Oscillator: Accurately calibrated dial gives complete marker coverage from 4 MC thru 216 MC with all the Television IF frequencies on highly stable fundamentals.

Crystal Oscillator: Separate crystal oscillator for use either as marker or calibrator. Stable circuit oscillates on any crystal fundamental from 4 MC to 20 MC. Output is controlled by selector switch to provide variable marker, crystal marker or both for calibration purposes. A BEAT DETECTOR is also incorporated for audible or visual checking of beat between variable marker oscillator and crystal.

400 Cycle Modulation: Provided for use with either the variable or crystal marker so traps can be adjusted by either audible or meter method.

Oscilloscope Timing: A phased 60 cycle sine wave timing voltage is provided with PHASE CONTROL to provide adjustment of double pattern. BLANKING is also available for single pattern trace with reference base line for measurement.

Video Modulation: Provision made for insertion of video signal to modulate the external marker output making possible "rebroadcasting" of television signals on any channel. Also an audio signal may be used to produce horizontal or vertical lines for linearity checks.

RF Output: Completely controllable with output control and step attenuator. Output impedance 30 ohms. Complete flexibility right at your finger tips.

Size: Same height as other Jackson TV instruments. Dimensions 13" high, 8¼" deep, 19⅛" wide.

Finish and Weight: An all steel gray Ham-R-Tex cabinet — total net weight 30 pounds.

Dealer Net Price..................$245.00

5-INCH OSCILLOSCOPE Model CRO-2

Wide Band Amplifier: Flat within 1.5 db from 20 cycles thru 4.5 megacycles dropping smoothly to a still useful value at 6 megacycles. This feature is absolutely essential for correct showing of TV sync. pulses.

Vertical Deflection Sensitivity: Two ranges with three positions for each range. Has fully compensated attenuators. Excellent transient response. Each unit completely tested for "tilt" and "overshoot."

Sensitivity Ranges: With a band width of 20 cycles thru 100 KC, the sensitivity ranges are .018, .18, 1.8 RMS volts per inch. The wide band position 20 cycles thru 4.5 MC has sensitivity ranges of .25, 2.5, 25 RMS volts per inch.

Horizontal Deflection Sensitivity: Push-pull horizontal amplifiers have a sensitivity for all applications of .55 RMS volts per inch.

Vertical Input Impedance: 1.5 megohms, shunted by 20 micromicrofarads. Direct to plates balanced 6 megohms, shunted by 11 micromicrofarads.

Horizontal Input Impedance: 1.1 megohms.

Linear Sweep Oscillator: Saw tooth wave 20 cycles thru 50 Kilocycles per second in 5 steps. Sine wave sweep of 60 cycles also available. Provision for external sweep synchronization.

Input Calibration: A standard voltage is provided for use in determining unknown voltages. Permits peak-to-peak measurement of all waveforms.

Vertical Polarity Reversal: By merely flipping a switch you can reverse the polarity of the voltage being supplied to the vertical deflection plates, also provides a means for choosing either positive or negative sync. voltages.

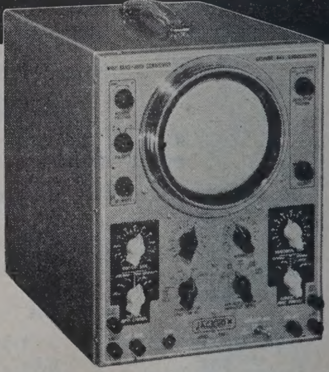
Return Trace Blanking: A new amplifier-timer combination for blanking return traces, providing a clearer, sharper image at all times. Prevents confusion in waveform analysis.

Synchronizing Input Control: Four input control positions, Internal — External — 60 cycle — 120 cycle.

Deflection Plate Connections: Direct connections thru capacitors for AC only to deflection plates of CR tube by means of terminal block at back of instrument.

Intensity Modulation: Either 60 cycle internal intensity modulation or external intensity modulation through binding posts on front panel.

Removable Calibration Screen: Clear plastic screen marked in grids of 1/10 inch per division. Easily removable.



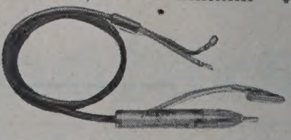
Accessory: Demodulation probe available for using scope as signal tracing instrument.

Size: Same height as other Jackson TV instruments. Dimensions 13" high, 10¼" wide, 15⅛" deep.

Finish and Weight: An all steel gray Ham-R-Tex cabinet — total net weight 26 pounds.

Model CRO-2, Dealer Net....$197.50

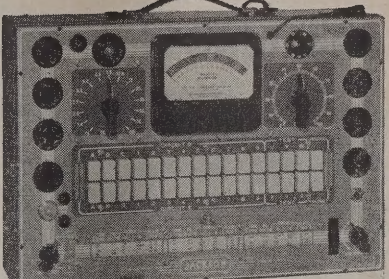
Model CR-P, Probe $9.95



JACKSON "SERVICE ENGINEERED" TEST INSTRUMENTS

THE JACKSON ELECTRICAL INSTRUMENT CO., DAYTON 2, OHIO

DYNAMIC TUBE TESTER



Model 648

This tester incorporates the most important engineering advancements in 12 years of tube tester research, such as the Dynamic test method and sequence switching. The Jackson Dynamic test circuit applies separate element voltages to each tube element. Separate load circuits are also used. These voltages and loads have been carefully selected for each tube to meet most ideally the normal operating condition of the tube. The current flowing only in the plate circuit of the tube under test is indicated on the 4 inch meter in easy-to-read terms.

Sequence Switching makes possible SIMPLIFIED OPERATION, formerly unattainable in Dynamic test methods. There are actually only three control units to be set according to rotary chart listing for each tube. These are: Heater Voltage (upper left), Plate Control (upper right) and the Sequence Switch (center). The only other adjustments are line voltage control and shorts test.

Fast, Accurate Shorts Test lamp indicates only when tube is shorted. The shorts test control moves only through 4 positions — yet completely tests each tube element for possible shorts or leakage. The tube is tested under a heated cathode condition.

Correct Test Voltage and Load Circuits protect tubes under test against damage by overload. Even low voltage battery types are provided with suitably low operating potentials. The full GOOD-BAD scale of the meter is used for each test. The meter is sufficiently sensitive that special "Low scale" readings are not required (such as for diodes, etc.).

Life-line test shows you accurate forecast of end of tube life. Reduced output caused by over-age gives reduced reading on meter. Lets you catch bad tubes before they actually go bad.

Steel cases and panels finished in gray Ham-R-Tex — approximate net weight of each model 16 pounds.

Counter-Base Only	**$6.00**
Model 648C (With Counter-Base)	**$99.50**
Model 648B (Bench-type steel case)	**$94.50**
Model 648P (Portable Tester in wood case)	**$99.50**

AUDIO OSCILLATOR Model 655

The model 655 provides an audio frequency voltage DEVELOPED AT ITS FUNDAMENTAL FREQUENCY. The basic design of this instrument is entirely different from the "beat frequency" type of Audio Oscillator.

FEATURES

Resistance Capacity Tuned Circuit Design, engineered for improved operating characteristics of audio measurements.

No Zero Adjustment — Tuned Fundamental Frequency method provides permanently locked calibration.

Output Characteristics — A choice of either transformer coupled or resistive output is available. The Model 655 meets the most exacting requirements as to **Waveform-Uniform Frequency Characteristics** and **Output Load Impedance Selection.** A special feature of the output system is the 10 ohm tap for low impedance circuits such as speaker voice coils, etc. **Variable Frequency Selection** throughout the four bands. There are over 33 inches of scale length making **Exact** settings possible.

Complete Stability — The stability of frequency calibration is constant throughout the entire range. The stabilized circuit permits large changes in line voltage to occur without affecting frequency or waveform and having negligible effect on output voltage.

Simplified Operation — It is only necessary to select desired **Frequency** and **Output. There Are No Other Controls** — The possibility of errors in operation is therefore eliminated.

High Output Power — More than **Three Times** the output usually available from ordinary audio oscillators.

Construction — Frequency dial is glass enclosed so that calibrations cannot become disfigured. Rugged mechanical features assure trouble free operation under service conditions.

SPECIFICATIONS

Frequency Range — 20 cycles to 200,000 cycles in 4 ranges: 20-200 cycles/200-2000 cycles/2000 to 20,000 cycles/20,000 cycles to 200,000 cycles.

Calibration — Logarithmic variation of frequency over the scale provides constant percentage accuracy at all frequencies.

Scale Length — Over 33 inches.

Output Impedance — Five values of output impedance: 10 ohms/250 ohms/500 ohms/5000 ohms/RESISTIVE. Controlled by selector switch.

Output Power — 500 Milliwatts (20 to 20,000 cycles transformer coupled).

Output Control — Continuously variable from zero to maximum.

Waveform — Less than 5% distortion at all frequencies between 30 and 15,000 cycles.

Frequency Characteristics — Plus or minus 1 DB 30-15,000 cycles using transformer coupled output.

Hum Level — Down more than 60 DB of maximum.

Accuracy — 3% or 1 cycle whichever is greater.

Tubes — 1-6G6G, 1-6SL7GT, 2-6V6GT, 1-5Y3GT furnished installed.

Dimensions — 13" wide x 9½" high x 9½" deep.

Dealer Net Price	**$135.00**

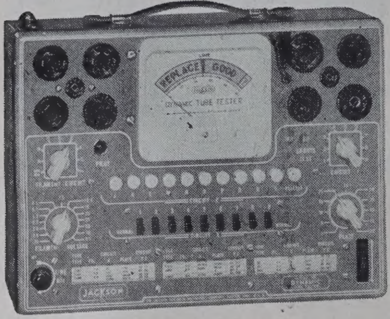
Net

JACKSON "SERVICE ENGINEERED" TEST INSTRUMENTS

THE JACKSON ELECTRICAL INSTRUMENT CO., DAYTON 2, OHIO

CHALLENGER DYNAMIC TUBE TESTER

Model 115



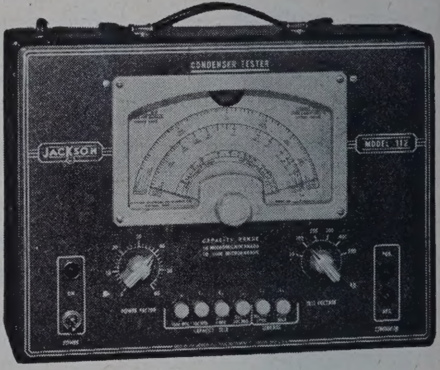
Uses famous Jackson Dynamic Test Principle. Applies separate element voltages to each tube element, making tests under actual use conditions. High Voltage Power Supply is a feature of this tester. By testing tubes at higher plate voltages (over 200 volts for some types) more accurate results are obtained. The improved switching system provides spare circuits, switch and socket positions for future use. Simplified operation, uses push-button and selector switch controls. Large 4" square meter for better readability. Complete shorts test. Tests all tubes (over 700 types) including television amplifiers and rectifiers. Built-in roll chart. Finished in attractive Challenger Green, with harmonizing Ivory knobs, meter cover and push-buttons. Free one year chart service on new tube types. Net weight 11 lbs.

Dealer Net Price..................$67.50

JACKSON

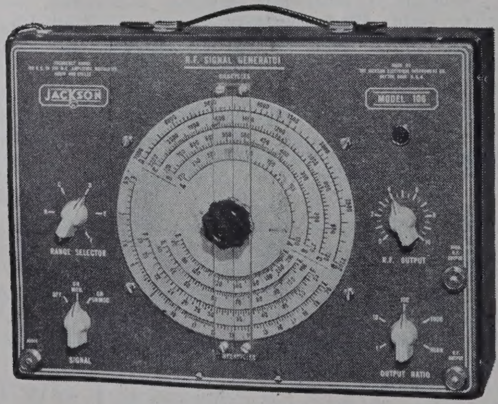
CHALLENGER CONDENSER TESTER

Model 112



This new instrument is push-button controlled, providing fast positive range selection for capacity and leakage tests. Checks all type faulty condensers — Electrolytic, Paper, Mica, etc. Using a new method for leakage tests, and eliminating the counting of flashes on the electron ray tube indicator. Six test voltages from 20 volts to 500 volts. Dial is glass-enclosed and equipped with the Jackson "Scale Expander" pointer which doubles effective scale length. Measures power factor on Direct Reading Scale calibrated from 0 to 60%. Ranges from .00001 to 1000 mfd. in four steps. Finished in beautiful Challenger Green Ham-R-Tex with ivory knobs and dial cover. Net weight 11 lbs.

Dealer Net Price..................$59.50



JACKSON

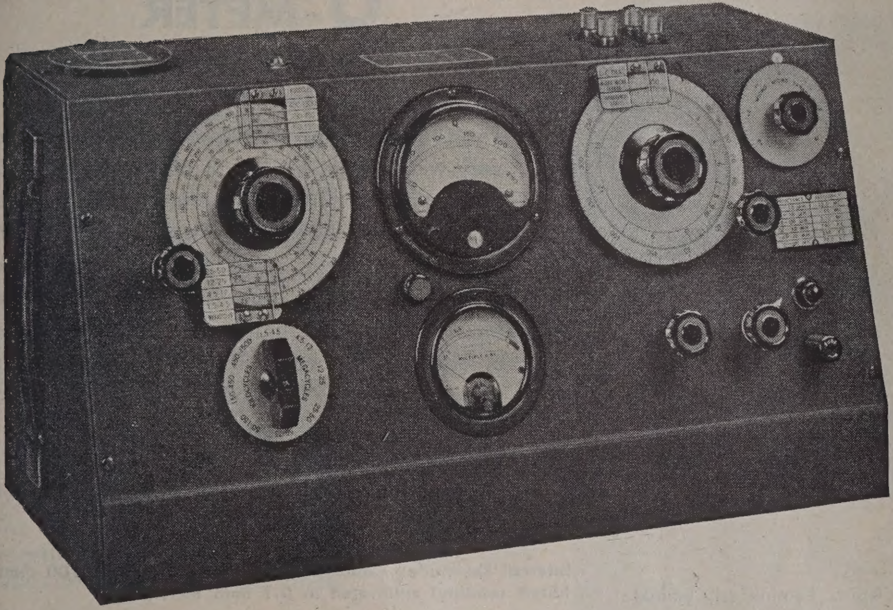
CHALLENGER TEST OSCILLATOR

Model 106

Standard AM Oscillator for testing AM and FM radios and using as auxiliary TV marker generator. Fundamental frequencies from 100 KC to 54 MC. Harmonics 54 MC to 216 MC. Two-circuit attenuator for controlling signal strength. Has 400 cycle audio modulation, or may be used for straight RF unmodulated signal. Accuracy is ½ of 1% on all ranges. Compare this popular priced factory calibrated Signal Generator with any competitive make or so-called "kits." Attractive Challenger Green Finish. Net weight 10 lbs.

Dealer Net Price..................$59.50

PRECISION INSTRUMENTS FOR THE RADIO AND ELECTRONIC INDUSTRY



Q-METER

TYPE 160-A

Freq. Range 50 kc. to 75 mc.

Radio frequency circuit design often requires the accurate measurement of Q, inductance, and capacitance values. For this application, the 160-A Q-Meter has become the universal choice of radio and electronic engineers throughout the country.

Each component part and assembly used in the manufacture of this instrument is designed with the utmost care and exactness. Circuit tolerances are held to values attainable only in custom built instruments.

The 160-A Q-Meter is designed specifically for the accurate and rapid measurement of Q, inductance, and capacitance. The basic method of measurement consists of measuring the voltage developed across a variable air capacitor connected as an element in a series resonant circuit. Essentially the Q-Meter is comprised of an 8 range RF oscillator, a Q measuring circuit with a main and vernier section tuning condenser, a vacuum tube voltmeter of special design which reads the voltage across the tuning condenser, and a voltage injection circuit which applies an accurately known voltage to the terminals of the series resonant circuit. In operation the Q circuit is resonated by means of the variable Q tuning capacitor and the voltage developed across this capacitor is indicated by means of the vacuum tube voltmeter which is calibrated directly in terms of Q. This method of measuring Q is simple, accurate, and requires only a single operation—resonating the circuit—to measure Q. Variations of this basic method of measurement are employed to determine effective inductance and capacitance as well as the dielectric properties of insulating materials.

SPECIFICATIONS

Oscillator Frequency Range: Continuously variable from 50 kc. to 75 mc. in eight self-contained ranges. (In conjunction with an external oscillator the frequency range of the Type 160-A Q-Meter may be extended from 50 kc. to 1 kc. for coil measurements).

Oscillator Frequency Accuracy: Generally better than ± 1%, except the 50-75 mc. range which is approximately ± 3%.

Range of Q Measurements: The Q voltmeter is calibrated directly in Q, 20-250. The "Multiply-Q-By" meter, which measures the oscillator voltage injected in the Q measuring circuit, is calibrated from x1 to x2 and also at x2.5. The reading of the Q voltmeter scale is multiplied by the setting of the "Multiply-Q-By" meter. Hence, the total range of circuit Q measurements is from 20 to 625. Condensers, dielectrics, etc., which are measured by placing these in parallel with the measuring circuit, may have Q's as high as 5,000.

Accuracy of Q Measurements: The accuracy of the direct reading measurement of circuit Q (for Q voltmeter readings between Q=50 and Q=250) is approximately 5% for all frequencies up to the region of 30 mc. and decreases with increasing frequency. Correction may be made for the error above 30 mc. as it is principally a frequency effect. The accuracy of the measurement of condensers, dielectrics, etc. is generally better than 10% for Q's below 5,000 and up to 30 mc.

Capacitance Calibration Range: Main Tuning condenser 30-450 mmf. calibrated in 1 mmf. divisions from 30 to 100 mmf. and in 5 mmf. divisions from 100 to 450 mmf. Vernier condenser, plus 3 mmf., zero, minus 3 mmf., calibrated in 0.1 mmf. divisions.

Accuracy of Capacitance Calibration: Main tuning condenser, generally better than 1% or 1 mmf., whichever is the greater. Vernier tuning condenser, ± 0.1 mmf. The internal inductance of the tuning condenser at the binding posts is approximately .015 microhenry.

Voltmeter: The Q voltmeter is also calibrated in volts. A specially calibrated tube, Type BRC 105-A tube, is used. Replacements may be made without recalibration.

Power Supply: 105-120 volts, 50-60 cycles. Also 210-240 volts, 50-60 cycles. Power consumption 50 watts.

Dimensions: Height 12.5", length 20", depth 8.5".

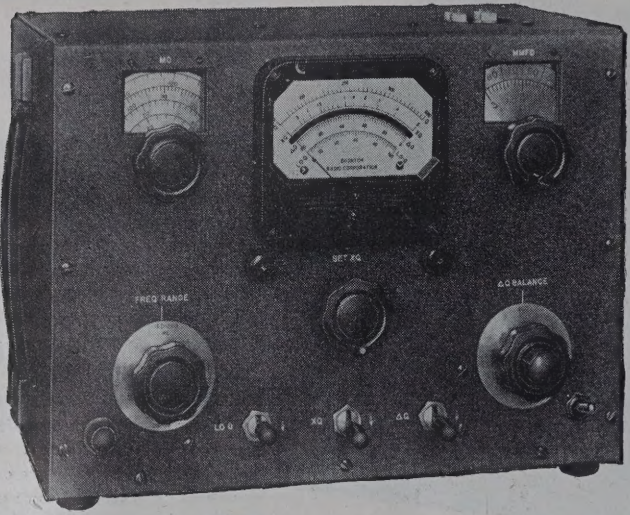
Weight: 25 lbs.

Price: $625.00, F.O.B. Boonton, N. J., U.S.A.

BOONTON RADIO Corporation
BOONTON·N·J·U·S·A·

Prices subject to change without notice

PRECISION INSTRUMENTS
FOR THE RADIO AND ELECTRONIC INDUSTRY



Q-METER

TYPE 190-A

Frequency Range 20 mc. to 260 mc.

The Q Meter Type 190-A measures Q over a very wide range at VHF. It also measures differences in Q between a reference circuit and other circuit configurations on a sensitive Differential Q Scale. All of the indications are made on a single parallax free meter. The internal variable condenser used to resonate external coils is calibrated at 0.1 mmf intervals and ten complete turns of the dial are required to cover the capacitance range. This new design includes the results of many years experience in the development and application of Q Meters.

SPECIFICATIONS

Frequency Coverage: 20 mc to 260 mc. Continuously variable in four ranges.

Frequency Accuracy: Calibrated to ± 1%.

Range of Q Measurements: 5 to 1200.

Range of Differential Q Measurements: 0 to 100.

Accuracy of Q Measurements: Circuit Q of 400 read directly on meter can be determined to accuracy of ± 5% to 100 mc and to ± 12% to 260 mc.

Internal Resonating Capacitance Range: 7.5 mmf to 100 mmf (direct reading) calibrated in 0.1 mmf increments.

Accuracy of Resonating Capacitor:
± 0.2 mmf to 20 mmf
± 0.3 mmf to 50 mmf
± 0.5 mmf to 100 mmf

Power Supply: 90-130 volts—60 cps (internally regulated).

Power Consumption—55 watts.

Weight: 24½ lbs.

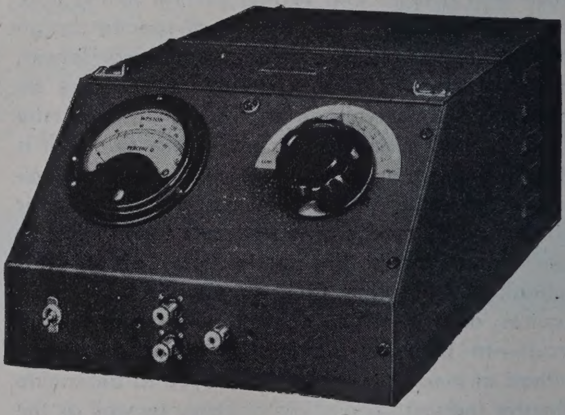
Price: $625.00 F.O.B. Boonton, N. J., U.S.A.

(Specifications subject to change without notice)

QX CHECKER TYPE 110-A

Frequency Range 100 kc. to 25 mc.

The QX-Checker is a production type test instrument specifically designed to compare reactance and relative Q of RF components with approved standards. The two factors, reactance and relative Q, are separately indicated, one on a meter and the other on a condenser dial, so that the deviation of either from established tolerances is immediately shown. Built to laboratory standards, the QX-Checker is a sturdy, fool-proof instrument for use in production work by factory personnel.



SPECIFICATIONS

Oscillator Frequency Range: 100 kc. to 25 mc. in 6 ranges using accessory plug-in coils (two coils furnished with each instrument).

Accuracy of Coil Checks: Coils may be checked against a standard to within about 0.2% with inductance values of 10 microhenries to 10 millihenries and Q of 100 or greater.

Capacitance Range: Capacitance values ranging between approximately 2-1000 mmf. may be checked against a standard to an accuracy of a few tenths of one mmf. if the Q of the capacitor is high.

Power Supply: 110-125 volts, 50-60 cycles, also 200-250 volts, 50 cycles.

Dimensions: Width 12¼", Depth 18", Height 8".

Weight: 26 lbs.

Price: $340.00, F.O.B. Boonton, N. J., U.S.A.

BOONTON RADIO Corporation
BOONTON · N · J · U · S · A ·

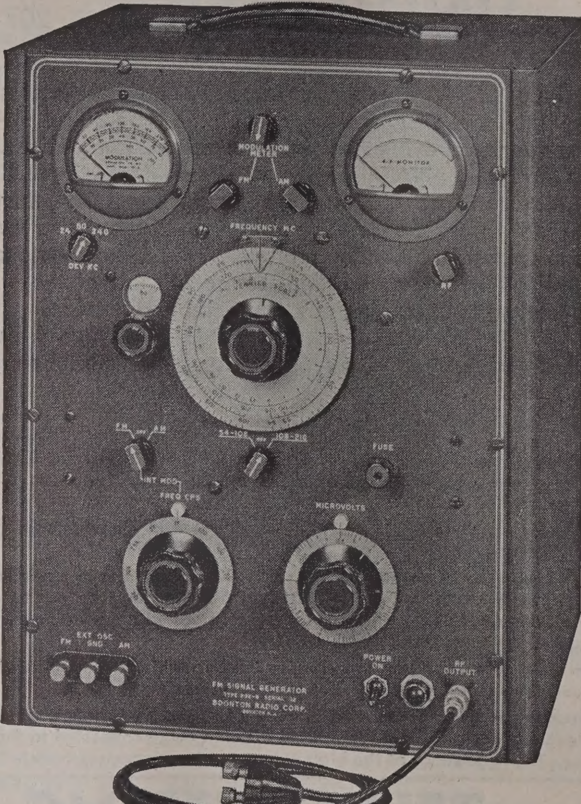
Prices subject to change without notice

PRECISION INSTRUMENTS
FOR THE RADIO AND ELECTRONIC INDUSTRY

FM SIGNAL GENERATOR

TYPE 202-B

Frequency Range 54 mc. to 216 mc.



The type 202-B FM Signal Generator has been developed to meet the needs of engineers engaged in the design of FM and television receivers for operation within the frequency range of from 54 megacycles to 216 megacycles.

This instrument has been proportioned for maximum conservation of laboratory bench space, with frequency dial, modulation and output meters positioned at eyelevel for maximum readability. The unit is finished in grey wrinkle enamel with engraved panel and is supplied complete with tubes and standard output cable.

SPECIFICATIONS

RF Range: Frequencies from 54 mc. to 216 mc. are covered in two ranges, 54-108 mc. and 108-216 mc.

Main Frequency Dial: The two RF ranges are calibrated directly in megacycles to an accuracy of within ± 0.5%. The dial is also divided in 24 equal divisions for use with the vernier frequency dial.

Vernier Frequency Dial: The vernier frequency dial is divided in 100 divisions and is geared to the main dial through a gear train having a 24:1 ratio. The approximate frequency change per vernier division is 26 kc. on the low range and 52 kc. on the high range.

Frequency Modulation (Deviation): The FM deviation is continuously variable from zero to 240 kc. The modulation meter is calibrated in three FM ranges (1) zero to 24 kc., (2) zero to 80 kc. and (3) zero to 240 kc. deviation.

Amplitude Modulation: The modulation meter is calibrated at 30% and 50% amplitude modulation. AM is continuously variable from zero to 50%.

Modulation Controls: Separate potentiometers are provided for continuous control of FM and AM levels.

Modulating Oscillator: The internal AF oscillator may be switched to provide either frequency or amplitude modulation; it may also be switched off. External binding posts permit the use of an external AF oscillator for either FM or AM. Both internal and external AF oscillators may be used simultaneously, thus providing either FM or AM at two modulation frequencies simultaneously or simultaneous FM and AM. The internal AF oscillator provides eight fixed frequencies which may be selected by a rotary type switch—50, 100, 400 cycles and 1, 5, 7.5, 10 and 15 kilocycles, accurate to within 5%. The output voltage of the internal AF oscillator is available at the external binding posts for synchronizing or other purposes.

RF Output Voltage: The RF output voltage is continuously variable over a range from 0.1 microvolt to 0.2 volts at the terminals of the output cable. The impedance at the RF output jack, looking into the instrument, is 53 ohms resistive. The output cable has a 53 ohm resistance termination at the terminal end hence the output impedance of the unit with cable attached is 26.5 ohms.

Distortion: FM distortion at 75 kc. deviation is less than 2% when modulated with the internal AF oscillator or an external AF oscillator having 0.5% distortion or less. At 50% amplitude modulation the distortion is about 5% using the internal AF oscillator and decreases as the modulation percentage is reduced. An external AF oscillator may be employed for amplitude modulation if desired.

Spurious RF Output: All spurious RF output voltages are at least 30 db. below the desired fundamental. The RF leakage is very low.

Fidelity Characteristics: The deviation sensitivity of the FM modulation system as a function of frequency is constant from dc. to over 10 kc. At 15 kc. the deviation as indicated on the modulation meter is 0.5 db. higher than the true value. The amplitude modulation system is also flat from dc. to 10 kc., and departs from nominal by 1.0 db. at 15 kilocycles.

Power Supply: The power supply is self-contained in the instrument for use on 60 cycles, 110 volts.

Accessories: 203-A Frequency Converter (Frequency range 0.4 mc. to 25 mc.).

Dimensions: Height: 17"; Width: 13½"; Depth: 11½".

Weight: 35 lbs.

Price: $975.00, F.O.B. Boonton, N. J., U.S.A.

BOONTON RADIO Corporation
BOONTON · N · J · U · S · A ·

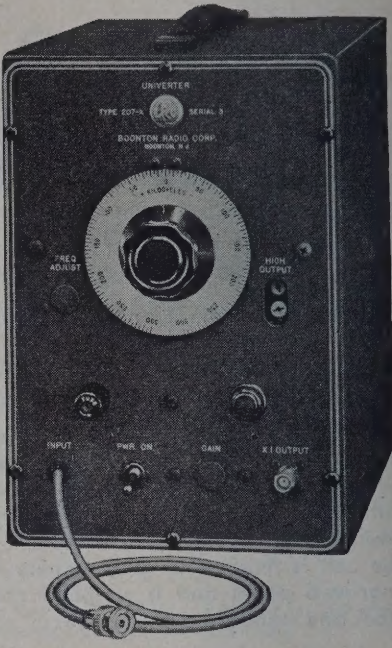
PRECISION INSTRUMENTS
FOR THE RADIO AND ELECTRONIC INDUSTRY

UNIVERTER TYPE 207-A

Frequency Range 0.1 mc. to 55 mc.

The Type 207-A Univerter, a frequency converter accessory having unity gain, was designed for use with the Type 202-B FM-AM Signal Generator to provide frequency coverage from 0.1 mc. to 55 mc. Thus the Type 207-A Univerter when used with the Type 202-B Signal Generator will provide complete FM-AM Signal Generator coverage from 100 kc. to 216 mc. This instrument also enables the frequency and amplitude modulation features of the 202-B instrument, as well as the attenuator calibration, to be utilized at these lower frequencies without causing any appreciable distortion.

The 207-A Univerter matches the 202-B FM Signal Generator in styling and finish, and is supplied complete with tubes and instruction book.



SPECIFICATIONS

RF Range: The Univerter, in combination with the 202-B FM Signal Generator, covers a frequency spectrum from 0.1 mc. to 55 mc. (0.3 mc. to 55 mc. with 200 kc. carrier deviation.)

Frequency Increment Dial: This dial is calibrated in increments of 5 kc. from plus 300 kc. through zero to minus 300 kc.

X1 Output: The RF output voltage at the X1 output jack is continuously variable from 0.1 microvolt to 0.1 volt across a 53 ohm load by means of the 202-B Signal Generator attenuator. The gain is constant within ±1 db over the frequency range of the instrument.

High Output: A front panel pin jack makes available an uncalibrated high voltage output. The voltage gain at this jack is approximately 7.5.

Output Impedance: The output impedance at the X1 jack is about 53 ohms, the impedance looking into a terminated 53 ohm cable connected to the jack is 26.5 ohms. The impedance at the high output pin jack is approximately 330 ohms.

Power Supply: The 207-A Univerter is designed for use on 50-60 cycles, 95-130 volts, 45 watts.

Dimensions: H: 11½" W: 7⅜" D: 10½"

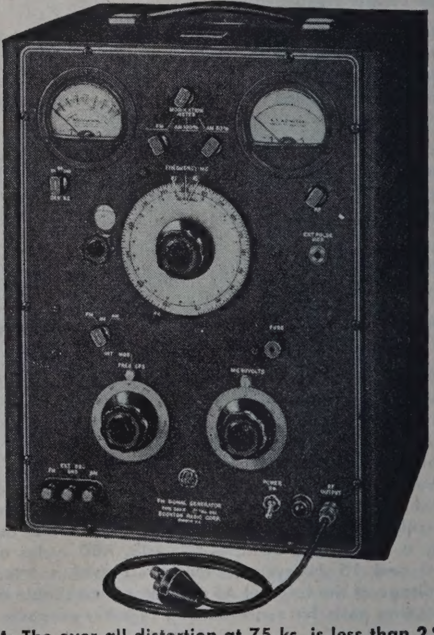
Weight: 20 lbs.

Price: $345.00 F.O.B. Boonton, New Jersey

TELEMETERING SIGNAL GENERATOR TYPE 202-D

Frequency Range 175 mc. to 250 mc.

The Type 202-D Signal Generator is a precise and reliable instrument well suited to the specialized requirements of telemetering engineers for rapidly analyzing and evaluating over-all system performance.



SPECIFICATIONS

RF Range: 175-250 megacycles in one range, accurate to ± 0.5%. Main frequency dial also calibrated in 24 equal divisions for use with vernier frequency dial.

Frequency Modulation (Deviation): The FM deviation is continuously variable from zero to 240 kc. The modulation meter is calibrated in three FM ranges: (1) 0-24 kc., (2) 0-80 kc., and (3) 0-240 kc. deviation.

Amplitude Modulation: Utilizing the internal audio oscillator amplitude modulation at any one of eight audio frequencies between 50 c. and 15 kc. may be obtained over the range of 0-50%, with meter calibration points at 30% and 50%. By means of an external audio oscillator the RF carrier may be amplitude modulated to substantially 100%. A front panel jack is provided which permits direct connection of an external modulating voltage source to the final stage for pulse and square wave modulation.

RF Output Voltage: The RF output voltage is continuously variable over a range from 0.1 microvolt to 0.2 volt at the terminals of the output cable. The impedance at the RF output jack, looking into the instrument, is 53 ohms resistive.

Distortion: FM: The over-all distortion at 75 kc. is less than 2% and at 240 kc. less than 10%. AM: The distortion present at the RF output for 30% amplitude modulation is less than 3% and for 50% AM less than 6.5. At 100% the distortion is 12% to 15% depending upon the modulating frequency.

Outside Cabinet Dimensions: 17" H, 13½" W, 11½" D.

Weight: 35 lbs.

Price: $980.00, F.O.B. Boonton, N. J., U.S.A.

BOONTON RADIO Corporation
BOONTON · N · J · U · S · A ·

Prices subject to change without notice

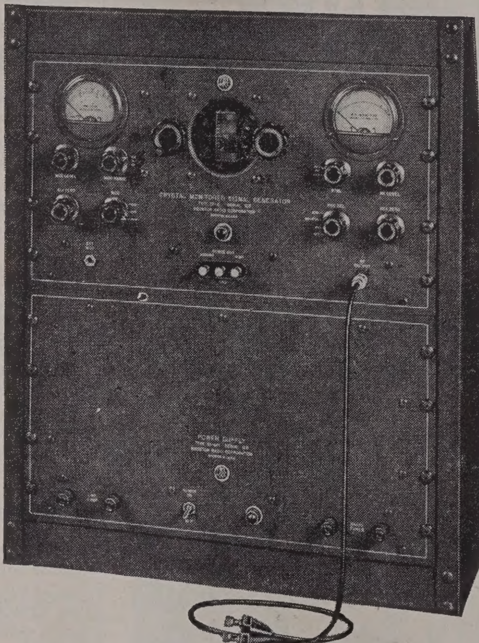
PRECISION INSTRUMENTS FOR THE RADIO AND ELECTRONIC INDUSTRY

OMNI RANGE

SIGNAL GENERATOR

TYPE 211-A **Frequency Range 88 mc. to 140 mc.**

The Type 211-A Signal Generator is specifically designed for the testing and calibrating of omni-range radio receiving equipment. It is also well suited for laboratory and development work where a precision type amplitude modulated R.F. signal source is required.



SPECIFICATIONS

Frequency Range: Master Oscillator: 88-140 megacycles in one range. Vernier frequency dial has 100 divisions and is coupled to the main tuning capacitor through a 120:1 gear drive. Each vernier division is equivalent to a 10 kc. change in frequency.

Crystal Controlled Frequencies: Either of two crystals 110.100 mc. and 114.900 mc., accurate to ± 0.0035%, may be selected by a switch for use individually or in combination with the master oscillator to standardize its output frequency.

Amplitude Modulation Characteristics: Two amplitude modulation ranges, 0-30% and 0-100%, are provided for use with the internal oscillator or a low distortion external oscillator. Distortion is 5% or less at 95% amplitude modulation.

Internal Audio Oscillator: Two modulating frequencies, 400 and 1000 cycles.

Modulation Amplifier: The internal modulating amplifier has the following characteristics:

Uniform response within ± 0.5 db.	**30 cycles to 11 kc.**
Uniform response within ± 0.1 db.	**90 cycles to 150 cycles.**
Uniform response within ± 0.1 db.	**9500 cycles to 10.5 kc.**

Phase Distortion: (up to 60% amplitude modulation.)

Less than 0.25 degrees at 30 cycles.

Less than 10 degrees at 11 kc.

Audio Test Voltage: This instrument contains a demodulator or detector which supplies to front panel terminals a portion of the demodulated carrier.

Spurious FM: Less than 1 kc. at 60% AM.

Output Attenuator: Single ended piston type, adjustable from 0.2 volt to 0.1 microvolt. Output impedance as seen looking in at terminals of output cable is 26.5 ohms. (Relay Rack not included.)

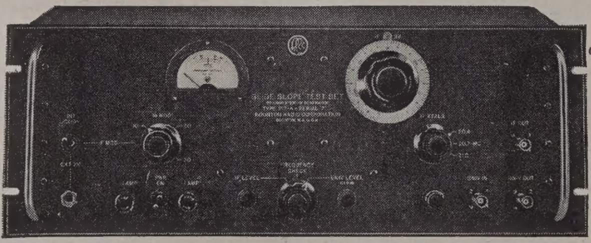
Price: $1800.00, F.O.B. Boonton, N. J., U.S.A.

GLIDE SLOPE TEST SET

TYPE 212-A **Freq. Range 329—335 mc.**

The Type 212-A Glide Slope Test Set has been developed for use with the Type 211-A VHF Signal Generator to provide additional frequency coverage from 329 mc. to 335 mc. for testing glide slope receivers. Three crystal spot frequencies are also provided for checking the intermediate frequency sections of these receivers.

Basically, the Type 212-A Test Set may be considered as having two separate systems, (A) a unity gain radio frequency converter (or Univerter) which adds 200 megacycles to the input frequency from the 211-A Signal Generator and (B) a crystal controlled I.F. Signal Generator.



SPECIFICATIONS

A—Univerter:

Frequency Range: 329 mc. to 335 mc.

Maximum Input Signal: 0.1 volt (0.05 volt modulated to 100%).

Input Impedance: 53 ohms, unbalanced.

Output Frequency: Input Frequency plus (200.000 mc. ± 0.005%).

Amplitude: The output into a 53 ohm load can be set equal to the input signal (± 1 db) in the frequency range 329 to 335 mc.

RF Monitor Meter: A center scale type front panel meter indicates the RF output voltage variations when the input is held constant at 0.1 volt.

Envelope Distortion: Less than 5% for an 0.05 volt signal modulated 95%.

Output Impedance: 53 ohms unbalanced.

B—IF Generator:

Output Frequencies: 20.700 mc. ± .0035%; 20.400 mc. ± .005%; 21.000 mc. ± .005%.

RF Output: Continuously variable from 1 microvolt to 1 volt across a 53 ohm unbalanced load by means of a piston type attenuator.

RF Monitor: Continuous monitoring with the same set-to-line type meter used with the Univerter.

Amplitude Modulation Capabilities: A maximum of 30% modulation can be obtained by means of an external signal source capable of developing 2 volts across a 250.000-ohm load, or by means of the self-contained 1000 cycle source.

Power Requirement: 105-125 volts, 50-60 cycles, 40 watts.

Weight 27½ lbs.

Dimensions: Panel, 19" Wide x 7" High. Depth, 10½" over-all. Unit designed for rack mounting and supplied with dust cover.

Price: $875.00, F.O.B. Boonton, N. J., U.S.A.

BOONTON RADIO *Corporation*

BOONTON·N·J·U·S·A·

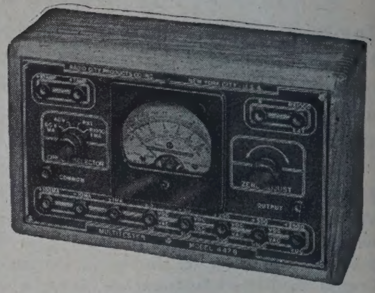
Prices subject to change without notice

RADIO CITY PRODUCTS CO., Inc.

NEW YORK 1, N. Y.

TEST EQUIPMENT

MODELS 447B AND 447BP - AC-DC MULTITESTER



The exceptional value in the 447B Model is made possible by the tremendous quantities produced. The resulting very low price is responsible for its great popularity. These units are in a class with other makes of testers that sell for considerably more.

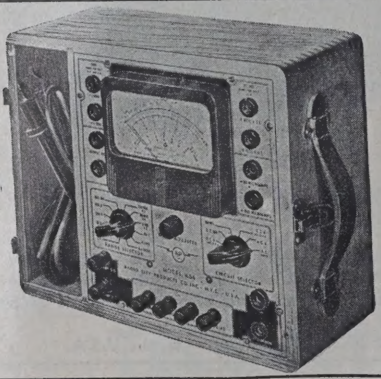
A 3" square D'Arsonval meter is used, having an accuracy of 2%. Accuracy of AC voltage measurements are improved by use of a new gold plated copper oxide rectifier.

RANGES

DC VOLTMETER: 0-5-50-250-500-2500 Volts.
AC VOLTMETER: 0-10-100-500-1000 Volts.
OUTPUT VOLTMETER: 0-10-100-500-1000 Volts.
DC MILLIAMMETER: 0-1-10-100-1000 MA.
DC AMMETER: 0-1-10 Amperes.
OHMMETER: 0-10,000 Ohms—1 Megohm—10 Megohms Ext.
DECIBEL METER: —8 to +55 decibels.

MODEL 447B—Open face instruments supplied in hardwood case. Size 5"x8½"x3". Weight 21 oz. Complete with batteries, ready to operate. Net Price........... $17.95

MODEL 447BP—Portable type supplied in hardwood case with carrying handle, cover and test leads. Size 6½" x 8½" x 4½" Weight 24 oz. Complete with batteries, ready to operate. Net Price........... $21.95



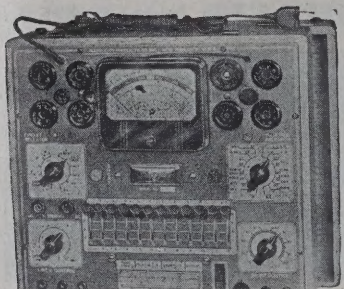
MODEL 488-A *All Coverage* DELUXE MULTITESTER

The one best multitester covering all requirements (40 ranges) in the TV-FM and general radio and electrical service fields.

LOWEST VOLTAGE SCALE DIVISION—0.05 v.
DUAL SENSITIVITY—20,000 ohms per volt—8 voltage ranges; 1,000 ohms per volt—7 voltage ranges.
A.C. Measurements of CURRENT—by current transformer method—very low impedance so as not to change normal circuit current.
Shunts and multipliers are matched for an accuracy within 1%.
OHMMETER—completely self-contained—no soldering for battery replacement. Ranges—0-3,000-300,000 ohms 0-30 megohms.
DC VOLTMETER—20,000 ohms per volt—0-3-12-60-300-600-1200-6000 volts.
DC VOLTMETER—1000 ohms per volt—0-3-12-60-300-600-1200-6000 volts.
AC VOLTMETER—0-3-12-60-300-600-1200-6000.
DC MICROAMMETER—0-60-300.
DC MILLIAMMETER—0-3-20-120-600.
DC AMMETER—0-12.
AC AMMETER—0-3-6-12.
OUTPUT VOLTMETER—0-3-12-60-300-600-1200.

Complete with Test Leads. Natural finish oak carrying case ready to use.

$61 50 NET



MODEL 807 COMBINATION TUBE AND SET TESTER

This advance design combines all of the features of new Model 323 Free Point Dynoptimum Tube Tester with a complete modern multitester set and condenser tester.

Has unique advantage of burn out protection. Power Supply has fuse protection and meter has fuse protection.

RCP's reputation for value in combination tube and set testers is not only nation wide but world wide. Thousands and thousands of the 800 series testers are in use. New Model 807 is the best of all in performance and value.

Tube Tester—identical to Model 323.

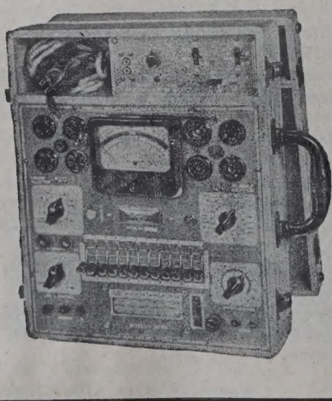
Condenser tester tests paper-mica and electrolytic condensers for leakage.

MULTITESTER RANGES:

DC VOLTMETER—0-10-50-500-1000-2500.
AC VOLTMETER—0-10-50-500-1000-2500.
DC MILLIAMMETER—0-10-100-1000.
DC AMMETER—0-10.
DECIBEL METER—8 to + 15, 15 to 29, 29 to 49, 32 to 55.
OHMMETER—0-500-5000 ohms, 0-0.1-1-10 megohms.

Housed in handsome hand-rubbed carrying case with test leads — batteries, etc. — complete, ready to operate. Size 12½ x 12¾ x 4¾ inches. Weight 12¼ lbs. Net Price....................

$79 50 NET



MODEL 8773 - SERVISHOP

EQUIVALENT TO A COMPLETE SERVICE SHOP

- ★ Tube Tester
- ★ Condenser Tester
- ★ Set Tester
- ★ AM Generator
- ★ FM Generator
- ★ AF Generator
- ★ Fuse Protected Meter

Never before has there been available an up-to-date tube tester for testing modern, miniature, novel base and sub-miniature tubes with the new, speedy Rollindex Roll Chart —combined with a complete multitester measuring AC and DC volts—DC milliamperes and amperes—ohms and megohms, decibels and output volts and also a condenser tester, AM signal generator, FM signal generator and audio oscillator.

The amazing fine performance of this equipment is the result of the latest engineering design in the 807 combination tube and set tester combined with the all purpose Model 730 signal generator.

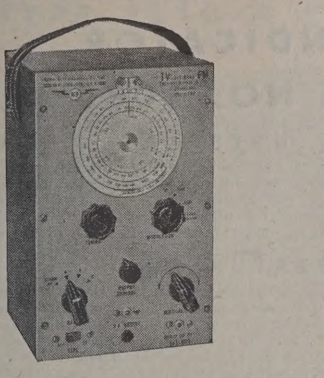
Model 8773—Complete with tubes, batteries and test leads, output leads, etc.—housed in beautiful natural finish oak case. Weight 18 lbs. Overall size 16½" x 12¾" x 5¼". An outstanding value at all times at..

$99 95 NET

RADIO CITY PRODUCTS CO., Inc.

NEW YORK 1, N. Y.

TEST EQUIPMENT



MODEL 740 TV "DO-ALL" GENERATOR

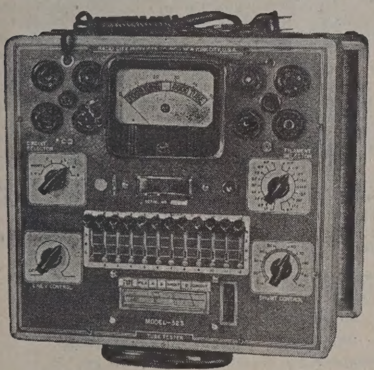
TELEVISION • FM • AUDIO • TV MARKER • TV PATTERN

This is the only single easily portable instruments that provides for alignment of:

1. Front Ends	**5. Picture Size**
2. IF's	**6. Picture Position**
3. Horizontal Linearity	**7. Focus Coil**
4. Vertical Linearity	**8. Ion Trap**

Covers every band, every channel of Television and FM receivers—VHF—all on Fundamental Frequencies.

RANGE: 9 Megacycles to 220 Megacycles with skips ALL FUNDAMENTALS—Bands 9-11 Megacycles, 21-47 Megacycles, 54 to 220 Megacycles.
ACCURACY: Better than 1/10 of 1 per cent tolerance on 9-11 Megacycles frequencies, and better than 1/2 of 1 per cent on 21 to 220 Megacycles. An excellent Marker-Generator.
PATTERN GENERATOR: Modulation can be either Horizontal Bar—Vertical Bar or Cross-Hatch.
TUNING: Dial is continuously calibrated through 340, giving an extremely long calibration scale; enables easy reading and tuning. Each TV channel is marked specially on the dial, facilitating alignment.
AUDIO OUTPUT: Both 540 Cycles and 220.5 KC are available.
ATTENUATION: Complete variation through 200 ohm control.
Unusually fine circuit design — rugged mechanical construction.
Complete ready to operate—105-125 volts—60 cycles. Size: 10x6x6
Weight: 9 lbs. Net Price **$69.50**



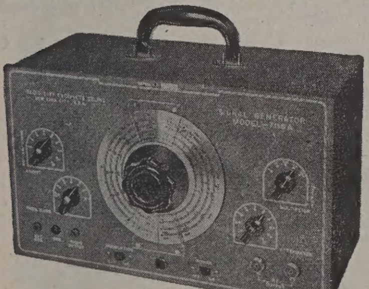
MODEL 323 - New Dynoptimum Free Point TUBE TESTER

Very latest design in an accurate, speedy tube tester that protects against obsolescence in the event of new tubes with more elements or different positioning of elements, etc.; includes new 8 prong subminiature socket. Extreme free point flexibility permits any socket terminal to be used for any tube element and allows detailed open short-leakage tests of each element as well as filament-heater continuity tests. Ten active lever switches take care of every receiving tube now on the market. Two more spare lever switches are provided (12 in all) for ample capacity for all future additions. Two extra socket blanks provide spares for possible future additions for tube base designs. TESTS modern tubes, miniatures, subminiature—mobile transmitting—hearing aid—ballasts—pilot lights—gaseous rectifiers—tuning indicators. New Rollindex—fast operating, smooth running, roll chart with approximately 1000 tube listings. Neon lamp indicator—quick checking of short-leakage on each individual tube element. Famous Dynoptimum Test for accuracy on 4½ inch meter, 1 milliampere sensitivity. A beautiful instrument that will enhance any test bench or store counter.

MODEL 323C—Open style metal case, easily portable. Size 12⅛x11⅞x4". Weight 9½ lbs. Net Price **$54.95**

MODEL 323 P-C — Combination portable — counter model—in beautiful oak carrying case with slip hinge cover. Size 12½x12¾x4¾". Weight 11 lbs. Net Price **$58.95**

MODEL 323M — Tube merchandiser in large counter handsome steel case. Net Price **$87.95**



MODEL 706A - SIGNAL GENERATOR

NEW! "WIDE RANGE" SIGNAL GENERATOR

This new signal generator provides highly satisfactory performance in continuous coverage of 150 KC to 220 M.C. in 8 ranges. Six fundamental ranges cover up through 55 Megacycles. ACCURACY maintained within 1% of calibration adjustment and recalibration is readily available by air trimmers. STABILITY and Constancy of calibration is assured by special electron-coupled circuit design, permeability, adjusted coils and air trimmer capacitors. SHIELDING—Thorough shielding of all critical circuits and components either individually or in compartment or both. This includes oscillator tube, coil assembly, attenuator, switching circuit. Transformer is electrostatically shielded. UNMODULATED SIGNAL—Available if desired. MODULATION—400 cycle sine wave audio oscillator with per cent modulation continuously variable from 0% to 80%. Above 80% modulation has no practical application because tremendous distortion occurs in all signal generators. External modulation can be used through input jack provided for same. AUDIO OSCILLATOR output at 400 cycles available for external use—terminals on panel—at 50 ohms output impedance. OUTPUT—High and low level. ATTENUATION—Ladder type step attenuator consisting of a multiplier and fine attenuator control. DIAL—Eight Scales distinctly calibrated—continuity of easy reading from 150 Kilocycles to 220 Megacycles. Planetary drive gives vernier tuning with no backlash. Tube Complement—6BA6 — 6SJ7 — 6X4. A high quality instrument in performance—construction and appearance—size 15" x 9" x 7" — weight 14 lbs.
Complete with tubes and accessories for operation on 105-130 volts 60 cycles. Net Price **$67.50**

NEW MODEL 654 V.T. VOLTMETER

A 17 range instrument—employs an electronic balanced bridge type push pull circuit and draws negligible current from any circuit because of high impedance of 25 megohms. It is a V.T. voltmeter for A.C. measurements, as well as D.C.

A discriminator alignment scale with zero center permits operation in both directions. Ohmmeter measurements—0.2 ohm to 1000 megohms in 5 ranges.

DC VOLTS: 0-5-25-100-250-1000.
AC VOLTS: 0-5-25-100-250-1000.
DB: —20 to 16, —6 to 30, 6 to 42, 14 to 50, 26 to 62.

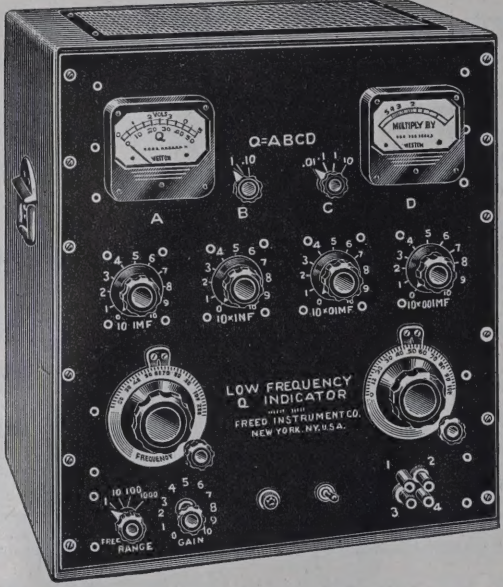
Complete with isolation probe and leads for operation on 105-130 volts, 50-60 cycles. Attractive grey and white finish in steel panel and case. Size 10"x6"x5". Weight 8½ lbs. Net Price **$57.50**

for PRECISION **FREED TEST INSTRUMENTS** *for* QUALITY

FREED TRANSFORMER CO., INC., 1718-36 WEIRFIELD ST., BROOKLYN (RIDGEWOOD) 27, N. Y.

LOW FREQUENCY "Q" INDICATOR

TYPE NO. 1030



USES

The Type 1030 Low Frequency "Q" Indicator measures directly the "Q" factor of coils. The instrument can also be used to measure the inductance of coils, distributed capacity, impedances, and dielectric losses. The "Q" Indicator can be used to study the magnetic properties of iron, such as stability of iron cores in function of applied voltages, and iron losses as a function of the frequency.

FEATURES

The main and essential feature of the instrument is that the "Q" factor is read directly without any complicated computations. The possibility of measuring "Q" through the whole audio and supersonic frequency range is provided. The setting up and the measuring of the "Q" of coils is practically instantaneous. The instrument is unaffected by line voltage variations, is entirely self-contained and A.C. operated. Both meters ("multiply-by" and "Q") are protected against overloads and cannot be burned out. The effective frequency range for "Q" measurements is 50 to 50,000 cycles. Due to the fact that the R. C. Oscillator frequency range is from 20 to 200,000 cycles, comparative "Q" Measurements can be made below 50 cycles and above 50,000 cycles. Since the "Q" factor appears as a relative quantity, i.e., a ratio of two voltages, the tracking of the two meters is such that a reasonably good accuracy of "Q" factors is obtained for frequencies above 50,000 cycles. The terminals of the variable decade condensers are available directly on the front panel of the instrument and can therefore be used as a high quality precision variable condenser. The R. C. Oscillator and variable impedance amplifier can be used as a separate low frequency generator with a maximum output power of five watts into a 50 ohm load. The "Q" scale is calibrated from 0 to 50. A high accuracy of measurement is obtained, since for any position of the multipliers, a total of "Q" variation from 0 to 50 is read on a 4 inch meter. "Q" factors of coils can be measured with up to 50 volts across the coil, and therefore makes it possible to determine the stability and the variations of the "Q" factor of coils in function of the applied voltage. The voltage fed into the series circuit is variable from 10 volts to .01 volt.

SPECIFICATIONS

Range of "Q" Measurements: The range of "Q" factors is from .5 to 500 over the frequency range from 50 to 50,000 cycles. The accuracy of "Q" measurement is approximately 5% for frequencies up to 50,000 cycles.

Oscillator Frequency Range: Continuously variable from 20 to 200,000 cycles in four ranges.

Frequency Accuracy: 1% under normal temperature conditions. The frequency stability is better than 2% over a long period of time.

Output Impedance and Voltage: Four output impedances are available.

(a) 10 ohms impedance — 10 V Output Voltage
(b) 1 ohm impedance — 1 V Output Voltage
(c) .2 ohm impedance — .1 V Output Voltage
(d) .1 ohm impedance —.01 V Output Voltage

Those Impedances are measured at 50,000 cy.

Variable Condenser: The variable condenser is composed of a 10 x 1 mf., 10 x 0.1 mf., 10 x 0.01 mf., 10 x 0.001 mf. decade condenser and a 0.001 mf. variable air condenser.

Power Supply: The instrument is entirely self-contained and A.C. operated. Total consumption 200 watts.

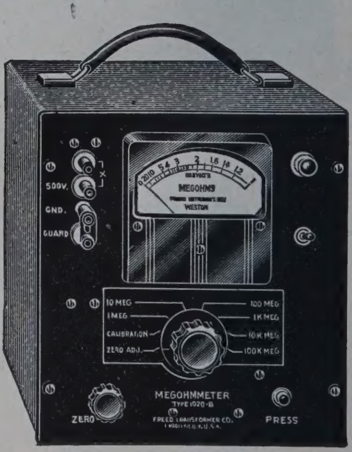
	W.	D.	H.
Dimension	19½"	14½"	23"
Weight	120 lbs.		

TYPE 1020-B MEGOHMMETER

USES: The Freed Type 1020-B Megohmmeter is a self contained and a-c operated instrument equally useful in the laboratory or for production testing of the leakage resistance of insulation materials, condensers, cables, motors and transformer windings.

FEATURES: Resistance values indicated directly on a four inch meter protected against over-load.

Rapid and safe to use, test voltage removed from terminals and capacitive component discharged to ground in all positions of multiplier switch. Low resistance in series with component under test provides very short charging time for even the very largest capacitors. Calibration position provided to check accuracy of 500 volts d-c potential.
500 volt test supply electronically regulated.



SPECIFICATIONS

Range: 1 megohm to 2,000,000 megohms in six overlapping ranges selected by a multiplier switch.

Accuracy: Plus or minus 3% on resistance values up to 100,000 megohms; plus or minus 5% from 100,000 to 2,000,000 megohms.

Voltages on Unknown: The voltage applied to the unkown terminals is 500 volts d-c and is independent (less than 1%) of the value of the unknown.

Stability: Line voltage variations from 105-125 volts will cause less than 2% variation in the meter reading.

Power Supply: 105-125 volts A.C. 50-60 cycles 30 watts.

Dimensions: 9½ x 10½ x 8 inches.

Net Weight: 18 pounds.

For Freed Transformers, please refer to Section N, pages N-98 to N-116

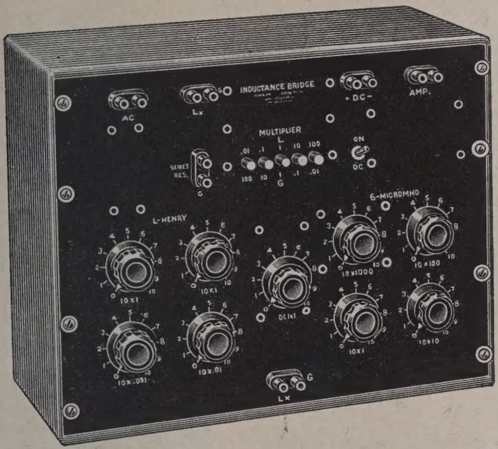
for **PRECISION**

FREED TEST INSTRUMENTS

for **QUALITY**

FREED TRANSFORMER CO., INC., 1718-36 WEIRFIELD ST., BROOKLYN (RIDGEWOOD) 27, N. Y.

TYPE 1110-A INCREMENTAL INDUCTANCE BRIDGE



USES

The Incremental Inductance Bridge is designed for measuring the inductance of Iron Core components at any frequency up to 10,000 cycles. Inductors can be measured with a superimposed direct current, therefore, the bridge will measure the incremental inductance of coils. The bridge can be used for determination of storage factor, "Q", either at a given frequency in function of the applied voltage or at a given voltage in function of the applied frequency. The bridge can be used by the manufacturers of iron core components, such as filter chokes, high Q coils, and iron core audio and supersonic frequency components. Due to its very wide inductance range the instrument can be used as a general purpose laboratory inductance bridge.

SPECIFICATIONS

Inductance Ranges: One millihenry to one thousand henries in five ranges. Inductance values are read directly from a four dial decade and a multiplier switch. The last range may be extended to 10,000 henries through the use of an external resistance.

Conductance Ranges: One micromho to one mho in five ranges, read directly from a four dial decade and a multiplier switch. This conductance represents the reciprocal of the A.C. resistance of the coil.

"Q" Range: "Q" is measured as the product of Inductance (L) and Conductance (G). The range of "Q" measured on the bridge is 0.5 to 100. Measurement of inductance is independent of the values of "Q".

Accuracy: 1% through the frequency range from 60-1000 cycles 2% for frequencies from 1000 to 10,000 cycles. This accuracy is decreased for extreme positions of the multiplier. Conductance measurements 5% from 60-1000 cycles.

Frequency Range: The bridge is calibrated and adjusted at both 60 and 1000 cycles, but can be used at any frequency up to 10,000 cycles. Errors resulting from stray capacity increase with frequency. Coils having a high inductance should be measured at a low frequency to avoid resonance effect.

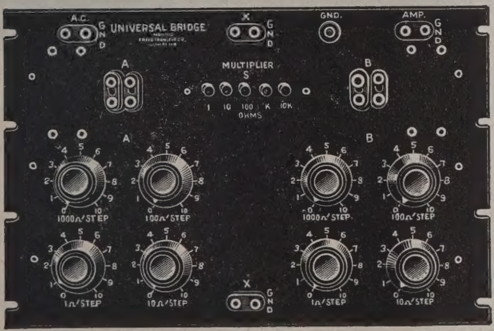
Range of Superimposed D.C.: On multiplier switch position L X 100 the D.C. is limited to 10 ma.
On the position L X 10, the D.C. is limited to 250 ma.
On all other positions the D.C. can be one ampere maximum.

Mounting: The bridge is supplied in a walnut cabinet or on special order for standard rack mounting.

		W H D
Dimensions:	Rack:	19" x 8" x 14"
	Cabinet:	21" x 8" x 14⅝"

Net Weight: Rack—37 lbs.; Cabinet—48 lbs.

TYPE 1150 UNIVERSAL BRIDGE



FEATURES

The Universal Bridge offers a variety of five possible bridge circuits. A wide range of capacitance, inductance, impedance, and phase angle measurement can be made throughout the frequency spectrum from 20 cycles to 20,000 cycles. By using decade resistors in the variable arms the unknown can be measured tc four significant figures.

Operation is simple and both terminals and controls are arranged for convenience and ease of measurements.

SPECIFICATIONS

Frequency Range: The bridge can be used at frequencies from 20 cycles to 20,000 cycles.

Accuracy: All resistors of the bridge arms are adjusted to 0.1%. The absolute accuracy of measurement will depend upon the accuracy of standards used.

Inductance Range: The bridge will measure inductance of coils from 0.1 mh to 1000 henries with an accuracy of 0.5% at 1000 cycles.

Capacitance Range: Condensers from .001 mf to 1 mf can be measured to within 0.5% at 1000 cycles. Condensers below .001 mf should be measured by the substitution method.

Mounting: The bridge is supplied in a walnut cabinet or on special order for standard rack mounting.

	W D H
Dimensions:	19" x 8½" x 12"

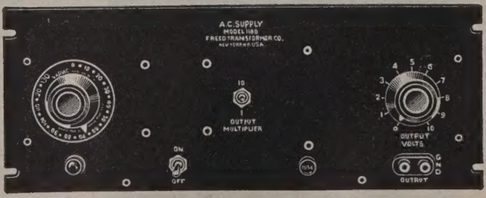
Weight: 32 lbs.

NO. 1180 A.C. SUPPLY

A valuable laboratory instrument with continuously variable output from 1/10 volt to 100 volts at 60 cycles.

Dimensions: Width—19"; Depth 5"; Height 7"

Weight: 13½ pounds.

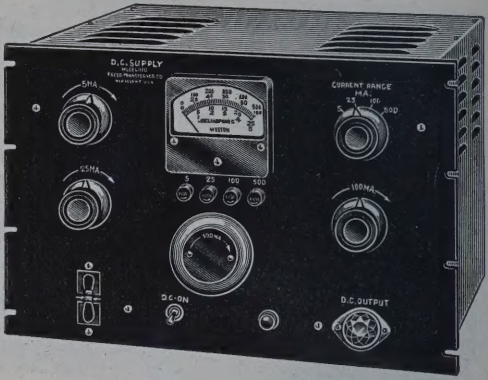


For Freed Transformers, please refer to Section N, pages N-98 to N-116

for **PRECISION** **FREED TEST INSTRUMENTS** *for* **QUALITY**

FREED TRANSFORMER CO., INC., 1718-36 WEIRFIELD ST., BROOKLYN (RIDGEWOOD) 27, N. Y.

TYPE NO. 1170 D.C. SUPPLY



USES

The Type 1170 Power Supply is intended to be used as a dependable source of direct current for the Incremental Inductance Bridge Type No. 1110A. The supply can also be used as a general laboratory substitute for a high voltage storage battery.

DESCRIPTION

The Type 1170 D.C. supply consists of an electronically regulated high voltage supply. Four independent control circuits provide four current ranges, namely 5 milliamperes, 25 milliamperes, 100 milliamperes and 500 milliamperes. The output current is indicated by a multirange 4″ meter.

SPECIFICATIONS

Current Ranges: Four current ranges—5, 25, 100 and 500 milliamperes.
Voltage Ranges: The maximum no load voltages corresponding to the four current ranges are the following: 500 MA—270 volts, 100 MA—270 volts, 25 MA—55 volts, 5 MA—25 volts. On both 500 MA and 100 MA range with the control set to zero. the output voltage is independent of the load.
Voltage Regulation: The unit operates from a 115 volts, 50-60 cycle line. For a line variation of plus or minus 10%, the output voltage shall not vary more than ±1½%.
Power Consumption: Under 500 MA full load the power consumption is 360 watts. Under no load conditions the consumption is 150 watts.
Hum Level: On the 270 volt, 500 milliampere range the hum level under full load condition is 6 millivolts which corresponds to —93 Db.
Mounting: The instrument is supplied for mounting on a 19 inch relay rack or for cabinet mounting.
Dimensions: Rack: 19″ W. x 12 3/16″ D. x 12¼″; Cabinet: 21½″ W. x 15″ D. x 14″ H.
Net Weight: Rack Mounted—68 lbs. In Cabinet—89 lbs.

NO. 1210 NULL DETECTOR AND VACUUM TUBE VOLTMETER

USES

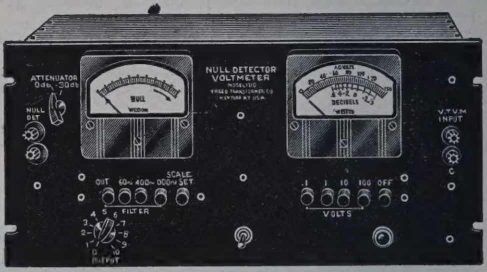
The Type 1210 Null Detector and Vacuum Tube Voltmeter is primarily designed for bridge measurements. The Null Detector indicates the balance of the bridge, and the Vacuum Tube Voltmeter indicates the voltage across the unknown two terminal or four terminal network. The three selective circuits provide means for sharply tuning the instrument to audio frequencies commonly used for measurements. The Vacuum Tube Voltmeter can be used as a general purpose audio Vacuum Tube Voltmeter.

DESCRIPTION

The Type 1210 Null Detector and Vacuum Tube Voltmeter is a combination of the Model 1140 Null Detector Amplifier, and a modified model 1060 high input impedance Vacuum Tube Voltmeter. Both instruments are independent and feed two separate 4″ meters.

SPECIFICATIONS

NULL DETECTOR
Input Impedance: 1 megohm in parallel with 25 mmf.
Frequency Response: 2 Db from 20 to 20,000 cycles—5 Db at 50,000 cycles.
Null Detector Sensitivity: At 1000 cycles, 100 microvolts will give a 15% meter deflection.
Selective Amplifier: 23 Db second harmonic attenuation at 60 cycles, 400 cycles and 1000 cycles.
VACUUM TUBE VOLTMETER
Voltage Ranges: .01 volts to 100 volts in four ranges—(.1—1—10—100 volts at ¾ of scale.)
Accuracy: 2% of full scale on all four ranges.
Waveform Error: The instrument is a full wave average meter and is free of turnover effects. For small amounts of distortion the accuracy of the instrument is independent of the waveform.



Frequency Range: 20 cycles to 20,000 cycles (1 Db).

Input Impedance: Equivalent to 50 megohms resistance in parallel with a 15 mmf condenser.

Meter Scale: Voltage scale calibrated from 0 to 150. Decibel scale calibrated from—6Db to +3 Db.

Dimensions: Rack Mounting 19″ x 9″ x 11½″.

Net Weight: 25 Lbs.

MODEL 1140 NULL DETECTOR-AMPLIFIER

NULL DETECTOR
ATTENUATOR 0db -30db
SCALE SET
NULL
INPUT
OUTPUT
60~ 400~ 1000~
SCALE SET NULL DET AMP
GAIN
FILTER
FUNCTION

USES

The Freed Model 1140 Null Detector Amplifier is a sensitive null indicator for bridge measurements, providing visual null indications or aural when used in conjunction with headphones. The unit may also be used as a high gain amplifier for general laboratory work.

DESCRIPTION

Functionally the instrument consists of a high gain linear amplifier with a 30 db. input attenuator in addition to the variable gain control. A four inch panel meter provides visual null indications, the response of the meter circuit is approximately logarithmic over a 40 db. voltage range. Resonant circuits tuned to 60, 400 and 1000 cycles limit the amplifier transmission characteristics to the three audio frequencies commonly used for bridge measurements.

SPECIFICATIONS

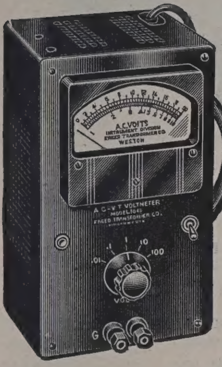
Input Impedance: 1 megohm in parallel with 25 mmf. GAIN: 98 db. with 1 megohm load (6 mmf. shunt capacity), down 1.5 db. at 25,000 cycles, down 5 db. at 50,000 cycles, down 2 db. at 20 cycles.
Null Detector Sensitivity: At 1 Kc. 100 microvolts will give a 15% meter deflection.
Selective Amplifier: 23 db. second harmonic attenuation at 60, 400 and 1000 cycles.
Output Impedance: Approximately 50,000 ohms.
Output Voltage: 40 volts undistorted into 1 megohm load, 10 volts into 20,000 ohms.
Power Supply: 105-125 volts, 50-60 cycles, 35 watts consumption.
Mounting: This instrument can be supplied in cabinet model (Type No. 1140) or in a standard relay rack mount with dust cover (Type No. 1140R).
Dimensions: (Type No. 1140) 13½″ x 8½″ x 10″ overall; (Type No. 1140R) 19″ L. x 7″ W. x 9″ D.
Weight: 24 lbs.

For Freed Transformers, please refer to Section N, pages N-98 to N-116

MODEL 1040 A.C.-V.T. VOLTMETER

USES

The type 1040 Vacuum Tube Voltmeter is a high impedance wide frequency range voltmeter which can be used at audio and supersonic frequencies. It is particularly recommended for (1) vibration studies involving very low frequencies, (2) frequency characteristics and gain measurements on amplifiers, (3) transmission losses on telephone circuits: filter and carrier systems up to 250,000 cycles, and (4) acoustic measurements, such as, determination of frequency response of microphones and loudspeakers. Because of the high sensitivity of the instrument, the voltmeter can be advantageously used as a null detector in A.C. bridge measurements. In addition to its use as a voltmeter, the instrument can be used as an ammeter to measure a wide range of currents by connecting it across suitable resistors.



FEATURES

Because of the low input capacity, a high value of input impedance is maintained over the five ranges of the voltmeter. A balanced rectifier, a balanced D.C. amplifier circuit, and a high amount of degeneration throughout the amplifier makes it independent of line voltage variations and changes in tube characteristics. A very important feature of the instrument is the logarithmic voltage scale of the meter. With this type of scale, the percentage accuracy of reading is uniform over the entire scale. Another advantage of the logarithmic scale is that it provides a uniform decibel scale which is a very valuable feature in sound and communication measurements. A zero adjustment and full scale adjustment are provided. These two controls serve for all ranges and no re-setting is necessary when switching from one range to another. The time constant of the instrument is adjusted in order to read very low frequencies of 7 to 10 cycles without any vibration of the needle. The circuit of the meter is arranged so that it can not be burned out by any overload of the instrument. The vacuum tube voltmeter is small, compact, entirely self-contained, A.C. operated.

SPECIFICATIONS

Voltage Ranges: .001 volts to 100 volts in five ranges (.01, .1, 10, and 100 volts full scale).

Accuracy: 2% on full scale on all five ranges, on sinusoidal voltages.

Waveform Error: The instrument is a peak voltmeter calibrated to read RMS values. On distorted waveforms, the percentage deviation of the reading from RMS values may be as large as the percentage of the harmonics present.

Frequency Ranges: 10 to 200,000 cycles, .1 db. variation from 20 cycles to 150,000 cycles: .50 db. variation from 10 cycles to 200,000 cycles.

Input Impedance: Equivalent to 500,000 ohm resistance in parallel with a 15 MMF. condenser.

Stability: Effect of variation in line voltage from 100 volts to 125 volts is 1%. Effect in changes of tubes is less than .5%.

Scale: Logarithmic voltage scale calibrated from 1 to 10 plus a linear decibel scale calibrated from 0 db. to 20 db.

Meter: 4″ suppressed zero 1 MA meter protected against overloads.

Power Supply: The instrument is entirely self-contained and operates on 100-125 volts, 50-60 cycles. Total consumption, 40 Watts.

Dimensions: 4⅞″ High x 5⅝″ Wide x 9⅞″ Long.

Weight: 12 pounds.

NO. 1010 COMPARISON AND LIMIT BRIDGE

USES

This instrument is a comparison and limit bridge for use in both laboratory and production testing of resistors, condensers and inductors. The manufacturer of these components can use it for production tests, the user for incoming inspection and acceptance tests. The instrument is particularly useful for laboratory work (bridge or filters) where very accurate components are required.

FEATURES

For precision and production testing, the bridge has many advantages. Power line operation and the visual indicator make the instrument completely self-contained. It can be used in noisy locations. Its small size and light weight permit the instrument to be moved easily and to be set up wherever necessary.

SPECIFICATIONS

1—Frequency: Three frequencies are available: 50-60 cycles, 1000 cycles, and 10,000 cycles.

The 50 or 60 cycles are taken from the line. The 1000 and 10,000 cycles are generated by an oscillator and are accurate to within 10%.

2—Range: Two comparison ranges are provided: 10% and 20%. They are selected by a rotary switch. In the 10% position the percentage is read directly on a calibrated dial. In the 20% position the reading of the dial is multiplied by two.

3—Resistor Measurements: Resistors from 10 ohms up to 1 megohms are measured by the comparison method at 60 cycles. Resistors of greater value than 1 megohm can be measured by using the instrument as a limit bridge.

4—Condenser Measurements: Condensers from 500 micromicrofarads up to 10 microfarads are measured by the comparison method at 1000 cycles. Condensers above 10 microfarads are measured by the comparison method at 60 cycles.

Small condensers 500 micromicrofarads to 25 micromicrofarads are measured at 1000 cycles, with the instrument used as a limit bridge.

5—Inductor Measurements: Inductors can be measured at 60 cycles, 1000 cycles or 10,000 cycles depending upon their values.

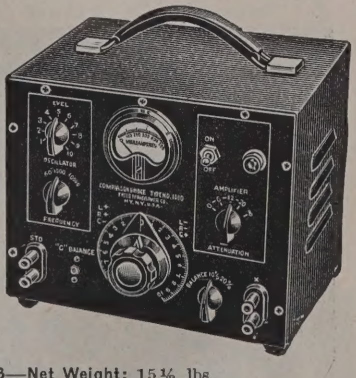
Ranges:

100Hy to 1 Hy	60 cycles
1Hy to .01 Hy	1,000 cycles
.01Hy to .1mHy	10,000 cycles

6—Accuracy: On the 10% position the components can be adjusted to within an accuracy of .5%.

8—Power Supply: 105 to 125 volts, 50-60 cycles. The power consumption is 40 watts.

12—Portable: Carrying cabinet of all metal construction.



13—Net Weight: 15½ lbs.

14—Dimensions: 10½″ x 8¾″ x 12″.

For Freed Transformers, please refer to Section N, pages N-98 to N-116

for **PRECISION**

FREED TEST INSTRUMENTS

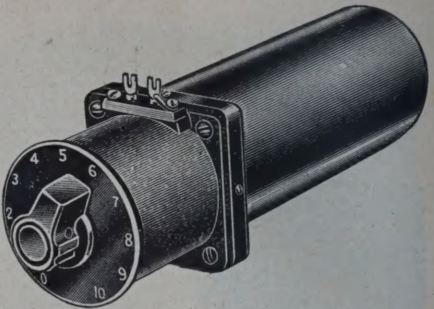
for **QUALITY**

FREED TRANSFORMER CO., INC., 1718-36 WEIRFIELD ST., BROOKLYN (RIDGEWOOD) 27, N. Y.

DECADE INDUCTORS

10 MH/STEP
1MH/STEP
.1MH/STEP
DECADE INDUCTOR
FREED TRANSFORMER CO.

Primarily designed for use in wave filters, tuned circuits and equalizers for audio and supersonic frequencies. The stability, accuracy and high value of "Q" makes these Decade Inductors invaluable laboratory instruments.



No. 1160
10 x 1. HY Steps
10 x .1 HY Steps
10 x .01 HY Steps
500-15,000 Cycles

No. 1161
10 x .1 HY Steps
10 x .01 HY Steps
10 x .001 HY Steps
2000-50,000 Cycles

No. 1162
10 x .01 HY Steps
10 x .001 HY Steps
10 x .0001 HY Steps
10,000-300,000 Cycles

No. 1164
10 x 10 HY Steps
10 x 1 HY Steps
10 x .1 HY Steps
50-1000 Cycles

No. 1163—3 Unit Decade Inductor
10 x .1 HY, 10 x .01 HY, 10 x .001 HY.
Frequency Range, 500-15,000 cycles.
Q=60 @ 1,000 cycles.

No. 1280—3 Unit Decade Inductor
10 x .1 HY, 10 x .01 HY, 10 x .001 HY.
Frequency Range, 500-15,000 cycles.
Q=160 @ 1,000 cycles.

No. 1310—3 Unit Decade Inductor
10 x 1 HY, 10 x .1 HY, 10 x .01 HY.
Frequency Range, 500-15,000 cycles.
Q=160 @ 1,000 cycles.

No. 1342—3 Unit Decade Inductor
10 x 10 HY, 10 x 1 HY, 10 x .1 HY.
Frequency Range, 200-2,000 cycles.
Q=80 @ 500 cycles.

No. 1260—4 Unit Decade Inductor
10 x 1 HY, 10 x .1 HY, 10 x .01 HY, 10 x .001 HY.
Frequency Range, 500-15,000 cycles.
Q=60 @ 1,000 cycles.

No. 1290—4 Unit Decade Inductor
10 x 1 HY, 10 x .1 HY, 10 x .01 HY, 10 x .001 HY.
Frequency Range, 500-15,000 cycles.
Q=160 @ 1,000 cycles.

No. 1270—10 x 1 HY.
Frequency Range, 500-15,000 cycles.
Q=160 @ 1,000 cycles.

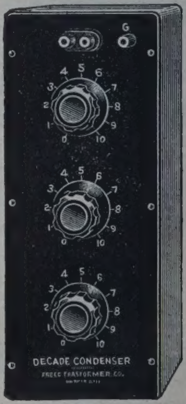
No. 1240—10 x .1 HY.
Frequency Range, 500-15,000 cycles.
Q=160 @ 1,000 cycles.

No. 1230—10 x .01 HY.
Frequency Range, 500-15,000 cycles.
Q=160 @ 1,000 cycles.

No. 1220—10 x .001 HY.
Frequency Range, 500-15,000 cycles.
Q=160 @ 1,000 cycles.

No. 1341—Decade Inductor, 10 x 10 HY
Frequency Range, 200-2,000 cycles.
Q=80 @ 500 cycles.

NO. 1250 DECADE CONDENSER

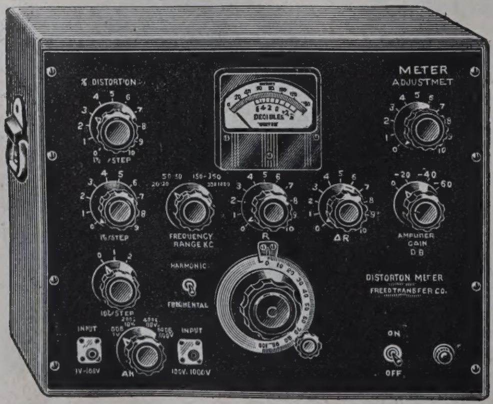


High quality Decade Condenser designed for use in Wave Filters, Tuned Circuits and Equalizers for Audio and Supersonic Frequency.

The stability, accuracy and low dissipation factor make this Condenser Decade an invaluable laboratory instrument. 1.110 mf in 0.001 mf steps ±1% accuracy. Maximum Voltage 500 peak.

Dimensions: Width 6"; Depth 4½"; Height 13¾"
Weight: 8 pounds.

NO. 1410 HARMONIC DISTORTION METER



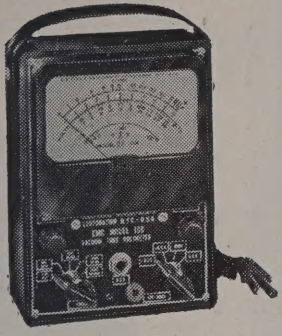
FOR CARRIER FREQUENCIES

Frequency range 20,000 cycles to one megacycle. Harmonic distortion range from 1/10% to 30%. Maximum input voltage 1000 volts. The instrument is self-contained and A.C. operated.

Dimensions: Width 19½"; Depth 10¼"; Height 15"
Weight: 45 pounds.

For Freed Transformers, please refer to Section N, pages N-98 to N-116

EMC Test Equipment Gives More Measurement Value Per Dollar



VACUUM TUBE VOLTMETER

EMC MODEL 106

✓ check these features...

- Specially designed for field alignment of television and radio sets.
- Uses dual triod balanced bridge circuit.
- All functions and ranges completely electronic — meter cannot burn out.
- Zero center position for FM discriminator alignment.
- Uses 1% precision resistors for voltage multipliers.
- 5 DB ranges.
- Full scale deflection of 1½ volts for both AC-DC volts.
- Measures resistance in 5 ranges from .2 ohm to 1000 megs.
- 1 meg. isolating resistor in probe. Housed in compact, portable bakelite case, 4¼" x 5¼" x 2⅞", net wt. 3 lbs.

SPECIFICATIONS:

AC VOLTAGE—5 Ranges: 0 to 1.5, 10, 100, 300, 1000 volts. Input resistance 2 megohms. Frequency response flat from: 25 to 100,000 cycles.

DC VOLTAGE—5 Ranges: 0 to 1.5, 10, 100, 300, 1000 volts (up to 30,000 volts with accessory probe. OHMS: 1000-10,000-100,000-10 megohms, 1000 megohms. 10 megohms center on 1000 megohms range.

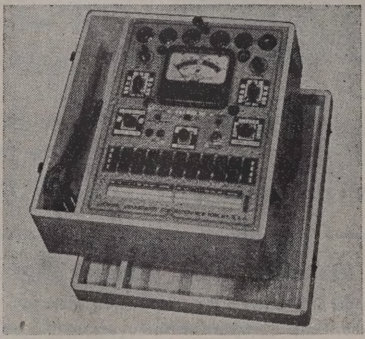
DECIBELS—Ranges: —24 to —1.5, —8 to +15, +12 to +35, +21.5 to +44.5, +32 to +55.

MODEL 106 Illustrated	**$35.90**
MODEL 106 In Kit Form	**$23.90**
MODEL RFP High Frequency Probe (useful to 200 megacycles)	**$ 6.95**
MODEL HVP 30,000 Volt Probe for Model 106	**$ 8.75**

E M C MUTUAL CONDUCTANCE TUBE TESTER — MODEL 206

Check These Features

- √ Checks mutual conductance on a calibrated micromho scale, as well as an a "Reject-Good" scale.
- √ Checks 5 element tubes as pentodes.
- √ Checks tubes for gas content.
- √ Sufficient plate current to check both emission and mutual conductance.
- √ Detects both shorted and open elements.
- √ Complete switching flexibility allows all present and future tubes to be tested regardless of location of elements on tube base.
- √ Tests tubes for radio frequency and other noise.
- √ Tests all tubes from .75 volts to 117 filament volts.
- √ Tests all loctal, octal, and miniature tubes.
- √ Tests cold cathode, magic-eye, voltage regulator tubes, ballast resistors.
- √ Instrument is fused, and fuse is easily replaceable from front of panel.
- √ Individual sockets for each tube base type eliminates possible errors.
- √ Checks individual sections of multi-purpose tubes.
- √ Attractive four-color panel with plenty of eye-appeal. Hard wrinkle finish for durability.
- √ Checks sub-miniature tubes.
- √ Uses lever types switches.



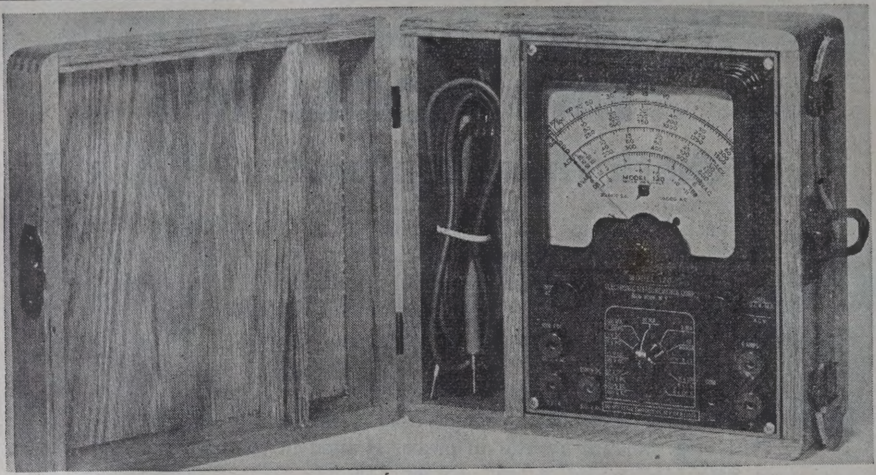
E M C Series 206 Mutual Conductance TNBE TESTERS

	Net Prices
Model 206 C—4½" meter in sloping counter case with built-in chart	**$79.50**
Model 206 P—4½" meter in hand-rubbed carrying case with built-in chart	**$83.50**

For 220 V. operation add **$8.00** to above prices.

ELECTRONIC MEASUREMENTS CORP.
280 Lafayette Street New York 12, N. Y.

EMC Test Equipment Gives More Measurement Value Per Dollar



MODEL 120

20,000 ohms per volt

The ONLY 20,000 ohms per volt instrument that gives:

1. WIDEST resistance range (.2 ohm to 300 megs.).
2. HIGHEST AC voltage sensitivity (10,000 ohms per volt).
3. LOWEST PRICE—$29.95, open face model; $34.95 for Model 120-P (portable).

Other Features Include:

1. AC voltage frequency range 30 cycles to 1 megacycle.
2. Rectifier and battery replaceable without soldering iron.
3. No external source of power needed for AC voltage measurements.
4. Special precision voltage multipliers accurate to 1%.

Model 120 (Open Face)	**$31.95**
Model 120-P (Portable Oak Case)	**$36.95**

Specifications:

- DC volts at 20,000 ohms per volt: 0-3v, 0-15v, 0-60v, 0-300v, 0-1500v, 0-6000v.
- AC volts at 10,000 ohms per volt: 0-6v, 0-30v, 0-120v, 0-600v, 0-3000v, 0-6000v.
- DC current: 0-60 microamps, 0-6ma, 0-60ma, 0-600 ma, 0-6 amps.
- Resistance: 0-3000, 0-300,000, 0-3 megs, 0-300 megs.
- Decibles: —4 to +11, +10 to +25, +22 to +37, +36 to +51, +50 to +65, +62 to +77.

MODEL 500 — R. F. Signal Generator

Note These High Quality Features:

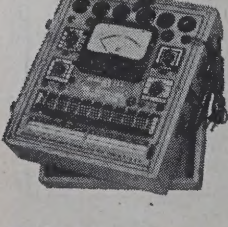
1. Employs electrostatically shielded transformer for 115V 60 cycle operation.
2. ALL coils not in use are automatically shorted out.
3. Provision for external modulation.
4. Covers range from 150KC to 36 megacycles on fundamentals—over 100 megacycles on harmonics.
5. Attractive 2 color gray hammertone panel and case.
6. 400 cycle internal modulation available.
7. Uses a highly stable, Hartley-type oscillator circuit.

Model 500	**$29.75**
Model 500K in Kit Form	**$19.75**

EMC MODEL 204 TUBE-BATTERY-OHM CAPACITY TESTER

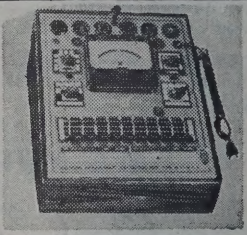
In this model EMC offers a durable, accurate instrument that gives easy, direct readings for all tubes through the standard emission method of testing. It uses four-position lever-type switches and is housed in a hand-rubbed, portable oak carrying case with removable hinged cover.

CHECK THESE FEATURES...



- Tests all tubes including Noval and sub-miniatures.
- Completely flexible switching arrangement.
- Checks batteries under rated load on "reject-good" scale.
- Individual sockets for each type of tube base.
- Tests all tubes from .75 volts to 117 filament volts.
- Tests all cold cathode, magic eye, voltage regulator and ballast tubes.
- Has pilot light indicator.
- Line voltage control compensates for line variations between 105 and 135 volts.
- Built-in roll chart protected by non-breakable transparent plastic.
- Checks for shorts and leakages.
- Checks condenser leakage to 1 meg. ohm.
- Checks resistance up to 4 meg. ohms.
- Checks capacity from .01 to 1 mfd.
- Three-color hammmertone panel.

MODEL 204	**$55.90**



MODEL 205 tube tester

In this durable, accurate instrument EMC offers a model that gives easy, direct readings for all tubes through the standard emission method of testing. It uses four-position lever-type switches and is housed in either a hand-rubbed, portable oak carrying case with removable hinged cover; or in a sloping counter case.

CHECK THESE FEATURES . . .

- Tests all tubes including Noval and sub-miniatures.
- Completely flexible switching arrangement.
- Checks batteries under rated load on "reject-good" scale.
- Individual sockets for each type of tube base.
- Tests all tubes from .75 volts to 117 filament volts.
- Tests all cold cathode, magic eye, voltage regulator and ballast tubes.
- Has pilot light indicator.
- Line voltage control compensates for line variations between 105 and 135 volts.
- Checks for shorts and leakages.
- Three-color hammertone panel.

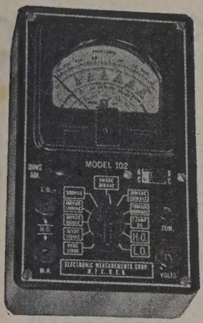
MODEL 205C Sloping counter case — illustrated	**$46.50**
MODEL 205P With hand-rubbed oak carrying case	**$47.50**

EMC ELECTRONIC MEASUREMENTS CORP.

280 Lafayette Street
New York 12, N. Y.

EMC Test Equipment **Gives More Measurement Value Per Dollar**

The *EMC ECONOMY LINE!*



MODEL 102 POCKET *VOLOMETER**

(1000 OHMS PER VOLT METER)

Check these Features:

3″ SQUARE METER—1 MIL D'ARSONVAL TYPE METER, 2% ACCURATE.

3 AC CURRENT RANGES.

ROUND CORNERED, BAKELITE, MOLDED CASE.

SAME ZERO ADJUSTMENT FOR BOTH RESISTANCE RANGES.

Specifications:

5 AC Voltage Ranges: 0 to 12-120-600-1200-3000 volts.

5 DC Voltage Ranges: 0 to 6-60-300-600-3000 volts.

4 DC Current Ranges: 0 to 6-30-120 ma., 0-1.2 amps.

3 AC Current Ranges: 0 to 30-150-600 ma.

2 Resistance Ranges: 0 to 1000 ohms, 0-1 megohms.

Weight: 1 lb. 5. oz.
Size: 3¾″ x 6¼″ x 2″ deep.

Model 102.. **$14.90**

MODEL 103 *VOLOMETER**

(1000 OHMS PER VOLT METER)

Check these Features:

4½″ SQUARE METER—1 MIL D'ARSONVAL TYPE METER, 2% ACCURATE.

3 AC CURRENT RANGES.

ROUND CORNERED, BAKELITE, MOLDED CASE.

SAME ZERO ADJUSTMENT FOR BOTH RESISTANCE RANGES.

Specifications:

5 DB Ranges: —4 to +64 db.

5 AC Voltage Ranges: 0 to 12-120-600-1200-3000 volts.

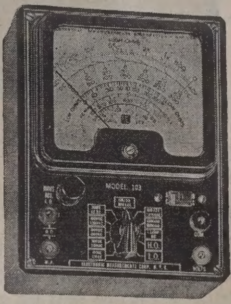
5 DC Voltage Ranges: 0 to 6-60-300-600-3000 volts.

4 DC Current Ranges: 0 to 6-30-120 ma., 0-1.2 amps.

3 AC Current Ranges: 0 to 30-150-600 ma.

2 Resistance Ranges: 0 to 1000 ohms, 0-1 megohms.

Weight: 2 lbs. 3 oz.
Size: 5¼″ x 6¾″ x 2⅞″

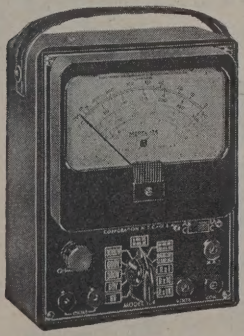


Model 103... $18.75

Model 103-S, same as above but with plastic carrying case **$19.25**

MODEL 104 *VOLOMETER**

(20,000 OHMS PER VOLT METER)



Model 104

$26.95

Check these Features:

4½″ SQUARE METER—50 MICROAMPERES; ALNICO MAGNET.

ROUND CORNERED, BAKELITE, MOLDED CASE WITH CARRYING STRAP.

3 AC CURRENT RANGES (to 3 amps.).

3 RESISTANCE RANGES (to 20 megohms).

Specifications:

5 DC Voltage Ranges (20,000 ohms/volt): 0 to 6-60-300-600-3000 volts.

5 AC Voltage Ranges (1,000 ohms/volt): 0 to 6-60-300-600-3000 volts.

3 Resistance Ranges: 0-20 K, 0-200 K, 0-20 megs.

3 AC Current Ranges: 0 to 30-300 ma., 0-3 amps.

3 DC Current Ranges: 0 to 6-60-600 ma.

5 DB Ranges: —4 to +67 db.

Weight: 2 lbs. 5 oz.
Size: 5¼″ x 6¾″ x 2⅞″

**Reg. Trade Mark for Volt-Ohm-Milliameter*

EMC **ELECTRONIC MEASUREMENTS CORP.**

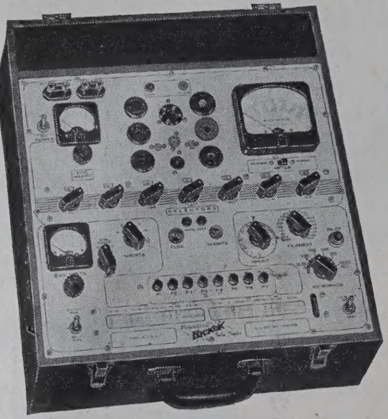
280 Lafayette Street
New York 12, N. Y.

Net

HICKOK TEST INSTRUMENTS HICKOK

DYNAMIC MUTUAL CONDUCTANCE *TUBE TESTERS*

Engineer's Laboratory Models



Model 539-A

RADIO, TELEVISION, LABORATORY, AVIATION *and* COMMUNICATION ENGINEERS' MODEL

Model 539-A, laboratory tube tester of highest accuracy. Dynamic Mutual Conductance with tube readings in micromhos for reliable test of tube gain under simulated operating conditions. Tests all tubes normally encountered in all phases of electronic work—including the ruggedized types used by airlines, hearing aid tubes, and miniature types used in TV receivers. Provides increased accuracy for testing high-gain type tubes.

Designed with professional accuracy for engineers and engineering technicians, in the radio, television, aviation, communication and industrial field.

Model 539-A, illustrated at the left. Strong portable carrying case with detachable cover. Most convenient to provide laboratory accuracy for the field engineer. Case is attractively covered with durable black leatherette. 16¾" W., 18⅜" L., 7½" D. 30 lbs. net, 39 lbs. shipping wgt. 110-130 V.A.C. 40 watts. **Price: $271.50**

Also available at same price, Model 539-D in matched-set, attractive steel bench model case.

SPECIFICATIONS:

- Permits choice of 3 A.C. signals; 0.25 volts: 0-15,000, 30,000 micromhos. 0.5 volts: 0-6000 micromhos. 2.5 volts: 0-3000, 6000 micromhos.
- Vernier adjustment, with sensitive 2-range meter, permits accurate setting of grid voltage.
- Provision for insertion of plate milliammeter for measuring plate current.
- Built-in, optional self-bias arrangement.
- Separate voltmeter measures grid bias.
- Separate A.C. meter measures line voltage at all times.
- D.C. grid bias and D.C. plate and screen voltages.
- Provides the HICKOK Tube Life, Tube Gas and Tube Noise tests.
- Built with highest accuracy HICKOK meters.

HIGHLY ACCURATE LABORATORY TUBE TESTER
for Radio, Television and Industrial Engineers

Model 536, professionals' Dynamic Mutual Conductance tube tester. Completely built to the highest quality standards. Provides Dynamic Mutual Conductance circuits for the most accurate tube tests. Contains the latest sockets for testing all tubes normally encountered in all phases of electronic work.

- Permits choice of 2 A.C. grid signals in addition to D.C. grid bias and plate voltages. Micromho Ranges: 1 volt; 0-6000, 15,000 micromhos. 5 volt; 0-3000, 6000, 15,000 micromhos.
- Provides the HICKOK Tube Life Test, Tube Gas Test and Tube Noise Test.
- A.C. meter accurately indicates line voltage at all times.
- Has high-low signal to insure highest accuracy.

Model 536, illustrated at the right. Strong portable carrying case with detachable cover. Most convenient to provide laboratory accuracy for the servicing technician in the field. Case is attractively covered with durable black leatherette. 16¾" W., 18⅜" L., 7½" D. 26 lbs. net, 35 lbs. shipping weight. 110-130 V.A.C. 40 watts.

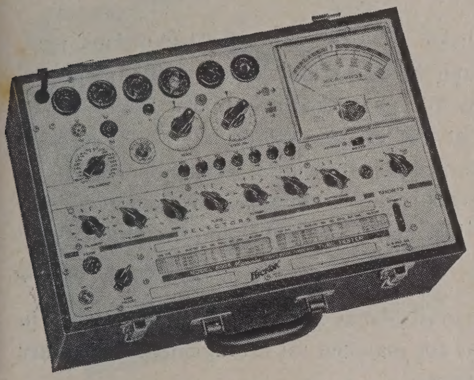
Model 700 — Also available is the HICKOK Model 700 tube tester for the electronic engineer for laboratory developmental and research work. Provides the most precise measurement of Dynamic Mutual Conductance. Furnished as three units, matched to the set. Designed so that it can never become obsolete. Write today for full technical details. Priced in the thousand-dollar range.

Model 536: $226.00

HICKOK . . . 1st CHOICE OF THE EXPERTS

HICKOK TEST INSTRUMENTS HICKOK

RADIO *and* TELEVISION TECHNICIANS' SMALL SIZE MODELS



Model 600-A **Price: $155.00**

DYNAMIC MUTUAL CONDUCTANCE IN A HANDIER, PORTABLE SIZE

Model 600-A, new lighter weight portable. Dynamic Mutual Conductance in a radio and TV technicians' popularly priced model. Smaller, handier, but built to the high HICKOK standard for accuracy and dependability. A very popular model for on-location or shop-bench servicing. The 600 may also be used for lab. and industrial applications.

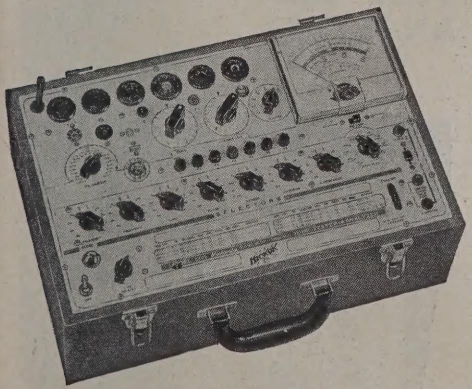
Model 600-A, illustrated at the left. Strong portable carrying case with detachable cover. Case is attractively covered in durable, dark red leatherette. 16¾" W., 11¾" L., 7½" D. 15 lbs. net, 25 lbs. shipping weight. 110-130 V.A.C. 40 watts.

HICKOK testers remain up to date. . . . Periodically revised roll-charts, covering new tubes, are available to all registered owners of HICKOK Tube Testers.

SPECIFICATIONS:

Scale readings in micromhos for most accurate tube evaluation. Ranges: 0-3000, 6000, 15,000 micromhos.
Contains the HICKOK Tube Gas Test.
Acclaimed by the experts as a must for accurate television servicing.
New, large 5" meter scale is easier to read more accurately.
Detects more weak tubes with professional accuracy.
Tests tubes under simulated operating conditions.
Tests the latest tubes including miniature and subminiature types.
New bias fuse prevents accidental damage to bias potentiometer.

ALL-PURPOSE TUBE *and* SET TESTER IN A HANDIER, PORTABLE SIZE



Model 605 **Price: $167.60**

Model 605, new, lighter weight portable. Radio and television technicians' popularly priced, all-purpose tube and set tester with built-in 20,000 ohm per volt D.C. multimeter panel. Designed for speedy, highly accurate radio and TV servicing.

Built to the high HICKOK quality standard throughout. Provides Dynamic Mutual Conductance circuits with tube readings in micromhos. A popular technicians model for on-location servicing. Smaller, lighter, but built entirely with highest quality components for accuracy and dependability.

Excellent for leakage tests of electrolytics, and checks for hum in any stage of receivers. Built with a minimum number of jacks. Ranges are selected with a rotary master switch. Test leads supplied.

Model 605, illustrated at the left. Same case as Model 600-A, above 17 lbs. net, 27 lbs. shipping weight 110-130 V.A.C. 40 watts.

SPECIFICATIONS:

Contains all features of the Model 600A listed above, including the HICKOK standard built-in roll chart with complete tube information.
New, large 5" meter scale is easier to read more accurately. Attractive lucite window has static-proof coating.
Accurate, built-in multimeter panel measures:
Volts: 0-1000 A.C. — D.C.
Ohms: 20,000 per volt D.C.
1,000 per volt A.C.
Resistance: 0.1 to 100 megohms, in 2 ranges.
Inductance: to 70 henries.
Capacitance: .0001 to 50 microfarads, in two ranges.
Current: 0-200 MA. D.C.
Decibels: — 10 to + 50.
New bias fuse prevents accidental damage to bias potentiometer.

HICKOK . . . 1st CHOICE OF THE EXPERTS

HICKOK TEST INSTRUMENTS HICKOK

RADIO *and* TELEVISION TECHNICIANS TUBE TESTER

Portable Model 533AP

Model 533-AP

Model 533-AP, radio, television and communication technicians' portable model with true Dynamic Mutual Conductance circuits pioneered by HICKOK. Acclaimed by the experts as the only true test of a tube. **Model 533-AP,** illustrated at the left. Strong, portable carrying case with detachable cover. Designed for on-location or shop-bench servicing. Case is attractively covered with durable black leatherette. 16¾" W., 18⅜" L., 7½" D. 24 lbs. net, 33 lbs. shipping weight. 110-130 V.A.C. 40 watts.

Price: $168.00

For those who prefer; also available, at same price, Model 533-AD in attractive steel bench-model for matched set arrangement with other HICKOK test instruments.

SPECIFICATIONS:

New Bias Fuse prevents accidental damage to bias potentiometer. New lucite meter window has static-free coating.
Tube readings in micromhos — 0-3000, 6000, 15,000.
Tests tubes under simulated operating conditions.
Contains the HICKOK Tube Gas Test and Tube Noise test.
Incorporates the new test feature that forecasts future life of a tube.
Larger, 5" easy-to-read meter scale and calibrated GM circuit provide increased accuracy in testing today's newer tubes.
- Tests all the latest tubes including miniature and subminiature types.

Accurately tests and detects more weak, borderline tubes.
Completely built of highest quality components for lasting accuracy and dependability.
Most valuable for accurate matching of tubes in television servicing.

COMPLETE ALL-PURPOSE TUBE *and* SET TESTER *with* BUILT-IN ANALYZER

Model 534-B, radio, television and communication technicians' all purpose tube and set tester with built-in 20,000 ohm per volt D.C. milliammeter. Built to the high HICKOK quality standard throughout. Provides Dynamic Mutual Conductance circuits for highly accurate tube tests. Contains latest sockets for testing the latest tubes including television and subminiature.

Tube readings in micromhos.
Contains the HICKOK Tube Gas Test.
Provides the new Tube Life Test that forecasts future life of a tube.
Checks tubes under simulated operating conditions for greater accuracy of test.
Detects more weak, ordinarily passable tubes.
Built-in multimeter panel measures:
  Volts: 0-5000 A.C. — D.C.
    20,000 ohms per volt D.C.
    1,000 ohms per volt A.C.
  Resistance: 0.1 ohm to 100 megohms.
  Capacitance: .0001 to 150 microfarads.
  Current: 0-200 MA D.C.
  Decibels: almost unlimited with use of conversion table.
  Ideal for leakage tests of electrolytics.
  Checks for hum in any stage of a receiver.

Model 534-B, illustrated at the right. This tester identifies you as a top-grade servicing technician. Strong portable carrying case with detachable cover. Designed for on-location or shop-bench servicing. Case is attractively covered with durable black leatherette. 16¾" W., 18⅜" L., 7½" D. 25 lbs. net, 34 lbs. shipping weight. 110-130 V.A.C. For those who prefer; optionally available, at same price — Model 534-BD in attractive steel bench model for matched set arrangement with other HICKOK test instruments. Test leads are supplied.

Model 534B

Also available in display type case at no additional cost.

Price: $195.50

HICKOK . . . 1st CHOICE OF THE EXPERTS

HICKOK TEST INSTRUMENTS HICKOK

DYNAMIC MUTUAL CONDUCTANCE IN A SMALLER COUNTER MODEL

Model 533-AC, a lower cost dealer's counter model. Attractively designed to set on the counter and increase your tube sales. Highly accurate Dynamic Mutual Conductance circuits. Encourages customers to bring their tubes in where they can see the actual test. If customers' tubes check "OK" you have an excellent opportunity to invite him to bring his receiver in for a thorough check of all its circuits. With the 533-AC you will build customer confidence, increase tube sales and promote your complete radio and TV service.

Model 533-AC, illustrated at the left. Satin finish aluminum panel. Beautifully styled, blue enameled steel case. 17½" W., 18½" L., 6" H. 24 lbs. net, 32 lbs. shipping weight. 110-130 V.A.C. 40 watts.

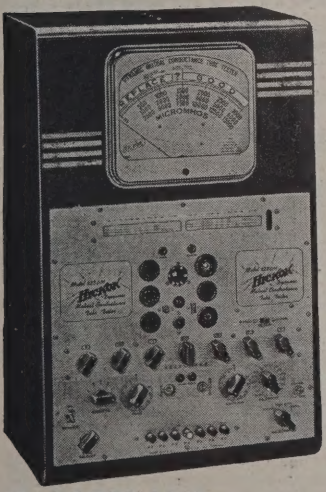
For those who prefer; optionally available, at same price, Model 533-AD in attractive steel bench model for matched set arrangement with other HICKOK test instruments. See the "D" case illustrated below, right.

Model 533-AC **Price: $168.00**

SPECIFICATIONS:

Dual-scale meter provides readings in micromhos for the technician and "Good", "Bad", "Replace" scale for easy customer interpretation.
Quick, impressive, accurate, and dependable.
Detects more weak, ordinarily passable tubes.
Contains the HICKOK Tube Gas Test, and a circuit for accurate forecast of future tube life.
Simple to operate.
Contains all necessary tube information on a handy built-in roll chart.
Tests tubes under simulated operating conditions.
Tests all the latest tubes including television.
Filament selector switch has a 20 volt tap.
Large 5" easy-to-read meter scale and calibrated GM circuit provide increased accuracy in testing today's newer tubes.

ATTRACTIVE DISPLAY MODELS



Model 533-ADM
Price: $179.50

MOST EFFECTIVE TUBE SALESMAN

Model 533-DM. Dealers who use this tube tester enthusiastically report that it is the best salesman they ever used.

Customer convincing, the 533-DM contains a huge, illuminated nine-inch meter that clearly and accurately shows condition of the tube under test. Dual-scale meter provides micromho readings for the technician, and a multi-color "Good", "Replace", "Bad" scale for easy customer interpretation across the counter.

Contains the HICKOK Tube Gas Test, and a circuit for accurate forcast of future tube life.
Detects more weak tubes.
Tests all the latest tubes including television.

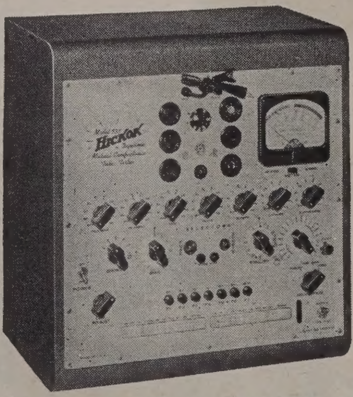
Model 533-DM, illustrated at the left. 9" chrome meter case, satin finish aluminum panel. Strong, attractive, enameled steel case. 26½" H., 17" W., 11" D. 35 lbs. net, 44 lbs. shipping weight. 110-130 V.A.C.

CATHODE RAY TUBE ADAPTER

Model CRT. Cathode ray tube test accessory is available for all HICKOK Tube testers. Accurately tests all TV receiver picture tubes without removing tube from TV set.

- Tube Gas Test
- Short Test
- Grid Control Test
- Cathode Emission Test

Price: $9.90



TECHNICIAN'S MATCHED-SET DISPLAY CASE, BENCH MODEL

Model D

Matched to the set, HICKOK "D" cases have been designed to make it easier for you to sell and safeguard your service.

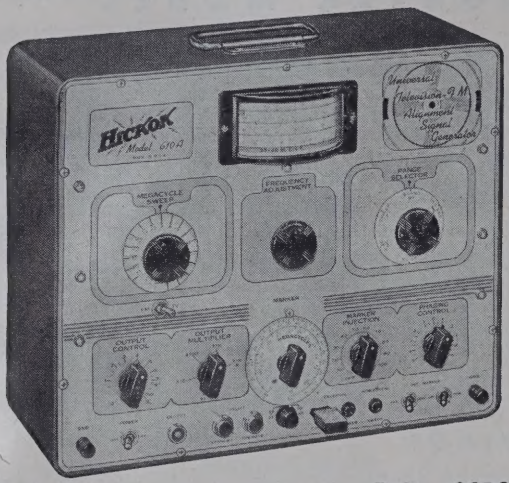
HICKOK "D" cases dress up your bench and pack a most effective sales punch. They help to promote your service, make it possible for you to proudly display your test instruments where customers can see them, and out where they will do you more good.

Model 533-AD shown above. Satin finish aluminum panel. Strong, attractive, enameled steel case, 17" W., 18¼" H., 11" D. Optional, at same price, for all 533, 534, 536 and 539 tube testers.

HICKOK . . . 1st CHOICE OF THE EXPERTS

HICKOK TEST INSTRUMENTS HICKOK

THE ACCEPTED TV ALIGNMENT GENERATOR



Model 610A **Price $219.00**

Power Supply: 105-125 V., 50-60 cycles, A.C.
Tube Compliments: 6J6—Variable oscillator; 6J6—Fixed oscillator; 6J6—Mixer; 6SN7—Crystal oscillator & marker oscillator; 6J5—Audio oscillator; 6/5—Rectifier.
Net 24 lbs. Shipping Weight: 31 lbs.
Size: 16¼"x13¼"x7"; Satin aluminum finish panel; Blue Hammertex finished steel portable case. Also available in matched set "D" case at no additional cost.

Popularly priced TV sweep generator—useful for UHF. Contains 3 most practical markers including Absorption. Marker Range: 19.5 to 48 m.c.—Covers all I.F. frequencies in TV receivers.

Contains linear sweep with unusual accuracy to 2%. Hickok iron modulator furnishes symmetrical pattern response curve for easier and more accurate readings.

THIS 1 INSTRUMENT DOES THIS

1. Provides accurate, complete visual alignment of any TV receiver.
2. Visually align IF stages of any television receiver—including the old and current bands, and new bands. Marker range—19 to 48 mc.
3. Align all traps with a calibrated signal—modulated or unmodulated—19 to 48 mc.
4. Insert a marker—accurate to .05 mc—at any point along the IF response curve. This marker frequency is directly calibrated on a dial 9½ inches long.
5. Align IF or RF Sections by single stage method—with high output.
6. Attenuate the output down to a very low signal in microvolts.
7. Highly stable.
8. Output multiplier control is 5-stage with a vernier control calibrated from 1 to 10.
9. Panel Jack accommodates separate plug-in calibrating crystals for local TV channels, if desired.
10. Makes possible a crystal controlled frequency modulated or unmodulated for any frequency as low as 2 mc to the upper television channel No. 13 at 216 mc.
11. Temperature compensated.
12. Low amplitude modulation.
13. Completely shielded attenuator.
14. Sweep phasing control.
15. TV sweep frequency.
16. FM sweep frequency.

NEW TELEVISION VIDEOMETER

Model 650
HICKOK
Television Videometer
TIMER
CHANNELS
OUTPUT SELECTOR
VIDEO ATTENUATOR
MASTER R.F. ATTENUATOR
OUTPUT MULTIPLIER
MICROVOLT CONTROL
POWER
PILOT

Model 650

Price: $310.90

Also available in matched-set "D" case at no additional cost.

This fine new instrument is the first of its kind. Now available to rapidly and accurately solve your service problems. Does in minutes many of the TV servicing jobs that would require hours by other methods.

The 650 has a new timer circuit which delivers video pulses of 60 cycles, 900 cycles, 15,750 cycles and 315 kc., singularly or in any combination, both positive and negative output. Pulses are all locked together and crystal controlled for greater accuracy.

Pulses can be used directly, metered in peak-to-peak volts or to modulate the self-contained RF oscillator.

RF oscillator covers all TV channels in two bands (2-6 and 7-13), all on fundamentals. RF output is metered at all times from 1 to 10,000 microvolts with calibrated attenuation and variable percentage modulation. RF can be externally modulated with video frequencies from 5 cycles to 4 MC with variable percentage modulation on all channels.

Self-contained, substitute external video amplifier, 5 cycles to 4 MC with a variable gain from 0 to 10, with high input impedance, low output impedance and metered peak-to-peak voltage output.

Includes horizontal and vertical sawtooth voltages which can be directly substituted for vertical and horizontal oscillator in a TV receiver. Both the vertical and horizontal sawtooth amplitude is sufficient to give full raster deflection and in the case of flyback type high voltage power supplies the horizontal sawtooth can be used to light up the picture tube.

The 650 also contains an AC line voltage scale for instantaneous check on line voltage fluctuation, a common source of TV trouble.

This HICKOK Videometer is truly an all-purpose video generator, and a must for the income-minded, successful and aggressive TV service technician.

Will rebroadcast a TV picture on any channel, to any number of TV receivers.

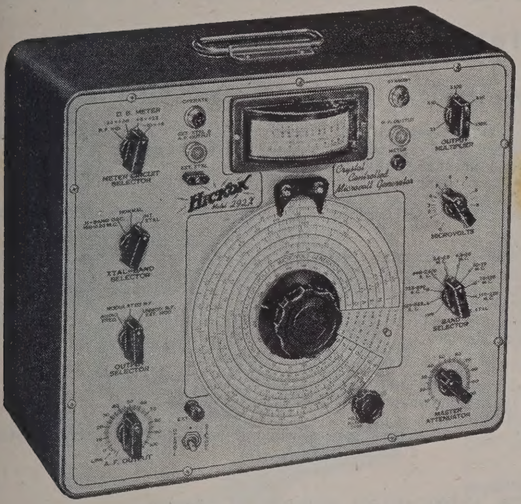
FEATURES

Quickly localizes and accurately identifies trouble in any section of a TV receiver.
Provides electronically accurate bar or dot pattern on the screen of any TV receiver — independent of station operation.
R.F. output, directly calibrated in microvolts for sensitivity measurements.
Attractive steel portable case. 16¼" x 13¼" x 7". 30 lbs. net; 40 lbs. shipping. Test leads included.
Substitute Video Amplifier with gain of 0 to 10.
Crystal controlled timer for greater accuracy.
Fast, accurate, the ideal instrument for fringe area TV servicing.
Increases TV maintenance profits — allows you to trouble shoot many more installations per day.
Built only by HICKOK. Contains highest quality components throughout for lasting accuracy and dependability.

HICKOK . . . 1st CHOICE OF THE EXPERTS

HICKOK TEST INSTRUMENTS HICKOK

NEW MICROVOLT SIGNAL GENERATOR for AM, FM, TV and Mobile Bands



Model 292-X **Price $266.00**

Also available in matched-set "D" case at no additional cost.

MODEL 292X

125 KC to 120 MC and 150 MC to 220 MC on fundamentals.

Here's an outstandingly accurate microvolt signal generator that meets the servicing, alignment and calibration needs of such high-frequency users as police, fire departments, railroads, relay press, maritime mobile, etc. Covers from 125 kc to 120 mc, and from 150 mc to 220 mc — all on fundamentals, with an accuracy of 1.0%. Has special provision for an optionally available crystal-controlled oscillator accurate to .0025% in 30-50 and 152-162 mc mobile ranges. Has easy-to-read calibrated 8" dial with over 100" of scale. Output voltages: 400 cycles AF, variable 0-2 volts; RF unmodulated or modulated at 400 cycles — directly calibrated 0-100,000 microvolts by means of internal vacuum tube voltmeter. Also has provision for external modulation. Internal 1000 kc crystal-controlled reference oscillator with an accuracy of 0.5%. Has excellent shielding; leakage is less than 0.05 microvolt. All controls are plainly marked. This new HICKOK Model 292X is the only popularly priced Microvolt Generator available that covers both Upper Channel TV and Mobile frequencies — on fundamentals.

FEATURES

- Covers all AM, FM, TV and Mobile Frequencies in 7 ranges. Also ideal for industrial applications.
- Crystal controlled. Temperature compensated.
- Amplitude Modulated and Unmodulated Output from .2 to 100,000 microvolts
- Cast Aluminum Attenuator for Minimum Signal Leakage
- May be externally modulated from 15 to 10,000 cycles per second
- Decibel Meter for faster servicing to indicate reference level
- Self-contained Crystal Oscillator Circuit—Crystals from 1 mc to 20 mc are available.
- Negligible Change in Frequency due to output
- Most accurate Microvolt Generator available for practical radio servicing and communication's manufacturers final inspections

TECHNICAL CHARACTERISTICS

Fundamental Frequency Coverage: Bands A through G — 125 kc to 120 mc; Band H — 150 to 220 mc. **Output Calibrated:** .2 to 100,000 microvolts. **Output Impedance:** X1, X10, and X100 microvolts — 5 ohms; X1K — 30 ohms. X10K — 0 to 100 ohms. **Modulation Fixed:** 400 cycles. **AF Output:** 0-2 volts. The Model 292-X is wired for plug-in type crystals (152-162, 30-50 mc), with accuracy to .0025%. Self-Contained crystal oscillator circuit has crystal jack on front panel permitting crystal outputs at any frequency from 250 kc to 20 mc on fundamentals; and to over 250 mc on harmonics. Type CCO-56 Crystal Oscillator unit available with frequency accuracy to .0025% for Mobile Band coverage. **Self-Contained Decibel Meter:** –10 to +38 DB in 3 ranges. **Power Consumption:** 35 watts at 115 volts. **Meter Model:** 50; 105-125 V., 50-70 cycles, A.C. 14"x16½"x8"; 29 lbs. Net: 38# Ship. Satin Aluminum Panel. Blue hammertex steel case. Test leads and 1000 kc crystal included.

UNIVERSAL CRYSTAL CONTROLLED SIGNAL GENERATOR

Model 288X
HICKOK
Universal Crystal Controlled Signal Generator
FREQUENCY MODULATED SWEEP
BAND SELECTOR
FREQUENCY ADJUSTMENT
OUTPUT CONTROL
OUTPUT MULTIPLIER
F.M.-A.M. SELECTOR
OUTPUT SELECTOR
VARIABLE AUDIO FREQUENCY
GROUND
DECIBEL METER
EXTERNAL MODULATION
SYNCHRONIZED SWEEP VOLTAGE

Model 288-X

Price: $186.00

Also available in matched-set "D" case at no additional cost.

MODEL 288X

High Output AM-FM Generator

A variable frequency signal generator, crystal controlled, for accurate AM and FM alignment. Useable in TV alignment as a marker oscillator in connection with television front-end or IF alignment, or the 288X can also be used as an FM generator to align the sound IF amplifier of a TV receiver. RF unmodulated or internally amplitude modulated at 400 cycles, or internally frequency modulated. RF variable from 110 kc. to 110 mc. on AM and 110 kc. to 160 mc. on FM, in 7 bands, all fundamental. Fixed 50-mc. output is internally frequency modulated at 60 cycles and at 400 cycles for FM and television. Fixed, crystal-controlled 110-kc. and 1000-kc. outputs either unmodulated or internally amplitude modulated. Fixed 1000 kc. internally frequency modulated at 60 cycles for visual IF alignment. 50 mc. and 1000 kc. oscillators beat with variable RF oscillator to give variable FM signals. Variable AF output 0-15,000 cycles; fixed AF, 400 cycles. Outputs continuously variable with multiplier and linear controls. Db meter — 10 to plus 38 in 3 ranges. 110-volt 60-cycle operation. Test leads included.

SPECIFICATIONS

Dimensions—13¼" x 16¼" x 7"
Net Weight—25 lbs.—Ship. 36 lbs.
Meter—Model 51X

Scale—over 100"
Satin-aluminum finish panel
Blue baked Hammertex finished steel case

HICKOK . . . 1st CHOICE OF THE EXPERTS

HICKOK TEST INSTRUMENTS HICKOK

VACUUM TUBE VOLTMETER

Smaller Size Laboratory Model

Model 215

Price: $67.50

Dual Probe and Test leads included.

INCLUDES: NEW, DUAL-PURPOSE AC-DC PROBE

A single unit with built-in switching arrangement. (Patent applied for)

- ★ Combination RMS or Peak-to-Peak voltage measurements.
- ★ New, guaranteed insulated and shock-resistant case.
- ★ Modern lucite meter case with large 5" easy-to-read scale.
- ★ Handier size for greater portability.
- ★ Zero-Center for faster discriminator alignment and other galvanometer applications.

This new HICKOK Model 215 is truly a laboratory instrument of highest quality, accuracy and dependability. Though ideal for the radio-television manufacturer or service shop, this fine instrument will meet a greater number of applications in the electronic design or industrial laboratory. Exceptionally versatile, the 215 provides the sensitivity and ranges for quick and accurate measurements of sine or complex waves of TV or industrial devices.

RANGES

D. C. VOLTMETER

Volts: 0 to 1.5, 3, 12, 30, 120, 300, 1200.
Input Resistance: 10 megohms with new HICKOK Dual-Probe.
Accuracy: ±3% of full scale.
Zero-Center Scale: For discriminator alignment and other galvanometer applications.

OHMMETER

Design Center: 10 ohms.
Ranges: x1 x10, x100, x1,000, x10,000, x100,000, x1 megohm.
Readability: .2 ohms to 1000 megohms.

A. C. VOLTMETER

7 Ranges AC, RMS: 0 to 1.5, 3, 12, 30, 120, 300, 1200.
7 Ranges AC, Peak-to-Peak: 0 to 4, 8, 32, 80, 320, 800, 3200.
Frequency Characteristics: Flat from 40 cps. to 3.5 MC. Crystal Probe available to extend frequency range to 250 MC.
Input Impedance: With new HICKOK Dual-Probe, 30 megohms shunted by 150 uuf.
Accuracy: ±5% of full scale.

SPECIFICATIONS

105-125 VAC. Insulated, shock-resistant case. 5¾" W., 8⅜" H., 4½" D., 4½ lbs. net weight. 8 lbs. shipping.

Test leads included:
New combination AC-DC HICKOK Dual-Probe, ohms lead and ground lead.

CAPACITANCE TESTER AND VACUUM TUBE VOLT-OHM MILLIAMMETER

Model 209-A
HICKOK
VOLTS - MILS
POWER
ZERO
OHMS CAPACITY

Model 209-A

POWER SUPPLY: 105-125 V, 50-70 cycles. Ranges: Volts, A-C and D-C 0-3, 12, 30, 120, 300, 1200. Mils (D-C): 0-3, 12, 30, 120, 300, 1200. Cap.: 0-10,000 mmf in 2 ranges, 0-1000 mf in 5 ranges. Ind.: 50 mh-100 henries. Ohms: 0.1 ohm to 10,000 megohms in 7 ranges. Frequency: A-C up to approximately 5 megacycles may be measured. Input Impedance: Volts D-C: 15 megohms, Volt A-C: 12 megohms. Tube Complement: 6X5GT A-C rectifiers, 6SJ7 cathode follower, 6SN7GT vacuum tube voltmeter, OD3/VR150 voltage regulator.

LABORATORY SIZE . . . LARGE NINE-INCH METER WITH ZERO CENTER SCALE

A universal test instrument for all radio and electronic service work. Accurately and easily measures wide ranges of inductances, capacitances, resistances, currents and voltages, both A.C. and D.C.

This new giant size instrument matches the size and attractiveness of the Hickok complete line of test equipment. Large 9-inch meter improves ease of operation. Has a 1200 Volt scale, and a new Peak-to-Peak Voltmeter to measure peak to peak or RMS values of A.C.

The new Zero-Center scale on D.C. permits much faster alignment of discriminator and other galvanometer applications.

SPECIFICATIONS:

Dimensions—13¼"x16¼"x7"
Meter—Hickok Model S-22
Weight—19 lbs. Net.—26 lbs. Ship.
Blue baked Hammertex finish
Also available in matched set "D" case at same price.

High input impedance prevents loading when making voltage tests. Measurement of inductances are possible with the use of a conversion chart supplied in the instruction book. Possibility of damage due to overload is slight in all except current measurements. Power supply permits normal operation and accuracy with wide line voltage fluctuation.

Price $132.50
Including probe and all leads.

HICKOK . . . 1st CHOICE OF THE EXPERTS

Net

HICKOK TEST INSTRUMENTS HICKOK

HIGH SENSITIVITY VOLT-OHM-MILLIAMMETER

Compact Portable . . . Shock-Resistant Case

Model 450

Price: $46.50

Test leads included.

LARGE 5" METER

RANGES:

20,000 ohms per volt DC, 5,000 ohms per volt AC.
Volts AC and DC: 2.5, 10, 50, 250, 1,000, 5,000
Output: 2.5, 10, 50, 250, 1,000
Milliamperes, DC: 2.5, 10, 50, 250, 1,000
Microamperes, DC: 0 to 50
Amperes, DC: 0-10.
Decibels: —30 to + 55, in 5 ranges
Ohms:
0 to 1,000, 5 ohm center scale
0 to 10,000, 50 ohm center scale
0 to 1 meg., 5,000 ohm center scale
0 to 100 meg., 500,000 ohm center scale

This fine, new HICKOK Model 450 is the last word in design for attractive, high sensitivity volt-ohm-milliammeters. It is thin, lightweight and fully portable.

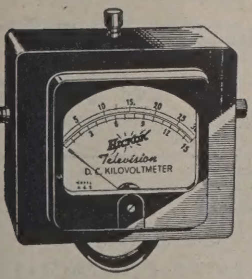
The modern HICKOK lucite meter case provides increased readability. Large 5" meter scale can be read more accurately.

Compact HICKOK design provides the thinnest instrument of its kind. Handier for the Radio-TV or field engineer for on-location servicing. Provides work-bench accuracy for all field jobs.

The new HICKOK insulated and shock-resistant case protects the high sensitivity and accuracy of this fine instrument.

Rugged and dependable, the HICKOK 450 provides for long, hard, day-in, day-out service on the bench or in the field. (Battery operated). 8¼" H., 5½" W., x 2½" D. 2½ lbs. net, 5 lbs. shipping.

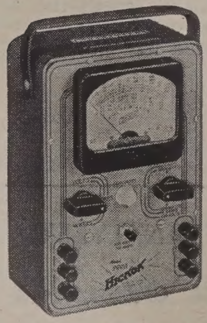
DOUBLE RANGE DC KILOVOLTMETER



Model 465

For measuring DC voltages as high as 30,000 volts. 10,000 ohm per volt sensitivity. Low current drain. Well insulated phenolic case for ample protection against the high voltages being measured. 7" x 6⅛" x 4$\frac{5}{16}$". 6 lbs. net; 8½ lbs. shipping. Complete price including leads and carrying case $66.65.

PORTABLE TRUE WATTMETER



Model 900-B

Tests all AC electrical units under actual use conditions. Continuity test for shorts. Accurately tests even smallest units. 3¾" meter shows wattage, amperes and line voltage. Portable case complete with leads, 9⅜" x 6¼" x 3¼". 6 lbs. net; 10 lbs. shipping. $69.95. C-105 external transformer for ranges to 10,000 watts and 130 amp. $17.00. 9A and 9B leads for 220 volts, $18.00. Strong, detachable-cover carrying case. $10.20.

PROBES

Model TVP-1 TELEVISION PROBE — Increases 'scope usefulness in servicing TV receivers. Enables technician to accurately duplicate manufacturer's pattern. Reduces loading effect. Phenolic, black and chrome probe, 4 ft. heavy-duty cord with spade connectors. 6 oz. net; 2 lbs. shipping. Light and easy to handle. $12.60.

Model 34 CRYSTAL DEMODULATOR PROBE — Use with any 'scope to trace a modulated RF signal, at any frequency to 500 MC, through a radio or TV receiver from the antenna post to the detector or discriminator. 4 ft. long. 2 oz. net; 2 lbs. shipping. A quick and accurate aid to trouble-shooting with your 'scope. $9.80.

Model PR-30 HIGH VOLTAGE DC PROBE — Extends range of your VTVM to 30,000 volts DC. Doubles use of any voltmeter. Ideal for use with HICKOK 203-PR or 209. Heavy-duty black phenolic, 4 ft. cord and cable type connector. 12 oz. net; 2 lbs. shipping. $11.90. Also PR30-A for use with HICKOK 209-A. $11.90.

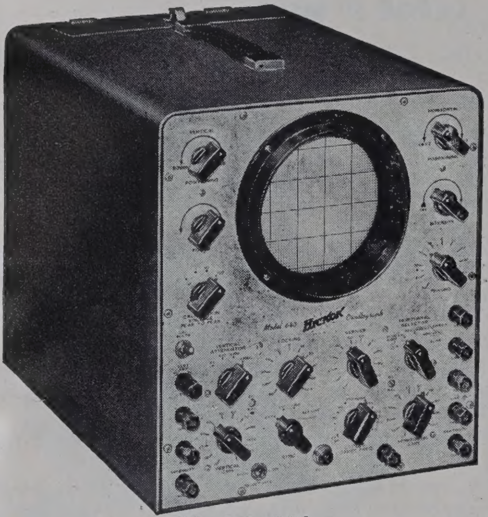
CRYSTALS

.005% or .0025% accuracy for 292-X	$18.80
4.5 MC for 610-A	4.65
Specified channels for 610-A	6.30
Special frequencies for 610-A	14.30

HICKOK . . . 1st CHOICE OF THE EXPERTS

HICKOK TEST INSTRUMENTS HICKOK

PROFESSIONAL MODEL LABORATORY OSCILLOGRAPH



Model 640

The new Model 640 Oscillograph is an outstanding, versatile instrument designed for General Purpose, Industrial Laboratory and Television applications for observation of transient or regular recurring phenomena.

Designed with outstanding range and sensitivity and completely built to the highest quality standards throughout. Rigidly field-tested and proved in the HICKOK laboratories.

SPECIFICATIONS:

WIDE BAND AMPLIFIER: Frequency response DC, 0 to 4.5 mc, (down 3 db).

VERTICAL DC AND AC AMPLIFIER: 17 M. V. per inch with sensitivity switch in high position. 35 M. V. per inch in low position.

FREQUENCY RESPONSE: 0 to 1,000,000 cycles (3 db point), in high position. 0 to 4,500,000 cycles (3 db point), in low position.
No jitter, even with high gain amplifiers.
Maximum Input Potential: 1000 volts peak.
Input Impedance: 2 megohms, 50 mmf.
Excellent stability and minimum microphonics and drift.

HORIZONTAL AMPLIFIER:
Deflection Factor —
Direct: 13 volts RMS per inch.
Full Gain Setting: 50 millivolts RMS per inch.
Frequency Response: 0 to 200,000 cycles, with 3 DB down at upper limit.
Maximum Input Potential: 1000 volts peak.
Input Impedance: 2 megohms, 50 mmf.

BUILT-IN CALIBRATING VOLTAGES:
Peak-to-Peak—100, 10, 1, .1 volts.

TEST SIGNALS: Line Frequency: 3 volts RMS per inch.
Sawtooth: Available from front panel.
Direct connection to both horizontal and vertical deflection plates.

SHOCK MOUNTED: Provides minimum microphonics due to external mechanical vibrations.

SHIELDED: Mu Metal magnetic shield gives maximum protection to the cathode ray tube against effects of external magnetic fields.

CALIBRATED SCALE: Provided for quantitative measurements and comparisons.

LINEAR TIME BASE: Recurrent and Driven Sweep: 2 cycles to 30,000 cycles.
Provision for external capacities for slower frequency sweeps of 10 seconds and slower.
Sweep Speeds: Faster than 0.75 inch per microsecond.
Television fixed frequencies; 30 and 7,875 for observing blanking and sync waveforms in the horizontal and vertical circuits of TV receivers.
Synchronization at line or 2-times line frequency.

EXPANDABLE SWEEP: 6 times expansion, or equivalent to 30 inches of screen diameter.

LINE FREQUENCY PHASING CONTROL: Zero, plus or minus 90° phase shift.

"Z" AXIS MODULATION: Capacitively coupled to the grid of the cathode ray tube. 15 volts will blank trace fully at normal intensity.

INTENSITY: Standard Model 640 includes 5UP1 cathode ray tube with medium persistence screen. High accelerating potentials give excellent intensity for viewing transient waves and high frequencies.
Some engineers may prefer a 5UP11 tube for short persistence, or a 5UP7 tube for long persistence. Either is available in the Model 640 at slight additional cost.

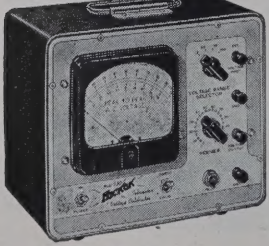
STABILIZED: Designed so that sweep lengths and synchronizations are maintained as signal level varies.

DIMENSIONS: Portable steel case, 14"x11½"x19", approximately 35 lbs. net; 40 lbs. shipping. Combination light shield and camera base provided.

Price: $355.00

TELEVISION CIRCUIT ANALYZER

PEAK-TO-PEAK VOLTAGE CALIBRATOR



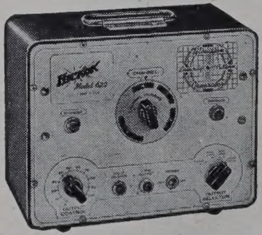
Model 630

Quickly identifies sync, clipper, differentiating and separating circuits trouble in TV receivers. Provides the accurate peak-to-peak voltage indication for proper wave form study and analysis of receiver circuits. A perfect companion to the HICKOK 640 and 670 oscillographs for accurate match of manufacturers spec. in TV alignment. Provides fast and accurate single or multiple stage gain measurements from video detector all the way through the deflecting circuits of cathode ray tube—in addition to gain measurements from the sound detector through to the speaker. Attractive, portable blue-hammertex case. 11¼" x 8¾" x 6". 12 lbs. net; 16 lbs. shipping.

Price: $87.50

TELEVISION LINEARITY PATTERN GENERATOR

CRYSTAL CONTROLLED



Model 620

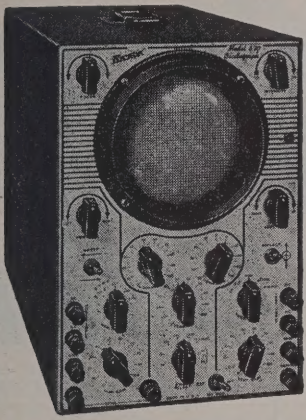
The HICKOK Model 620 provides a dependable, stable pattern on the screen of any TV receiver—independent of station operation. High output permits fast accurate TV alignment anywhere—anytime. Checks relative receiver sensitivity. Detects hum in horizontal deflection circuits. Provides fast, accurate means for alignment of Horizontal and Vertical linearity and drive controls, width height and hold controls and horizontal AFC circuits.

Output Voltage: 50 to 50,000 microvolts. All modulating frequencies are crystal controlled.
Horizontal Lines: 8 or 9.
Vertical Lines: 12
Selection of horizontal or vertical lines can be made separately or simultaneously as a Cross-Hatch pattern.
Blue hammertex portable steel case, 11¼" x 8¾" x 6". 11 lbs. net; 16 lbs. shipping. Test leads included.

Price: $176.65

H I C K O K . . . 1st CHOICE OF THE EXPERTS

HICKOK TEST INSTRUMENTS HICKOK



Model 670

NEW MODEL 670 OSCILLOGRAPH

Accurate, Stable, High Sensitivity with AC and DC AMPLIFIERS

Model 670: The more exacting requirements of today's television maintenance have made it necessary for the service technician to have a good 'Scope. The HICKOK Model 670 is designed with DC amplifiers to provide excellent square wave response — even down to DC.

Many TV receivers are so far out of alignment that extreme 'Scope sensitivity is necessary to properly show the response curve. The 670 provides this extra sensitivity — to 10 MV per inch.

To properly view all TV frequencies a wide band vertical amplifier is necessary. The 670 provides for this need by having a band width to beyond 2 MC. Push-pull amplifiers and polarity reversing switches are also new features you will find most useful in the 670.

TECHNICAL FEATURES:

Highest practical sensitivity: 0.01 (10 millivolts) RMS per inch.
Demodulator circuit for viewing modulation on RF signal.
Recurrent linear sweep; 3 cycles to 50,000 cycles.
Reversing switches for both horizontal and vertical deflection.
Fixed sweep frequency for horizontal and vertical wave forms to TV receivers.
Both negative and positive synchronizing.
Line phasing control (approximately 180°).
Wide band vertical amplifier, useful beyond 2 MC.
Direct coupled, balanced (push-pull) amplifiers for both vertical and horizontal deflection.
Provision for Z-axis modulation.
Permits the study and analysis of wave forms, and other electric and magnetic phenomena. Excellent square wave response.
Provides for the visual testing and alignment of amplitude and frequency modulated receivers, as well as television equipment when used with a frequency modulated RF oscillator or sweep generator.
Provides the means for measuring voltages and frequences of AC signals, hum, gain and distortion in audio amplifiers.

Price: $229.00

TECHNICAL CHARACTERISTICS

Deflection Sensitivity:

a. vertical amplifier	.01 volts (RMS) per inch
b. vertical direct	12 volts (RMS) per inch
c. horizontal amplifier	.07 volts (RMS) per inch
d. horizontal direct	13 volts (RMS) per inch

Input Impedance:

a. vertical amplifier	2.2 megohms—30 mmf
b. vertical direct	3.3 megohms
c. horizontal amplifier	1 megohm—35 mmf
d. horizontal direct	3.3 megohms

Frequency Range:
a. Vertical Amplifier: Useful beyond 2 MC; pulse rise time 0.6 microseconds.
b. Horizontal Amplifier: O to 250 KC; pulse rise time 1.2 microseconds.

Sweep Oscillator: 3 to 50 KC.

Power Supply: 105-125 VAC, 50-70 cycles, 65 watts at 115 VAC.

Size: 9½" W x 12¼" H x 18" D. In attractive, steel portable case or matched set "D" case.

Weight: 28 lbs. net; 35 lbs. ship.

Model 680

TELEVISION RF MARKER and Crystal Calibrator

A perfect companion for the HICKOK 610-A TV Alignment Generator to provide the most complete, overall TV alignment including UHF and VHF.

The 680 is designed to rapidly solve the growing TV front-end maintenance problems. Thousands of TV front-ends are failing daily due to age. The usual procedure of returning these units to the manufacturer for replacement has become increasingly difficult. Now, with the 680 you can build a big business on repairing TV front-ends yourself — to crystal accuracy. The 680 has directly calibrated channel, sound and picture frequencies accurate to .05%. Covers the ranges of 53-89 MC and 174-217 MC on fundamentals and to 868 MC on harmonics.

The 680 also is a crystal standard with choice of 3 crystals provided by means of a front panel switch. (A 2.5 MC crystal is supplied.) The built-in magic eye provides a visible zero beat indicator; a phone jack is also provided for an audiable indicator.

The 680 can be used as a heterodyne frequency meter for calibrating other generators up to 900 MC.

This fine instrument is the latest HICKOK development and can be used as a crystal standard in the shop, laboratory or factory, to check oscillators, generators and front-end or over all response curve of a TV receiver to an accuracy of .05%.

Price: $129.50

TECHNICAL CHARACTERISTICS

Power supply required: 20 Watts, 105-125V AC 50-70 cycles.

RF Output: 53-89 MC, 174-217 MC.
VHF 106-178 MC 2nd harmonic
424-712 MC 8th harmonic
UHF 522-651 MC 3rd harmonic
696-868 MC 4th harmonic

.15V, RMS RF output, 31 crystal check points at 2.5 MC. 11-1 ratio.

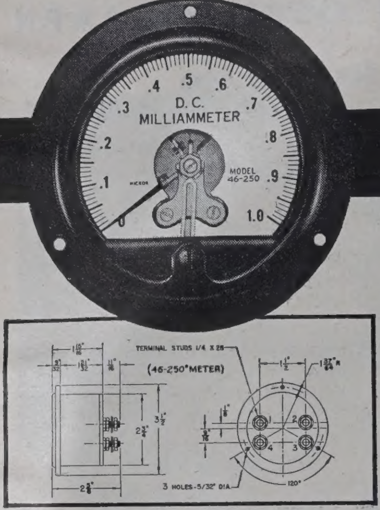
Size 11½" W x 6" H x 9" D, attractive portable steel case.

Weight: 13¾ lbs. net; 18 lbs. shipping.

HICKOK . . . 1st CHOICE OF THE EXPERTS

Net

THE STANDARD OF QUALITY **HICKOK INSTRUMENTS** **FOR OVER FORTY YEARS**


D. C. MILLIAMMETER
MODEL 46-250
HICKOK
0
.1
.2
.3
.4
.5
.6
.7
.8
.9
1.0
TERMINAL STUDS 1/4 X 28
(46-250" METER)
3 HOLES-5/32" DIA.
120°

Illustrated: 250° meter, 3½" with scale length of 5$\frac{3}{16}$". Accuracy within 1½% of full scale.
Available: 2½", 3½", 4" round or square and 5½" round. DC and AC rectifier types in ranges listed below.

DC Milliammeters	DC Ammeters	DC Microammeters	DC Voltmeter 1000 Ohms Per Volt
1	1	★200	1
2	1.5	300	3
3	2	500	5
5	3	750	7.5
10	5		10
15	10		15
25	15		25
50	25		50
75	50		75
100	*100		100
150	*150		150
300	*200		250
500	*250		300
750	*300		500
	*400		600
	*500		
	*600		
	*750		
	*1000		
	*100-0-100		
	*200-0-200		

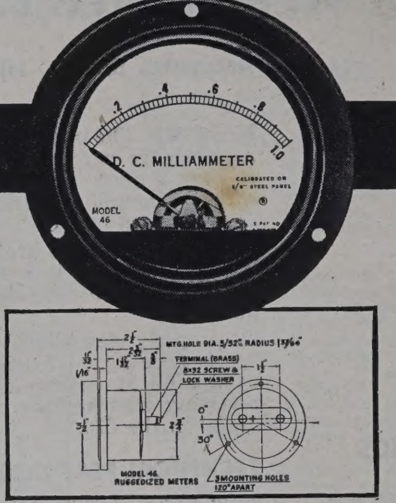
★Not Available in 4" and 5"

*Used with External Shunts with 50 M.V. drop,

AC RECTIFIER INSTRUMENTS

Microammeters	Milliammeters	Voltmeters
250	1	1
500	2	3
	3	5
	5	10
		50
		150
		300
		600

NOTE: Ranges listed for these 3 styles of instruments are only typical. Any practical range can be supplied.


D. C. MILLIAMMETER
CALIBRATED ON 1/8" STEEL PANEL
MODEL 46
.2
.4
.6
.8
1.0
MTG. HOLE DIA. 5/32" RADIUS 1 37/64"
TERMINAL (BRASS)
8-32 SCREW & LOCK WASHER
0°
30°
MODEL 46 RUGGEDIZED METERS
3 MOUNTING HOLES 120° APART

Illustrated: "Ruggedized" Model. Accuracy 1½% of full scale.
Available: 2½", 3½" and 4½" round. DC and AC rectifier types in ranges listed below.

DC Milliammeters	DC Ammeters	DC Voltmeters	DC Microammeters
1	1	1.5	20
1.5	1.5	2	30
2	2	3	50
3	3	5	80
5	5	8	100
8	8	10	150
10	10	15	200
15	15	20	300
20	20	30	500
30	30	50	750
50	*50	80	
80	*80	100	
100	*100	150	
150	*150	200	
200	*200	300	
300	*250	500	
500	*300	800	
750	*400	Also Kilovolt ranges.	
	*500		
	*600		
	*800		
	*1000		
	1200		
	*100-0-100		
	*200-0-200		

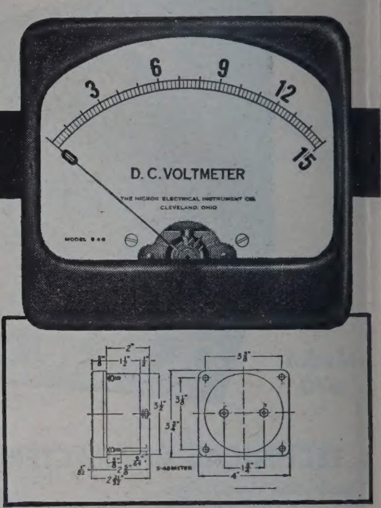
*Used with External Shunts with 50 M.V. Drop.

AC RECTIFIER TYPES

Microammeters	Milliammeters	Voltmeters
100	1	1
200	2	3
500	3	5
	5	10
		50
		150
		300
		600*
		800*

*Not Available in 2½" Size

D. B. METERS
High Speed Medium Speed —12, 0, + 6 DB


D. C. VOLTMETER
THE HICKOK ELECTRICAL INSTRUMENT CO. CLEVELAND, OHIO
3
6
9
12
15
S-48METER

Illustrated: Model S-48, 4". Accuracy within 1½% of full scale.
Available: 2½", 3½" round or square. 4", 5" square only; in types and ranges listed below. DC, rectifier, thermocouple and AC types.

DC Milliammeters	DC Ammeters		DC Voltmeters		DC Micrometers
1	1	*200	1	250	10
2	1.5	*250	3	300	20
3	2	*300	5	500	25
5	3	*400	7.5	600	50
10	5	*500	10	800	100
15	10	*600	15		200
25	15	*750	25		300
50	25	*1000	50		500
75	50	*100-0-100	75		750
100	*100	*200-0-200	100		
	*150		150		

*Used with External Shunts with 50 M.V. Drop

THERMO INSTRUMENTS — ACCURACY 2%.

Thermo Milliammeters	Thermo Ammeter	
2	1	100
5	5	150
10	10	300
25	25	500
	50	

POWER LEVEL INDICATORS—D B METERS
High Speed or Medium Speed Movements
—12, 0 + 6 d b

VU (VOLUME UNIT) METERS SCALE A, SCALE B

RECTIFIER INSTRUMENTS — ACCURACY 5%

AC Micrometers	AC Milliammeters	AC Voltmeter	
100	1	1	50
200	2	3	150
500	3	5	300
	5	10	600
			800

ALTERNATING CURRENT INSTRUMENTS ACCURACY 1½% OF FULL SCALE

AC Milliammeters		AC Ammeters		AC Voltme	
10	300	1	50	1.5	100
15	500	2	75	5	130
25		3	100	10	150
50		5		15	250
100		10		25	300
150		25		50	

AC - DC WATT METERS

Ranges Watts		Single Phase Volt Limit			Am Lim
75	3000	150	300	0.75	1
150	3000	150	150	1.5	3
300	6000	150	300	3	3
750	5000	150	150	7.5	5
1500	10 KW	150	300	15	5
1500		300		30	

And Higher if used with Current Transformers having 5 Ampere Secondary.

THE HICKOK ELECTRICAL INSTRUMENT COMPANY

10532 Dupont Avenue • Cleveland 8, Ohio

Write for Catalog No. 26

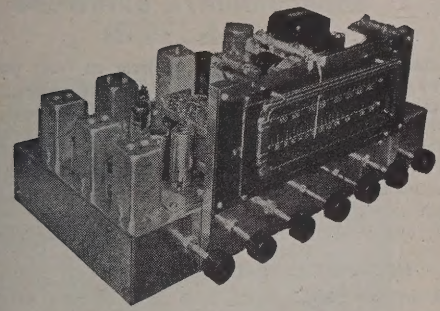
BROWNING LABORATORIES, INC. WINCHESTER, MASS., U.S.A.

BROWNING FM-AM TUNER — MODEL RJ-20B

Designed for high-fidelity receiving application in the AM broadcast and FM bands.

ELECTRICAL FEATURES

- For FM—88 to 108 MC, and AM—530 to 1650 KC. Armstrong FM circuit.
- 20 db quieting with 6½ microvolts on FM; 5 microvolts sensitivity on AM.
- Separate RF and IF on both bands; no coil switching.
- Variable bandwidth AM IF gives full 9 KC band on broad and 4 KC on narrow position.
- Selective AFC on FM.
- Drift-compensated.
- FM audio response flat from 15 to 15,000 cycles ± 1½ db.
- 100,000-ohm output impedance: 300 or 72 ohms input for FM provided.
- Tubes: five 6AU6; one 12AT7; two 6AL5; one 6SN7; one 6SK7; one 6SA7; one 6J6; one 6SG7; one 6AL7 tuning eye; one 5Y3 rectifier.



MECHANICAL FEATURES

- Edgelighted slide-rule dial with large tuning ratio.
- Height 7½"; width, 17"; depth, 9".
- Weight: RJ-20B, 18½ lbs. shipping 26 lbs.

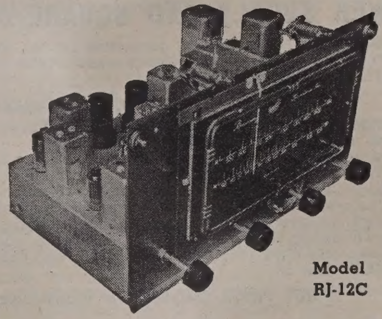
BROWNING FM-AM TUNER — MODEL RJ-12C

Engineered for high-fidelity reception in the FM band. The AM section provides high sensitivity and selectivity as well as quality reception in the broadcast band.

ELECTRICAL FEATURES

- For the FM band—88 to 108 MC, and broadcast band—530 to 1650 KC.
- Less than 10 microvolts needed to produce 30 db noise reduction in the FM band; sensitivity of 5 microvolts in the AM broadcast band.
- Separate RF and IF systems on both bands; no coil switching.
- Drift-compensated.
- Selective AFC on FM.
- FM audio response flat from 15 cycles to 15000 cycles within ± 1½ db.
- AM audio response flat from 20 to 6600 cycles ± 3 db; IF's triple tuned.
- Miniature tubes used as FM RF and IF amplifiers assure maximum gain.
- High-impedance output for connection to any high-quality audio amplifier.
- Phono-TV-Recorder positions on channel selector switch to provide volume control directly on the tuner; input connections in back of tuner.
- FM-AM on one antenna with 300 ohms input with twin lead cables.
- Power supply, optional, provides 250 volts d-c at 65 MA and 6.3 volts a-c at 4 amperes.
- Major Armstrong's circuit on FM.
- 6AL7 tuning eye for accurate tuning on both FM and AM.
- Operates on 115 volts, 60 cycles. 80 volt-amperes input when used with Browning model PF-12 power supply.
- Tubes: three 6AU6; one 12AT7; one 6SK7; one 6SG7; two 6SJ7; one 6J6; one 6H6; one 6SA7; one 6AL7 tuning eye; one 1N54 crystal detector.

Model	Weight	Shipping Weight
RJ-12C—FM-AM Tuner	12 lbs.	18 lbs.
PF-12—Power Supply	8 lbs.	9 lbs.



Model RJ-12C

MECHANICAL FEATURES

- Easily mounted in book-cases, drawers, shelves and cabinets.
- Dial escutcheon supplied with unit. Edge lighted dial—slide rule type.
- Model PF-12 power supply is small separate unit for mounting in confined spaces.
- Dimensions: height 7⅜"; width 13½"; depth 9". Power supply: height 6"; width 3½"; depth 8".

BROWNING FM TUNER — MODEL RV-10B

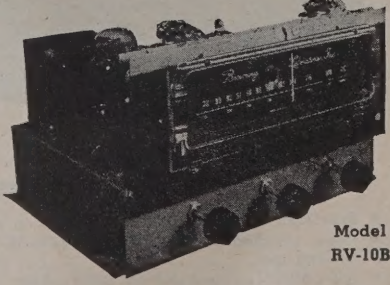
Designed for high-fidelity reception in the FM band.

ELECTRICAL FEATURES

- Receives signals in the FM band extending from 88 to 108 megacycles.
- Less than 10 microvolts needed to produce complete limiting.
- Audio response flat from 15 cycles to 15,000 cycles within ± 1½ db.
- Two-stage cascade limiter used to ensure freedom from noise.
- Tuned RF stage used to increase gain and reduce image interference.
- High impedance output to feed any high-fidelity amplifier.
- Drift-compensated.
- Selective AFC.
- Phono-FM-TV-Recorder switch permits instant transfer of input signals.
- Power supply self contained.
- Employs Armstrong FM circuit.
- Tuning eye indicates correct tuning.
- 115 volt, 60 cycle AC operation. 65 volt-amperes input.
- Tube complement: three Type 6AU6, one 12AT7; two 6SJ7; one 6H6; one 6J6.
- Tuning eye indicator (6AL7). Type 5Y3 rectifier tube.

MECHANICAL FEATURES

- Physically small. Can be easily mounted in cabinets, shelves, bookcases, drawers, and the like.
- Dial escutcheon, knobs, shielded interconnecting wire and connectors supplied with each unit.
- Attractive edgelighted dial calibrated in megacycles and channel numbers.
- Rugged construction, all components of the highest quality.
- Dimensions: RV-10B—Height 6½", Width 11", Depth 8¾".



Model RV-10B

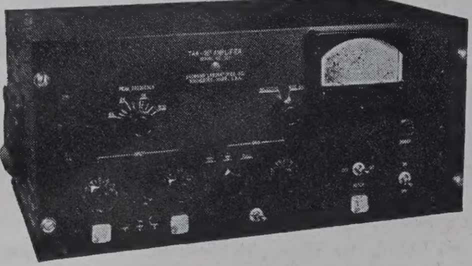
Model	Weight	Shipping Weight
RV-10B	11 lbs.	16 lbs.

Net

BROWNING LABORATORIES, INC. WINCHESTER, MASS., U.S.A.

BROWNING
MODEL TAA-16A AMPLIFIER

High gain AC voltmeter for measurement of standing wave ratios with slotted lines.



ELECTRICAL FEATURES

- 500- to 5000-cycle range; **broadband/selective** controls on front panel.
- 15-microvolt sensitivity in **broadband** and 10 microvolts in **selective** position.
- Four-inch meter with illuminated scales calibrated in 0-10 as well as Standing Wave Voltage Ratio.
- Panel switch for bolometer voltage application.
- Master gain control switch provides attenuation factors of 1, 10 and 100.
- Power supply electronically regulated for stability.
- 60 volt-amperes input at 115 volts 60 cycles.
- Tubes: three 6SJ7GT; one VR-105; two 6V6GT; one 6H6GT; one 5Y3GT.

MECHANICAL FEATURES

- Rack panel in black wrinkle steel cabinet, 9" x 20" x 12".
- Panel black leatherette finish with engraved characters.
- Input tube shock mounted for low microphonics.
- Weight 30½ lbs. Shipping weight 45 lbs.

NET PRICE COMPLETE WITH TUBES (FOB Winchester, Mass.) $415.00

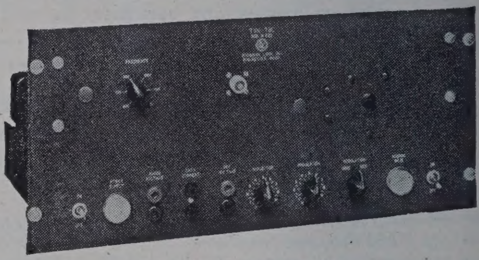
BROWNING MODEL TVN-7
POWER SUPPLY AND SQUARE-WAVE MODULATOR

The basic unit of a signal generator in the super-high-frequency range. Square-wave modulator for low-powered velocity-modulated tubes such as the 417A, 2K28 and 2K25.

ELECTRICAL FEATURES

- Range of cathode voltage is 280 to 480 volts, continuously variable. Provision is made for 180 to 300 volt range.
- Range of reflector voltage is 15 to 150 volts controllable from panel.
- Provision is made for grid pulse modulation or reflector pulse modulation.
- Grid pulse amplitude 60 volts; reflector pulse 100 volts maximum.
- Square-wave modulation frequency is variable from 600 to 2500 cycles.
- Provisions are made for external modulation.
- 110-115-volts, 60-cycle operation with 170 volt-amperes input.
- Tubes: one type 5Y3; two OD3/VR150; one 6SN7; one 6V6; one 6Y6G; one 5R4GY; one 6SJ7.

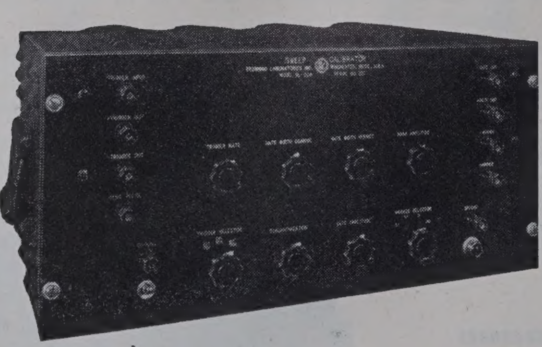
NET PRICE $245.00 FOB Winchester, Mass.



MECHANICAL FEATURES

- Designed for rack mounting; cabinet extra.
- Black wrinkle, engraved-steel panel.
- 8¾" x 19" x 11"; Wt. 33 lbs. Shipping Wt. 50 lbs.

BROWNING SWEEP CALIBRATOR — MODEL GL-22A



MECHANICAL FEATURES

- Provided with steel cabinet finished in black wrinkle.
- Panel finished in black leatherette with labels engraved into surface.
- All output connections on front panel.
- Insulated universal binding posts used for output connections.
- Dimensions: Height 9", Width 20½", Depth 12".
- Weight: 35 lbs. Shipping weight: 52 lbs.

Designed for use with oscilloscopes and synchroscopes as a source of timing markers for the measurement of sweep intervals.

ELECTRICAL FEATURES

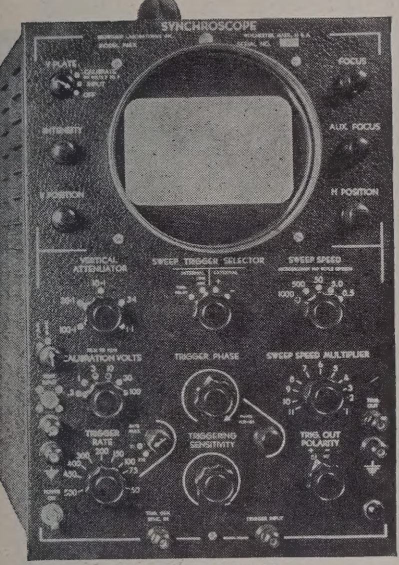
- Provides markers of 0.1, 1.0, 10, 100 microseconds either positive or negative with variable amplitude to 50 volts.
- Generates variable width, variable amplitude gate for blanking or timing purposes.
- Contains own trigger generator with positive and negative trigger outputs.
- Markers may be initiated from external trigger or from internal generator. May be synchronized with triggers up to 100 KC. repetition rate.
- Voltage regulation to timing circuits.
- 115 volt, 60 cycle operation. 110 volt-amperes input.
- Tube complement: one Type 6BE6, one 6J6, three 6V6GT, one 6SN7, one 5Y3GT, one VR-105, one 6X5GT, two 12AU7, one 6H6, one 6SH7, one 6AG7, and one 2050.

Net Prices, F.O.B. Winchester, Mass.

Cabinet Style	**$295.00**
Rack Panel	**$285.00**

BROWNING LABORATORIES, INC. WINCHESTER, MASS., U.S.A.

BROWNING SYNCHROSCOPE MODEL P4-EX



NET PRICE $465.00
F.O.B. WINCHESTER, MASS.

This instrument is designed for viewing repetitive or non-repetitive phenomena occurring in electronic circuits, especially those of short duration where a triggered sweep is necessary. Internal trigger generator with phaseable output triggers permits use of the P4-EX as a timing source for equipment requiring external triggering. Vertical and horizontal calibration facilities permit measurement of both time and amplitude.

ELECTRICAL FEATURES

- Five-inch type 5UP cathode-ray tube, available in P1, P7 or P11 screens, with an accelerating potential of 2600 volts.
- Triggered sweep writing rate continuously variable from 1.0 to 25,000 microseconds per inch.
- Sweep speed controls directly calibrated, within ±10%, in microseconds per horizontal screen division.
- Sawtooth recurrence rate: 50 to 5,000 cycles per second, from internal generator.
- Triggered sweep repetition rate: up to trigger-to-sweep ratios of 50:1.
- External trigger requirements: 5 volts, positive or negative; rise time 20 volts per microsecond.
- Internal timing generator: 50 to 5,000 cycles per second. May be synchronized with external positive signals of 10 volts or greater.
- Trigger timing: may be phased from 500 microseconds in advance of sweep start to 500 microseconds following sweep start.
- Vertical amplifier bandwidth: down 3 db. at 5 cycles and 5 mc.
- Vertical amplifier deflection sensitivity: 1.0 volt per inch.
- Vertical amplifier attenuator: ratios of 100, 30, 10, 3, and 1 to 1.
- Calibration voltages: 0.3, 1, 3, 10, 30, 100 volts p. to p. to amplifier input; 100 volts to deflection plate. Accuracy ±5% at 115 volts line voltage.
- Beam modulation connection: at rear panel; positive signals blank sweep.
- Vertical deflection plate connection: at rear panel.
- Tube complement: four 6BC5, two 6C4, three 6AL5, three 6SN7, one 6AU6, one 12AU7, one 6BG6G, one 5U4G, two 2X2A, one OA2, one 6BE6, one 2D21, one 6J6, one 5UP1.
- Power input: 115/230 volts, 50-60 cycles, 180 volt-amperes.

MECHANICAL FEATURES

- Steel cabinet finished in black wrinkle.
- Steel panel finished in black leatherette.
- Copper-plated steel chassis with lacquer finish.
- Controls grouped by function for operating convenience.
- Dimensions: 10" wide, 14½" high, 16¾" deep.
- Weight: 50 lbs. Shipping weight: 60 lbs.

BROWNING OSCILLOSYNCHROSCOPE MODEL ON-5A — MODEL ON-5X

This new, low-priced instrument is designed to satisfy the requirements for **basic laboratory equipment** to be used in pulse work. It provides exceptional flexibility with sweep writing rate continuously variable over a wide range, broad frequency coverage and high sensitivity; it is self-calibrating on both the X and the Y axis. All these advantages are provided at exceptionally low cost.

OSCILLOSYNCHROSCOPE
INTENSITY
FOCUS
V POSITION
H POSITION
VERTICAL GAIN
SYNC SELECTOR
SWEEP SPEED
EXT. ATTENUATOR
SYNC GAIN
SWEEP SPEED MULTIPLIER
CALIBRATION VOLTS
INT. SWEEP SELECTOR
EXT. HORIZONTAL GAIN
C.R. TUBE CATHODE
SYNC INPUT

ELECTRICAL FEATURES

- Five-inch 5UP1 cathode-ray tube operates at accelerating potential of 2600 volts.
- Triggered sweep writing rate continuously variable from 1.0 to 25,000 microseconds per inch.
- Sweep speed controls directly calibrated, within ± 10%, in terms of microseconds per screen division (horizontal deflection) for both triggered and sawtooth operation.
- Sawtooth recurrence rate: 10 cycles to 100 KC.
- Triggered sweep will operate at any rate from a single sweep up to a frequency determined by the desired sweep time; will also operate from regularly recurrent signals to display up to ten cycles of the phenomena for a single, triggered sweep.
- Sweep may be triggered (or synchronized when operated as recurrent sawtooth) by positive or negative sine-wave or pulse signals of 0.5 volts (external) or 0.75 inches deflection (from vertical amplifier).
- Vertical amplifier has flat frequency response, within 3 db., from 5 cycles to 5 megacycles per second with deflection sensitivity of .15 volt/inch p.p.
- Model ON-5X contains a .45 microsecond vertical amplifier delay line to permit triggering of the sweep by observed pulses for one-inch deflection, at maximum gain. Rise time of .08 microseconds.
- Three-step attenuator for gain control 1:1, 10:1, and 100:1 — plus continuous adjustment over entire range.
- Horizontal amplifier operates from 500 KC down to d.c. thus allowing use of extremely slow sweeps; deflection sensitivity is 2.0 volts RMS per inch.
- Peak-to-peak vertical calibration voltages of 0-2, 0-20, and 0-200 can be switch-selected; accuracy is ± 10%.
- Cathode connection, brought out to front panel, allows external blanking and marker connection.
- Direct connection to all deflection plates at rear terminal board.
- Total power requirement is 180 volt-amperes at 115 volts, 60 cycles.
- Tube complement: one 5UP1; two 6C4; eight 6BC5; two 6AL5; one 12AU7; two 6BG6G; one 5U4G; two 2X2A; two OA2; two 6SN7.
- Operates on 115/230 volts, 50-400 cycles.

MECHANICAL FEATURES

- Steel cabinet finished in black wrinkle.
- Steel panel finished in black leatherette.
- Copper-plated steel chassis with lacquer finish.
- Controls grouped by function for operating convenience.
- Free-view screen has graduated X- and Y-axis scales.
- Dimensions: 10" wide, 14½" high, 16¾" deep.
- Weight: 50 lbs.; shipping weight: 60 lbs.

NET PRICES: FOB WINCHESTER, MASS.

MODEL ON-5A	**$485.00**
MODEL ON-5X (with video delay)	**$535.00**

BROWNING PROBE MODEL FJ-2

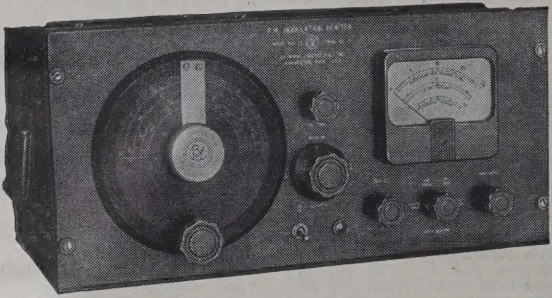
This low-capacity probe is available as an accessory for the Oscillosynchroscopes Model ON-5A and Model ON-5X. Complete with 6-foot cable, this unit has a voltage attenuation of 10:1, an input capacitance of approximately 12 mmf, and an input resistance of 2.2 megohms.

NET PRICE $20.00 — FOB WINCHESTER, MASS.

Net

BROWNING LABORATORIES, INC. WINCHESTER, MASS., U.S.A.

BROWNING UNIVERSAL FM MODULATION MONITOR — MODEL MD-25A



A single instrument for monitoring the modulation of all FM transmitters operating in the communications bands from 30 to 162 mc. Provides simple and inexpensive means for checking fixed or mobile transmitters for compliance with FCC limitations on carrier frequency swing due to modulation. Maintenance of frequency swing within the FCC plus-or-minus 15 Kc limit is equally important for reduction of adjacent-channel interference. Peak flasher indicates excessive modulation.

The Browning Universal Modulation Monitor checks any communications system working on 30-40, 40-50, 72-76, and 152-162 mc., a feature of special importance to engineers responsible for supervision of several systems, since a single instrument can be used to check all transmitters operating within the above bands.

ELECTRICAL FEATURES

• An outstanding feature of Model MD-25A is its extreme simplicity of operation. The multi-range band-selector switch is set to the band to be monitored, and the unmodulated transmitter carrier is tuned in precisely. Then the carrier is modulated by voice or audio oscillator, and the frequency swing is read directly from a 4-inch panel meter calibrated to 20 kc. A calibrated discriminator is used to determine modulation swing. The meter also determines precise tuning by indicating limiter voltage or total discriminator voltage. • The meter can be read to better than 1 kc. The meter indicates peak swings of sustained sinusoidal modulation or voice modulation peaks of 0.3 seconds duration or more. • Aural monitoring is provided by means of an audio output which permits attachment of an audio amplifier or phones. Oscilloscope may be attached at the same point for analysis of demodulated signal. • Measurements may be made on signals generating less than 1 millivolt at the antenna input. If the instrument is mounted at the headquarters station, cars can be checked while they are on the road. • Tube complement: one 6AK5, four 6AU6, three 6SN7, one each 5Y3, 6C4, 6AL5, 6J6, VR-150.

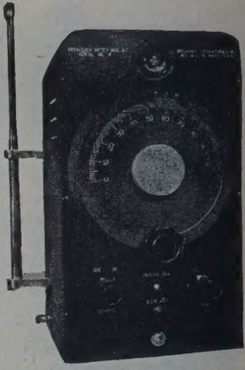
MECHANICAL FEATURES

• Model MD-25A is mounted on a standard 8¾" rack panel. • Supplied with a portable case 20" wide, 9" high, and 12" deep. • Weight: 40 lbs. Shipping weight: 55 lbs. • Case is readily removable for rack mounting use.

Net Price, F.O.B. Winchester, Mass . $345.00

BROWNING FREQUENCY METERS

Browning frequency meters are precision-built instruments designed to check frequencies in various ranges from 100 kilocycles to 500 megacycles. Custom-built and hand-calibrated, each of the meters listed below is equipped with a 100 KC CRYSTAL USED AS SECONDARY STANDARD WHICH IS EASILY COMPARED WITH WWV RADIATIONS ALLOWING EVERY FREQUENCY METER TO BE CHECKED IN THE FIELD. Some of the outstanding electrical features are:



MODEL S-7

MODEL S-4

- From 1 to 5 specified frequencies in 1.5-70 mc. range.
- Accuracy ± .0025% of the specified frequency.
- Stable electron-coupled oscillator used in special circuit.
- Visual detection of zero beat with cathode-ray indicator.
- 110-115-volt ac/dc operation with 40 volt-amperes input.
- Telescoping antenna on side of case.
- **Tubes: one 6SC7; one 6SA7; one 6J5; one 6SK7; one 6U5; one** 25Z6 and one VR90 voltage regulator.

MODEL S-6

- Range: 100 kilocycles to 50 megacycles, in 5 bands.
- Accuracy ±0.025% of the frequency measured.
- Harmonic amplifiers permit use of harmonics up to 50 mc.
- Visual and audio detection of zero beat.
- 115 volt ac operation with 40 volt-amperes input.
- Telescoping antenna on side of case.
- Tubes: one 6SK7; one 6SL7; one 6SF5; one 6U5; one 5Y3GT; one VR90.

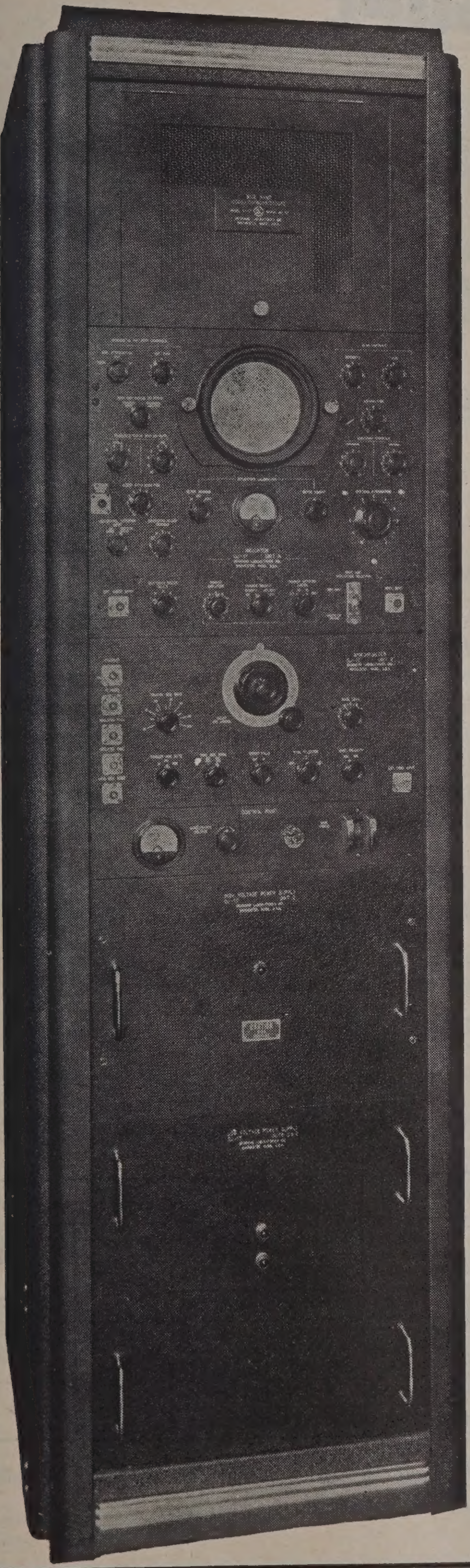
MODEL S-7

- Calibrated for One or Two frequencies in 72-76 and/or 152-174 mc. bands.
- Accuracy ±.0025% of the specified frequency.
- Deviation chart supplied for instant determination of deviation from assigned frequency.
- Cathode-ray indicator for accurate setting of ECO calibration.
- 115-volt ac/dc operation with 40 volt-amperes input.
- Telescoping antenna on side of case.
- Tubes: one 6SL7; one 6SA7; one 6J5; one 6SK7; one 25Z6; one VR-90; and one 6U5 tuning indicator.

MECHANICAL FEATURES OF ALL MODELS

- Rugged steel cabinet with ⅛" aluminum panel.
- Machined main dial graduated in 100 divisions over 180 degrees. Vernier allows reading of 1/10 of dial division.
- Panel finished in black leatherette.
- All labels engraved in panel surface.
- Dimensions: 13½" high, 7⅝" wide, 6⅞" deep.
- Weight: 15 lbs. Shipping weight 18½ lbs.

BROWNING LABORATORIES, INC. WINCHESTER, MASS., U.S.A.



BROWNING WIDE-BAND OSCILLOSYNCHROSCOPE MODEL OJ-17

This new Browning instrument is designed to meet the demand for an oscillosynchroscope capable of producing satisfactory traces in high-speed pulse work. The characteristics of this 'scope suit it to use in work involving pulses of extremely short duration and in the study of complex wave forms having very high frequency components. The individual elements — 'scope, synchronizer, high-voltage power supply, low-voltage power supply, and control panel — are mounted in a standard vertical rack cabinet on casters. Space is provided at the top of the cabinet for installation of a Fairchild Oscillorecord camera when photographic records of 'scope traces are desired.

CIRCUIT FEATURES

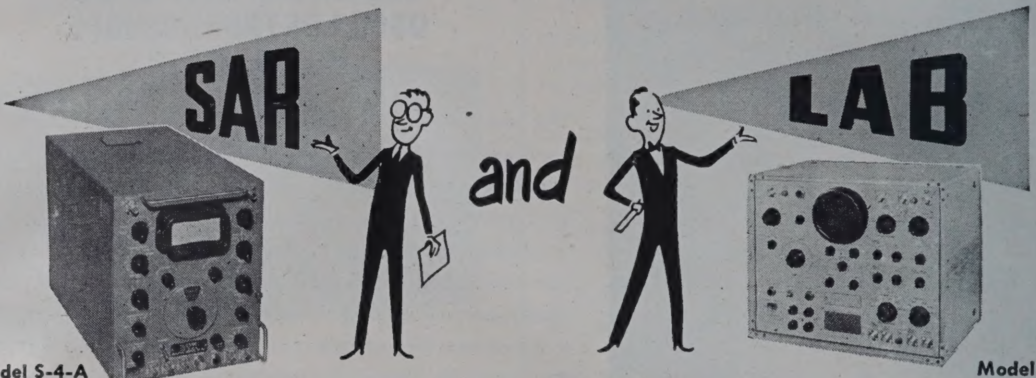
- Band width of 16 mc. in vertical amplifier; deflection sensitivity of .05 volts/inch at maximum gain, video delay of 0.2 microsecond.
- Horizontal Amplifier: Band width of 2 mc., deflection sensitivity .25 volts/inch at maximum gain.
- Cathode Ray Tube: Type 5RP or 5XP with anode voltage variable from 10 to 20 KV. Supplied in any of the standard phosphors.
- Driven Sweep: Variable from .05 to 500 microseconds per inch, may be triggered from (1) external pulses of 0.1 volt or higher, (2) video amplifier signals, (3) scope trigger generator.
- Sawtooth Recurrent Sweep: 5 to 500,000 cycles per second.
- Trigger Generator: Positive and negative output of 100 volts from 500 ohms, running rate — 20-20,000 cps.
- Markers: Either internal blanking or deflection type: 0.1, 1.0, 10, 100 microsecond ranges.
- Blanking: External connection to grid provided.
- Variable Delay Circuit: Operates from internal trigger generator or external sync. and provides positive and negative delayed output triggers. May be used to delay sweep from external sync. or internal trigger generator. Delay continuously variable to 2000 microseconds. Adjustable by means of 4½" directly calibrated dial.
- Voltage Calibration Circuit: Provides measurement of input signals by means of substitution voltages in the form of 1000-cycle square waves.
- Size: 81⅜" x 23⅝" x 24".
- Weight: 500 lbs.; shipping weight: 750 lbs.

NET PRICE, F.O.B. Winchester, Massachusetts $5000.00

Net

WATERMAN PIONEERING

PULSESCOPE®



Model S-4-A **Model S-5-A**

PULSESCOPES are Oscilloscopes to portray the attributes of the pulse: such as shape, amplitude, duration and time displacement. Both of the PULSESCOPES have Video amplifiers with frequency response up to 11 megacycles with Video delay of 0.55 microseconds and pulse rise and fall time better than 0.07 microseconds.

S-4-A SAR PULSESCOPE—Video Sensitivity 0.5vp to p/in. S Sweep 80 cycles to 800KC, either trigger or repetitive. A Sweep 1.2 microseconds to 12,000 microseconds. R Delay 3 microseconds to 10,000 microseconds directly calibrated on precision dial. R Pedestal (or Sweep) 2.4 microseconds to 24 microseconds. Internal Crystal Markers 10 microseconds and 50 microseconds. Size 9⅛ x 11¼ x 17¼". Weight: Less than 32 pounds.

S-5-A LAB PULSESCOPE—Video Sensitivity 0.1vp to p/in. Sweep 1.2 microseconds to 120,000 microseconds with 10 to 1 expansion. Sweep either trigger or repetitive. Internal Markers synchronized with Sweep from 0.2 microseconds to 500 microseconds. Trigger Generator and built-in precision amplitude calibrator. Completely cased. Size: 16½ x 14⅛ x 14½". Weight: Less than 60 pounds.

WATERMAN RAYONIC TUBE DEVELOPMENTS

3 SP

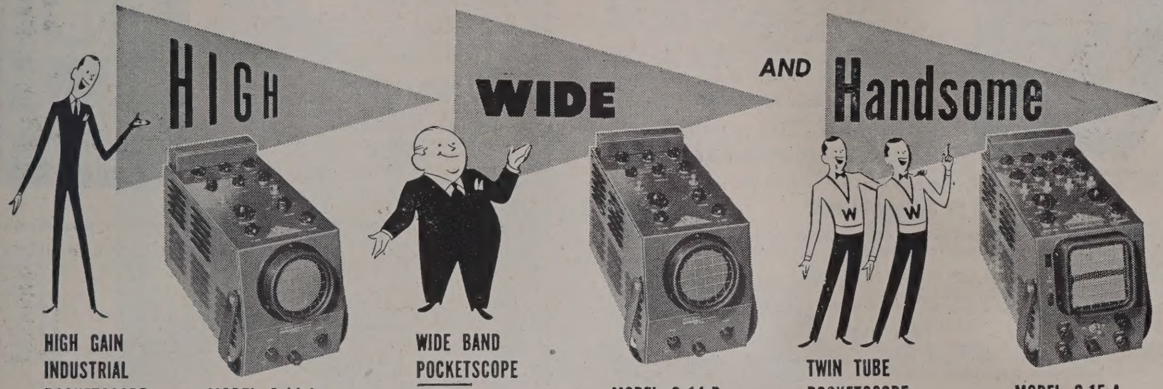
Since the introduction of Waterman RAYONIC 3MP1 tube for miniaturized oscilloscopes, Waterman has developed a rectangular tube for multi-trace oscilloscopy. Identified as the Waterman RAYONIC 3SP, it is available in P1, P2, P7 and P11 screen phosphors. The face of the tube is 1½" x 3" and the over-all length is 9¼". Its unique design permits two 3SP tubes to occupy the same space as a single 3" round tube, a feature which is utilized in the S-15-A TWIN-TUBE POCKETSCOPE. On a standard 19" relay rack, it is possible to mount up to ten 3SP tubes with sufficient clearances for rack requirements. All RAYONIC cathode ray tubes are available in P1, P2, P7 and P11 phosphors. We are authorized to supply 3SP1, 3JP1 and 3JP7 with JAN stamp. All RAYONIC tubes listed below operate on 6.3 volts heater with .6 amp. current.

3 MP

TUBE	PHYSICAL DATA			TYPICAL VOLTAGES				DEFLECTION FACTOR V/IN.		MAX. VOLTS	
	Face	Length	Base	Anode #3	Anode #2	Anode #1	Grid #1	D1 to D2	D3 to D4	Anode #3	Anode #2
3JP	3 inch Round	10 inches	Medium Diheptal 12 Pin	3000	1500	300 to 515	—22.5 to —67.5	127 to 173	94 to 128	4000	2000
				4000	2000	400 to 690	—30 to —90	170 to 230	125 to 170		
3MP	3 inch Round	8 inches	Small Duodecal 12 Pin		1000	200 to 350	0 to —68	140 to 190	130 to 180		2500
					2000	400 to 700	0 to —126	280 to 380	260 to 360		
3SP	1½ x 3 inches	9.12 inches	Small Duodecal 12 Pin		1000	165 to 310	—28.5 to —67.5	73 to 99	52 to 70		2750
					2000	330 to 620	—58 to —135	146 to 198	104 to 140		

THE WATERMAN LINE-UP

POCKETSCOPE®

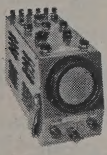


HIGH GAIN INDUSTRIAL POCKETSCOPE **MODEL S-14-A**

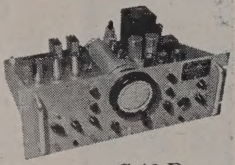
WIDE BAND POCKETSCOPE **MODEL S-14-B**

TWIN TUBE POCKETSCOPE **MODEL S-15-A**

HI, WIDE and HANDSOME POCKETSCOPES are characterized by small size, light weight, and outstanding electrical performance. All units have frequency compensated attenuators as well as non-frequency discriminating gain controls. All units have both periodic and trigger sweeps from ½ cycle to 50KC. The amplifiers are direct coupled thus frequency response starts from 0 cycles. No peaking coils are used, thus, the transient response is good. Full expansion of trace, both vertical and horizontal, is built in. Means for amplitude calibration are provided. DC coupling in POCKETSCOPES provides unusual stability of the trace, regardless of the line voltage changes or variations of impedances in the input circuit. The HI, WIDE and HANDSOME POCKETSCOPES are the outgrowth of Waterman pioneering of the first commercial miniature oscilloscope, which has proved to be useful and reliable over a period of years. Combination filter and graph screens are used for better visibility, thus traces can be observed even under high ambient light conditions. Binding posts for convenience of connections, with an effective shield, are used. S-14-A has sensitivity of 10 mv/inch with pass band above 200KC. S-14-B has sensitivity of 50 mv/inch with pass band above 1 megacycle. S-15-A is similar to S-14-A except that it has two independent CR Tubes for multi-trace oscilloscope work. Accessories such as carrying cases and probes are available.


S-11-A

The Model S-11-A Industrial & Television POCKETSCOPE is a small, compact, lightweight instrument for observation of repetitive electrical circuit phenomena. The Industrial & Television POCKETSCOPE is a complete cathode ray oscilloscope incorporating the cathode ray tube, vertical, horizontal, and intensity amplifiers, linear time base oscillator, blanking, synchronization means and self-contained power supply. The Industrial & Television POCKETSCOPE can be used, not only for AC measurements, but for DC as well, inasmuch as it has vertical and horizontal amplifiers which are capable of reproducing faithfully within —2 db, from 0 to 200KC. The sensitivity of the vertical and horizontal amplifiers is high and is in the order of 100 mv rms/in.


S-12-B

Model S-12-B RAKSCOPE has the features of S-11-A POCKETSCOPE, plus. The RAKSCOPE is JANized and the government model number is OS-11. The Sweep, from 5 cycles to 50KC is either repetitive or triggered. Vertical and horizontal amplifiers are 50 millivolts rms per inch with band pass from 0 to 200KC. Special calibrating circuitry is provided for frequency comparison. Both the vertical and horizontal amplifiers are identical and use no peaking. The panel is only 7″ high and the scope fits standard rack. The functional layout of the control permits ease of operation.

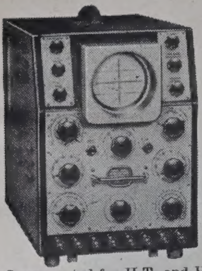
WATERMAN PRODUCTS CO., INC.

WATERMAN PRODUCTS

PHILADELPHIA 25, PENNA., U.S.A.
CABLE ADDRESS, POKETSCOPE, PHILA.

Manufacturers of POCKETSCOPES® • RAKSCOPES® • PULSESCOPES® and RAYONIC TUBES®

COSSOR OSCILLOGRAPHS THRU BEAM INSTRUMENTS



Double Beam Industrial Oscillograph Model 1049

This Instrument is presented to meet the requirements of Industrial concerns and Research Laboratories who require to measure phenomena of zero or very low frequency and to make photographic records of transients requiring a high photographic writing speed.
Two independent Y axis amplifiers are used; one for each beam. Y1 and Y2 gain 900 and 25 respectively, with response D.C.—100 Kcs.

Y1 D.C. AMPLIFIER

Gain—900, Five Tubes.
Frequency response, D.C. to 100 Kcs. plus or minus 15%.
Fitted with directly calibrated Y Shift control.
Compensated for H.T. and Heater supply variations.
Input Impedance, 0.5 to 0.75 megohms capacity 10 to 40 pF.

Y2 D.C. AMPLIFIER

Gain—25, One Tube.
Frequency response, D.C. to 100 Kcs. plus or minus 15%.
Fitted with switch attenuator calibrated in the following range of Y2 sensitivity:—
Volts per mm. 10.0, 5.0, 2.0, 1.0, 0.5, 0.2, 0.1.
Max. input, 1,000 V.D.C., or Peak A.C.
Input Impedance, 0.5 to 1 megohm, 70 pF (Miller effect).

TIME BASE

Repetitive, Triggered or Single Stroke operation.
Positive or Negative sync. and Trigger by continuously variable control.
Directly calibrated time scale with 9 ranges from 150 microseconds to 1.5 seconds.

SYNCHRONIZATION AND TRIGGER

Switch selection for External sync. or Internal sync. from Y1 or Y2 signals.
Sync. input impedance, 2 megohms 20 pF.

BEAM TRIGGER

H.F. circuit giving the following facilities:—

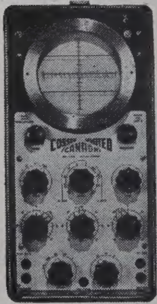
1. Beam Trigger off.
2. Electrical Beam Trigger enabling beam to be switched on and off by application of D.C. to trigger terminal, and giving beam switching for time marking from A.C. signal.
3. Mechanical Beam Trigger enabling beam to be switched by shorting "Beam Trigger" and "Common terminals".
4. Line Frequency Beam Trigger giving blackout pips at Line Frequency.
5. Push-button to facilitate photography and to inspect the trace.

CATHODE RAY TUBE

Type 89 Double Beam 4″ diam. "J" (blue) Screen.
The output of the Amplifier and Time Base and direct access to the Tube Plates and Anode, and "Ground" available at the side of the instrument.

POWER RATING

Voltage—110, 125, 207, 225 and 245. Stabilized for variations of up to plus or minus 10% of input volts.
Frequency—40-100 cycles. Consumption—130 watts.
Stabilized D.C. voltages:—
Tube—2KV and 4KV. Amplifiers, Time Base, etc.—650 volts.



Cossor Portable Twin-Beam Oscilloscope Model 1037C

The instrument uses the unique Cossor Double Beam Type 89 Cathode Ray Tube (green screen). C.R.T. has a flat 4″ diameter face, facilitating accurate measurements and avoids optical focussing troubles when photographing traces. Signals to the tubes normally pass through the amplifiers but direct connection to the CRT electrodes is provided. Time Base is an extremely linear Miller Transitron with cathode follower coupling, synchronized via a limiter stage, dispensing with front panel synch. control.

Y1 AMPLIFIER—is direct coupled. Gain is 25, sensitivity 1.0 r.m.s. volt/inch. Input impedance is .5 megohm and 30 uuf. Maximum input 1000 volts DC. Response from D.C., i.e. 0 to 100,000 cycles within 15% or 1 db., approximately. 3 stages. Gain levels in preset calibrated steps. Voltage inputs read directly off vertical shift control.

Y2 AMPLIFIER—is A.C. coupled, single stage. Gain is 10 and sensitivity 2.7 r.m.s. volts/inch. Input impedance 1 mogohm, 30 uuf. Gain levels in preset steps. Frequency response from 20 cycles up to 300,000 cycles within 15% or 1 db. approximately. An A.C. connection from a front panel terminal direct to the Y2 plate is provided when the A2 volts switch is set to 60. Calibration and synchronism are maintained.
Sensitivity of either beam direct is 15 volts r.m.s./inch. With amplifiers in cascade, 0.1 r.m.s. volts/inch.

X AXIS

No X axis amplifier is used. Durect sensitivity is 12.5 r.m.s. volts/inch. The Miller Transitron system generates recurrent sweeps from 2 - 50,000 cycles/sec., calibrated in milliseconds and microseconds on the X shift control for direct reading of time intervals within 10% accuracy. Synchronization is automatic. Front panel switch selects sync. from Y1 or Y2 amplifier outputs or from mains frequency. Flyback is blanked out at all speeds. Time base voltage is available at high impedance at X1 terminal at rear panel.

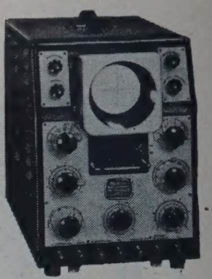
TEST SIGNAL

50 volts peak to peak at power frequency available at front panel.

POWER RATING

70 watts approximately at input voltages of 80, 105, 110, 115, 180 and 230 volts, **at any frequency from 25 to 2400 cycles/sec.** Tube supply 1000 volts. General D.C. voltage supply 350 volts.

Double Beam Oscillograph Model 1035



Model 1035 Oscillograph is designed to meet the exacting needs of the modern Research Laboratory and Industrial Plant whose requirements demand a simply operated and versatile instrument for quantitative measurements and waveform analyses.
Two independent Y axis amplifiers are used. One for each beam. The mechanical presentation of this Oscillograph combines functional simplicity with robustness and attractive appearance.
Calibrated controls enable direct measurement of Time and Voltage and thus provide a valuable facility of equal appeal to Laboratory, Production or Service Engineers.
The traces are presented over the full diameter of a 4″ double beam flat-screen and special screens with a long afterglow can be supplied for special work.

Y1 AMPLIFIER

3 tubes.
Directly calibrated voltage scale with 7 ranges—(Accuracy plus or minus 15%) 7 Mcs. to 20 C.P.S.

VOLTS RANGE	GAIN	FREQUENCY 15% Down	RESPONSE 50% Down
50 volts	3	7.0 Mcs.	10.0 Mcs.
15 volts	10	3.0 Mcs.	4.5 Mcs.
5 volts	30	2.2 Mcs.	2.8 Mcs.
1,500 millivolts	100	1.6 Mcs.	2.0 Mcs.
500 "	300	1.0 Mcs.	1.4 Mcs.
150 "	1,000	150 Kcs.	500 Kcs.
50 "	3,000	60 Kcs.	250 Kcs.

L.F. Response down to 20 c.p.s.
Maximum Input Volts, 500 D.C.
Input Impedance, 2 megohms. Input Capacity 20 pF.

Y2 AMPLIFIER

One tube.
Directly calibrated voltage scale with 5 ranges.
(Accuracy plus or minus 15%). 500, 150, 50, 15, and 5 volts.
Frequency Response 20 c.p.s. to 100 Kcs. plus or minus 15%.
Output available at terminal on front panel.
Cathode Follower facilities for external use.
A.C. connection to tube plate via terminal on front panel.
Maximum input volts, 500 D.C.
Input impedance, 0.2 megohms.
Input capacity, 35 pF.

TEST WAVEFORM VOLTAGE ("CAL.")

50 volts peak to peak.

TIME BASE

Repetitive, Triggered and Single Stroke operation. Positive or Negative sync. and Trigger by switch control. Directly calibrated time scale with 9 ranges: (Accuracy plus or minus 10%) 15 microseconds to 150 microseconds. Time base volts available at high impedance at X1 terminal. Switch positions provided for EXT. T.B. and Time Base "OFF." Flyback suppressed.

SYNCHRONIZATION AND TRIGGER

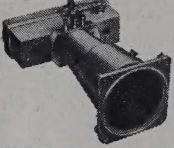
Switch selection for positive or negative sync. and trigger from external source or internally from Y1 Amplifier.

CATHODE RAY TUBE

Cossor double beam. 4″ dia. flat face.
Output of both Amplifiers, Time Base and direct connections to tube plates and modulator circuits are available at the side of the instrument.

POWER RATING

Voltage—105 to 235 in 10 steps. Frequency—50 to 100 cycles.
Consumption—170 watts (approx.) C.R.T. supply—2,000 volts.



Cossor Oscillograph Camera Model 1428

CAMERA SPECIFICATIONS

LENS	Aperture F/3.5
SHUTTER	Single-bladed, push button operated.
FILM DRIVE	Sprocket feed.
LENS REDUCTION RATIO	2.6:1.
MAZ. SIZE OF RECORD	On Tube screen—6.5 cms. On film—25 mm.
SHUTTER SWITCH	Switch contacts close during shutter opening period for Beam or Event triggering. Maximum switch rating 50 volts. 100 mA non-inductive load.
FITTING	Camera is located with Oscillograph tube bezel by two register pins and clamped by four captive thumb-screws.
FOCUSSING	Focus is set at Works but is adjustable.
RECORDS	Single frame or continuous film with Motor Attachment.
FILM AND PAPER	35mm. perforated film or paper in 25-foot rolls.
LOADING	Camera in daylight. Cassette in dark room.
FILM SPEEDS WITH MOTOR ATTACHMENT	(Type F) 4″, 12″, 36″ per second. (Type M) .4″, 1.2″, 3.6″ " (Type S) .04″, .12″, .36″ "
WEIGHT, camera only	5½ lbs., approx.

Cossor Camera Motor Drive Attachment Model 1429

For A.C. supplies only, 110v., 200-220v. and 230-250v., 50-60 cycles.

FILM SPEEDS

Gearbox Type F	4″, 12″ and 36″ per second
" " M	.4″, 1.2″ and 3.6″ " "
" " S	.04″, .12″ and .36″ " "

Please state supply voltage and type of gearbox required when ordering.

WEIGHTS

Motor Drive Attachment and Gearbox complete 13¼ lbs.

Send for full descriptive literature to:

BEAM INSTRUMENTS CORPORATION 350 Fifth Avenue, New York 1, N. Y.

BEST PRODUCTS THRU BEAM INSTRUMENTS

VACUO JUNCTIONS

(THERMOCOUPLES)

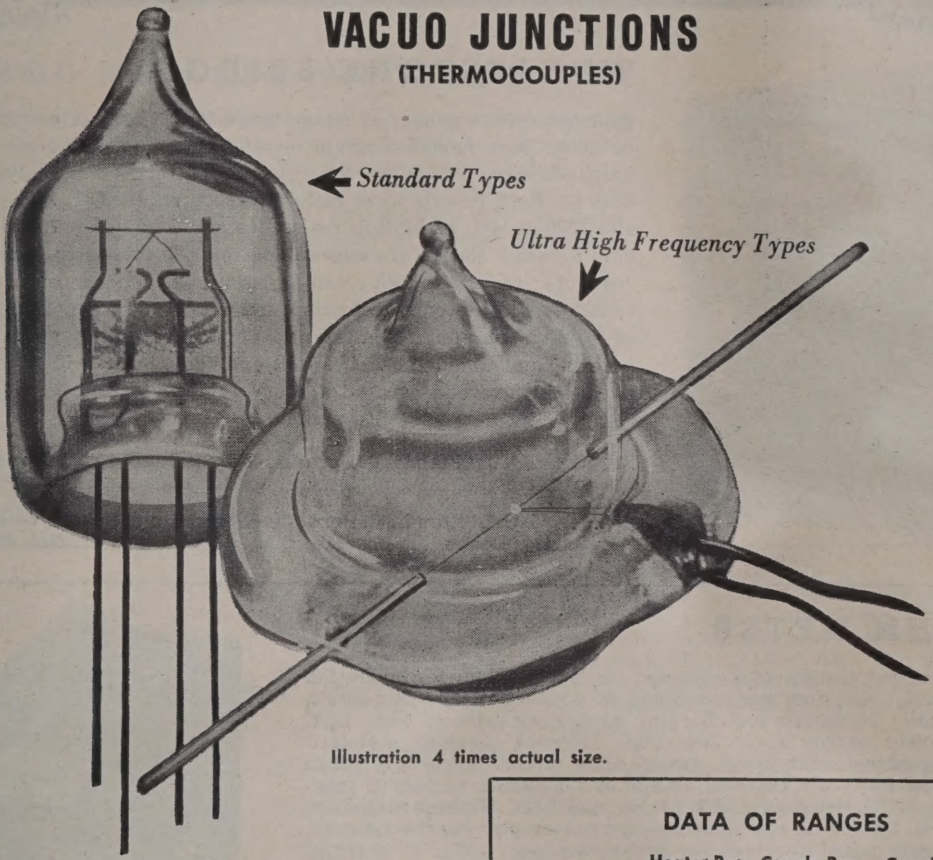


Illustration 4 times actual size.

GENERAL INFORMATION.

Insulation.
Vacuo Junctions are electrically insulated from the heaters, and tested to 100 volts D.C.

Resistance Tolerances.
Resistance tolerances for Heater or Thermo-Couple are plus or minus 10%.

Sensitivity Tolerances.
The nominal output of 7 millivolts is subject to a variation of plus or minus 12%.

Current Overload.
The current ratings can be exceeded by a 50% overload without risk of damage to the Thermo-Couple for continuous running. The millivolts output at any overload within this limit can be calculated by relating it to the square of the current approximately.

The Heater will withstand transient overloads of 100%, but there is a risk of burning out if this overload is maintained.

General.
Owing to the extremely fine gauges employed it is not possible to guarantee any closer tolerances.

Temperature Co-efficient.
The over-all temperature co-efficient of the Thermo-Couple does not exceed 0.2% per degree centigrade. This temperature co-efficient, generally speaking, is of no value because the Thermo-Couples, being used invariably with indicating galvanometers, it is the over-all temperature co-efficient of couple and galvanometer which is important, and this can only be ascertained experimentally, the interacting factors being too numerous for estimation or calculation.

DATA OF RANGES

Range	Heater Res. Ohms.	Couple Res. Ohms.	Couple Output
Stand. Types			
1.25 M.A.	1600	13	7MV ± 12%
2.5 MA.	400	8	" "
Stand. and U.H.F. Types			
5 MA.	90	8	" "
10 "	25	8	" "
15 "	20	4	" "
25 "	10	4	" "
50 "	3	4	" "
100 "	1.5	4	" "
200 "	0.7	4	" "
500 "	0.3	4	" "
1000 "	0.15	4	" "

The above range is available in ULTRA HIGH FREQUENCY type, from 5 MA. upwards.

All joints are spot welded. Couple is insulated from heater. Special ranges and outputs can be made to suit customers' individual requirements. Quotations on request.

Send for full descriptive literature to:

BEAM INSTRUMENTS CORPORATION

350 Fifth Avenue, New York 1, N. Y.

Industrial Instruments

Electrical Test Equipment

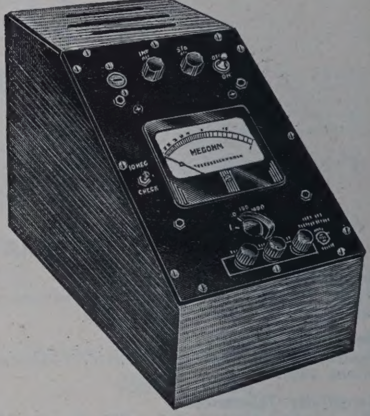
WHEATSTONE BRIDGE

● A carefully engineered bridge made for all around use in lab., plant, or field. Both models contain own 4½-volt battery power supply and galvanometer. Provision for external batteries and galvanometer if desired. Both models have ratio dial settings of .001, .01, .1, 1, 10, 100, and 1000 as well as built-in resistance standards of 1, 10, 100, and 1000-ohm decades. Ratios are guaranteed to .05% tolerance. Resistance dial resistors to .1%. Self-cleaning, four-leaf phosphor bronze wiper switches with detent mechanism mounted below panel. Galvanometer of well-known moving-coil type. Separate binding posts for use of external galvanometer if desired, and for use of bridge as resistance decade. Hardwood case with removable cover. 9¼″ x 7½″ x 6¼″ h. Wt. 9¼ lbs. net; 12¼ lbs. shipping.

MODEL RN-1. Standard Portable Wheatstone Bridge, complete with batteries........**Net Price $121.00**

MODEL RN-2. Standard Portable Wheatstone Bridge with Murray & Varley Loops........**Net Price $140.00**

MEGOHM METER

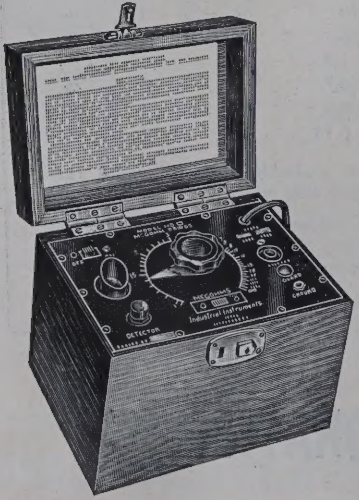


● For high-speed testing of condenser leakage resistance, insulation resistance and insulation measurements in production and inspection of components. Terminals for charging capacitors prior to test. Self-contained power source up to 200 volts. Internal checking standard to check and adjust calibration. Broad scale meter. Accuracy within ±1% based on full scale current. Range of 1 megohm to 100,000 megohms on four multiplier ranges of 1, 10, 100, and 1000. Highest range can be extended to 500,000 megohms using external supply. Hardwood case. Sloping bakelite panel designed for production use. 15″ x 8″ x 10″ h. Wt. 19 lbs. net; 23 lbs. shipping.

MODEL L-2A. Megohm Meter with tubes........**Net Price $160.00**

MODEL L-4A. Megohm Meter having 200 volt DC and 500 volt DC measuring voltage........**Net Price $195.00**

MODEL L-6A. Megohm Meter having continuously variable source voltage 100-600 volts DC and built-in voltmeter to check voltage. **Net Price $245.00**



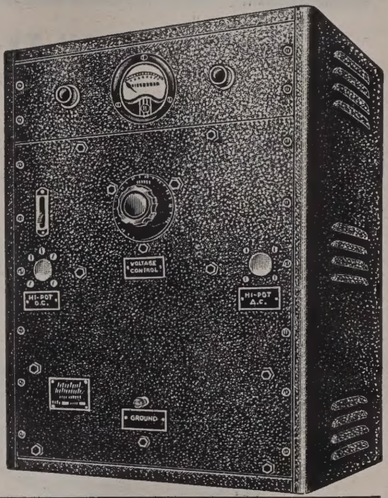
MEGOHM BRIDGE

● A fast, accurate instrument for routine inspection work. May be used by laboratory workers, or production workers. Very simple to operate. "Magic Eye" replaces costly and delicate galvanometer. Operates from AC power line. Self-contained DC source. Accuracy within 5% from 1 to 15 on scale; as close as readable on remainder of scale. Hardwood case with slip-hinge removable cover. 8″ x 5¾″ x 7″ h. Wt. 6¼ lbs. net; 8¼ lbs. shipping.

MODEL MB-8. 1 megohm to 1,000 megohms; 100 megohms to 100,000 megohms 500 Volts, D.C. Bridge source........**Net Price $90.00**

MODEL MB-11. 1 megohm to 1,000 megohms; 10 megohms to 10,000 megohms; 100 megohms to 100,000 megohms........**Net Price $132.00**

VOLTAGE BREAKDOWN TESTER



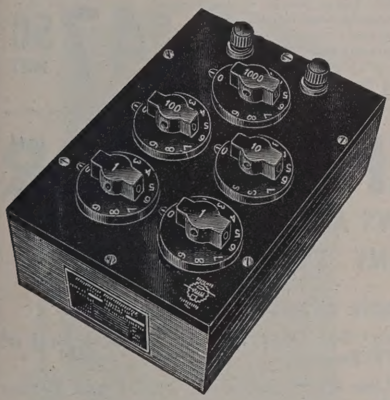
● A simple, positive, safe and quick means of testing voltage breakdown of materials and components. Step-up transformer accurately controlled by Variac. Continuously variable over entire range, 0 to 4,000 v. DC. For safety, load is limited to 5 milliamperes over full range. Also safety switch if instrument is removed from case. Operates on AC line. Warning light indicates instrument is operative. Voltage breakdown indicated by red light.

MODEL P-1. Voltage Breakdown Tester with tubes. 15″ x 8″ x 10″. Hardwood case with fine-grained crackle enamel sloping panel. Wt. 29 lbs. net; 32 lbs. shipping. (Not illustrated)..**Net Price $165.00**

MODEL P-2. Voltage Breakdown Tester with tubes and additional 0 to 3,000 v. AC outlet. 15″ x 8″ x 10″. Wt. 29 lbs. net; 32 lbs. shipping. (Not illustrated)..**Net Price $200.00**

MODEL P-3. Voltage Breakdown Tester with tubes. Upright, crackle enamel finish cabinet of metal. Range 0 to 10,000 v. DC, 0 to 8,000 v. AC..**Net Price $385.00**

RESISTANCE DECADES

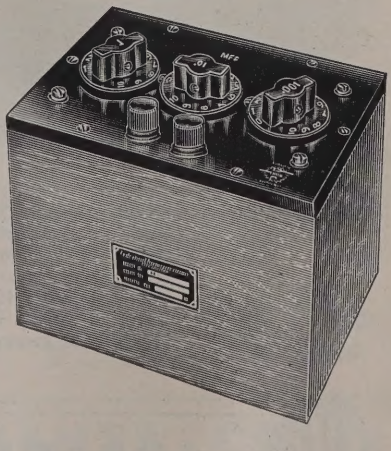


● Available in standard models with resistance ranges of .9 to 999,990 ohms total. Accuracy to ±0.1%. Self-cleaning, four-leaf phosphor bronze wiper switches with detent mechanism mounted below the panel. Hardwood case. Models DR-1 to DR-4, 5¾″ x 8″ x 4″ h.; wt. 4 lbs. net; 6 lbs. shipping. Models DR-10 to DR-14, 4⅛″ x 6″ x 4″ h.; wt. 3 lbs. net; 5 lbs. shipping. Models DR-50 to DR-52, 6⅛″ x 9″ x 4¼″ h.; wt. 5 lbs. net; 7 lbs. shipping.

Model No.	Total Resistance Ohms	Decade Steps	Accuracy	Net Price
DR-1	999,000	9x(1,000+10,000+100,000)	±1%	$ 55.00
DR-2	99,900	9x(100+1,000+10,000)	±1%	55.00
DR-3	9,990	9x(10+100+1,000)	±.1%	50.00
DR-4	999	9x(1+10+100)	±.1%	48.50
DR-10	.9	9x.1	±.1%	22.00
DR-11	9	9x1	±.1%	22.00
DR-12	90	9x10	±.1%	22.00
DR-13	900	9x100	±.1%	22.00
DR-14	9,000	9x1,000	±.1%	25.00
DR-50	9,999.9	9x(.1+1+10+100+1,000)	±.1%	72.00
DR-51	99,999	9x(1+10+100+1,000+10,000)	±.1%	77.00
DR-52	999,990	9x(10+100+1,000+10,000+100,000)	±.1%	100.00

CAPACITANCE DECADES

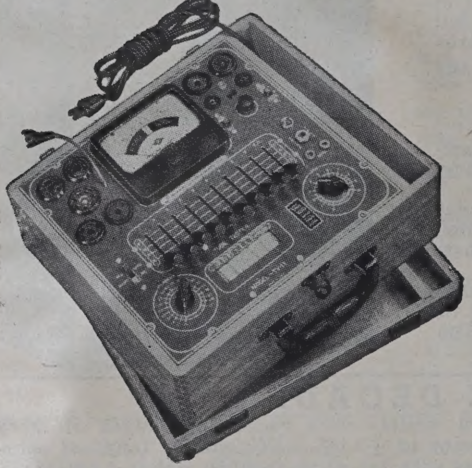
● Instrument calibrated directly in capacitance so that reading from left to right, the dial settings will give the exact value in microfarads. Progressive adjustment in .01, .001, or .0001 mfd. steps depending on model. .001 to 11.1 mfd. can be obtained by group assembly. All units employ paper or mica capacitors of highest quality and stability. Enclosed in hardwood case. DK-4, DK-10 and DK-2A, 8″ x 5½″ x 7¼″ H.; wt. 8 lbs.; 12 lbs. shipping. DK-5, DK-11, 11″ x 8¼″ x 7″ H.; wt. 10 lbs. net; 12 lbs. shipping.



Model	Capacitance Mfd. Steps	Accuracy	Dielectric Section	P.F.	Peak Volts	Price
DK-5	11.1 in .01	1%	.01 Mica	.2%	700 DC	$ 75.00
			.1 paper	1%	400 DC	
			1.0 paper	1%	400 DC	
DK-4	1.11 in .001	1%	.001 mica	.2%	700 DC	60.00
			.01 mica	.2%	700 DC	
			.1 paper	1%	400 DC	
DK-2A	1.11 in .001	1%	Mica throughout	.2%	700 DC 500 AC 60 cycle	140.00
DK-10	.111 in .0001	.5% or 10 mmfd.	Mica throughout	.2%	700 DC 500 AC 60 cycle	100.00
DK-11	11.1 in .01	.5%	.01 Mica	.2%	700 DC	150.00
		.5%	.1 mica	.2%	500 DC 60 cycle	
		1%	1.0 paper	1%	400 DC	

SUPERIOR TEST EQUIPMENT

The New Model TV-11 TUBE TESTER



Specifications:

- Tests all tubes including 4, 5, 6, 7, Octal, Lock-in, Peanut, Bantam, Hearing-aid, Thyratron, Miniatures, Sub-Miniatures, Novals, Sub-Minars, Proximity Fuse Types, etc.
- Tests for "shorts" and "leakages" up to 5 Megohms.
- Uses the new self-cleaning Lever Action Switches for individual element testing. Because all elements are numbered according to pin-number in the RMA base numbering system, the user can instantly identify which element is under test. Tubes having tapped filaments and tubes with filaments terminating in more than one pin are truly tested with the Model TV-11 as any of the pins may be placed in the neutral position when necessary.
- The Model TV-11 does not use any combination type sockets. Instead individual sockets are used for each type of tube. Thus it is impossible to damage a tube by inserting it in the wrong socket.
- Free-moving built-in roll chart provides complete data for all tubes.
- Newly designed Line Voltage Control compensates for variation of any line voltage between 105 Volts and 130 Volts.

EXTRA SERVICE
The Model TV-11 may be used as an extremely sensitive Condenser Leakage Checker. A relaxation type oscillator incorporated in this model will detect leakage even when the frequency is one per minute.

*** NOISE TEST**
Phono Jack on front panel for plugging in either phones or external amplifier will detect microphonic tubes or noise due to faulty elements and loose external connections.

The Model TV-11 operates on 105-130 Volt 60 Cycles A.C. Comes housed in a beautiful hand-rubbed oak cabinet complete with portable cover. Size 11½" x13"x6". Shipping Weight 15 lbs.

$47.50 NET

TELEVISION BAR GENERATOR

THROWS AN ACTUAL BAR PATTERN ON ANY TV RECEIVER SCREEN!!

Superior Instruments Co.
SICO
HOR. LIN.
VERT. LIN.
HOR. SWEEP
VERT. SWEEP
FUNCTION
Television Cross-Bar Generator
CHANNELS
LINEARITY
POWER
SWEEP FREQ.
ON
OFF
SWEEP
OUTPUT

Two Simple Steps

1. **Connect Bar Generator to Antenna Post of any TV Receiver.**
2. **Plug Line Cord into A.C. Outlet and Throw Switch.**

RESULT: **A stable never-shifting vertical or horizontal pattern projected on the screen of the TV receiver under test.**

Features:

1. Provides linear pattern to adjust VERTICAL linearity, height, centering.
2. Provides linear pattern to adjust HORIZONTAL drive, width, peaking, linearity, centering.
3. Provides vertical sweep signal for adjusting and synchronizing vertical oscillator discharge and output tubes.
4. Provides vertical signal to replace vertical oscillator to check vertical amplifier operation.
5. Provides horizontal sweep signal for adjusting and synchronizing horizontal oscillator A.F.C. and output tubes.
6. Provides horizontal sweep signal to check H.V. section of fly-back and pulse operating power supplies.
7. Provides signal for testing video amplifiers.
8. Can be used when no stations are on the air.

SPECIFICATIONS:
Power Supply: 105-125 Volt 60 Cycles
Power Consumption: 20 Watts
Channels: 2-5 on panel, 7-13 by harmonics
Horizontal lines: 4 to 12 (Variable)
Vertical lines: 12 (Fixed)
Vertical sweep output: 60 Cycles
Horizontal sweep output: 15,750 Cycles

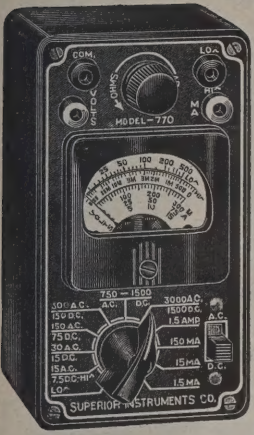
TV BAR GENERATOR COMES COMPLETE WITH SHIELDED LEADS AND DETAILED OPERATING INSTRUCTIONS. ONLY . . .

$39.95 NET

Manufactured by

SUPERIOR INSTRUMENTS CO.
NEW YORK 7, N. Y.

SUPERIOR TEST EQUIPMENT



The new model 770

AN ACCURATE POCKET-SIZE

VOLT-OHM MILLIAMMETER

(SENSITIVITY: 1000 OHMS PER VOLT)

FEATURES

★ Compact-measures 3⅛" x 5⅞" x 2¼".

★ Uses latest design 2% accurate 1 Mil. D'Arsonval type meter.

★ Same zero adjustment holds for both resistance ranges. It is not necessary to readjust when switching from one resistance range to another. This is an important time-saving feature never before included in a V.O.M. in this price range.

★ Housed in round-cornered, molded case.

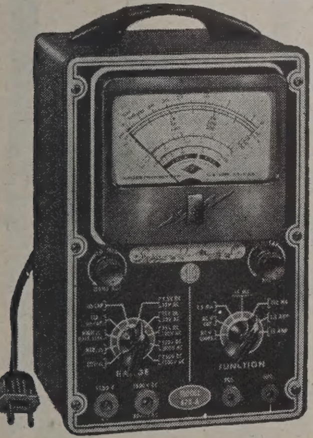
★ Beautiful black etched panel. Depressed letters filled with permanent white, insures long-life even with constant use.

The Model 770 comes complete with self-contained batteries, test leads and all operating instructions.

SPECIFICATIONS

6 A.C. VOLTAGE RANGES:
0—15/30/150/300/1500/3000 VOLTS
6 D.C. VOLTAGE RANGES:
0—7.5/15/75/150/750/1500 VOLTS
4 D.C. CURRENT RANGES:
0—1.5/15/150 MA. 0—1.5 AMPS.
2 RESISTANCE RANGES:
0—500 OHMS 0—1 MEGOHM

$14.90 NET



The new model 670-A

SUPER-METER

A COMBINATION VOLT-OHM MILLIAMMETER PLUS CAPACITY REACTANCE INDUCTANCE AND DECIBEL MEASUREMENTS

SPECIFICATIONS:

D.C.VOLTS: 0 to 7.5/15/75/150/750/1,500/7,500 Volts
A.C. VOLTS: 0 to 15/30/150/300/1,500/3,000 Volts
OUTPUT VOLTS: 0 to 15/30/150/300/1,500 3,000 Volts
D.C. CURRENT: 0 to 1.5/15/150 Ma. 0 to 1.5/15 Amperes
RESISTANCE: 0 to 1,000/100,000 Ohms 0 to 10 Megohms
CAPACITY: .001 to 1 Mfd. 1 to 50 Mfd. (Quality test for electrolytics)
REACTANCE: 50 to 2,500 Ohms 2,500 Ohms to 2.5 Megohms
INDUCTANCE: .15 to 7 Henries 7 to 7,000 Henries
DECIBELS: −6 to +18 +14 to +38 +34 to +58

ADDED FEATURE:

The Model 670-A includes a special GOOD-BAD scale for checking the quality of electrolytic condensers at a test potential of 150 Volts.

The Model 670-A comes housed in a rugged, crackle-finished steel cabinet complete with test leads and operating instructions. Measures 6¼" x 9½" x 4½".

$28.40 NET

The new model 660 — AN AC OPERATED

SIGNAL GENERATOR

Provides Complete Coverage for A.M.-F.M. and TV Alignment

SIGNAL GENERATOR MODEL 660
SUPERIOR INSTRUMENT CO. NEW YORK, U.S.A.

SPECIFICATIONS

★ Generates Radio Frequencies from 100 Kilocycles to 60 Megacycles on fundamentals and from 60 Megacycles to 240 Megacycles on powerful harmonics.

★ Accuracy and stability assured by use of permeability trimmed Hi-Q coils.

★ R.F. available or modulated by the internal audio oscillator.

★ Built in 400 Cycle sine wave audio oscillator used to modulate the R.F. signal also available separately for audio testing of receivers, amplifiers, etc.

★ Oscillator Circuit: Uses a miniature high frequency type of acorn triode in a Hartley circuit to insure a high degree of stability. By using the same type of triode as a buffer amplifier, complete and positive isolation between the R.F. oscillator and the attenuator is attained.

★ Attenuator: A 3 step ladder type of attenuator is used. Each step of the attenuator is controlled by a separate attenuator control thus providing intermediate level steps.

★ Tubes used: 955, as R.F. Oscillator, 955 as Modulated Buffer Amplifier, 6SN7 as Audio Oscillator and Power Rectifier.

The Model 660 comes complete with coaxial cable test lead and instructions.

$42.95 NET

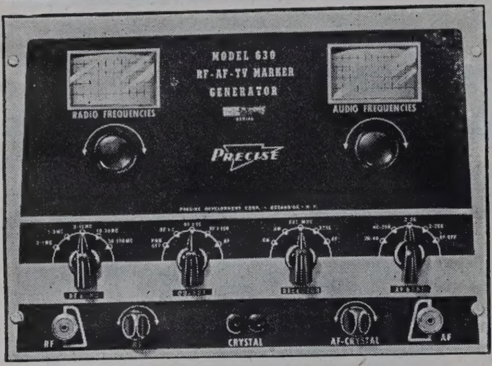
Manufactured by

SUPERIOR INSTRUMENTS CO.

NEW YORK 7, N. Y.

Instruments IN KIT & WIRED FORM . . . precise

above all else



• PRECISE MODEL 630

RF-AF-TV and Marker Generator

The very first kit to reach 110 MC on fundamentals, 330 MC on harmonics. The first kit to offer a complete factory preassembled and calibrated RF head. Pre-tuned RF Head; *Audio: 20-20,000 cycles; variable percent modulation; cathode-follower output; stepping attenuator; external modulation; speech amplifier; crystal marker; crystal amplitude control; RF & AF stand-by; Wien Bridge AF Oscillator; Colpitts RF Oscillator; Drum Dials; Coaxial fittings; individually tuned coils; constant output impedance; filtered line; Vernier tuning on RF & AF; Separate RF Section; Complete shielding.

RF FREQUENCIES:

Band 1	—300KC to 1MC	FUNDAMENTALS
Band 2	— 1MC to 3MC	FUNDAMENTALS
Band 3	— 3MC to 10MC	FUNDAMENTALS
Band 4	— 10MC to 30MC	FUNDAMENTALS
Band 5	— 30MC to 110MC	FUNDAMENTALS
Band 5A	— 60MC to 220MC	2nd Harmonic
Band 5B	— 90MC to 330MC	3rd Harmonic

AF FREQUENCIES:

- Band 1—20 to 40 Cycles
- Band 2—40 to 200 Cycles
- Band 3—200 to 2K Cycles
- Band 4—2K to 20K

8 x 11 x 5"; leather handle; wrinkle steel cabinet; deeply etched aluminum panel; amphenol type connectors; wt.: 10 lbs. TUBE COMPLEMENT: 6C4, 6SN7, 6AU6, 6X5.

630K. . . $33^95
630KA $38.95
Factory Wired....... $53.95

• PRECISE MODEL 909 Vacuum Tube Voltmeter

WHAT BETTER WAY TO BUY THAN BY MAKING A COMPARISON!

Ceramic precision resistors—1% or better; deeply etched panel; steel cabinet; Amphenol type DC connector; special, separate 5V. AC scale for accuracy on low voltages; 250 V. scale enables you to read line voltages accurately.

FREQUENCY RANGE:
Up to 250 megacycles with PRECISE 912 Probe (avail at additional cost)

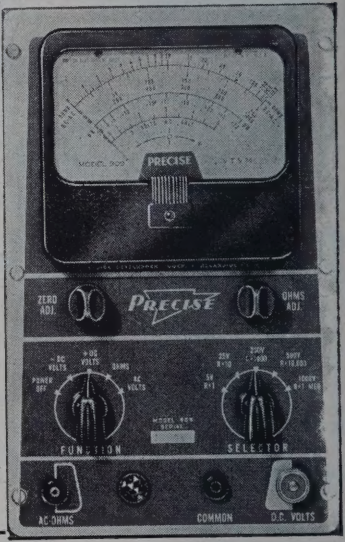
VOLTAGE RANGE:
Up to 30,000 V. with PRECISE 999 High Voltage Probe (avail. at additional cost)

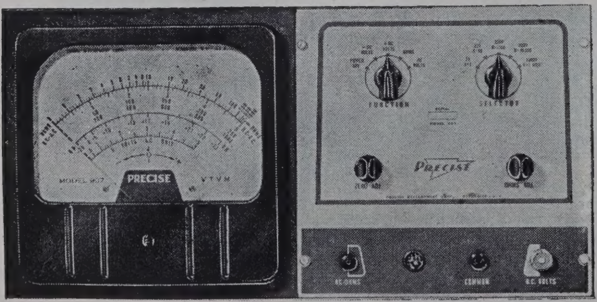
FM & TV:
Special true zero alignment scale for FM & TV discriminators; Burn out proof circuit; 25 Megohm input impedance on DC; complete with test leads and internal battery; oversize 4½" meter; 105-120V., 50-60 cycles, AC; wt.: 10 lbs.; 9½ x 6 x 5".

RANGES:
+DC: 0-5-25-250-500-1000 Volts
—DC: 0-5-25-250-500-1000 Volts
AC: 0-5-25-250-500-1000 Volts
Ohms: Rx1-Rx10-Rx1000-Rx10,000-Rx1,000,000 ohms;
from .2 Ohms to 1 Billion Ohms.
DB; From —20 to +55 DB

TUBE COMPLEMENT:
6SN7, 6AL5, 6X5

909K. . . . .$25^98
Factory Wired......................... $44.98





• PRECISE MODEL 907

Deluxe Vacuum Tube Voltmeter
(Vertical or Horizontal Construction)

Another PRECISE First!

Again giving you the best as a matter of course, in our ever continuing effort to provide "ENGINEERING PRODUCTS" that defy competitive efforts.

GIGANTIC 7½" Meter movement for better visibility, greater accuracy; all the unusual values of the Model 909 in a really DELUXE version. Specifications same as Model 909.
8 x 16 x 5"

Model 907K. . . . . $38^98
Factory Wired..$57.98

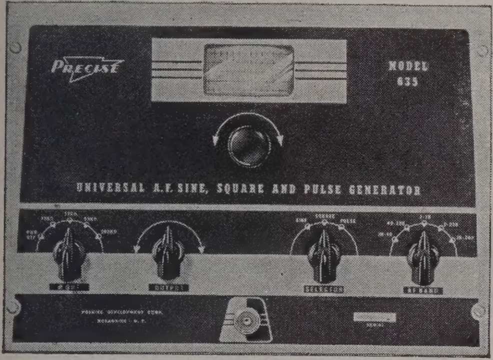
Prices slightly higher in the West
Prices and specifications subject to change without notice
ALL EQUIPMENT HAS THE PRECISE GUARANTEE

SOLD THROUGH LEADING JOBBERS • WRITE FOR CATALOG #52-AR

PRECISE DEVELOPMENT CORP. • Oceanside, New York

Instruments IN KIT & WIRED FORM . . . precise

above all else



• PRECISE MODEL 635

Universal AF Sine, Square and Pulse Generator

Efficiently and effectively ascertains all Audio and Video troubles
Sine waves; square waves; Wien Bridge Oscillator; Pulses; variable impedance output; voltage regulation insures a veritably constant output; cathode follower output; Minimum overshoot & round-off through 30,000 cycles on square waves and pulses; sine waves through 200,000 cycles.

8 x 11 x 5″; leather handle; wrinkle steel cabinet; deeply etched aluminum panel; amphenol type connectors; wt.: 10 lbs.

TUBE COMPLEMENT:
1—6AU6; 3—6SN7; 1—6X5; 16S6

RANGES: 20-40 cycles
40-200 cycles
200-2000 cycles
2000-20,000 cycles
20,000-200,000 cycles

635K. $33.50

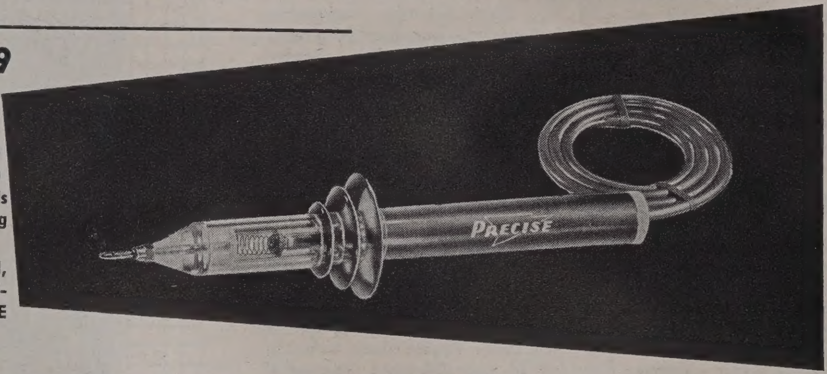
Factory Wired. $52.50

• Precise Model 999

High Voltage Probe

100,000,000,000,000,000,000,000,000 000,000,000,000,000,000,000,000,000 000,000,000,000 to 1 are the odds against a voltage breakdown occurring in this probe.

ESSENTIAL FOR EVERY SERVICEMAN, ENGINEER HAM OR STUDENT! ESSENTIAL TO THE MAN WHO KNOWS THE VALUE OF BEING PRECISE!



The PRECISE MODEL 999 High Voltage Probe was designed for high voltage measurements with special emphasis on SAFETY, OPERATIONAL SIMPLICITY AND RUGGED CONSTRUCTION. First in the industry to include any one or more of the following exclusive features:

MULTIPLE INSULATION: The only probe with at least three individual media that must be penetrated before a voltage breakdown could occur.

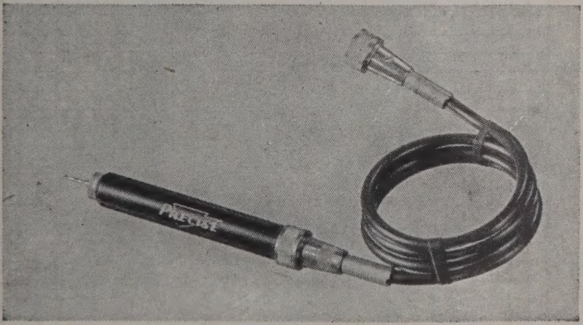
MECHANICALLY SHOCKPROOF CONSTRUCTION: The only probe to utilize a double spring suspension system in order to protect the Ceramic high wattage multiplier resistor.

INTERCHANGEABLE TIPS: The only probe where two tips are supplied — one, the conventional type for probing; the other, an alligator clip for connecting permanently to the circuit.

SWIVEL LEAD CONNECTION: A special-fixed slip-ring arrangement is provided which prevents the test lead cable from snagging or developing high strains at the junction of the cable and probe handle.

INTERCHANGEABLE RESISTORS

999. . . . Wired Only. . . . $6.98



• PRECISE MODEL 912 R.F. Probe

Individually calibrated at 75 megacycles for accuracy, impedance and shunt capacity. The lowest priced, finest factory wired and calibrated R.F. Probe in the industry today.

- FREQUENCY RANGE: RMS readings from AF through 250 megacycles. Veritably flat through 100 megacycles
- BUILT IN 600 VOLT BLOCKING CAPACITATOR
- INPUT CAPACITY: The approximate input capacity is less than 3 uufd and usually about 1.2 uufd.
- INPUT RESISTANCE: Approximately 200,000 ohms at 1 megacycle
  Approximately 150,000 ohms at 10 megacycles
  Approximately 25,000 ohms at 100 megacycles

Wired Only. $4.25

Prices slightly higher in the West

Prices and specifications subject to change without notice

ALL EQUIPMENT HAS THE PRECISE GUARANTEE

SOLD THROUGH LEADING JOBBERS • WRITE FOR CATALOG #52-AR

PRECISE DEVELOPMENT CORP. • Oceanside, New York

Net

EICO

Laboratory Precision at Lowest Cost—

INSTRUMENTS and KITS

The industry's most complete line of MATCHED TEST INSTRUMENTS!

You Build *EICO* KITS in one evening . . . but they last a lifetime! AND—YOU SAVE 50%!

TRIPLE-PROVED for AM, FM, TV

1. PERFORMANCE-PROVED on the TV production lines and in the design laboratories of the leading set manufacturers.
2. PERFORMANCE-PROVED by over 100,000 servicemen coast-to-coast.
3. PERFORMANCE-PROVED by the nation's leading electronics training schools and universities.

EICO New 5" Push-Pull Oscilloscope

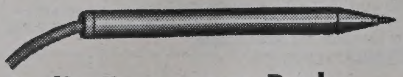
All-new laboratory-precision scope with all the extra sensitivity and response for precise servicing of TV, FM & AM sets. Push-pull undistorted vertical and horizontal amplifiers. Boosted sensitivity, .05 to .1 rms volts/inch. Useful to 2.5 MC. TV-type multivibrator sweep circuits, 15 cps — 75 KC. Z-axis intensity modulation feature. Dual positioning controls move trace anywhere on screen. Complete with 2-6J5, 3-6SN7, 2-5Y3, and 5" C.R. Tube. 3-color etched rub-proof panel; rugged steel case. 115 v., 60 cycle AC. 8½x17"x13". Ship. wt. 29 lbs.

Model 425-K, KIT, only............ **$44.95** Model 425, factory wired..... **$79.95**

EICO New Vacuum Tube Voltmeter

Laboratory-precision VTVM for trigger-fast operation and lifetime service. 15 different ranges. Large 4½" meter, can't-burn-out circuit. New zero center for TV & FM discriminator alignment. Electronic AC & DC ranges: 0-5, 10, 100, 500, 1000 v. (30,000 volts & 200 MC with HVP-1 & P-75 probes). Ohmmeter ranges, .2 ohms to 1000 megs. DB scale. New stable double-triode balanced bridge circuit — extreme accuracy. 26 megs DC input impedance. 3-color etched rub-proof panel; rugged steel case. 115 v., 60 cycle AC. $9\frac{7}{16}$"x 6"x 5". Ship. wt. 10 lbs.

$49.95 Model 221-K, KIT, only............ **$25.95** Model 221, factory wired......



EICO Radio Frequency Probe

Sensitive Germanium crystal probe for signal tracing and measurements to over 200 mc. Extends range of VTVMs and scopes.

P-75K, KIT, for VTVM; P-76K for Scope; ea.................. **$3.75**

P-75 or P-76, factory wired, ea.. **$5.95**

EICO High Voltage Probe

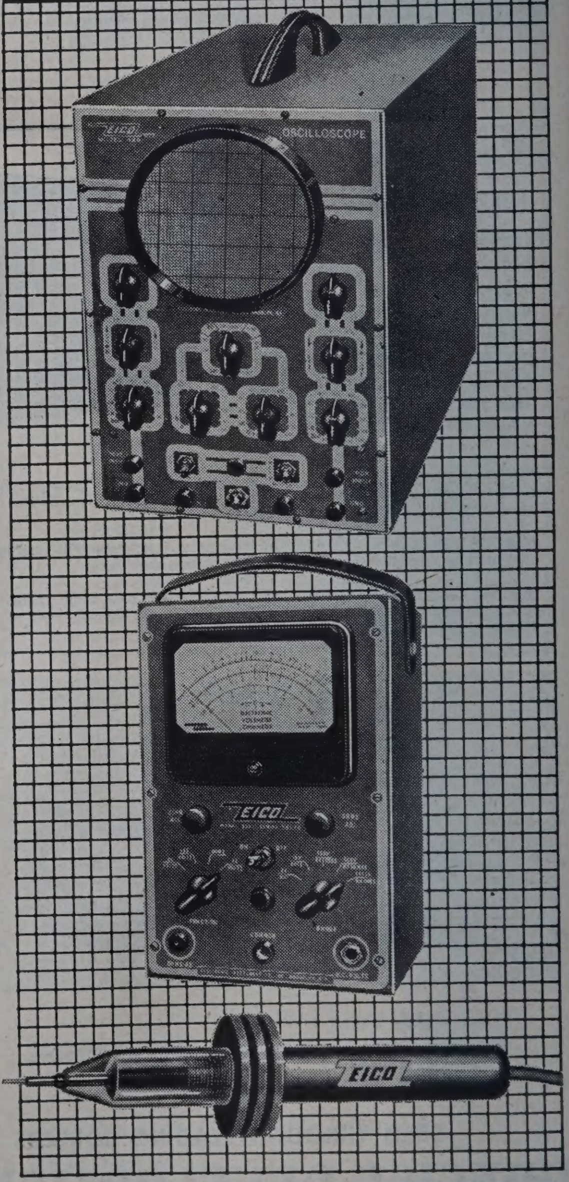
New professional EICO-engineered HV probe carefully designed and insulated for extra safety and versatility. Extends range of VTVMs and voltmeters up to 30,000 v. Lucite head. Large flash-guards. Multilayer processed handle. Complete with interchangeable ceramic Multiplier to match your instrument.

Model HVP-1 (wired).. **$6.95**

Prices 5% higher on West Coast. Due to unstable conditions, all prices and specifications are subject to change without notice.

ELECTRONIC INSTRUMENT CO., Inc., Brooklyn 11, N. Y.

20 KITS and 21 WIRED INSTRUMENTS TO CHOOSE FROM!



Dollar for dollar, feature for feature, *EICO* Instruments and Kits lead the industry!

Net

EICO

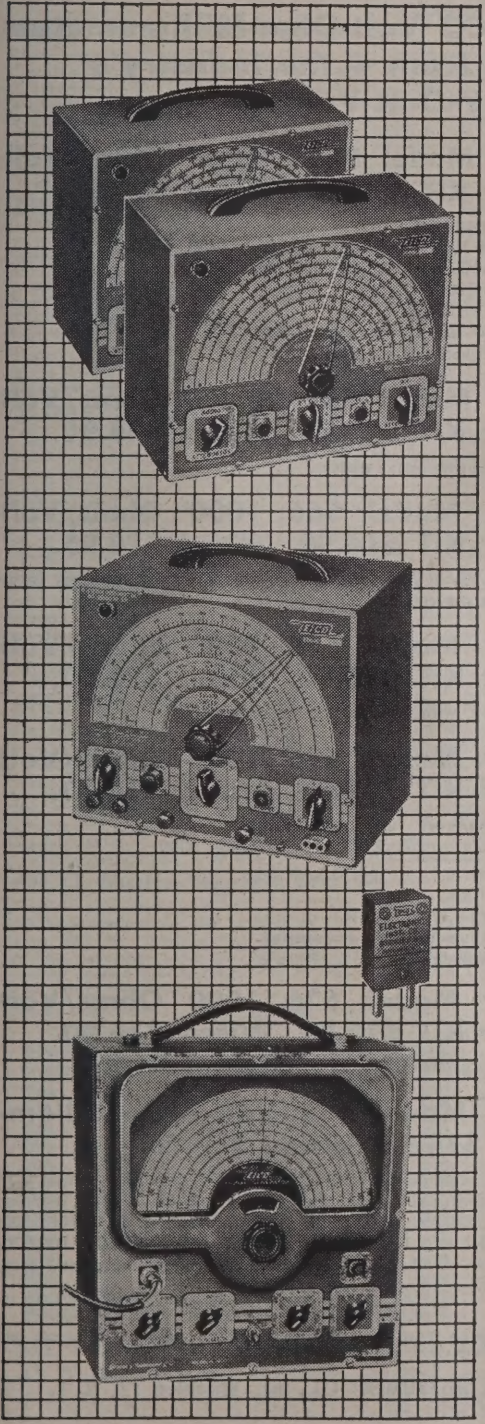
Laboratory Precision at Lowest Cost–

INSTRUMENTS and KITS

TRIPLE-PROVED FOR AM, FM, TV

The Industry's most complete line of MATCHED TEST INSTRUMENTS!

You Build *EICO* KITS in one evening... but they last a lifetime! AND YOU SAVE 50%



5 NEW GENERATORS TO CHOOSE FROM!

2 *EICO* New RF-AF Signal Generators

Model 320: For FM-AM precision alignment and TV marker frequencies. Vernier Tuning Condenser. Highly stable RF oscillator, range: 150 KC - 102 MC with fundamentals to 34 MC. Separate audio oscillator supplies 400-cycle pure sine wave voltage. Pure RF, modulated RF or pure AF for external testing. 3-color etched panel; rugged steel case. Ship. wt. 10 lbs.

Model 320-K, KIT, only.................. **$19.95** Model 320, factory wired............ **$29.95**

Model 322: In addition to all the outstanding laboratory-precision qualities of the famous EICO Model 320, the brand new Model 322 features **the individual calibration of each of its 5 bands.**

Model 322-K, KIT, only.................. **$23.95** Model 322, factory wired............ **$34.95**

EICO New TV-FM Sweep Generator

Covers all TV-FM alignment frequencies, 500 KC - 228 MC. Vernier-driven dial: center of each of 13 TV channels marked on front panel. Sweepwidth variable 0-30 MC with mechanical inductive sweep — permits gain comparison of adjacent RF TV channels. Crystal marker oscillator, variable amplitude. Provides for injection of external marker. Phasing control. Complete with HF tubes. Less Crystal. 10"x 8"x 6¾". 5 MC Crystal, each. $3.95. Ship. wt. 12 lbs.

Model 360-K, KIT, only.................. **$34.95** Model 360, factory wired............ **$49.95**

EICO 5MC Crystal

EICO-designed for all generators and oscillators, this highest quality crystal accommodates all standard sockets and circuits. Gives excellent performance with EICO Model 360 Sweep Generator.

Model C-5 (not a kit) only.. **$3.95**

EICO New Deluxe RF-AF Signal Generator

Laboratory-precision generator EICO Service-Engineered with 1% accuracy. Extremely stable, frequency 75 kc - 150 mc in 7 calibrated ranges. Illuminated hairline *vernier tuning*. VR stabilized line supply. 400-cycle pure sine wave with less than 5% distortion. Tube complement: 6X5, 7F7, 6C4, VR-150. 3-color etched panel; rugged steel case. 115 v., 60 cycle AC. 12"x 13"x 7". Ship. wt. 21 lbs.

Model 315-K, KIT, only.................. **$39.95** Model 315, factory wired............ **$59.95**

BRAND NEW! *EICO* AUDIO GENERATOR

(not illustrated)

Ask your jobber about this outstanding new audio generator — available in both Kit and Wired form.

Dollar for dollar, feature for feature, *EICO* Instruments and Kits lead the industry!

Net

EICO

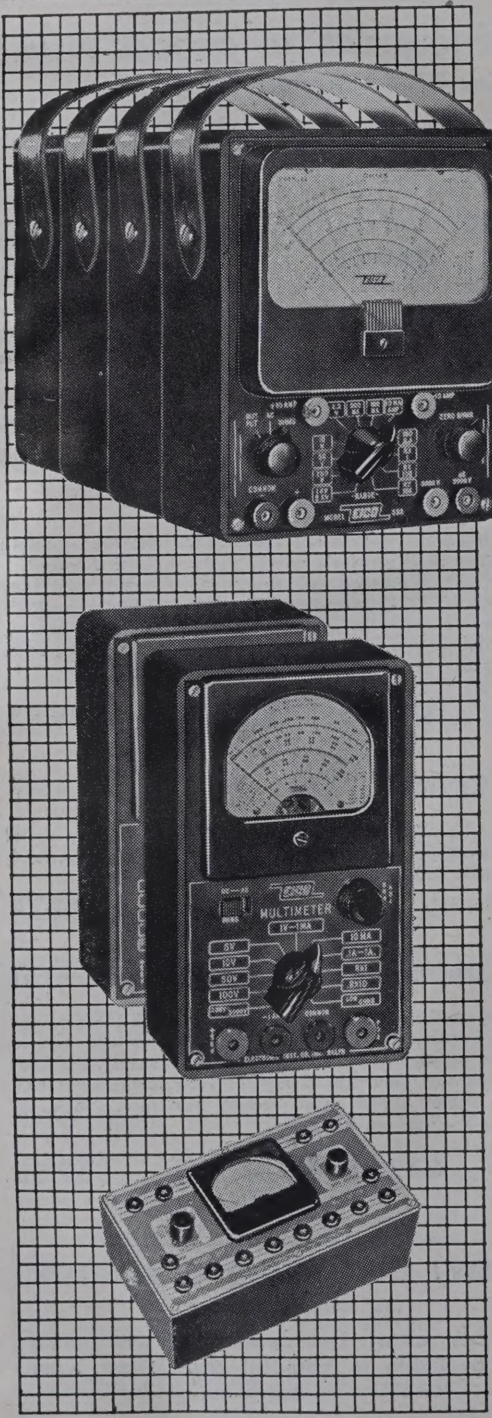
Laboratory Precision at Lowest Cost–

INSTRUMENTS and KITS

TRIPLE-PROVED FOR AM, FM, TV

The Industry's most complete line of
MATCHED TEST INSTRUMENTS!

You Build *EICO* KITS in one evening... but they last a lifetime! AND YOU SAVE 50%



7 New *EICO* Volt-Ohm-Milliammeters to choose from — *the Industry's* Greatest V-O-M Values!

EICO New Model 565 20,000 Ohms/Volt Multimeter KIT $24.95. Wired $29.95.

- **31 full scale ranges!**
- **DC/AC/Output Volts:** 0-2.5, 10, 50, 250, 1000, 5000.
- **DC Current:** 0-100 ua; 10, 100, 500 ma; 10 Amp.
- **Ohms:** 0-2000, 200K, 20 meg.
- **5 DB Ranges:** — 12 to + 55.
- **Large 4½" 50 ua meter movement.**
- **High-impact** Bakelite case. 6¾ x 5¼ x 3".

EICO New Model 555 20,000 Ohms/Volt Multimeter KIT $29.95. Wired $34.95.

As above, with 1% precision resistors.

EICO New Model 566 1000 Ohms/Volt Multimeter KIT $14.90. Wired $18.95.

Ranges: same as Model 536 (see below), plus 7 output voltages. Large 4½" 400 ua meter movement.

EICO New Model 556 1000 Ohms/Volt Multimeter KIT $16.90. Wired $23.50.

Same as Model 566, with 1% precision resistors.

EICO New Model 536 1000 Ohms/Volt Multimeter KIT $12.90. Wired $14.90.

- **31 1000 ohms/volt full-scale ranges!**
- **DC/AC Volts:** Zero to 1, 5, 10, 50, 100, 500, 5000.
- **DC/AC Current:** 0-1, 10 ma; 0.1, 1 Amp.
- **Ohms:** 0-500, 100K, 1 meg.
- **6 DB Ranges:** — 20 to + 69.
- **Large 3" 400 ua meter movement.**
- **High-impact** Bakelite case. 6¼ x 3¾ x 2".

EICO New Model 526 1000 Ohms/Volt Multimeter KIT $13.90. Wired $16.90.

As above, with 1% precision resistors.

EICO New Model 511 Volt-Ohm-Milliammeter KIT $14.95. Wired $17.95.

Pocket-size VOM cram-packed with value! 22 different ranges. 3" D'Arsonval movement. Ring-type shunts. Germanium crystal rectifier. Ranges — DC: 0-5, 50, 250, 500, 2500 v. AC and Output: 0-10, 100, 500, 1000 v. DC Ma: 0-1, 10, 100. DC Amp: 0-1, 10. Ohms: 0-500, 100,000; 0-1 Meg. DB: —8 to + 55. 3-color etched panel; rugged hardwood case. 8"x 4½"x 3". Ship. wt. 3½ lbs.

Prices slightly higher on West Coast. Due to unstable conditions, all prices and specifications are subject to change without notice.

ELECTRONIC INSTRUMENT CO., Inc., Brooklyn 11, N. Y.

Dollar for dollar, feature for feature, *EICO* Instruments and Kits lead the industry!

EICO

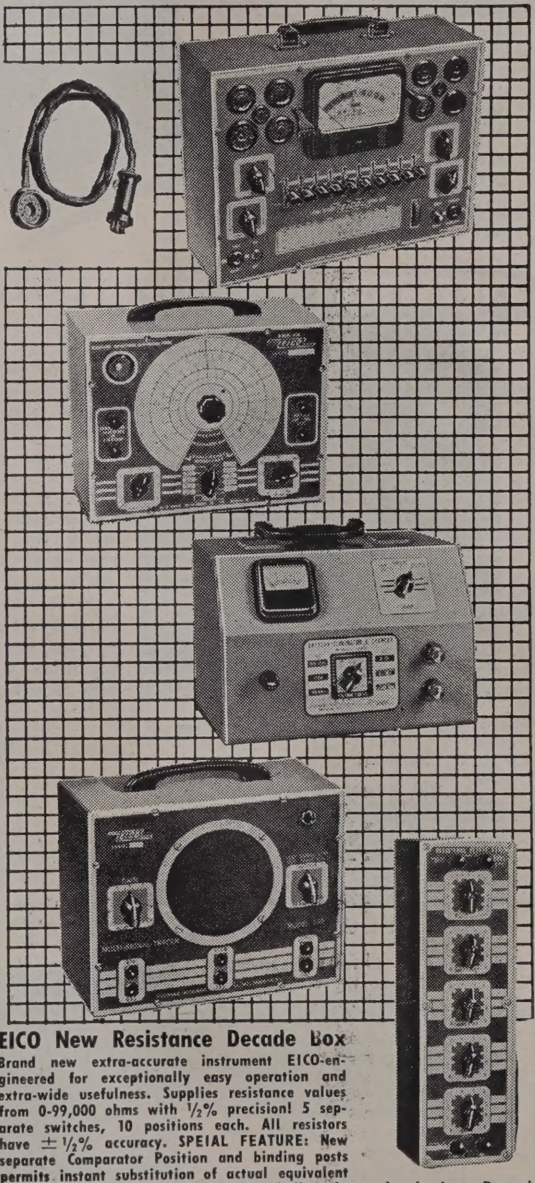
Laboratory Precision at Lowest Cost—

INSTRUMENTS and KITS

TRIPLE-PROVED FOR AM, FM, TV

The Industry's most complete line of MATCHED TEST INSTRUMENTS!

You Build *EICO* KITS in one evening... but they last a lifetime! AND YOU SAVE 50%



*EI*CO New Tube Tester

Brand new professional tube tester and merchandiser EICO Service-Engineered for unbeatable value! Large $4\frac{1}{2}$'' full-vision meter. Tests *conventional and TV tubes* including 9-pin miniatures. New lever-action switches — tests every tube element: Illuminated "Speed Roll-Chart". 2 grid caps. Short and open-element tests. Spare socket for new tubes. Protective overload bulb. Electronic rectifier. 3-color etched panel; rugged steel case. 115 v., 60 cycle AC. $12\frac{1}{2}$''x $9\frac{1}{2}$''x $4\frac{1}{4}$''. Ship. wt. 12 lbs.

Model 625-K, KIT, only........ **$34.95** Model 625, factory wired........ **$49.95**

*EI*CO New Picture Tube Test Adapter

(for EICO Models 625 & 625-K Tube Testers)

With the new Model CRA and your EICO Tube Tester, you check all sizes TV Picture Tubes as fast and easily as any ordinary tube. Model CRA gives a quantitative measurement of cathode emission, and tests for filament continuity and shorts between elements. Comes complete with standard 12-pin TV tube socket, octal plug-in connector, and extra long 4-foot cable that enables Pix Tube to remain in set *while testing*.

Model CRA, only **$4.50**

*EI*CO New Resistance-Capacitance Bridge & R-C-L Comparator

This brand new professional resistance-capacitance bridge is especially EICO Service-Engineered for extremely wide usefulness. Measures and tests all resistors from 0.5 ohms to 500 megohms. Measures and tests every type condenser, 10 mmfd to 5000 mfd. Special built-in **Precision Comparator Range** gives instant, easy comparison measurement of resistance, capacitance and inductance with a complementary component as a standard: exceptional wide range of 400:1. Built-in continuously variable 0-500 DC voltage source for capacitor leakage testing. Separate leakage tests for paper and mica condensers (large magic eye indicator) and for electrolytic condensers (neon bulb circuit). Allows determination of capacitor power factor by means of calibrated potentiometer and magic eye. Latest bridge-type circuit. 110 v. 60 cycle transformer and rectifier. All ranges calibrated on front panel. 3-color etched rub-proof panel; rugged steel case. 10'' x 8'' x $4\frac{3}{4}$''.

Model 950-K, KIT, only........ **$19.95** Model 950, factory wired........ **$29.95**

*EI*CO New Battery Eliminator, Charger & Booster

For *all* auto radio testing. Latest-type full-wave *Bridge* circuit. 4-stack manganese copper-sulfide rectifiers. Specially designed transformer, continuously variable from 0 to 13 volts. Continuous operation: 5-8 v., 10 amps. Intermittent: 20 amps. 10,000 mfd filter condenser. Meter measures *current and voltage output*. Fused primary and an automatic reset overload device for secondary. Rugged hammertone steel case. 115 v., 60 cycle AC. $10\frac{1}{2}$''x $7\frac{3}{4}$''x $8\frac{3}{4}$''. Ship. wt. 15 lbs.

Model 1040-K, KIT, only........ **$25.95** Model 1040, factory wired........ **$34.95**

*EI*CO Multi-Signal Tracer

Highest gain and flexibility in low-cost field! Audibly traces all IF, RF, Video & Audio from ANT to SPKR or CRT without switching. Response well over 200 mc. Integral test speaker. Provision for visual tracing with VTVM. Complete with 6SJ7, 6K6, 6X5. Germanium crystal diode probe. 3-color etched panel; rugged steel case. 115 v., 60 cycle AC. 10''x 8''x $4\frac{3}{4}$''. Ship. wt. 9 lbs.

Model 145-K, KIT, only........ **$19.95** Model 145, factory wired........ **$28.95**

the exclusive EICO Make-Good GUARANTEE

(included with every *EI*CO product)

Each EICO Kit and Instrument is *doubly guaranteed*, by EICO and your jobber, to contain only selected quality components EICO guarantees to replace any component which might become defective in normal use if returned to the factory transportation charges pre-paid within 90 days of purchase EICO guarantees all Kits assembled according to EICO's simplified instructions will operate as specified therein EICO guarantees service and calibration of every EICO Kit and Instrument at the nominal charge as stated in the instructions

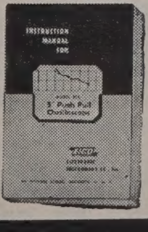
The EICO Guarantee

Only EICO gives you the Make-Good Guarantee — the strongest, most substantial guarantee in the industry! When you buy EICO, you enjoy the greatest protection available for your test equipment investment!

EICO New Resistance Decade Box

Brand new extra-accurate instrument EICO-engineered for exceptionally easy operation and extra-wide usefulness. Supplies resistance values from 0-99,000 ohms with $\frac{1}{2}$% precision! 5 separate switches, 10 positions each. All resistors have ± $\frac{1}{2}$% accuracy. SPEIAL FEATURE: New separate Comparator Position and binding posts permits instant substitution of actual equivalent component for the resistance value indicated on decade box. Rugged, extremely simple construction. 3-color etched panel; sturdy steel case. $3\frac{1}{2}$''x 12''x 3''. Ship. wt. $2\frac{1}{2}$ lbs.

Model 1171-K, KIT, only....$19.95 **Model 1171, factory wired $24.95**



COMPREHENSIVE INSTRUCTIONS

Every EICO Kit contains the most comprehensive, easiest-to-follow step-by-step instructions and the clearest, easiest-to-read schematic and pictorial diagrams in electronics! All small parts (resistors, condensers, etc.) are packed in individually marked envelopes clearly numbered and identified on the blueprints. That's why servicemen and students say "it's a snap" for anyone to build the EICO Kits!

SEE THESE FAMOUS *EI*CO INSTRUMENTS & KITS AT YOUR LOCAL JOBBER TODAY—AND SAVE!

Prices 5% higher on West Coast. Due to unstable conditions, all prices and specifications are subject to change without notice.

ELECTRONIC INSTRUMENT CO., Inc., Brooklyn 11, N. Y.

Dollar for dollar, feature for feature, *EICO* Instruments and Kits lead the industry!

PRECISE MEASUREMENTS COMPANY

100 KILOVOLTS!

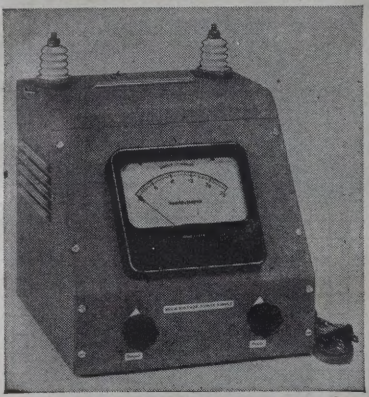
At Fifty Thousand Ohms/Volt
KILOVOLTER Model 4000

- Shielded Polysterene Probe
- Choice of Ranges
- Simple Foolproof Circuits

Measures television and X-ray voltages with extra high input impedances. All voltage is dissipated in the shielded polysterene probe. "Normal-Reverse" key is provided so that probe may be used regardless of polarity of voltage under test. Indicator has large clear scale for easy reading.

Model	Range Kilovolts	Price
4000	0-25/50	$67.50
4000-A	0-100	80.00
4000-B	0-50/100	85.00
4000-C	0-10/50/100	95.00

HIGH VOLTAGE POWER SUPPLIES



A precision, well constructed high voltage supply for television, meter testing and calibration, electrostatic painting, breakdown tests, nuclear physics and wherever high potentials at low currents are needed. Output is well filtered direct current. Adjustable by means of a contol on the front panel. Available with or without meter. Input voltage is 115 volts, 60 cycles.

Model		Maximum Voltage	Price
6000		2,500	$40.00
6000-A	With Meter	2,500	60.00
6005		5,000	45.00
6005-A	With Meter	5,000	65.00
6010		10,000	55.00
6010-A	With Meter	10,000	75.00
6015		15,000	70.00
6015-A	With Meter	15,000	90.00
6025		25,000	85.00
6025-A	With Meter	25,000	105.00

ELECTRO-GRAPHIC RECORDER

Features for the first time a recording instrument of small size and low cost. Built-in motor operates from the standard power lines. In spite of the small size the recording width has been enlarged so that 1 and ¾ inch wide paper is used. All writing is of a permanent nature. No ink, chemicals or pens are used. Standard models are of one milliampere sensitivity, other ranges available on order. Mounts on panel as any standard meter.

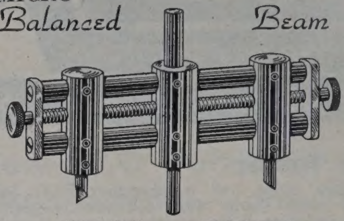
Model 50	RECORDER 0-1 Mill.	Price $85.00

We Invite Your Inquiry for - - -

SNOOPERSCOPES • INFRA RED MATERIALS • KERR CELLS • GOVERNMENT CONTRACT & SUBCONTRACT WORK • HIGH VACUUM AND GASEOUS TUBES MADE TO ORDER

Instruments Built to Specifications

MICRO *Balanced Beam* CIRCLE CUTTER



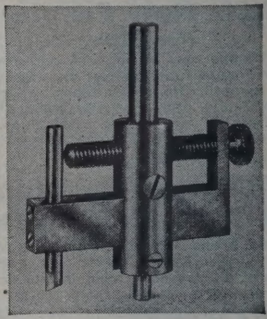
CUTS METALS • WOODS • PLASTICS

For quickly cutting those extra large hole sizes. Perfect for making washers.

Model	Type Shank	Size	Price
9	Round	10″	$12.50
10	Round	15″	15.00

Extra cutting bits 50¢ each

MICRO CIRCLE CUTTER



Cuts holes in all types of metals from stainless steel to magnesium. Perfect for plastics and wood. Built-in micrometer type size control for precise settings. Adjustable in an infinite number of hole sizes within its range. "Quickie" beam locking mechanism for long trouble-free operation. Extra heavy construction of the main beam and body make it useful for production jobs as well as experimental work. All are equipped with a ¼″ high speed steel cutting bit.

Model	Type	Size	Price
1	Round Shank (for drill press or hand drill)	4″	$5.00
1-A	Square Tapered (for hand brace)	4″	5.00
5	Round Shank	6″	7.50

Extra cutting Bit 60¢

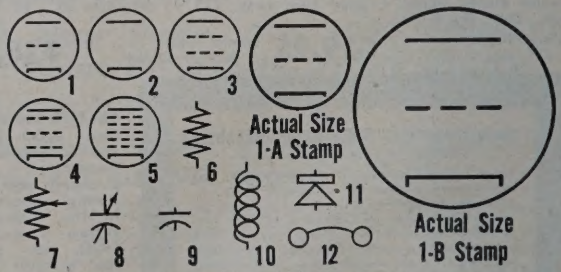
SCALE PRINTING MACHINE

Prints lettering, numbers and divisions on meter scales, dials, name plates, labels, etc. Uses standard printers type obtainable everywhere. Not intended for production work but rather for those special jobs which are one of a kind. Does a neat printed job in a jiffy. The Model 1000 Junior machine finds the most use where the divisions are already drawn in and the scale requires numbers and letters. The Model 1500 Standard machine (illustrated) provides in addition, division printing features.

Model		Price
1000	JUNIOR SCALE PRINTING MACHINE	$45.00
1500	STANDARD SCALE PRINTING MACHINE	95.00

Prices do not include printers type.

RUBBER CIRCUIT STAMPS



These handy rubber stamps provide clear sharp impressions of all the most widely used radio and electrical circuit symbols. Not only saves considerable drawing and drafting time but provides a neater-looking appearance as well. Available in two popular sizes. Stamps may be purchased separately or in complete sets. When ordering, specify stamp number and size.

SIZE A	CIRCUIT STAMP SET	(12 stamps)	$8.50
SIZE A	Individual Circuit Stamps	each	.85
SIZE B	CIRCUIT STAMP SET	(12 stamps)	10.00
SIZE B	Individual Circuit Stamps	each	.95

"PRECISE" Test Equipment is sold through wholesale distributors. See your local distributor or write us for his address. — PRECISE MEASUREMENTS COMPANY

The DIAL LIGHT COMPANY of AMERICA

Foremost Manufacturer of Pilot Lights

PILOT LIGHT ASSEMBLIES

for

T-3¼ NEON LAMP • NE-51

11/16″ MOUNTING HOLE

BUILT-IN RESISTOR

(Patent No. 2,421,321)

All of these assemblies are listed by Underwriters' Laboratories, Inc.

NE-51

For 110 and 220 volts

The new NE-51 lamp is especially useful for pilot lights to be operated on commercial voltages. It has a distinctive orange-red glow and consumes very little current.

MULTI-VUE CAP

In addition to the advantages given by the provision of the built-in resistor, these assemblies offer another feature that is especially important in obtaining effective indication with the NE-51 lamp. The "Multi-vue" cap shown at the right gives a high degree of visibility by directing an increased amount of light toward the eye when the indicator is viewed from any angle. When it is desirable to view the electrodes directly, the clear caps shown below are very effective. For concentrating the light into a beam the metal lens holders are equipped with convex lenses as shown.

CATALOGUE NUMBERS

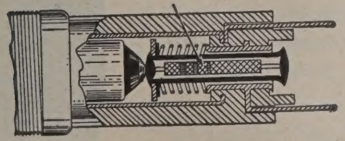
521308-991	Multivue cap, Screw terminals (Fig. 1)
531308-991	Multivue cap, Screw terminals (Fig. 2)
91408-931	Long clear cap, Soldering terminals (Fig. 4)
95408-931	Clear cap, Soldering terminals (Fig. 3)
81408-111	Screw-in cap, Convex lens, Soldering terminals (Fig. 20)
80408-831	Screw cap, Dome plastic lens, Soldering terminals (Fig. 21)
801308-831	Screw cap, Dome plastic lens, Screw terminals
51408-111	Screw cap, Convex lens, Soldering terminals (Fig. 22)
511308-111	Screw cap, Convex lens, Screw terminals

COLOR—The final figure 1 in the listed numbers indicates RED LENS COLOR. If other color is desired, change final figure to one from table below:

Green-2*,	Amber-3,	Blue-4*,	White-5,	Yellow-6,	Clear-7

**not recommended with neon lamps.*

BUILT-IN RESISTOR



PATENTED
No. 2,421,321

External resistors will be furnished which will permit use of these pilot lights on voltages higher than 220 volts.

Equipped with

BINDING SCREWS

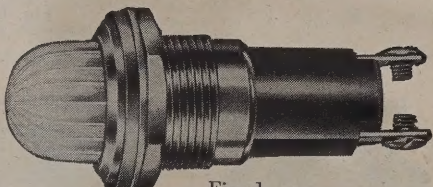


Fig. 1

Multivue caps

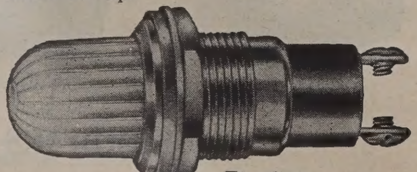


Fig. 2

Equipped with

SOLDERING TERMINALS

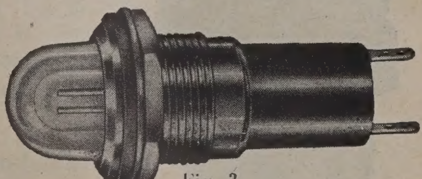


Fig. 3

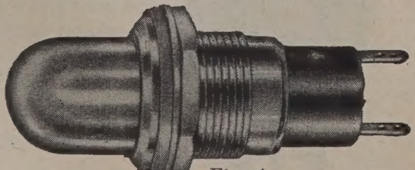


Fig. 4

This series of pilot light assemblies is unique and has several exclusive features. The resistors are permanently built into the high quality DIALCO designed socket.

This socket is constructed with heavy molded bakelite insulation in which the terminals are securely anchored. The insulated socket is mounted in a threaded bushing equipped with nut and shakeproof washer for mounting on a panel of any usual thickness.

The DIAL LIGHT COMPANY of AMERICA

Foremost Manufacturer of Pilot Lights

NEW YORK 3, N. Y.

The DIAL LIGHT COMPANY of AMERICA

Foremost Manufacturer of Pilot Lights

NEW YORK 3, N. Y.

CAPS

All illustrations are approximately actual size

FRICTION

Convex lens

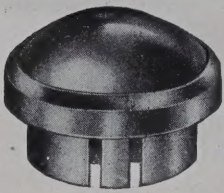


Fig. 5

BAYONET

Convex lens

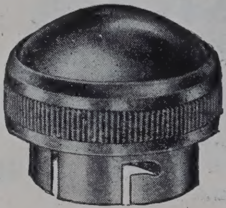


Fig. 6

SCREW

Torpedo lens

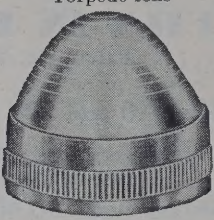


Fig. 7

Large convex lens

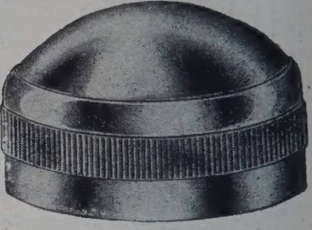


Fig. 8

SCREW

Dome plastic lens

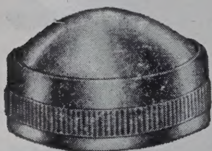


Fig. 9

Faceted lens

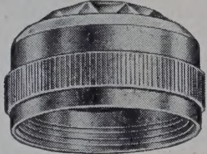


Fig. 10

Convex lens

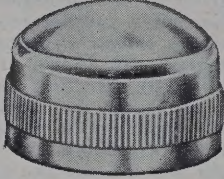


Fig. 11

Large torpedo lens

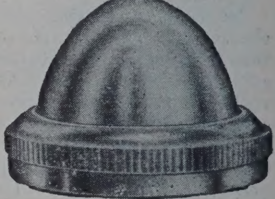
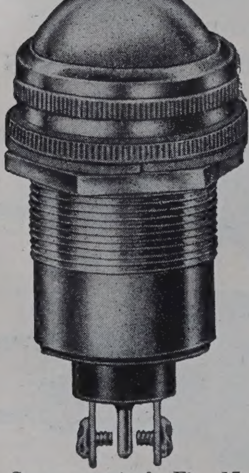


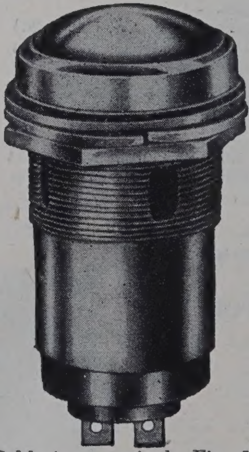
Fig. 12

ASSEMBLIES FOR 1 INCH MOUNTING HOLE

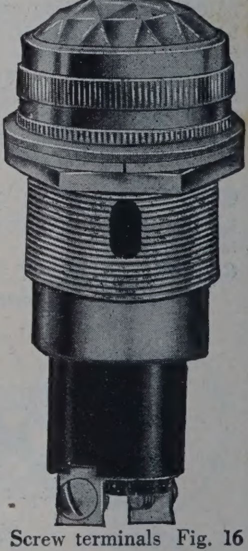
DOUBLE CONTACT BAYONET



Screw terminals Fig. 15

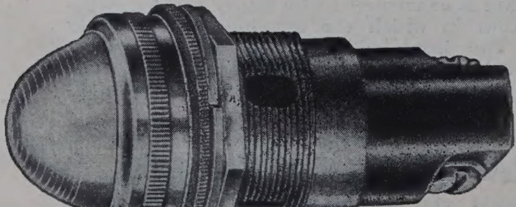


Soldering terminals Fig. 17

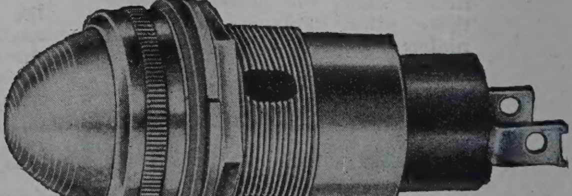


Screw terminals Fig. 16

CANDELABRA SCREW



Screw terminals
Fig. 13



Soldering terminals
Fig. 14

The DIAL LIGHT COMPANY of AMERICA

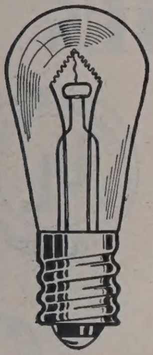
Foremost Manufacturer of Pilot Lights

NEW YORK 3, N. Y.

CATALOG NUMBERS FOR ENCLOSED ASSEMBLIES

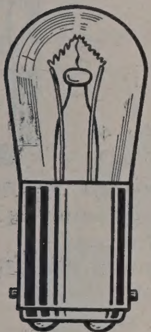
Mount in one inch clearance hole

UNDERWRITERS' LISTED



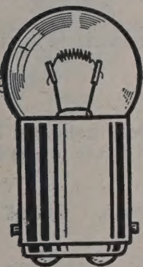
For S-6 Lamp with Candelabra Screw Base

51901-111	Screw cap, Convex lens, frosted back (Fig. 11) Screw terminals (Fig. 13)
61901-111	Screw cap, Large convex lens, frosted back (Fig. 8) Screw terminals (Fig. 13)
51901-431	Screw cap, Faceted lens (Fig. 10) Screw terminals (Fig 13)
19901-531	Screw cap, Large torpedo lens (Fig. 12) Screw terminals (Fig. 13)
51101-111	Screw cap, Convex lens, frosted back (Fig. 11) Soldering lugs (Fig. 14)
41901-111	Bayonet cap Convex lens (Fig. 6) Screw terminals (Fig. 13)
31901-111	Friction cap Convex lens (Fig. 5) Screw terminals (Fig. 13)
47901	Light Shield cap (Fig. 19) Binding Screw terminals (Fig. 13)
71101-111	Mechanical dimmer (Fig. 18) Soldering terminals (Fig. 14)
78101-111	Polaroid dimmer (Fig. 18) Soldering terminals (Fig. 14)



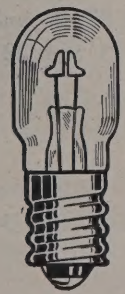
For S-6 Lamp with Double Contact Bayonet Base

513202-111	Screw cap, Convex lens, frosted back (Fig. 11) Screw terminals (Fig. 16)
613202-111	Screw cap, Large convex lens, frosted back (Fig. 8) Screw terminals (Fig. 16)
513202-111	Screw cap, Faceted lens (Fig. 10) Screw terminals (Fig. 16)
803202-531	Screw cap, Torpedo lens (Fig. 7) Screw terminals (Fig. 16)
413202-111	Bayonet cap Convex lens, frosted back (Fig. 6) Screw terminals (Fig. 16)
313202-111	Friction cap Convex lens, frosted back (Fig. 5) Screw terminals (Fig. 16)



For G-6 Lamp with Double Contact Bayonet Base

51704-111	Screw cap, Convex lens, frosted back (Fig. 11) Screw terminals (Fig. 15)
51704-431	Screw cap, Faceted lens (Fig. 10) Screw terminals (Fig. 15)
80704-531	Screw cap, Torpedo lens (Fig. 7) Screw terminals (Fig. 15)
80704-841	Screw cap, Dome plastic lens, matted back (Fig. 9) Screw terminals (Fig. 15)
51204-111	Screw cap, Convex lens, frosted back (Fig. 11) Soldering terminals (Fig. 17)
41204-111	Bayonet cap Convex lens (Fig. 6) Soldering terminals (Fig. 17)
31204-111	Friction cap Convex lens (Fig. 5) Soldering terminals (Fig. 17)



For NE-45 Neon Glow Lamp, Candelabra Screw Base

51914-131	Screw cap, Convex lens (Fig. 11) Binding screw terminals (Fig. 13)
80914-841	Screw cap, Dome lens (Fig. 9) Binding screw terminals (Fig. 13)
41914-131	Bayonet cap Convex lens (Fig 6) Binding screw terminals (Fig. 13)
31914-131	Friction cap Convex lens (Fig. 5) Binding screw terminals (Fig. 13)
51114-131	Screw cap, Convex lens (Fig. 11) Soldering terminals (Fig. 14)
80114-531	Screw cap, Torpedo lens (Fig. 7) Soldering terminals (Fig. 14)

COLOR—The final figure 1 in the above number indicates RED LENS COLOR. If other color is desired, change final figure to one from table below.

Green-2, Amber-3, Blue-4, White-5, Yellow-6, Clear-7

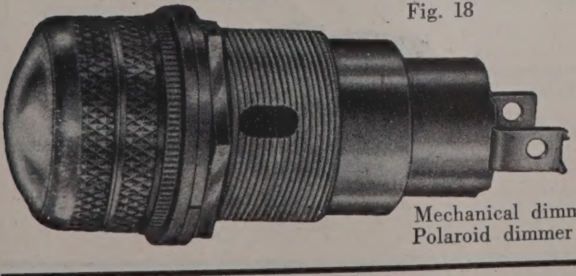


Fig. 18

Mechanical dimmer
Polaroid dimmer

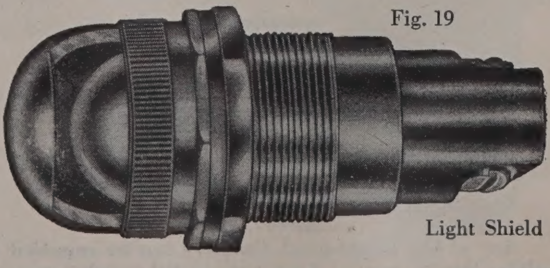


Fig. 19

Light Shield

The DIAL LIGHT COMPANY of AMERICA

Foremost Manufacturer of Pilot Lights

NEW YORK 3, N. Y.

PILOT LIGHT ASSEMBLIES

ASSEMBLIES FOR T-3¼ LAMPS

MINIATURE BAYONET BASE

(for low voltages)

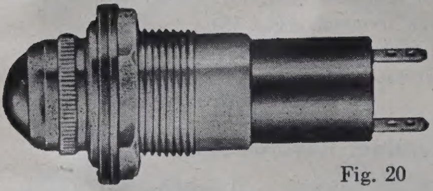


Fig. 20

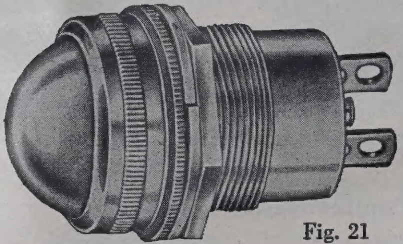


Fig. 21

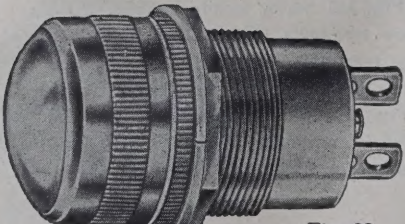


Fig. 22

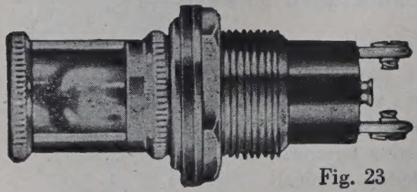


Fig. 23

CATALOGUE NUMBERS

521310-991	Multivue cap, Screw terminals (Fig. 1)
531310-991	Multivue cap, Screw terminals (Fig. 2)
91410-931	Long clear cap, Soldering terminals (Fig. 4)
95410-931	Clear cap, Soldering terminals (Fig. 3)
81410-111	Screw-in cap, Convex lens, Soldering terminals (Fig. 20)
80410-831	Screw cap, Dome plastic lens, Soldering terminals (Fig. 21)
801310-831	Screw cap, Dome plastic lens, Screw terminals
51410-111	Screw cap, Convex lens, Soldering terminals (Fig. 22)
511310-111	Screw cap, Convex lens, Screw terminals
211310	Light shield cap Screw terminals (Fig. 23)
93410-111	Polaroid dimmer cap, Convex lens, Soldering terminals (Fig. 25)
98410-111	Dimmer cap, Convex lens, Soldering terminals (Fig. 24)

COLOR—The final figure 1 in the listed numbers indicates RED LENS COLOR. If other color is desired, change final figure to one from table below:

Green-2, Amber-3, Blue-4, White-5, Yellow-6, Clear-7

Smaller assemblies as illustrated in Figs. 20, 23, 24 and 25 mount in 11/16″ clearance hole. Figs. 21 and 22 require 1″ clearance hole.

MECHANICAL and POLAROID DIMMERS

mechanical

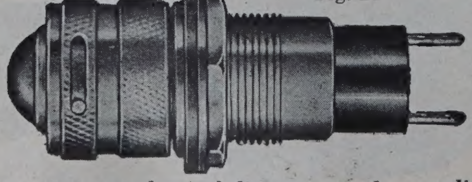


Fig. 24

polaroid

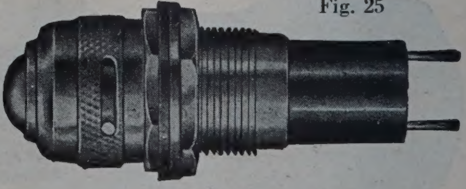


Fig. 25

Any of the mechanical dimmers can be supplied in either the "Complete Blackout" or the regulation type.

The DIAL LIGHT COMPANY of AMERICA

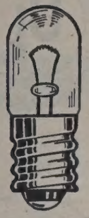
Foremost Manufacturer of Pilot Lights

NEW YORK 3, N. Y.

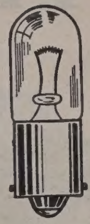
PILOT LIGHT ASSEMBLIES

A SELECTION OF OPEN TYPES

For T-3¼ Low voltage Incandescent Lamps



Miniature Screw Base



Miniature Bayonet Base

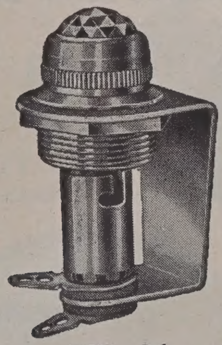


FIG. 26

Typical assemblies for bayonet base lamp. Available also for screw type, see listing below.

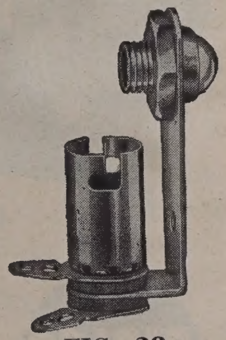


FIG. 28

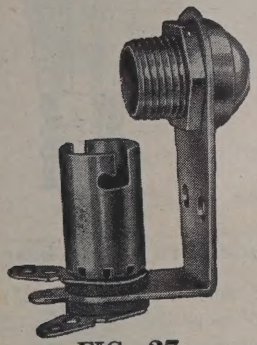


FIG. 27

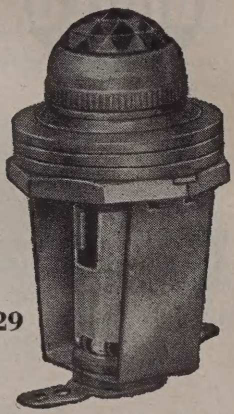


FIG. 29

Octagon lock nut and bracket on these two units welded into one-piece construction.

CATALOGUE NUMBERS

Assemblies for T-3¼ miniature bayonet base lamps

No. 810B-431	Faceted ½″ lens.	For 11/16″ mounting hole.	Fig. 26
No. 710-121	Convex ½″ lens.	For 7/16″ mounting hole.	Fig. 27
No. 755-621	Convex 11/32″ lens.	For 9/32″ mounting hole.	Fig. 28
No. 857B-431	Faceted ½″ lens.	For 11/16″ mounting hole.	Fig. 29
No. 67B-111	Convex ¾″ lens.	For 13/16″ mounting hole.	Fig. 30

Assemblies for T-3¼ miniature screw base lamps

No. 810M-431	Faceted ½″ lens.	For 11/16″ mounting hole.	Similar to Fig. 26
No. 510-121	Convex ½″ lens.	For 7/16″ mounting hole.	Similar to Fig. 27
No. 555-621	Convex 11/32″ lens.	For 9/32″ mounting hole.	Similar to Fig. 28
No. 855-431	Faceted ½″ lens.	For 11/16″ mounting hole.	Similar to Fig. 29
No. 66M-111	Convex ¾″ lens.	For 13/16″ mounting hole.	Similar to Fig. 30

COLOR—The final figure 1 in the listed numbers indicates RED LENS COLOR. If other color is desired, change final figure to one from table below:

Green-2, Amber-3, Blue-4, White-5, Yellow-6, Clear-7

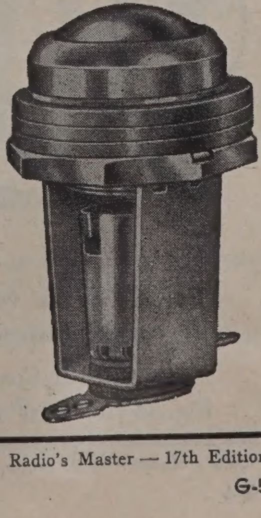


FIG. 30

The DIAL LIGHT COMPANY of AMERICA

Foremost Manufacturer of Pilot Lights

NEW YORK 3, N. Y.

PILOT LIGHT ASSEMBLIES

A SELECTION OF OPEN TYPES

For Candelabra Screw Base Lamps

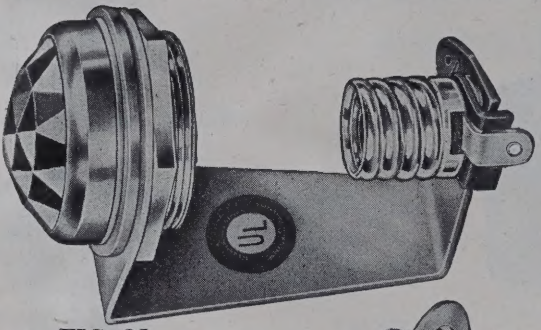


FIG. 31

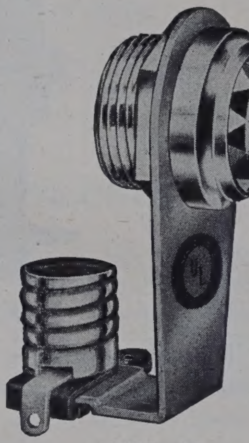
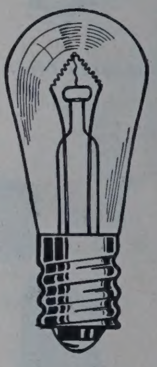


FIG. 33



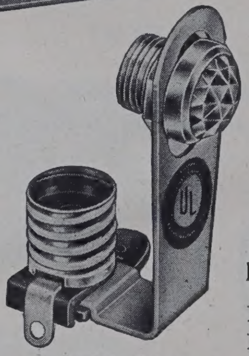


FIG. 32

For S-6 Incandescent Lamps, candelabra screw base

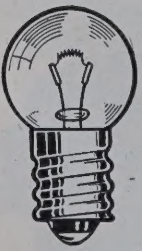
No. 10-18-14-431	Faceted ½″ Lens (for 7/16″ mounting hole) (Fig. 32)
No. 25-18-15-431	Faceted ⅝″ Lens (for 11/16″ mounting hole) (Fig. 33)
No. 31-18-16-431	Faceted 1″ Lens (for 1″ mounting hole) (Fig. 31)

All of the above assemblies are listed by Underwriters' Laboratories, Inc.

COLOR—The final figure 1 in the listed numbers indicates RED LENS COLOR. If other color is desired, change final figure to one from table below:

Green-2, Amber-3, Blue-4, White-5, Yellow-6, Clear-7

Octagon lock nut and bracket on these two units welded into one-piece construction.



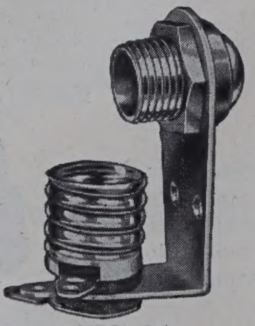


FIG. 34

For G-6 Low voltage lamps, candelabra screw base

No. 610-121 Convex ½″ lens
Fig. 34 (for 7/16″ mounting hole)

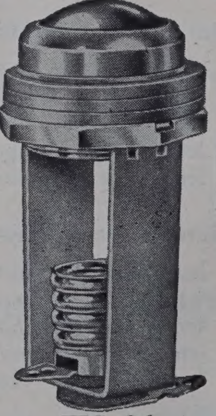
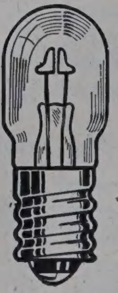


FIG. 36



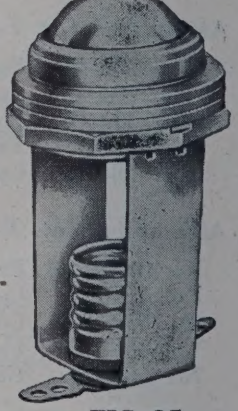


FIG. 35

For NE-45 Neon Glow Lamps, candelabra screw base

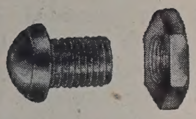
No. 67BN-831 Dome Plastic Lens (¾″ diam.) Fig. 35
No. 66N-131 Convex Glass Lens (¾″ diam.) Fig. 36
(Both mount in 13/16″ hole. Cap removable)

The DIAL LIGHT COMPANY of AMERICA

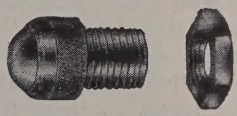
Foremost Manufacturer of Pilot Lights
NEW YORK 3, N. Y.

Lens Holders with Lenses for Panel Mounting

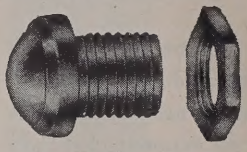
Screw Types Are Complete With Nut for Shank



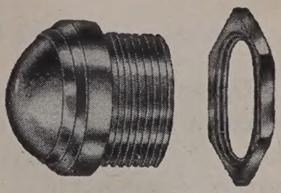
5006-111
9/32"-27 thread



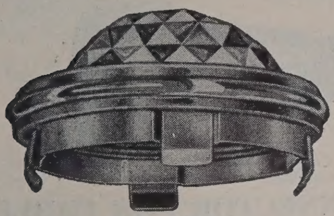
7005-111
3/8"-24 thread



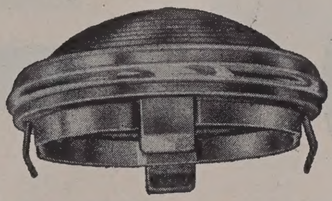
10006-111
7/16"-27 thread



25006-111
11/16"-27 thread

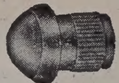


34-431
GLASS LENS

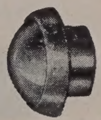


34-841
PLASTIC LENS

These holders snap into 1½" hole



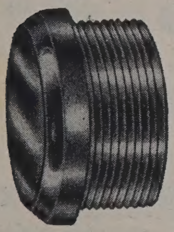
6004-111
9/32" hole



38-111
⅜" hole

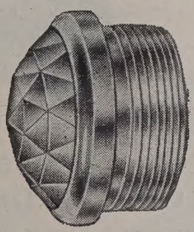
PUSH-IN TYPES

FLAT



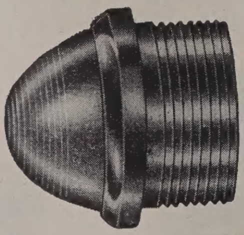
76006-231

FACETED



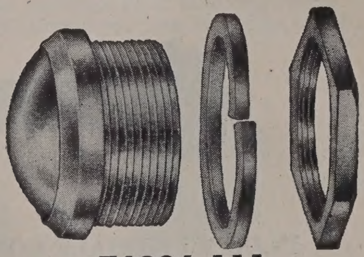
76006-431

TORPEDO



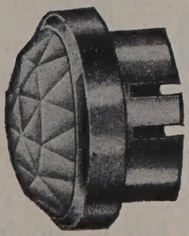
76006-531

CONVEX



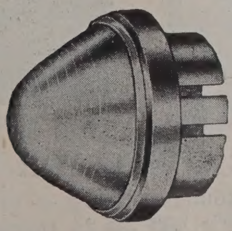
76006-111

FACETED



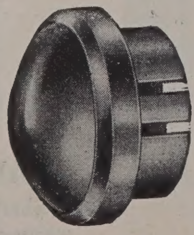
31-431

TORPEDO



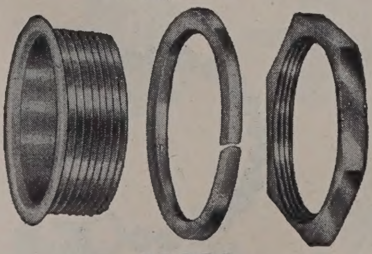
31-531

CONVEX



31-111

BUSHING



31246

The above two groups mount in 1" clearance hole. The upper series lock to the panel and are tamper proof. The lower series permit lamp replacement from the front of the panel.

LENS COLOR—The final figure 1 in the listed numbers indicates RED LENS COLOR. If other color is desired, change final figure to one from table below:

Green-2, Amber-3, Blue-4, White-5, Yellow-6, Clear-7

The DIAL LIGHT COMPANY of AMERICA

Foremost Manufacturer of Pilot Lights

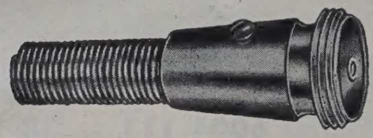
NEW YORK 3, N. Y.

CONNECTORS FOR SINGLE CONDUCTOR CABLE FOR MICROPHONES - SPEAKERS - PICK-UPS - JACKS

(using cable shield for second conductor)

The fittings shown here are designed for use with standard metal shielded single conductor cable up to 1/4″ diameter. These connectors are heavily constructed from solid brass and all exposed parts are chrome plated and highly polished.

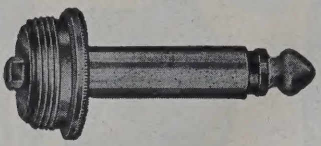
The cable end connectors are provided with rugged wire spring protectors which prevent sharp bends at the connection. The protector is soldered to the cable sheath and secured in the connector by a set screw so that all strain is relieved from the conductor.



No. 101

MALE CONNECTOR FOR CABLE

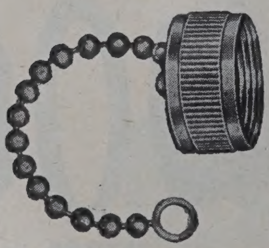
With spring protector to prevent sharp bending of cable. Solders to cable sheath — secured by set screw.



No. 102

PLUG WITH MALE CONNECTOR

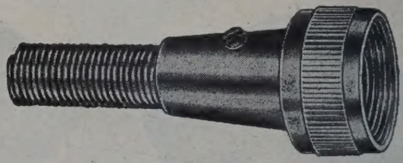
Fits standard jacks



No. 103

CAP AND CHAIN

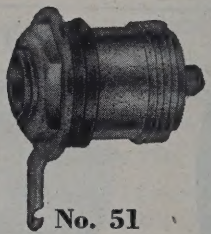
To protect unused male connectors. Chain secured by screw prevents loss when removed to make connection.



No. 100

FEMALE CONNECTOR FOR CABLE

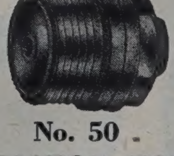
With spring protector to prevent sharp bending of cable. Solders to cable sheath — secured by set screw.



No. 51

MALE CONNECTOR FOR CHASSIS

Has sprung center contact which grounds before cable connection is broken preventing open circuit howls.



No. 50

MALE CONNECTOR FOR CHASSIS

Shell grounds to panel — or may be insulated by washers. Fit 3/8″ — 24 threaded hole or may be secured by nut.

No. 50 P

MALE CONNECTOR FOR CHASSIS

(Similar to No. 50 above)

Designed for force fit in hole in panel. Requires no nut to secure in place.

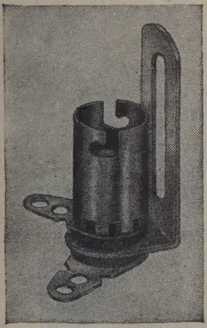
SOCKETS

BRACKET MOUNTED

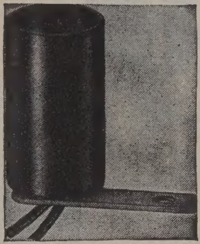
DIALCO

MINIATURE BAYONET

MINIATURE SCREW

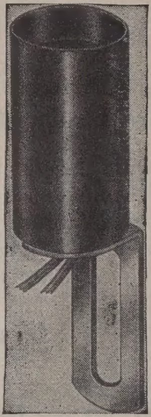


No. 7 Series

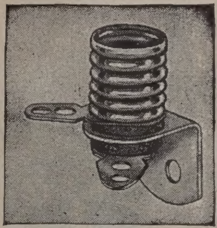


No. 2 Series
FIBRE TUBE

Wire Leads



No. 3 Series
MOLDED BAKELITE

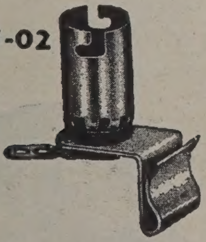


No. 5 Series

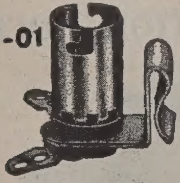
Socket suffix — Bracket Description
—01—Plain clip, upturned
—02—Plain clip, downturned
—03—Clip with ears, upturned
—04—Clip with ears, downturned
—05—Right angle, upturned, slotted. Slot—⅞″ x 3/16″
—06—Right angle, downturned, slotted. Slot—⅞″ x 3/16″
—07—Plain socket, no bracket
—08—Right angle, downturned, short. Hole Size—5/32″
—09—Right angle, upturned, short. Hole Size—5/32″

Socket suffix — Bracket Description
—11—Square U-shaped. Hole Size—5/32″
—12—Horizontal (no bend), short. Hole Size—5/32″
—13—Horizontal (no bend), slotted. Slot—⅞″ x 3/16″
—14—Vee with locking tongue, short—1″
—15—Vee with locking tongue, short—1¼″
—16—Vee with locking tongue, intermediate—1-5/16″
—17—Vee with locking tongue, long—1⅜″
—18—Vee with locking tongue, long—1½″
—19—Right angle, upturned, long. Hole Size—9/64″
—20—Right angle, downturned, long. Hole Size—9/64″

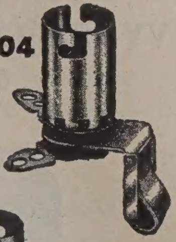
7-02



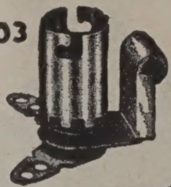
7-01



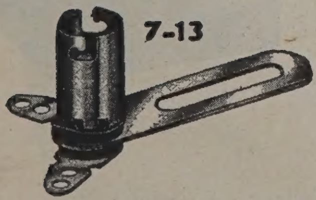
7-04



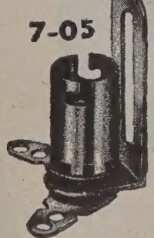
7-03



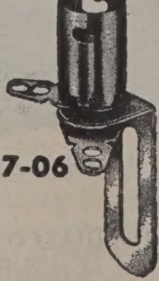
7-13



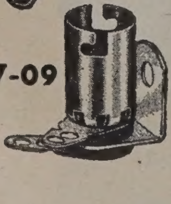
7-05



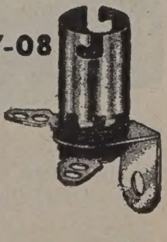
7-06



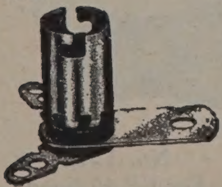
7-09



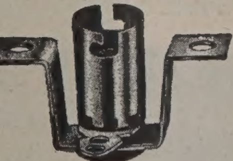
7-08



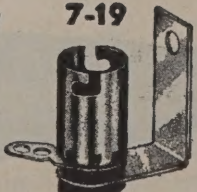
7-12



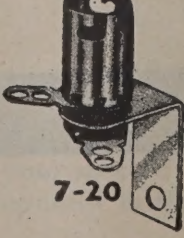
7-11



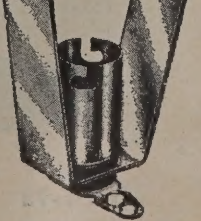
7-19



7-20



7-17



DIALCO

SOCKETS

BRACKET MOUNTED

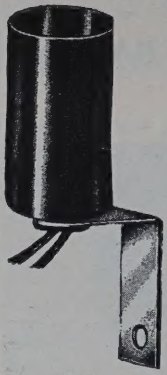
75 Watts, 125 Volts

UNDERWRITERS'

LISTED

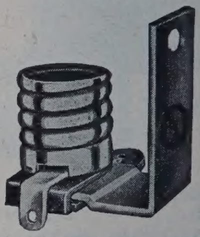
No. 4 Series
Wire Leads

Insulated with heavy molded Bakelite. Square shoulder locks into square hole in bracket — all securely held by large tubular rivet.

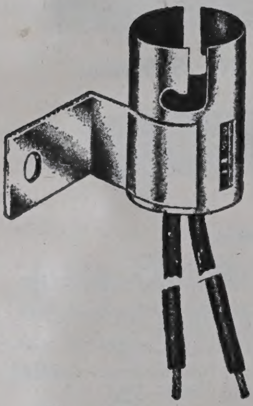


IDEAL FOR S-6 and C-7 LAMPS

No. 18 Series



Soldering Terminals (locked in position)



No. 12 Series
CERAMIC DISK

No. 12 Series — Double Contact Bayonet Ceramic Insulating Disk

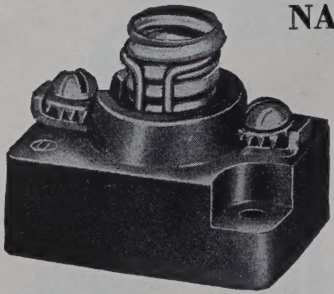
The new "12" series socket is constructed with a high quality ceramic disk supporting the socket contacts. Recesses in the disk receive the lead wires so that no live metal is exposed.

Wire Leads

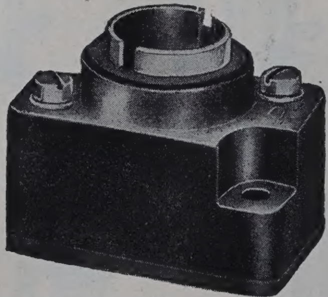
The standard flexible leads are of plastic insulated approved wire, 18 gauge. Usual length is 8 inches; longer leads will be supplied when specified.

Many Bracket Types

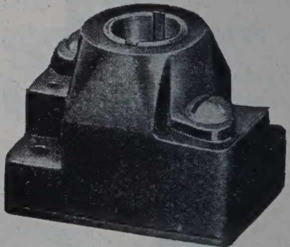
NAVY SPECIFICATION SOCKETS



Candelabra screw 9S2036
Candelabra screw 9S5038
(not illustrated)



Double Contact bayonet 9S4634



Miniature bayonet
9S4931

LAMP INSTALLER

The DIALCO lamp installer shown below is a useful tool in installing lamps and in servicing pilot lights.

No. L-73

No. L-45
For NE-45 Neon

Dial and Jewel

PILOT LIGHT ASSEMBLIES

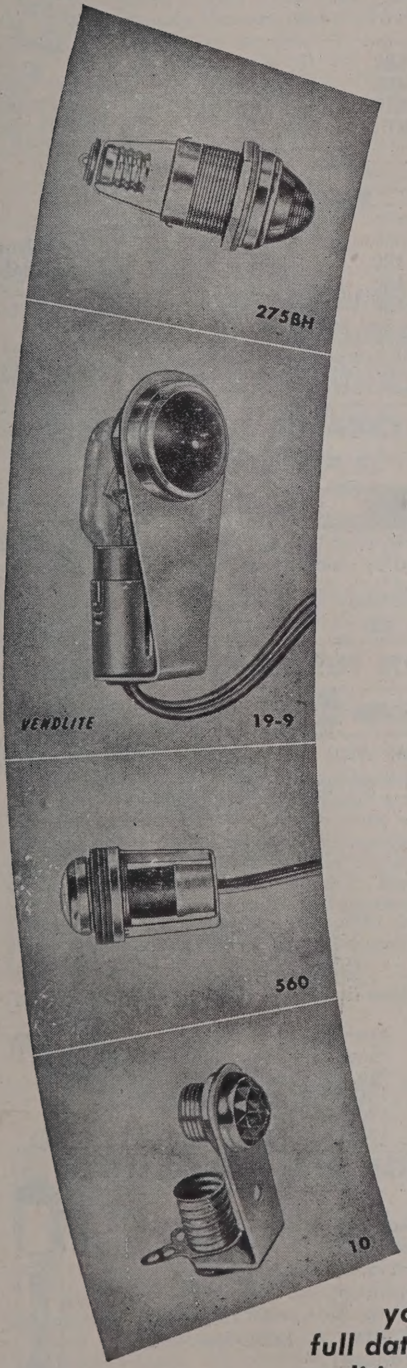
DRAKE MANUFACTURING CO., 1709 W. HUBBARD ST., CHICAGO 22, ILL.

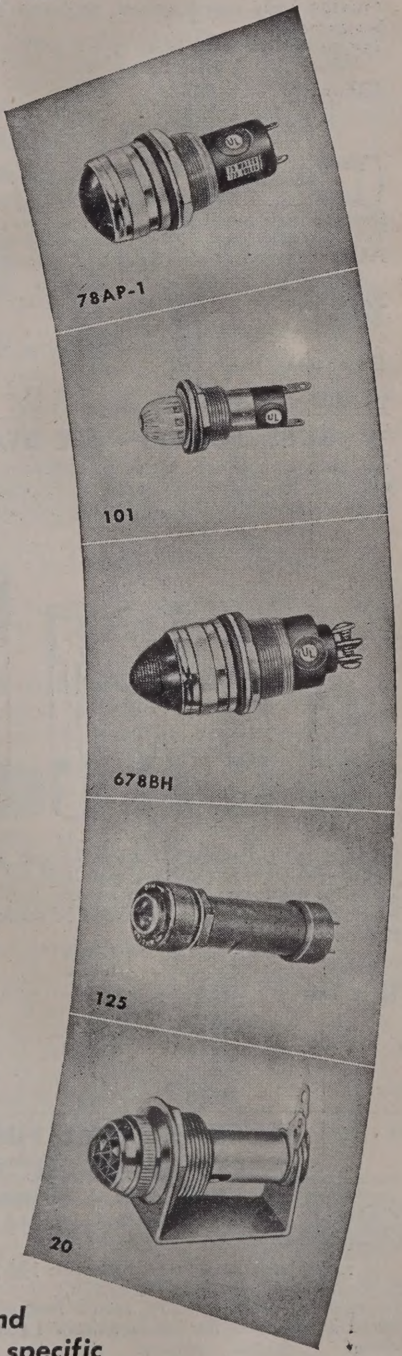
★

You can get a DRAKE assembly for

EVERY USE –

usually at a saving!





★

Hundreds of styles, sizes and combinations are available in the big DRAKE line . . . developed over a period of years for almost every conceivable kind of use. It's easy to select from them the exact unit to fit your requirement best. All are made with the meticulous attention to quality and the practical design features which have qualified DRAKE Assemblies as original equipment on so many well-known brands of radios and all kinds of other equipment where miniature lighting is used. And you can credit ingenious DRAKE engineering with the savings in cost which are usually possible when you use these precision-built units.

★

DRAKE units — many of them of special and unusual design—are being produced in volume for Defense applications. These units, of course, meet JAN specifications. But in spite of the growing stream of Assemblies we are turning out for this vital purpose, DRAKE is still maintaining full service—and making on-time deliveries — on non-defense orders.

★

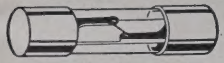
Write us, describing your application . . . we'll send full data on the best units for your specific conditions — on the most economical basis!

BUSS Fuses

FUSETRON DUAL-ELEMENT Fuses and Fuse Holders

for Protection of Radios, Instruments and Electronic Equipment

FAST ACTING FUSES for PROTECTION OF INSTRUMENTS, Etc.

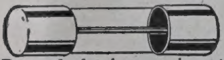


Formerly called 8AG.
Dimension ¼ x 1 inch, Glass tube.

Provide high speed action necessary to protect sensitive instruments.

Test specification—carry 100%, open at 200% in 5 seconds.

Voltage	Symbol	Amperes	List Price
250 or less	**MJB**	1/500	$0.70
"	**MJB**	1/200	.30
"	**MJB**	1/100 or 1/32	.20



Formerly called 8AG
Dimension ¼ x 1 inch, Glass tube.

Provide high speed action necessary to protect instruments.

Test specification—carry 100%, open at 200% in 5 seconds.

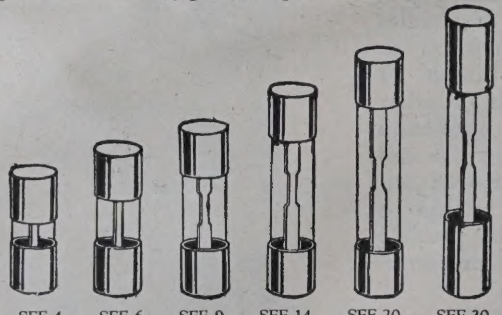
AGX are listed as approved by Underwriters' Laboratories.

Voltage	Symbol	Amperes	List Price
250 or less	**MJW**	1/16 or ⅛	$0.15
"	**AGX**	⅛	.15
"	**AGX**	¼, ⅜ or ½	.12
125 or less	**AGX**	¾	.12
"	**AGX**	1, 1½ or 2	.10

The MJW fuses are special low resistance fuses.

BUSS FUSES — SFE STANDARD

All cuts actual size. Fuses of different amperages are of different lengths — to make it impossible to insert too large a size — thereby preventing over-fuseing.



SFF 4 SFE 6 SFE 9 SFE 14 SFE 20 SFE 30

Glass tube — diameter ¼ inch. Length as per table below.

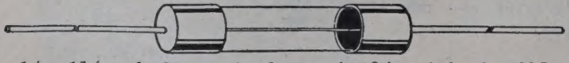
Test specification—carry 100%, open at 125% in ½ hour.

Listed as approved by Underwriters' Laboratories.

Made according to specifications of Society of Automotive Engineers.

Voltage	Symbol & Amperes	Length Inches	Pounds per 100	List Price
32 or less	**SFE4**	⅝	.70	$0.05
"	**SFE6**	¾	.71	.05
"	**SFE9**	⅞	.72	.04
"	**SFE14**	1 1/16	.77	.04
"	**SFE20**	1¼	.83	.035
"	**SFE30**	1 7/16	1.05	.06

BUSS PIG-TAIL FUSES



¼ x 1¼ inch Glass tube fuse with 1¾ inch leads of No. 20 tinned copper wire. Symbol GJV.

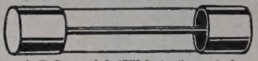
¼ x 1⅛ inch Paper tube fuse with 1¾ inch leads of No. 20 tinned copper wire. Symbol GJC.

Test specifications — carry 110%, open at 135% in 1 hour.

Listed as approved by Underwriters' Laboratories.

Voltage	Symbol	Amperes	List Price
250 or less	**GJV**	⅛, ¼, ⅜, ½ or ¾	$0.20
"	**GJV**	1, 1½, 2 or 3	.15
"	**GJC**	⅛, ¼, ⅜, ½ or ¾	.20
"	**GJC**	1, 1½, 2 or 3	.15

BUSS GLASS TUBE FUSES, ¼ x 1¼ inch



AGC and MTH 4, 5 and 6

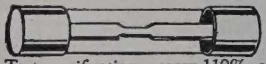
MTH 8

Formerly called 3AG

Test specification—carry 110%, open at 135% in 1 hour.

Listed as approved by Underwriters' Laboratories.

Voltage	Symbol	Amperes	List Price
250 or less	**AGC**	⅛, ¼, ⅜, ½ or ¾	$0.15
"	**AGC**	1, 1½, 2 or 3	.07
"	**MTH**	4, 5 or 6	.10
"	**MTH**	8	.15



Formerly called 3AG

Test specification—carry 110%, open at 135% in 1 hour.

Voltage	Symbol	Amperes	List Price
32 or less	**AGC**	5, 6 or 7½,	$0.05
"	**AGC**	10 or 15,	.04
"	**AGC**	25 or 30	.05

20 ampere size is an SFE 20 fuse.

Sizes larger than 30 ampere are not recommended as clips or fuse holders would not permit fuse to carry such high currents. If surges or starting currents make heavier fuse necessary, use MDL Fusetron dual-element fuses.

BUSS CERAMIC TUBE FUSES ¼ x 1¼ inch

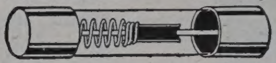
Formerly called 3AB

Test specification—carry 110%, open at 135% in 1 hour.

Listed as approved by Underwriters' Laboratories, 15 amps and less.

Voltage	Symbol	Amperes	List Price
250 or less	**ABC**	10, 12, 15 or 20	$0.15

FUSETRON FUSES, ¼ x 1¼ inch



Glass tube —
Dual-Element type

A FUSE WITH A LONG TIME-LAG

These fuses avoid needless blows from starting currents or surges. They have a fuse link which operates only on very high overloads or short-circuits — they have a thermal cutout which functions on low overloads — the thermal cutout cannot operate quickly at any load, hence long time-lag is obtained. Yet protection is afforded against short-circuits or continued overloads.

Test specification—carry 110%, open at 135% in 1 hour.

Approximate blowing time:		MDL		MDX	
at 200% load		25	sec.	12	sec.
at 300%	"	8	"	3	"
at 500%	"	3	"	½	"

125 and 250 volt sizes listed as approved by Underwriters' Laboratories.

Voltage	Symbol	Amperes
250 or less	**MDL**	1/100, 1/32, 1/16, 1/10, 15/100, 2/10, 3/10, 4/10, ½, 6/10, 8/10 or 1
125 or less	**MDL**	1¼, 1 6/10, 2, 2½, or 2 8/10
"	**MDX**	3 2/10, 4, 5 or 6¼
32 or less	**MDL**	3 2/10, 4, 5, 6¼, 8, 10, 15, 20, 25 or 30

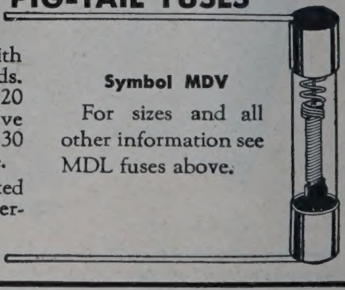
FUSETRON PIG-TAIL FUSES

These are MDL fuses with 1½ inch tinned wire leads. 0 to 8 amp. have No. 20 wire, 10 to 15 amp. have No. 16 wire and 20 to 30 amp. have No. 14 wire.

125 and 250 volt sizes listed as approved by Underwriters' Laboratories.

Symbol MDV

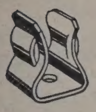
For sizes and all other information see MDL fuses above.



BUSS Fuses
FUSETRON DUAL-ELEMENT Fuses and Fuse Holders
for Protection of Radios, Instruments and Electronic Equipment

BUSS FUSE CLIPS for ¼ inch Fuses

(SFE4, 6, 9, 14, 20, AGX, AGC, ABC, MDL, MJB, MTH fuses)



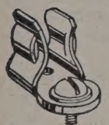
Spring bronze clips are made of Herculoy — a bronze of distinctly superior quality for spring clips. This metal gives clips great gripping strength and ability to retain spring under adverse conditions.

Beryllium copper clips combine low electrical resistance with great gripping strength. This means maximum electrical conductivity and results in cooler operation of clips and fuse.

Size of mounting hole; .130 to .135 inch.
Center of hole to back-stop; .125 to .135 inch.
Min. length of contact surface; 8/32 inch
Maximum height; 14/32 inch
Maximum width; 11/32 inch

		List Price
4548	Spring bronze clip, Nickel plated.	$0.02
4592	Beryllium copper clip, Silver plated.	.05

BUSS CLIP ASSEMBLIES for ¼ inch Fuses



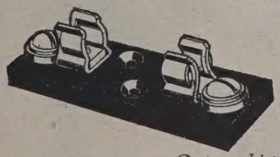
(SFE4, 6, 9, 14, 20, AGX, AGC, ABC, MDL, MJB, MJW, MTH fuses)

Clips as described above. Brass terminal. 3/16 inch 6-32 washer head terminal screw. ¼ inch 4-40 flat head iron mounting screw.

4431	includes No. 4548 spring bronze clip, terminal screw, terminal and mounting screw.	List Price $0.10
4432	includes No. 4592 beryllium copper clip, terminal screw, terminal and mounting screw.	List Price $0.13

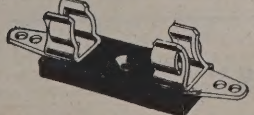
BUSS FUSE BLOCKS

Bakelite base blocks 3/16 inch thick. Countersunk mounting holes for No. 6 flat head screws. Brass No. 6 terminal screws. No. 4548 spring bronze clips.



Full base, Screw terminal Blocks

For Fuses	One Pole	List Price	Two Pole	List Price	Three Pole	List Price
SFE4	4511	$0.35	4521	$0.70	4531	$1.00
SFE6	4516	.35	4526	.70	4536	1.00
SFE9	4517	.35	4527	.70	4537	1.00
SFE14, AGX, MJB	4514	.35	4524	.70	4534	1.00
SFE20, ABC, AGC, MDL, MTH	4512	.35	4522	.70	4532	1.00



Small base, Solder Terminal Blocks

For Fuses	One Pole	List Price	Two Pole	List Price	Three Pole	List Price
SFE14, AGX, MJB	4520	$0.15	4485	$0.30	4403	$0.45
SFE20, ABC, AGC, MDL, MTH	4405	.15	4408	.30	4411	.45

Other standard and special fuses, fuse blocks and fuse holders

If the fuses, blocks and holders shown do not fit your requirements ask for information on other types.

Fuses and fuse mountings to meet JAN and Military specifications also are available.

If you have a special problem in protection send description or sketch giving number of circuits, type of fuse, terminals, etc., desired. We welcome such inquiries.

BUSS FUSE HOLDERS

Make it convenient to mount fuse on any equipment.

Changing or inspection of fuse is easy and quick.

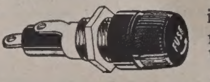
Holder has removable knob. Fuse projects beyond body of holder and is not held tight on other end when knob is removed.

Fuse and contacts are protected from dirt and fumes.

Good contact on fuse is made certain by strong coil spring pressure. Poor contact heating that often causes fuse to blow needlessly is eliminated.

Holder bodies are made of black bakelite. All current carrying parts are of brass or copper. Terminals and all contact parts are bright alloy plated.

PANEL MOUNTED HOLDERS for ¼ inch Fuses



Holders are inserted through hole in panel and are locked in place by nut on holder. They can be used on panels up to 5/16 inch thick.

Bayonet type knob requires only quarter turn to remove fuse. No screw driver is needed.

Side terminal is held mechanically as well as by solder. Heat of soldering wire to it will not cause it to loosen or come off.

Vibration will not cause failure of terminals as they are designed to stand severe service.

Neoprene washer and steel locking nut (zinc plated, chromate dipped) furnished with each holder.

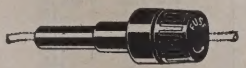
Wire hole in terminals; .115 inch.

Normal current carrying capacity; 15 amperes.

Listed as approved by Underwriters' Laboratories.

		List Price
HJM	for ¼ x 1inch fuses (AGX, MJB, MJW, SFE 14)	$0.40
HKP	for ¼ x 1¼ inch fuses (ABC, AGC, SFE20, MDL, MTH)	.40

IN–THE–LINE HOLDERS for ¼ inch fuses



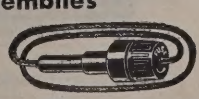
These holders are for mounting fuse in wire. Holders consist of body and bayonet type knob — two contacts ready to be staked on ends of wire — a pressure spring that is used under contact in base of holder.

Holders can also be mounted in panel up to 5/16 inch thick by means of a No. 9969 Spring nut (Nut not furnished). Flat spot on holder permits it to be locked against rotation.

Normal current carrying capacity: 15 amperes.

Symbol		List Price
HDI	for ¼ x 1 inch fuses (AGX, MJB, MJW, SFE 14) Takes No. 18 or smaller wires.	$0.20
HDJ-A	for ¼ x 1¼ inch fuses (ABC, AGC, MDL, MTH, SFE 20) Takes No. 18 or smaller wires.	.20
HDJ-B	for ¼ x 1¼ inch fuses (as above) Takes No. 14 or 16 wires.	.20
No. 9969	Spring nut for panel mounting above holders.	.04

Holder-and-Fuse Assemblies



Assembly consists of holder, fuse and 19 inch loop of No. 14 wire already staked and soldered to terminals.

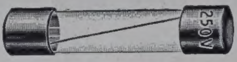
Offer simplest way to install protection. Wire can be cut to give leads of desired length. A spring nut, furnished with holder, can be used to mount holder on panel up to 3/32 inch thick.

		List Price
HRJ	Complete with SFE 20 fuse	$0.40
HRI	Complete with SFE 14 fuse	.40
HRH	Complete with SFE 9 fuse	.40

LITTELFUSE

"Quicker than a Short Circuit"

3 AG "LITTELFUSES"



¼" x 1¼"

Standard Package—100

Blow Time

Percentage of rating	Blow Time
110%	Life
135%	0–1 hour
200%	0–2 minutes

311000 Series **Littelfuses**—Quick to medium-blowing fuses—for use in radios, auto-radios, amplifiers, etc. Straight-type fuse element—positioned to center of fuse—makes open link always in the visible portion of fuse.

Catalog No.	Amp. rating	Max. volt	Ohms res.	List Price, each
311005.	5	32	.028	$0.05
31107.5	7½	32	.02	.05
311010.	10	32	.011	.04
311015.	15	32	.008	.04
311020.	20	32	.006	.035
311030.	30	32	.005	.05

312000 Series **Littelfuses**—Quick-acting fuses—for low time-lag applications similar to the **311000** fuse series above. Protective-coated elements, on fuses to 3 amperes, prevent oxidation and promote clean break on fusion. Diagonal element alignment of this fuse assures accurate alignment and calibration, even when the fuse element is expanded by heat.

Catalog No.	Amp. rating	Max. volt.	Ohms res.	List Price each
312.062	1/16	250	5.400	$0.15
312.125	⅛	250	6.35	.15
312.250	¼	250	3.275	.15
312.375	⅜	250	2.38	.15
312.500	½	250	1.39	.15
312.750	¾	250	.89	.15
312001.	1	250	.23	.07
31201.5	1½	250	.146	.07
312002.	2	250	.073	.07
312003.	3	250	.052	.07
312004.	4	250	.049	.10
312005.	5	250	.029	.10
312006.	6	250	.025	.10
312008.	8	125	.022	.15

Approved by Underwriters' Laboratories.

3 AG "SLO-BLO" "LITTELFUSES"

LITTELFUSE USA
313 ¼A

¼"x 1¼"

Standard package—100

Blow time

Percentage of rating	Blow Time
110%	Life
135%	0–1 hour
200	60 seconds max. 5 seconds min.

313000 Series **Littelfuses**—**Slo-Blo** fuses with high time-lag to withstand heavy surges—quick on shorts. Designed for circuits with equipment having high inductive or capacitative surges, such as magnets, solenoids, etc., and for circuits with heavy starting currents, such as motors and lamp circuits. Anti-fatigue construction (compound element, with spring and resistor) makes these fuses ideal for intermittent-duty circuits on vibrators, control circuits, hi-tension electric fences, small magnets, coils, etc. **"Pioneered by Littelfuse."**

Catalog No.	Former No.	Amp. rating	Max. volt.	List Price, each
313.010	1259	1/100	125	$0.25
313.032	1261	1/32	125	.25
313.062	1262	1/16	125	.25
313.100	....	1/10	125	.25
313.125	1263	1/8	125	.25
313.150	....	15/100	125	.25
313.187	1263-A	3/16	125	.25
313.200	....	2/10	125	.25
313.250	1264	1/4	125	.25
313.300	....	3/10	125	.25
313.375	1265	3/8	125	.25
313.400	....	4/10	125	.25
313.500	1266	1/2	125	.25
313.600	....	6/10	125	.25
313.750	1267	3/4	125	.25
313.800	....	8/10	125	.25
313001.	1268	1	125	.25
3131.25	....	1¼	125	.20
31301.5	1041-C	1½	125	.20
31301.6	....	1-6/10	125	.20
313002.	1042-C	2	125	.20
31302.5	....	2½	125	.20
313003.	1043-C	3	125	.20
31303.2	....	3-2/10	125	.20
313004.	....	4	125	.20
313005.	1080-C	5	125	.20
3136.25	....	6¼	32	.20
313008.	....	8	32	.20
313010.	1081-C	10	32	.20
313015.	1082-C	15	32	.20
313020.	1083-C	20	32	.20

Approved by Underwriters' Laboratories through 5 amps.

3 AB "TINY MIGHTY" "LITTELFUSES"

Littelfuse Made in USA
UL
TINY-MIGHTY LITTELFUSE
15A

¼" x 1¼"

Standard package—100.

Blow Time

Percentage of rating	Blow Time
110%	Life
135%	0–1 hour
200%	0–2 minutes

314000 Series **Littelfuses**—The smallest Underwriters' Laboratory approved fuses in ratings this high. Steatite enclosed, arc-quenching, powder filled fuses. Shatter-proofed against quick shorts. Medium time lag. Recommended for use with amplifiers, rectifiers, battery charging equipment, small generators, control panels, amusement devices, communication and electronic equipment, radios, signal apparatus, small motor circuits, etc. Take less space than N.E.C. fuses—**"Pioneered by Littelfuse."**

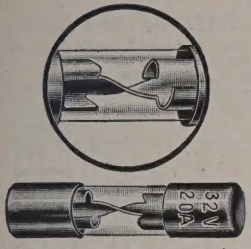
Catalog No.	Amp. rating	Max. volt.	Ohms res.	List Price, each
314008.	8	250	.021	$0.15
314010.	10	250	.014	.15
314012.	12	250	.013	.15
314015.	15	250	.012	.15
314020.	20	250	.0007	.15

Approved by Underwriters' Laboratories through 15 amps.

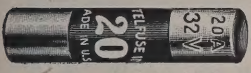
LITTELFUSE "Quicker than a Short Circuit"

AIRCRAFT LITTELFUSES—ANTI-VIBRATION TYPE

Especially designed for Aircraft Service. Characteristics: High Mechanical Strength—Resistance to Fatigue—Long Vibration Life



4 AG Aircraf t Fuse showing reinforced twisted element



Bakelite-enclosed 4 AB Fuse

CONSTRUCTION: Glass-enclosed. Littelfuse Locked Cap Assembly (no cements) prevents loosening of caps. High visibility transparent label for amperage. Elements mechanically depolarized by twisting at 90° (see illustrations) are braced against extreme vibration. "Gooseneck" non-crystallizing fuse element takes up expansion and contraction. Ratings 5 amps. or less use Spring and Link. Service life six times simple wire. The 4 AG and 5 AG sizes are supplied for Aircraft services for their strength and greater carrying capacity han 3 AG fuses.

BAKELITE-ENCLOSED: 4 AB and 5 AB fuses recommended where severe overloads might shatter glass.

CURRENT RATING: Rated to NEC specifications to carry 10% overload indefinitely, to blow on 35% overload within 1 hr., and 100% overload within 2 min.

VOLTAGE RATING: Voltage at which fuses will break without arcing over, or bursting under short circuit conditions.

VIBRATION FACTOR: Minimum hours these fuses endure our Magnetic Vibrator operating 120 cycles a second, while carrying the rated current. Acceleration is 10 times the worst field conditions.

4AG "LITTELFUSES"
1¼″ x 9/32″ Dia.
Unit Wt.—3.5 Gms.

Vibration Factor	Cat. No.	Former No.	Amp. Rating	Max. Volt.	Ohms Res.	Price, Each
100+	**"Slo-Blo"**					
100+	413001.	1091C	1	250	.71	$0.25
100+	413002.	1092C	2	250	.094	.25
500+	413003.	1093C	3	250	.059	.25
500+	413005.	1094C	5	32	.023	.25
500+	**Aircraft**					
500+	411010.	1095	10	32	.016	.13
500+	411015.	1096	15	32	.010	.13
500+	411020.	1097	20	32	.008	.13
500+	411025.	1098	25	32	.007	.13
500+	411030.	1099	30	32	.007	.13
500+	411035.	—	35	32	.006	.18
500+	411040.	1100	40	32	.004	.20

4AB "LITTELFUSES"
1¼″ x 9/32″ Dia.
Unit Wt.—3.75 Gms.

Cat. No.	Former No.	Amp. Rating	Max. Volt.	Ohms Res.	Price, Each
414001.	1091B	1	250	.39	$0.25
414002.	1092B	2	250	.16	.25
414003.	1093B	3	250	.055	.25
414005.	1094B	5	115*	.041	.25
414010.	1095B	10	115*	.016	.25
414015.	1096B	15	115*	.012	.25
414020.	1097B	20	32	.008	.25
414025.	1098B	25	32	.007	.25
414030.	1099B	30	32	.007	.25
414035.	1100B	35	32	.006	.25
414040.	—	40	32	.003	.25

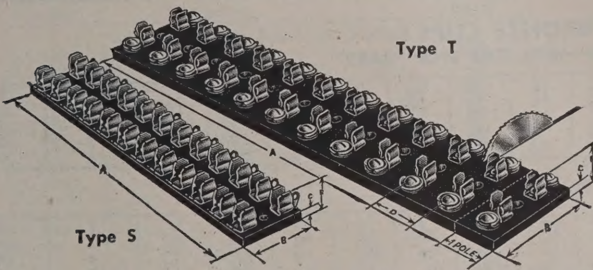
* Good for power supplies up to 25 KVA at 115V—400 cycles.

5AG "LITTELFUSES"
1½″ x 13/32″ Dia.
Unit Wt.—8.5 Gms.

Cat. No.	Former No.	Amp. Rating	Max. Volt.	Ohms Res.	Price, Each
"Slo-Blo"					
513001.	1160C	1	250	.88	$0.25
513002.	1161C	2	250	.24	.25
513003.	1162C	3	250	.18	.25
513005.	1163C	5	32	.05	.25
Aircraft					
511010.	1164	10	32	.039	.15
511015.	1165	15	32	.013	.15
511020.	1166	20	32	.013	.15
511025.	1442	25	32	.030	.15
511030.	1167	30	32	.013	.15
511035.	1472	35	32	.008	.15
511040.	1168	40	32	.010	.15
511050.	1169	50	32	.009	.18
511060.	1222	60	32	.010	.18

NEW FUSE MOUNTING PANELS

Open type fuse panels, stocked in 12-pole units as shown—we cut them to 1, 2, 3, 4 or more poles as ordered, or you may cut them in your plant (⅛″ allowance for saw cut).



Fuse Type	Mtg. Type	Dim. "B"	Dim. "C"	Dim. "D"	Dim. "E"
8AG	S	1⅜	3/16	⅝	21/32
3AG	S	1⅝	3/16	⅝	21/32
3AG	T	2⅜	7/32	29/32	11/16
4AG	T	2⅜	7/32	29/32	13/16
5AG	T	2¾	9/32	9/32	35/32

Mountings with Solder Terminals—Type "S". Phosphor-Bronze, bright-dipped finish "Lug-Clips" are firmly anchored to black Bakelite base—have non-turning anchors. For 8AG and 3AG size fuses.

Mountings with Screw Terminals—Type "T". Spaced to U/L requirements for equipment circuit protection. Nickel plated brass screw terminals, nickel plated fuse clips. Type 356 (3AG) and type 556 (5AG or Midget) have cupped wire-retaining washers under terminal screws as required by U/L. Type 456 (4AG) has lock washers or terminals.

FOR 3AG FUSES—TYPE "T"

Catalog No.	No. Poles	Dim. "A"	List Price, Each
356001	1	25/32	$0.35
356002	2	1 11/16	0.70
356003	3	2 19/32	1.05
356004	4	3½	1.40
356005	5	4 13/32	1.75
356006	6	5 5/16	2.10
356007	7	6 7/32	2.45
356008	8	7⅛	2.80
356009	9	8 1/32	3.15
356010	10	8 15/16	3.50
356011	11	9 27/32	3.85
356012	12	10¾	4.20

FOR 4AG FUSES—TYPE "T"

Catalog No.	No. Poles	Dim. "A"	List Price, Each
456001	1	25/32	$0.40
456002	2	1 11/16	.75
456003	3	2 19/32	1.10
456004	4	3½	1.45
456005	5	4 13/32	1.80
456006	6	5 5/16	2.15
456007	7	6 7/32	2.50
456008	8	7⅛	2.85
456009	9	8 1/32	3.20
456010	10	8 15/32	3.55
456011	11	9 27/32	3.90
456012	12	10¾	4.25

FOR 5AG FUSES—TYPE "T"

556001	1	27/32	$0.50
556002	2	1 13/16	.95
556003	3	2 25/32	1.40
556004	4	3¾	1.85
556005	5	4 23/32	2.30
556006	6	5 11/16	2.75
556007	7	6 21/32	3.20
556008	8	7⅝	3.65
556009	9	8 19/32	4.10
556010	10	9 9/16	4.55
556011	11	10 17/32	5.00
556012	12	11½	5.45

FOR 3AG FUSES—TYPE "S"

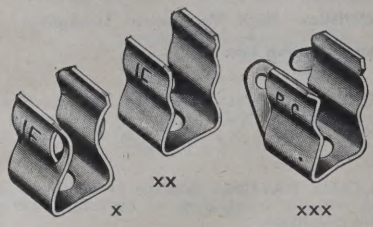
Catalog No.	No. Poles	Dim. "A"	List Price Each
357001	1	½	$0.15
357002	2	1⅛	.30
357003	3	1¾	.45
357004	4	2⅜	.60
357005	5	3	.75
357006	6	3⅝	.90
357007	7	4¼	1.05
357008	8	4⅞	1.20
357009	9	5½	1.35
357010	10	6⅛	1.50
357011	11	6¾	1.65
357012	12	7⅜	1.80

FOR 8AG FUSES—TYPE "S"

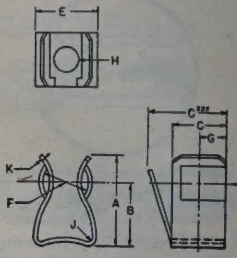
387001	1	½	$0.15
387002	2	1⅛	.30
387003	3	1¾	.45
387004	4	2⅜	.60
387005	5	3	.75
387006	6	3⅝	.90
387007	7	4¼	1.05
387008	8	4⅞	1.20
387009	9	5½	1.35
387010	10	6⅛	1.50
387011	11	6¾	1.65
387012	12	7⅜	1.80

LITTELFUSE *"Quicker than a Short Circuit"*

LITTELFUSE BERYLLIUM COPPER AND PHOSPHOR BRONZE FUSE CLIPS



Littelfuse fuse clips are available in three standard styles: "X," with "ears" or fuse stops; "XX," earless; and "XXX," "Lug-Clips," a new **Littelfuse** clip having a lug or solder terminal made as an integral part of the clip. All styles are furnished in either Phosphor-Bronze or Beryllium Copper.



Catalog Number	Former Number	Fuse Adaptation	Type	DIMENSIONS A	B	C	E	F	G	H	Unit Wt. grams	Std. Pkg. 100 Wt.—lbs.	List Price Each

BERYLLIUM COPPER CLIPS

SILVER PLATED—WITH FUSE STOP "EARS"

121001	1216B	SFE, 3AG & 8AG Fuses	X	29/64	1/4	5/16	11/32	1/4	5/32	.131	1	1	$0.05
123001	1217B	4AG & 4AB Fuses	X	9/16	3/8	13/32	.385	9/32	3/16	.171	1.6	1	.08
125001	1218B	5AG, Hi-Voltage-Midget	X	3/4	1/2	7/16	15/32	13/32	7/32	.196	3	2	.15
127001	1219	N.E.C.-30 Fuses	X	13/16	9/16	19/32	5/8	9/16	1/4	.203	5.5	2	.18
129001	1221	Standard Hi-Voltage	X	1 7/32	13/16	.750	7/8	13/16	5/16	.265	14.5	4	.40

SILVER PLATED—EARLESS TYPE

121002	1417	SFE, 3AG & AB, & 8AG	XX	29/64	1/4	5/16	11/32	1/4	5/32	.131	1	1	.05
123002	1437	4AG & 4AB	XX	9/16	3/8	13/32	.385	9/32	3/16	.171	1.6	1	.08
125002		5AG, Hi-Voltage-Midget	XX	3/4	1/2	7/16	15/32	13/32	7/32	.196	3	2	.15
127002	1475	N.E.C.-30 Fuses	XX	13/16	9/16	19/32	5/8	9/16	1/4	.203	5.5	2	.18
129002	1476	Standard Hi-Voltage	XX	1 7/32	13/16	.750	7/8	13/16	5/16	.265	14.5	4	.40

SILVER PLATED—"LUG-CLIP"—SOLDER TERMINAL ATTACHED

121004	New	SFE, 3AG, AB, & 8AG	XXX	29/64	1/4	37/64	11/32	1/4	5/32	.131	1.2	1	.08
123004	New	4AG Fuses	XXX	9/16	3/8	19/32	.385	9/32	3/16	.171	1.7	1	.12
125004	New	5AG & Midget Fuse	XXX	3/4	1/2	5/8	15/32	13/32	7/32	.196	3.5	2	.20

PHOSPHOR BRONZE CLIPS

BURNISHED NICKEL PLATE—WITH FUSE STOP "EARS"

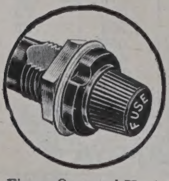
101001	1011B	SFE, 3AG & AB, & 8AG	X	29/64	1/4	5/16	11/32	1/4	5/32	.131	1	1	.02
103001	1319	4AG & 4AB	X	9/16	3/8	13/32	.385	9/32	3/16	.173	1.7	1	.04
105001	2048	5AG, Hi-Voltage-Midget	X	3/4	1/2	7/16	15/32	13/32	7/32	.196	3.2	2	.05
107001	5048	N.E.C.-30 Fuses	X	13/16	9/16	19/32	5/8	9/16	1/4	.203	5.8	2	.06
109001	1463	Standard Hi-Voltage	X	1 7/32	13/16	.750	7/8	13/16	5/16	.265	15.6	4	.16

BURNISHED NICKEL PLATE—EARLESS TYPE

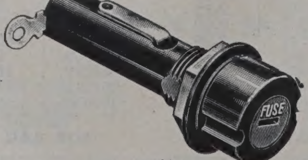
101002	125-2	1AG, 3AG & AB, 7AG & 8 AG	XX	29/64	1/4	5/16	11/32	1/4	5/32	.131	1	1	.02
104002		4AG & 4AB	XX	9/16	3/8	13/32	.385	9/32	3/16	.173	1.7	1	.04
105002	2049B	5AG, Hi-Voltage-Midget	XX	3/4	1/2	7/16	15/32	13/32	7/32	.196	3.2	2	.05
107002	SP-178	N.E.C. Bantam Fuses	XX	13/16	9/16	19/32	5/8	9/16	1/4	.203	5.8	2	.06

BRIGHT-DIP PHOSPHOR BRONZE—"LUG CLIP" SOLDER TERMINAL ATTACHED

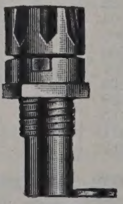
101003		1AG, 3AG & AB, 7AG & 8AG	XXX	29/64	1/4	37/64	11/32	1/4	5/32	.131	1.2	1	.03
103003		4AG & 4AB	XXX	9/16	3/8	19/32	.385	9/32	3/16	.171	1.7	1	.05
105003		5AG, Hi-Voltage-Midget	XXX	3/4	1/2	5/8	15/32	13/32	7/32	.196	3.5	2	.08



Finger Operated Knob



341001



342003

"LITTELFUSE"

FUSE EXTRACTOR POSTS

Quicker, safer method for mounting and changing fuses. Held in end of removable knob, fuse is easily replaced by unscrewing knob. Available with finger-operated knob or with screw driver slot knob.

Catalog No.	Former No.	Descr.—Knob, How Operated	Mtg. Hole	Length Under Panel	List Price Each
341001	1075S	3AG—Screw Driver	.500–.505″	2 3/32	$0.45
342001	1075F	3AG—Finger	.500–.505″	2 7/32	.45
342003	......	3AG—Miniature	.500–.505″	1.035	.45
371001	1087S	8AG—Screw Driver	.500–.505″	2 3/32	.45
372001	1087F	8AG—Finger	.500–.505″	2 7/32	.45

LITTELFUSE *"Quicker than a Short Circuit"*

8AG INSTRUMENT *high speed* LITTELFUSES

Locked Cap Assembly and other exclusive Littelfuse features for protection of delicate test equipment, galvanometers, microammeters, milliammeters, voltmeters, etc. Glass-enclosed: 1 x ¼″ dia., accurately rated, high speed action, short time lag. Voltage ratings up to 250 V., AC or DC. For higher voltages use fuses in series.

Catalog No.	Former No.	Amp. Rating	Max. Volt.	Ohms Res. @ 5 m.a.	APPLICATIONS Volt-meters Ohms P.V.	APPLICATIONS All Magnetic Movement Milliammeters	APPLICATIONS Thermo-couples	List Price Ea.
361.002	....	1/500	250	3,470.	Over 1000	Galvanometers	0–0.1 to 0–0.5	$0.70
361.005	1000	1/200	250	480.	Over 1000	Galvanometers	Up to 0–5	.30
361.010	1001	1/100	250	263.4	1000	Up to 0–1	0–5 to 0–10	.20
361.031	1002	1/32	250	40.0	500–100	0–1 to 0–10	0–10 to 0–25	.20
361.062	1003	1/16	250	5.0	100–500	0–10 to 0–25	0–25 to 0–60	.15
361.125	1004	⅛	250	2.0	20–100	0–25 to 0–75	0–75 to 0–150	.15
361.250	1005	¼	250	3.5	10–20	0–75 to 0–150	0–115 to 0–200	.15
361.375	1006	⅜	250	3.0	5–10	0–150 to 0–250	0–200 to 0–300	.15
361.500	1007	½	250	2.0	3–5	0–250 to 0–350	0–300 to 0–400	.15
361.750	1007-A	¾	250	2.0		0–350 to 0–500	0–400 to 0–600	.15
361001.	1008	1	250	.24		0–500 to 0–750	0–600 to 0–1000	.10
36101.5	1008-A	1½	250	.13		0–750 to 0–1000	0–1000 to 0–1500	.10
361002.	1009	2	250	.10		0–1000 to 0–1500	0–1500 to 0–2000	.10
361003.		3	250	.043		0–1500 to 0–2000	0–2000 to 0–3000	.10
361005.		5	32	.030		0–2000 to 0–4000	0–3000 to 0–5000	.10

BAKELITE IN-LINE FUSE RETAINER

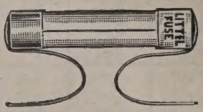
Designed to hang in the cable or mount in the chassis, the inline fuse retainer molded of high impact bakelite is primarily for low-voltage applications: car radios, heaters, spot lights, clocks, etc.

The disassembled unit consists of the bakelite body receptacle, bakelite knob with metal insert, one spring, two knife-edge rivet contacts.

155000 Series—Assembled with an 8″ loop of wire lead:

155004A	For 4-amp SFE and 1AG fuses	**List Prices** **.30 ea.**
155006A	For 6-amp SFE fuses	
155009A	For 9-amp SFE and 7AG fuses	
155014A	For 14-amp SFE and 8AG fuses	
155020A	For 20-amp SFE and 3AG fuses	

Catalog Number	Description	List Price Each
	3AG SLO-BLO PIGTAIL FUSES	
315.010	1/100 amp. (125 volt)	$.30
315.032	1/32 amp. (125 volt)	.30
315.062	1/16 amp. (125 volt)	.30
315.100	1/10 amp. (125 volt)	.30
315.150	15/100 amp. (125 volt)	.30
315.200	2/10 amp. (125 volt)	.30
315.250*	¼ amp. (125 volt)	.30
315.300	3/10 amp. (125 volt)	.30
315.400	4/10 amp. (125 volt)	.30
315.500*	½ amp. (125 volt)	.30
315.600	6/10 amp. (125 volt)	.30
315.800	8/10 amp. (125 volt)	.30
315001.	1 amp. (125 volt)	.30
3151.25	1¼ amp. (125 volt)	.25
31501.6	1-6/10 amp. (125 volt)	.25
315002.	2 amp. (125 volt)	.25
31502.5	2½ amp. (125 volt)	.25
31503.2	3-2/10 amp. (125 volt)	.25
315004.	4 amp. (32 volt)	.25
315005.	5 amp. (32 volt)	.25
	3AG PIGTAIL FUSES	
318.062	1/16 amp. (250 volt)	.20
318.125	⅛ amp. (250 volt)	.20
318.250*	¼ amp. (250 volt)	.20
318.375	⅜ amp. (250 volt)	.20
318.500*	½ amp. (250 volt)	.20
318.750	¾ amp. (250 volt)	.20
318001.	1 amp. (250 volt)	.12
31801.5	1½ amp. (250 volt)	.12
318002.	2 amp. (250 volt)	.12
318003.	3 amp. (250 volt)	.12
318004.	4 amp. (250 volt)	.12
318005.	5 amp. (250 volt)	.12
	8AG T.V. FUSES (No Pigtail)	
362.125	⅛ amp. (250 volt)	.15
362.250*	¼ amp. (250 volt)	.15
362.375*	⅜ amp. (250 volt)	.15
362.500	½ amp. (250 volt)	.15
362.750	¾ amp. (250 volt)	.15
362001.	1 amp. (250 volt)	.10
36201.5	1½ amp. (125 volt)	.10
362002.	2 amp. (125 volt)	.10
362003.	3 amp. (125 volt)	.10
362005.	5 amp. (125 volt)	.05



*Most commonly used by large volume set manufacturers.

All above fuses approved by Underwriters' Laboratories except 315004 and 315005.

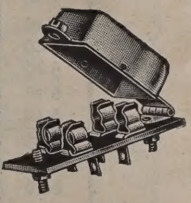
METER BACK MOUNTING

Cat. No. 383002 (1059)—Mounts directly on meter binding post. Will not touch other posts on smallest standard meter. Linen bakelite base, 1″ x 1⅛″. Length over screw terminal, 1½″. Std. Pkg. 20. Wgt. ½ lb. **List Price Each..........$0.20**

FUSE MOUNTINGS (3AG)

Hinged Cover Type

(Meets Underwriters' Requirements)



Cover fibre-lined. Metal shielded cover hinged to bakelite base. Terminal mounting extends through insulated base. Nut lightly staked to cover to prevent loss. Requires 1⅝″ x 1⅛″ knockout hole in panel. Two 6-32 x 5/16″ mounting studs at 2⅛″ centers. Base 2½″ x 1¼″. ¾″ high above panel. Std. Pkg. 20.

Cat. No.	List Price Each
351009 (1237A)—Double Pole	$0.75
351005 (1379)—Single Pole	.50

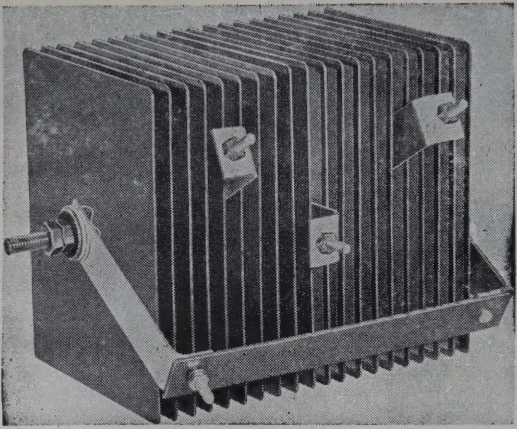
TV SNAP ON FUSE HOLDER

Time saver for pigtail replacement. Snap on blown pigtail, then use regular fuse in other side. No soldering.

In order to provide TV service men with their demand for a larger, more compact unit of TV Snap On Fuse Holders, Littelfuse has produced a package of 10 of the holders in a hard, long-wearing, plastic box.

No. 094025

List Price, per box, $3.00



Sarkes Tarzian

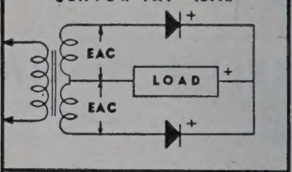
"Centre-Kooled" POWER RECTIFIERS

SINGLE PHASE—FULL WAVE RECTIFIER STACKS

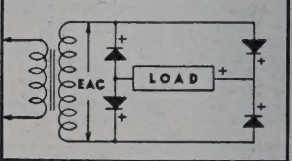
DC OUTPUT At 35°C. Amb.		CIRCUIT	Max. AC Input	APPROXIMATE DIMENSIONS—Refer to			Figure	Catalog
Volts	Max. Amps.	Refer to Diagram	Volts	A	B	C		No.
6-10	2	C.T.	13	3"	2¼"	3"	2	D-10
6-10	4	C.T.	13	4"	2¼"	4"	2	D-11
6-10	6	C.T.	13	4"	2½"	4"	2	D-12
6-10	8	C.T.	13	5"	2¼"	6"	2	D-13
6-10	12	C.T.	13	5"	2½"	6"	2	D-14
6-10	15	C.T.	13	4¼"	2¼"	12"	3	D-15
6-10	22.5	C.T.	13	4¼"	2½"	12"	3	D-16
6-20	2	BR.	26	3"	3"	3"	2	D-17
6-20	4	BR.	26	4"	3"	4"	2	D-18
6-20	6	BR.	26	4"	3¾"	4"	2	D-19
6-20	8	BR.	26	5"	3"	6"	2	D-20
6-20	12	BR.	26	5"	3¾"	6"	2	D-21
6-20	15	BR.	26	4¼"	3"	12"	3	D-22
6-20	22.5	BR.	26	4¼"	3¾"	12"	3	D-23
20-40	2	BR.	52	3"	4½"	3"	2	D-24
20-40	4	BR.	52	4"	4½"	4"	2	D-25
20-40	6	BR.	52	4"	6"	4"	2	D-26
20-40	8	BR.	52	5"	4½"	6"	2	D-27
20-40	12	BR.	52	5"	6"	6"	2	D-28
20-40	15	BR.	52	4¼"	4½"	12"	3	D-29
20-40	22.5	BR.	52	4¼"	6"	12"	3	D-30
40-60	2	BR.	78	3"	5¾"	3"	2	D-31
40-60	4	BR.	78	4"	5¾"	4"	2	D-32
40-60	6	BR.	78	4"	8¼"	4"	2	D-33
40-60	8	BR.	78	5"	5¾"	6"	2	D-34
40-60	12	BR.	78	5"	8¼"	6"	2	D-35
40-60	15	BR.	78	4¼"	5¾"	12"	3	D-36
40-60	22.5	BR.	78	4¼"	8¼"	12"	3	D-37
60-100	.5	BR.	130	1.6"	5"	1.6"	1	D-38
60-100	1	BR.	130	2"	5"	2"	1	D-39
60-100	2	BR.	130	3"	8⅝"	3"	2	D-40
60-100	4	BR.	130	4"	8⅝"	4"	2	D-41
60-100	6	BR.	130	4"	12⅞"	4"	2	D-42
60-100	8	BR.	130	5"	8⅝"	6"	2	D-43
60-100	12	BR.	130	5"	12⅞"	6"	2	D-44
100-120	.5	BR.	156	1.6"	5⅞"	1.6"	1	D-45
100-120	1	BR.	156	2"	5⅞"	2"	1	D-46
100-120	2	BR.	156	3"	10"	3"	2	D-47
100-120	4	BR.	156	4"	10"	4"	2	D-48
100-120	6	BR.	156	4"	15¼"	4"	2	D-49
100-120	8	BR.	156	5"	10"	6"	2	D-50
100-120	12	BR.	156	5"	15¼"	6"	2	D-51

CIRCUITS AND DIMENSIONAL DIAGRAMS

CENTER TAP (C.T.)



BRIDGE (BR.)



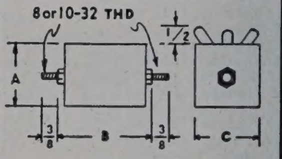


FIGURE-1

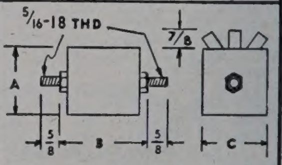


FIGURE-2

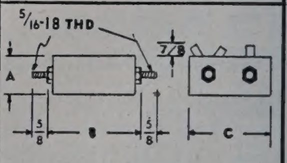


FIGURE-3

ALL DIMENSIONS
ARE APPROXIMATE

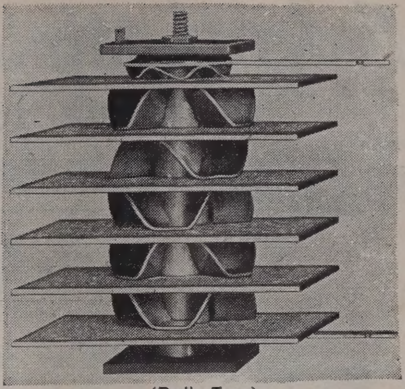
SARKES TARZIAN, INC., RECTIFIER DIVISION

Dept. RM

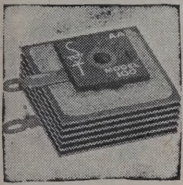
Sarkes Tarzian

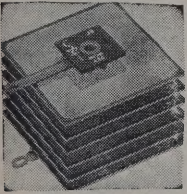
"Centre-Kooled"

SELENIUM RECTIFIERS

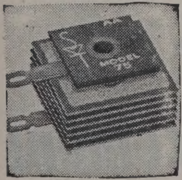

(Radio Type)

For All DC Power Requirements





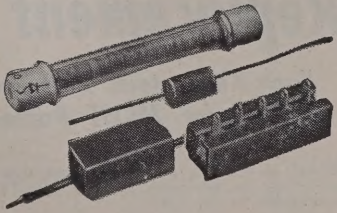
Model No.	Max. DC Current	Max. RMS Input Voltage	Max. RMS Current (MA)	Max. Inverse Peak Voltage	Max. Peak Current (MA)	Dimensions	Application
35	35	130	90	380	350	3/8"x5/8"x5/8"x5/8"	Boosters
65	65	130	162	380	650	13/32"x1"x1"x11/16"	B+ Supply—Portable & AC-DC Radio
75	75	130	187	380	750	13/32"x1"x1"x13/16"	B+ Supply—Portable Radio
100	100	130	250	380	1000	13/32" x1¼"x1¼"x13/16"	B+ Supply—AM-FM Radio
100A	100	130	250	380	1000	13/32"x1"x1"x1"	B+ Radio
150	150	130	375	380	1500	13/32" x1¼"x1¼"x13/16"	B+ Supply—Radio-Television
200	200	130	500	380	2000	13/32"x1.6"x1.6"x1"	B+ Supply—Television
250	250	130	625	380	2500	13/32" x1.6"x1.6"x15/16"	B+ Supply—Television
300	300	130	750	380	3000	13/32"x1.6"x1.6"x1⅞"	B+ Supply—Television
350	350	130	875	380	3500	13/32"x2"x2"x15/16"	B+ Supply—Television
450	450	130	1125	380	4500	13/32"x2"x2"x1⅞"	B+ Supply—Radio-Television
108	100	160	250	440	1000	13/32" x1¼"x1¼"x31/32"	B+ Supply—½ Wave, Mobile Radio-TV
78D	75	160	187	440	750	13/32"x1"x1"x1⅝"	B+ Supply—Doubler —Radio-Television
108D	100	160	250	440	1000	13/32" x1¼"x1¼"x1⅝"	B+—Doubler —Radio-Television
208D	200	160	500	440	2000	13/32" x1.6"x1.6"x1⅝"	B+—Doubler —Radio-Television
154B	150	25	270	35	1800	13/32"x1"x1"x11/16"	Filament—Relay Supply
304B	300	25	540	35	2400	13/32" x1¼"x1¼"x11/16"	Filament—Relay Supply
604B	600	25	1080	35	4000	13/32" x1.6"x1.6"x11/16"	Filament—Relay Supply



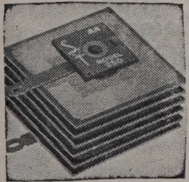
HIGH VOLTAGE SELENIUM RECTIFIERS

Sarkes Tarzian high voltage selenium rectifiers are designed for use in photo-flash supplies, cathode ray oscilloscopes, television receivers, high potential test equipment, and electronic equipments used by military forces.

Designated as Type 0 for current ranges to 5 milliamperes and as Type 1 for current ranges to 25 milliamperes, the units are available in half wave, full wave bridge, and center tap stacks. Both types are available with voltage ratings to 4000 in a single unit and hundreds of thousands of volts by using multiple units in series. In center tap and bridge circuits the maximum allowable D.C. current is 10 MA for Type 0 and 50 MA for Type 1 assemblies.



The Type 0, in a glass enclosure is hermetically sealed for high humidity operation (Half Wave units only) and mounting is by means of silver plated ferrules. The bakelite enclosed Type 0 rectifiers are designed for normal commercial use and electrical connection is made by means of axial pigtail leads. For inverse voltage ratings to 208 volts A.C. the unit is self supporting; longer assemblies require a mounting clip.

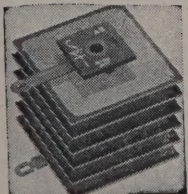


SELENIUM RECTIFIER
handbook

The Type 1 rectifier is available only in square bakelite enclosures. The unit, normally supplied, is not hermetically sealed; however, it is possible to "capsulize" the Type 1 rectifier for high humidity applications.

For complete information or engineering assistance—write, phone or wire. No obligations on your part.

New Handbook Available 80 pages of valuable information about Selenium Rectifiers . . . 48 pages of Radio & Television circuit diagrams . . . 20 pages on Power Rectifiers . . . 3 pages of High Voltage Rectifiers . . . a 7 page cross index replacement guide. (Price 50 cents)

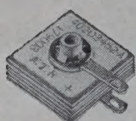
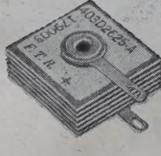
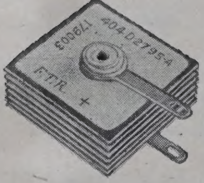
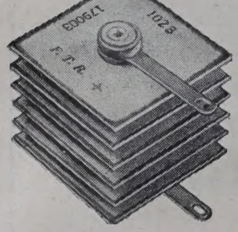
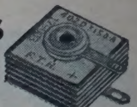
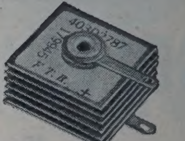
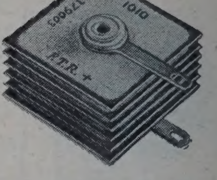
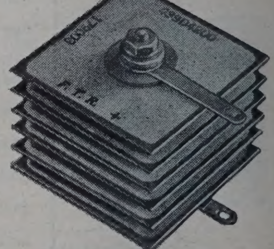


SARKES TARZIAN, INC., RECTIFIER DIV.

Dept. RM

Federal Miniature Selenium Rectifiers

The revolutionary rectifier with unlimited use in radio • television • electronics

Federal Code Number	Output MA DC	Input (RMS) Volts	Input (RMS) MA	Inverse Volts	Peak MA	Plate Size	Application	Sugg'd Retail Price Each
1159	20	130	50	380	200	3/8″ dia.	B+Booster Bias	**$1.10**
1002A	65	130	160	380	750	1″ sq.	B+AC-DC 5 Tube	**1.33**
1003A	75	130	220	380	900	1″ sq.	B+3 Way Radio	**1.55**
1101A	100	130	160	380	750	1″ sq.	B+Radio Telev.	**1.90**
1004A	100	130	325	380	1200	1 9/32″ x 1 13/64″	B+Radio Telev.	**1.90**
1005A	150	130	425	380	1200	1 9/32″ x 1 13/64″	B+ Radio Telev.	**2.25**
1006A	200	130	550	380	2000	1 17/32″ sq.	B+Telev.	**2.70**
†1010	250	130	625	380	2000	1 17/32″ sq.	B+Telev.	**3.00**
*1028A	250	130	625	380	2000	1 17/32″ sq.	B+Booster Bias	**3.00**
1087A	275	130	700	380	2000	1 17/32″ sq.	B+Telev.	**2.85**
1090A	300	130	750	380	2000	1 17/32″ sq.	B+Telev.	**3.05**
1023	350	130	900	380	3000	1 3/4″ sq.	B+Telev.	**3.45**
1130	400	130	1000	380	4000	2″ sq.	B+Telev.	**4.25**
1021	450	130	1150	380	4000	2″ sq.	B+Telev.	**4.30**
1179	500	130	1150	380	4000	2″ sq.	B+Telev.	**4.47**
1014A	100	160	325	440	1200	1 9/32″ x 1 13/64″	Vibrator	**3.05**
1029A	200	160	550	440	2000	1 17/32″ max.	B+Telev.	**3.35**
1022	450	160	1150	440	4000	2″ sq.	B+Telev.	**4.25**
1007A	75	‡160	220	440	900	1″ sq.	Doubler Vibrator	**3.50**
1008A	100	‡160	325	440	1200	1 9/32″ x 1 13/64″	Vibrator Doubler	**4.40**
1009A	200	‡160	550	440	2000	1 17/32″ sq.	Vibrator Doubler	**6.00**
1015	150	25	270	35	1800	1″ sq.	Bridge Rectifier	**1.75**
1016	300	25	540	35	2400	1 9/32″ x 1 13/64″	Bridge Rectifier	**2.05**
1017	600	25	1080	35	4000	1 17/32″ sq.	Bridge Rectifier	**2.60**
1013	700	• 18	....	...	....	1 17/32″ sq.	Battery Charger	**1.00**
1018	2000	§ 18	....	...	....	4 1/4″ lg. (Mtg. Plt.)	Battery Charger	**3.66**
1001	75	20	220	55	900	1″ sq. (Mtg. Plt.)	Bias Rectifier	**.63**

1019 N.T.C. Resistor (Resistance: Cold, 1400 ohms, Hot, 200 ohms).	**.31**

• The characteristics given are based on its use in a half-wave rectifier circuit with a .3 cell battery load.

§ The characteristics given are based on its use in a full-wave rectifier circuit with a .3 cell battery load.

‡ Rating per section—2 sections per rectifier.

† Stud construction.

* Eyelet construction.

Letter "A" following catalog number indicates locking lug.

Federal Selenium Rectifier Replacement KITS are a Hit with Servicemen!

Each Kit contains 2 of each of 4 "Preferred Types" for MOST Radio-TV Replacements

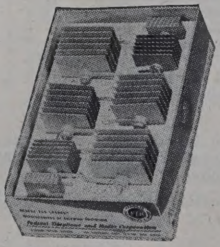
Federal's 8-unit Kits are the convenient, timesaving way for servicemen to make radio-TV replacements "on the spot."

Kit No. 1 contains types for handling 90% of television replacement jobs.

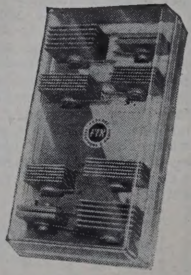
Kit No. 2 contains types for most radio replacements.

Federal Kits are valuable aids in servicing more than 30,000,000 selenium rectifiers now in the field.

Consult your local Federal Distributor or write to Federal direct.

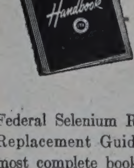


KIT No. 1



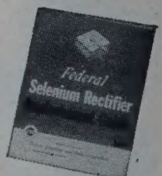
KIT No. 2 (Clear Plastic Utility Package)

Federal's Popular Selenium Rectifier Publications



Federal's Miniature Selenium Rectifier Handbook—48 pages of valuable design and application data on America's most complete line of miniature selenium rectifiers.
Price Each..............25¢

Federal Selenium Rectifier Replacement Guide—the most complete book of its kind. Simplifies and speeds replacement of selenium rectifiers in radio-TV receivers. A "must" for servicemen.
Price Each............50¢



Federal Telephone and Radio Corporation

FEDERAL TELEPHONE & RADIO FTR

AN IT&T ASSOCIATE

America's Oldest and Largest Manufacturer of Selenium Rectifiers

PACKAGED POWER
SELENIUM RECTIFIER STACKS
by *Federal*

Federal has America's largest stock of stacks for all popular applications . . . available for prompt shipment. Special design data and prices for the asking.

NOTE: Ratings for 35° C. Ambient; Resistive or Inductive loads; all designs shown are for single phase full wave rectification.

PRICE LIST and DATA SHEET

Effective September 15, 1951

Maximum D.C. Output (Approximate)‡		Rectifier Stack Code Number	Maximum A.C. Input Volts	Circuit and Stack Conn. Diagram	Rectifier Stack Dimensions			Catalog Number	Net User's Price
Volts	Amps.				A	$B \pm \frac{1}{16}''$	Fig.		
10	3.0	106C1AX1	13	'B'	$3\frac{3}{8}''$	$1\frac{9}{16}''$	1	2100	$ 6.67
	6.0	133C1AX1	13		$4\frac{3}{8}''$	$1\frac{3}{4}''$	1	2101	8.33
	12.0	136C1AX1	13		5″x6″	$1\frac{3}{4}''$	2	2102	11.91
20	3.0	106B1AX1	26	'A'	$3\frac{3}{8}''$	$2\frac{1}{16}''$	1	2103	9.42
	6.0	133B1AX1	26		$4\frac{3}{8}''$	$2\frac{11}{16}''$	1	2104	12.58
	12.0	136B1AX1	26		5″x6″	$2\frac{3}{4}''$	2	2105	20.50
40	3.0	106B2AX1	52	'A'	$3\frac{3}{8}''$	$3\frac{9}{16}''$	3	2026	15.00
	6.0	133B2AX1	52		$4\frac{3}{8}''$	5″	3	2107	21.17
	12.0	136B2AX1	52		5″x6″	$5\frac{1}{4}''$	4	2108	34.00
60	3.0	106B3AX1	78	'A'	$3\frac{3}{8}''$	$4\frac{1}{2}''$	3	2118	20.00
	6.0	133B3AX1	78		$4\frac{3}{8}''$	$6\frac{3}{4}''$	3	2033	29.17
	12.0	136B3AX1	78		5″x6″	$7\frac{5}{16}''$	4	2085	46.92
80	3.0	106B4AX1	104	'A'	$3\frac{3}{8}''$	$5\frac{1}{2}''$	3	2109	24.92
	6.0	133B4AX1	104		$4\frac{3}{8}''$	$8\frac{9}{16}''$	3	2110	37.17
	12.0	136B4AX1	104		5″x6″	$9\frac{5}{16}''$	4	2111	59.84
100	1.0	139B5AX1	130	'A'	2″ sq.	$5\frac{3}{8}''$	5	2112	16.25
	2.4	106B5AX1	130		$3\frac{3}{8}''$	$6\frac{5}{8}''$	3	2113	29.83
	6.0	133B5AX1	130		$4\frac{3}{8}''$	$10\frac{9}{16}''$	3	2114	45.17
120	0.3	103B6AX1	156	'A'	$1\frac{9}{32}''$x$1\frac{13}{64}''$	$4\frac{3}{4}''$	5*	2115	14.17
	0.6	104B6AX1	156		$1\frac{17}{32}''$ sq.	$4\frac{7}{8}''$	5	2036	16.34
	1.0	139B6AX1	156		2″ sq.	$6\frac{7}{16}''$	5	2116	18.75
	2.4	106B6AX1	156		$3\frac{3}{8}''$	$7\frac{5}{8}''$	3	2038	34.92
	6.0	133B6AX1	156		$4\frac{3}{8}''$	$12\frac{5}{16}''$	3	2117	53.17

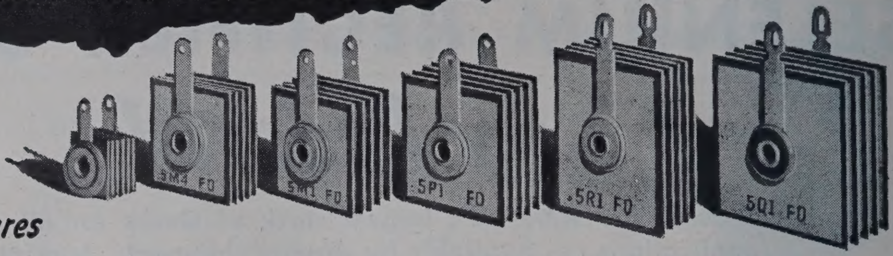
‡ Resistive or Inductive Loads.
* 8-32 Thread

Consult your local Federal Distributor or write to Federal direct—

Federal Telephone & Radio Corporation

100 KINGSLAND ROAD **SELENIUM-INTELIN DIVISION** **CLIFTON, N. J.**

MILLIONS OF MINIATURES IN SERVICE IN RADIO AND TELEVISION!



Miniatures

Seletron

SELENIUM RECTIFIERS

SELETRON Selenium Rectifiers are finding use in wider and wider fields of application ranging from half wave stacks for bias supply such as 8Y1 listed at the left, to multiple assemblies capable of delivering many kilowatts. Typical examples of such SELETRON power use are installations operating elevators in more than 100 office buildings in New York and Chicago; an assembly of 48 volts, 10,000 amps for electrolysis of water, and the spectacular Eveready searchlight on New York's Great White Way.

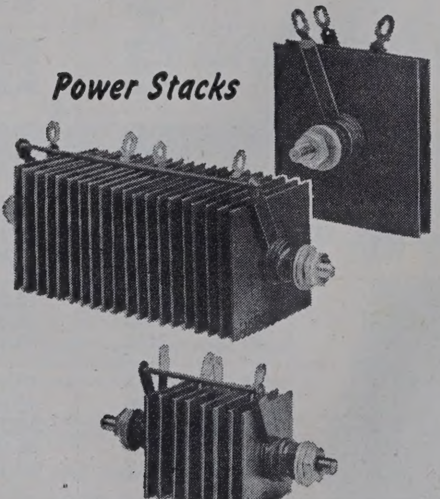
MINIATURE SELETRON SELENIUM RECTIFIERS

MODEL NO.	PLATE SIZE	STACK THICKNESS	MAX. INPUT VOLTAGE R.M.S.	MAX. PEAK INVERSE VOLTAGE	MAX. D.C. OUTPUT CURRENT	LIST PRICE
1M1	1" sq.	3/8"	25	75	100 MA	$0.83
8Y1	1/2" sq.	9/16"	130	380	20 MA*	1.15
16Y1	1/2" sq.	15/16"	260	760	20 MA*	2.28
8J1	11/16" sq.	9/16"	130	380	65 MA	1.38
5M4	1" sq.	11/16"	130	380	75 MA	1.65
5M1	1" sq.	7/8"	130	380	100 MA	2.00
5P1	1 3/16" sq.	7/8"	130	380	150 MA	2.45
6P2	1 3/16" sq.	1 3/16"	156	456	150 MA	2.60
5R1	1 1/2"x1 1/4"	7/8"	130	380	200 MA	2.85
5Q1	1 1/2" sq.	1 1/8"	130	380	250 MA	3.22
6Q1	1 1/2" sq.	1 1/8"	156	456	250 MA	3.28
6Q2	1 1/2" sq.	1 3/8"	156	456	250 MA	3.28
6Q4(†)	1 1/2" sq.		130	380	300 MA	3.55
5QS1	1 1/2"x2"	1 1/8"	130	380	350 MA	3.80
6QS2	1 1/2"x2"	1 1/4"	156	456	350 MA	4.05
5S1	2" sq.	1 1/8"	130	380	500 MA	4.35
6S2	2" sq.	1 3/8"	156	456	500 MA	5.20

* This rectifier is rated at 25 MA when used with a 47 ohm series resistor.

(†) Stud mounted—overall: 2".

Power Stacks



INDUSTRIAL TYPE SELENIUM RECTIFIERS STOCKED BY JOBBERS

Single Phase — Full Wave Bridge — Resistive-Inductive Load

D.C. OUTPUT @ 35°C			MAX. INPUT R.M.S. VOLTS	SELETRON RECTIFIER CODE NO.	RECTIFIER LIST PRICE	BRACKETS LIST EACH
MAX. AMPS.	APPROX. VOLTS NEW	APPROX. VOLTS AGED				
0.9	18	17	24	Q1B1S1B	$2.40	.17
1.4	19	18	24	S1B1S1B	4.16	.22
3.2	18	17	24	U1B1S1B	6.34	.22
5.2	18	17	24	F1B1S1B	8.82	.28
10.0	18	17	24	H1B1S1B	12.38	.44
20.0	18	17	24	H1B2S1B	23.43	.44
30.0	19	18	24	WH1B3S1B	35.26	.44
0.45	37	35	48	P2B1S1B	5.00	.17
0.9	37	35	48	Q2B1S1B	5.64	.17
1.4	37	35	48	S2B1S1B	7.60	.22
3.2	37	35	48	U2B1S1B	11.25	.22
5.2	37	34	48	F2B1S1B	16.08	.28
10.0	37	34	48	H2B1S1B	22.71	.44
16.0	37	35	48	H2B2S1B	42.73	.44
24.0	37	35	48	H2B3S1B	61.95	.44
0.9	112	105	144	WQ6B1S1B	14.65	.17
1.4	114	108	144	WS6B1S1B	21.32	.22
2.4	112	106	144	U6B1S1B	27.53	.22
5.2	110	103	144	WF6B1S1B	44.46	.28
0.9	130	122	168	WQ7B1S1B	16.57	.17
1.4	133	126	168	WS7B1S1B	24.56	.22
2.4	131	123	168	U7B1S1B	31.29	.22
5.2	129	120	168	WF7B1S1B	50.97	.28

Our Engineering Department will be glad to aid you in the solution of your rectifier problems without obligation. Write for booklet on SELETRON Selenium Rectifiers —Address Dept. US-5.

SELETRON DIVISION

RADIO RECEPTOR COMPANY, INC.

Since 1922 in Radio and Electronics

Sales Department: 251 West 19th St., New York 11, N. Y.

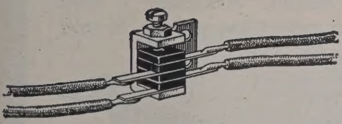
Factory: 84 North 9th St., Brooklyn 11, N. Y.

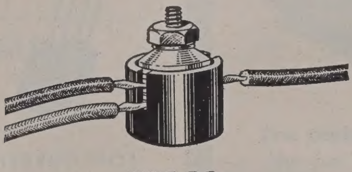
• ELECTROX*
Low-Capacity
RECTIFIER UNITS

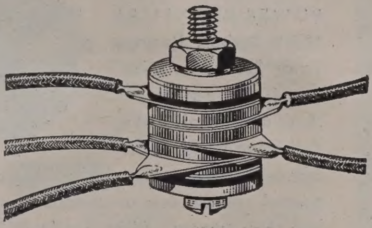
Used by most leading test set manufacturers as original components in their equipment.

*Trade Mark Reg. U. S. Pat. Off.

Full and half wave, low-capacity copper oxide rectifiers for instruments, test sets and similar applications. Electrox Rectifiers are made by a pioneer manufacturer of high-quality, dry disc rectifiers. Each type is specially adapted to meet the individual requirements of the user; each unit is individually inspected, tested, and guaranteed right. For dependability, get genuine Electrox Rectifiers!

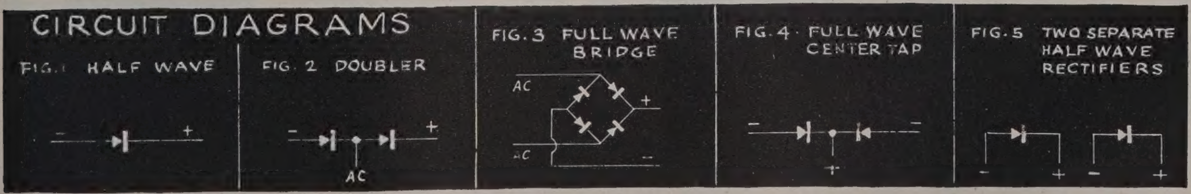

TYPE A-4
CAT. NO. 5020


TYPE B-2
CAT. NO. 5047
CAT. NO. 5049


TYPE C-4
CAT. NO. 5017

Max. Continuous Rating			Circuit Diagram Fig.	Element Diam. Inches	No. of Elements	Connections	Lead Length Inches	Type	Cat. No.
D.C. M.A.	D.C. Volts	A.C. Rms. Volts							
1	1	1.5	3	⅛	4	4 leads	4	AA–4	5064
5	3	4	3	3/16†	4	4 leads	3	A–4	5020
13		3	1	7/16	1	2 leads	3	B–1	5048
13		4	4	7/16	2	3 leads	3	B–2	5047
13		3*	2	7/16	2	3 leads	3	B–2	5049
20	3	4	3	7/16	4	5 leads	3	B–4	5016
32		3	1	¾	1	2 lugs		C–1	5011
32		3*	2	¾	2	3 leads		C–2	5057
32		3*	5	¾	2	4 lugs		C–2	5010
64	3	4.1	3	¾	4	5 lugs		C–4	5014
64	3	4.1	3	¾	4	5 leads	3	C–4	5017

*3 volts A.C. per element. †3/16" square.


CIRCUIT DIAGRAMS
FIG. 1 HALF WAVE
FIG. 2 DOUBLER
FIG. 3 FULL WAVE BRIDGE
FIG. 4 FULL WAVE CENTER TAP
FIG. 5 TWO SEPARATE HALF WAVE RECTIFIERS
AC
+
−

SCHAUER MANUFACTURING CORP. • Cincinnati, Ohio

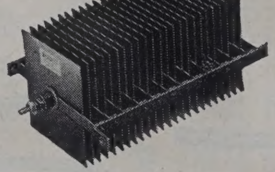
Makers, since 1930, of high-quality, dry disc rectifiers.

BRADLEY RECTIFIERS AND PHOTOCELLS

VACUUM PROCESSED FOR PERFORMANCE AS RATED

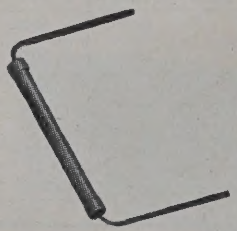
SELENIUM

HIGH-VOLTAGE RECTIFIERS (**SE6M Series**). Ratings to 5 ma D.C.—6000 volts maximum peak inverse. Hermetically sealed in glass tubes. Ferrules for fuse type mounting.

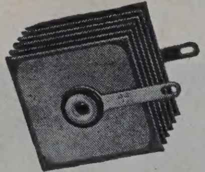


POWER RECTIFIERS (**SE11 Series**). Ratings from 50 ma to thousands of amperes. Available in half-wave, full-wave bridge, voltage multiplier, center tap full-wave, polyphase, and special connections to customer's current and voltage requirements. Plate size from 1"x1" to 5"x6".

LIMITER (**SR Series**). For magnetic amplifier and special applications. Hermetically sealed to meet all specifications.

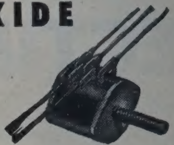


MINIATURE HIGH-VOLTAGE RECTIFIERS (**SE8 Series**). Completely sealed in Bakelite housings. Ratings up to 6000 volts peak inverse and 12.5 ma D.C. Size from ¼" diameter x ⅝" long.



HALF-WAVE RECTIFIERS (**SE9 Series**). Rated from 50 ma to 500 ma. Peak inverse up to 500 volts. Plate size from 1"x1". Length ½" to 1½".

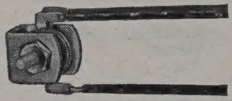
COPPER OXIDE



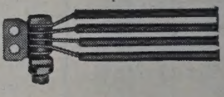
HIGH CONVERSION RATIO RECTIFIERS (**CX4D Series**), for electronic control and instrument work. Ratings from 25 ma to 100 ma and up to 12 volts A.C. Completely enclosed housing. Size ⅞"x¾", from ½" to 2" long. Single 6-32 screw mounting.

MINIATURE HERMETICALLY SEALED RECTIFIERS (**CX23 Series**). Modulators and bridges with matched sections for detecting phase differentials in A.C. currents and small D.C. potentials applied to balanced A.C. circuits. Maximum 2 volts continuous as modulators, 6 volts as bridges.

LOW-CURRENT HIGH-FREQUENCY RECTIFIERS (**CX8C Series**).
Rated up to 36 volts A.C. 500 microamperes D.C. Size ¼" diameter x ⅝" long. 2½" tinned leads.



CONTROL AND TEST EQUIPMENT RECTIFIERS (**C014D Series**). Rated from 20 ma half-wave to 35 ma full-wave, up to 6 volts A.C., 4 volts D.C. Single 6-32 screw mounting.



INSTRUMENT RECTIFIERS (**CX2E Series**). Rated up to 6 volts A.C., 4.5 volts D.C., 5 ma D.C. for conventional circuits and special current control applications. Two 7/64" diameter mounting holes. 3" gold leads.

BALANCED BRIDGES AND MODULATORS (**CX3E Series**) with current and temperature characteristics balanced to better than 1% over a range of −40°C. to 70°C. Up to 12 volts A.C., 8 volts D.C., 5 ma D.C. Hermetically sealed.

NEW HANDBOOK AVAILABLE

Valuable reference for engineers. Contains design considerations as well as complete descriptions of Bradley Rectifiers and Photoelectric Cells. Available on request to qualified engineers.

SELF-GENERATING PHOTOELECTRIC CELLS

BRADLEY LABORATORIES, INC.

168 COLUMBUS AVENUE, NEW HAVEN 11, CONNECTICUT

International *Selenium Rectifiers*

MINIATURE RECTIFIERS

As easily installed as a Resistor or Condenser.

INTERNATIONAL R.C.

Only 2 Soldering Operations required.

130 Volts RMS

Peak Inverse Volts: 380

FOR ELECTRONIC APPLICATIONS UP TO 1,000 MA

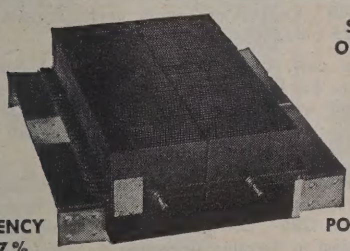
Approximate Voltage Drop: 5 volts

RATINGS AVAILABLE

Type No.	RS75	RS100	RS150	RS200	RS250	RS1000
Current (ma)	75	100	150	200	250	1000

SEND FOR BULLETIN IS-1249

POWER RECTIFIERS



Suitable for Oil Immersion

EFFICIENCY TO 87%

POWER FACTOR 95%

RATINGS TO 250 KW

FOR ELECTROPLATING, BATTERY CHARGING, ELEVATOR AND AIRCRAFT POWER SUPPLY UNITS, ETC.

PARTIAL LIST OF POWER RECTIFIERS

TYPE NO.	DC VOLTS	DC AMPS	SIZE PLATE
D507	0—15	0.5	1¼" Sq.
D510	0—15	3.0	3" Sq.
D513	0—15	14.0	6¼"x 7¼"
D517	15—30	3.0	3" Sq.
D520	15—30	14.0	6¼"x 7¼"
D521	95	5.0	4⅜" Sq.

WRITE FOR BULLETIN C-349

HIGH VOLTAGE RECTIFIERS

CARTRIDGE TYPE

RATINGS TO 25 KV AND 75 MA.

In half-wave, voltage doubler or bridge circuits

From ¼" to 1¼" O.D. or built to your specifications

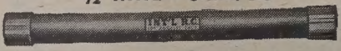
TYPICAL APPLICATIONS

BIAS SUPPLIES	ELECTROSTATIC PROCESSES
CONDENSER TESTING	GEIGER COUNTERS
CATHODE RAY TUBES	INVERSE PEAK SUPPRESSORS
ELECTRON MULTIPLIERS	PHOTOFLASH POWER SUPPLIES

TELEVISION CIRCUITS

TYPE V-HF SERIES

½ WAVE — 5 MA. DC

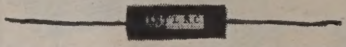


TYPE V-HF SERIES

DC OUTPUT VOLTAGE	RECTIFIER PART NO.	DC OUTPUT VOLTAGE	RECTIFIER PART NO.
20	V1HF	1000	V50HF
60	V3HF	2000	V100HF
100	V5HF	3000	V150HF
400	V20HF	4000	V200HF

TYPE Y-HP SERIES

½ wave—11 MA. DC



DC OUTPUT VOLTAGE	RECTIFIER PART NO.	DC OUTPUT VOLTAGE	RECTIFIER PART NO.
20	Y1HP	1000	Y50HP
60	Y3HP	2000	Y100HP
100	Y5HP	3000	Y150HP
400	Y20HP	4000	Y200HP

TYPE U-HF SERIES

½ wave—1.5 MA. DC

¼" Diameter Rating to 4,000 v. DC

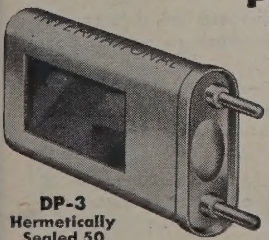
Fit standard automotive type Fuse clips

PARTIAL LIST OF U-HF SERIES AVAILABLE

DC OUTPUT VOLTAGE	RECTIFIER PART NO.	STD. AUTO-TYPE FUSE CLIP	MAX. LENGTH INCHES
200	U10HF	7-AG	27/32
360	U18HF	7-AG	27/32
500	U25HF	8-AG	31/32
600	U30HF	3-AG	1-7/32
700	U35HF	9-AG	1-3/8

WRITE FOR BULLETIN H-1

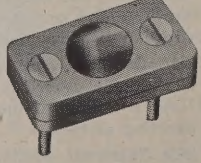
PHOTO-ELECTRIC CELLS SELF-GENERATING TYPE



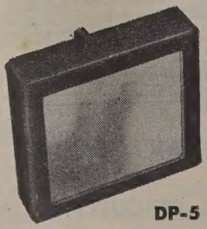
DP-3
Hermetically Sealed 50 microamperes at 100 foot-candles

INTERNATIONAL

DP-2
Hermetically Sealed 25 microamperes at 100 foot-candles



A-2M
13 microamperes at 100 foot-candles



DP-5
Hermetically Sealed Up to 600 microamperes at 100 foot-candles

Unmounted Cells Available

Write for Bulletins PC-649, PPC-250, HPC-450, HPC-252

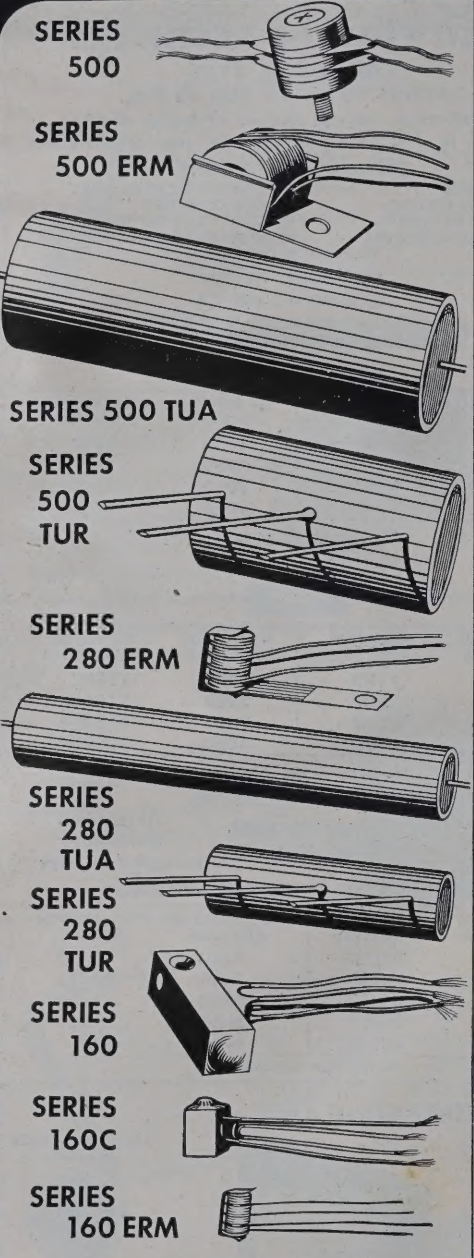
International
RECTIFIER CORPORATION

GENERAL OFFICES:
1521 E. Grand Ave.
El Segundo, Calif.
Phone El Segundo 1890

CHICAGO BRANCH OFFICE:
205 W. Wacker Dr.
Franklin 2-3889

CONANT Miniature Metallic Rectifiers

STANDARD SINCE 1933



ALL RECTIFIERS SHOWN ACTUAL SIZE

INTERNAL CIRCUITS

Standard rectifiers are connected internally according to one of the five circuit diagrams shown.

SERIES 500 Copper oxide only. Color coded. Welded lead wires 3″ long. Synthetic lacquer-enamel finish. Single 6-32 stud mounting. Available in special types. Cell diameter .500″. Cell rating 5 r.m.s. volts, 30 average mils.

SERIES 500-ERM Copper oxide or selenium. Color coded. Solid lead wires 3″ long. Lacquer finish. Single hole mounting. Available in special types. Cell diameter .500″. Cell ratings, copper oxide 5 r.m.s. volts, 30 average mils; selenium, 25 r.m.s. volts, 30 average mils.

SERIES 500-TUA Selenium only. Color coded. Solid axial leads 3″ long. Lacquer finish. Mounts by lead wires only. Fully enclosed and sealed in phenolic tube. Half wave types only for high voltage. Cell diameter .500″. Cell rating 25 r.m.s. volts, 30 average mils. Per cell ratings subject to derating according to rectifier design.

SERIES 500-TUR Selenium only. Color coded. Solid radial leads 3″ long. Lacquer finish. Mounts by lead wires only. Fully enclosed and sealed in phenolic tube. Cell diameter, .500″. Cell rating 25 r.m.s. volts, 30 average mils. Per cell ratings subject to derating according to rectifier design.

SERIES 280-ERM Copper oxide or selenium. Color coded. Solid lead wires 3″ long. Lacquer finish. Mounts by "Bracketerminal" combining cathode (plus) terminal and mounting bracket. Available in standard types only. Cell diameter .280″. Cell rating, copper oxide, 5 r.m.s. volts, 10 average mils; selenium, 25 r.m.s. volts, 10 average mils.

SERIES 280-TUA Selenium only. Color coded. Solid axial leads 3″ long. Lacquer finish. Mounts by lead wires only. Fully enclosed and sealed in phenolic tube. Half wave types only, for high voltage. Cell diameter .280″. Cell rating 25 r.m.s. volts, 10 average mils. Per cell rating subject to derating according to rectifier design.

SERIES 280-TUR Selenium only. Color coded. Solid radial leads 3″ long. Lacquer finish. Mounts by lead wires only. Fully enclosed and sealed in phenolic tube. Cell diameter .280″. Cell rating 25 r.m.s. volts, 10 average mils. Per cell rating subject to derating according to rectifier design.

SERIES 160 Copper oxide or selenium. Color coded. Welded lead wires 3″ long. Fully enclosed and sealed in molded phenolic case. Mounts by #2 screw. Cell diameter .160″. Cell rating, copper oxide, 5 r.m.s. volts, 5 average mils; selenium, 25 r.m.s. volts, 5 average mils.

SERIES 160-C Copper oxide or selenium. Color coded. Welded lead wires 3″ long. Fully enclosed and sealed in welded brass case. Mounts in midget fuse clip. Cell diameter .160″. Cell rating, copper oxide, 5 r.m.s. volts, 5 average mils; selenium, 25 r.m.s. volts, 5 average mils.

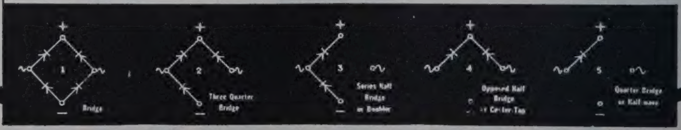
SERIES 160-ERM Copper oxide or selenium. Color coded. Solid leads 1″ long. Lacquer finish. Mounts by lead wires only. Cell diameter .160″. Cell rating, copper oxide, 5 r.m.s. volts, 5 average mils; selenium, 25 r.m.s. volts, 5 average mils.

Standard rectifiers are connected internally according to one of the five circuit diagrams shown.

Series 500, 160 and 160-C are the well known standard line of instrument rectifiers and are constructed to the highest standards of quality. Construction is conventional.

TUA (tubular, axial leads) and TUR (tubular, radial leads) construction is desirable especially in rectifiers designed for high voltage operation. Total enclosure of the stack however limits heat radiation necessitating derating of cells.

ERM (external resilient member) construction insures maintenance of optimum stack pressures regardless of ambient or operating temperatures. Rectifiers in ERM construction are smaller, lighter and cheaper.


+
1
Bridge
2
Three Quarter Bridge
3
Series Half Bridge or Doubler
4
Opposed Half Bridge or Center-Tap
5
Quarter Bridge or Half-wave
—

Cable Address
NATVARNCO
New York

CONANT

20 Vesey St., New York 7, New York
1836 Euclid Ave., Cleveland 15, Ohio
6518 W. North Ave., Chicago 35, Ill.
2601 Cherry St., Kansas City 8, Mo.
P.O. Box 201, Crosstown Sta., Memphis 4, Tenn.
1145 Peachtree St. N.E., Atlanta 5, Ga.

1212 Camp St., Dallas 2, Texas
4018 Greer Ave., St. Louis 7, Mo.
5528 E. Colfax Ave., Denver 7, Colo.
Bendix Bldg., 1206 Maple Ave.,
Los Angeles 15, Calif.
Export Div., 75 West St., New York 6, N. Y.
Canadian: 50 Yarmouth Rd., Toronto, Ont.

CONANT LABORATORIES, 6500 "O" STREET, LINCOLN, NEBR.

WHAT IS TEK-FILE?

Rider Tek-File

1. TEK-FILE is Rider TV and radio service data in individual package form grouped according to manufacturers.

2. Each TEK-FILE Pack is separated into file folders for fast, easy reference; perfect for house calls and service bench use.

3. New TEK-FILE Packs are available every month—separate Packs for TV and radio information.

4. All TEK-FILE data is official, complete factory-issued data direct from the manufacturer . . . *not* edited, abridged or prepared by an independent service laboratory.

5. TEK-FILE makes servicing easy! Each Pack contains all the manufacturer's data you need . . . and it's guaranteed to match the set! Schematics, chassis views, troubleshooting test patterns, parts lists, circuit changes . . . It's all there!

6. Replacement parts listings included starting with TV Pack No. 57 and all Radio Packs. Parts listed guaranteed to meet physical, electrical, and test performance ratings of original equipment—or complete refund. EXTRA! TEK-FILE Handies containing the manufacturer's cures for troubles.

Only $2.00 per Pack

Free index covering all TEK-FILE Packs at your jobber!

JOHN F. RIDER PUBLISHER, INC.
480 Canal St., N.Y. 13, N.Y.

RIDER

Now, The Plain Truth about easy tv servicing

Learn how official service data direct from the set manufacturer's own engineering and testing laboratories can solve the most difficult tv and radio repairs, quickly and permanently!

No one knows his receiver better than the manufacturer.

Isn't it common sense that the men who design and build the receiver know the most about it? They are responsible for the receiver's performance and when a weakness is discovered, they are the first to determine the necessary permanent correction. The servicing information issued by the manufacturer's engineering department is certainly the most complete; because it contains not only the whole story on each model but includes *changes* in the receiver which the service technician must know in order to make a permanent repair! For example: A major set manufacturer found that a capacitor overheated and broke down. A conventional replacement of the defective capacitor would mean repeat calls and customer dissatisfaction because the overheating and eventual breakdown would reoccur. So he developed a permanent cure—rearrangment of the circuit wiring. The only way you could repair this trouble would be to have the *complete* factory data!

How to get this vital information.

There are only two ways to get the complete unabridged manufacturers' servicing data: one way is to write the manufacturers direct. However, by doing this you run the risk of mail delay while your customer's set gathers dust, plus the difficulty of organizing the material once it's received.

The other way—the only practical way—is to buy this data in complete, easy-to-read published form. THIS MEANS RIDER SERVICING DATA! For 23 years Rider, and Rider alone, has been the only source for getting the whole story—the complete story, including all manufacturers' production changes—in accurate, organized, unedited form. You get large, easy-to-follow schematics . . . explanation of circuits . . . stage by stage alignment curves . . . page after page of trouble-shooting test patterns . . . waveforms . . . *complete* factory parts lists and values . . . clear, enlarged chassis views . . . circuit changes . . . and much, much more, all guaranteed to match the set you're working on. This has made servicing *easy* for countless thousands of service technicians.

Replacement parts listings.

Beginning with TV Pack 57 and by special arrangement with the receiver manufacturers, Rider lists replacement parts. Only those parts are listed which meet the original equipment specifications as established by the receiver manufacturer. We and the parts manufacturer *guarantee* that the suggested replacement performs like the original—or your *full money back.* This guarantee protects you—it assures you rapid repairs—minimum call-backs—public acceptance—and profitable operation.

Rider servicing data designed to meet your needs.

Whether you are a part-time or full-time service technician—independent or employed—you can afford Rider servicing data in this convenient, easy-to-use form.

Rider Tek-File.
TV, radio and allied data.

The newest way to get complete Rider servicing data. The *only* difference between Rider manuals and Tek-File is the package. In manuals you buy the data of many manufacturers in one volume. In Tek-File packs you buy the same data—but only for one, two, or a few manufacturers at a time according to your needs. Each numbered Tek-File pack contains standard file folders with all servicing data for the manufacturer's models printed on the pack's tamper-proof label. These folders are designed for house calls and easy bench use in the shop. Perfect for the specialist on certain brands of receivers . . . the part-time service technician . . . the engineer and the independent or employed serviceman. Price only $2.00 per pack.

As an additional Tek-File service, many packs contain Tek-File Handies. These are 3" x 5" index cards giving manufacturer-tested trouble cures plus production changes made by the manufacturer's own engineering department.

Compile your Rider Manuals by subscription to Tek-File.

Tek-File contains the same factory-authorized information that is published in Rider Manuals. You can compile your own volume of Rider servicing data on a monthly basis *before* the actual publication of a Rider Manual. Subscribe through your jobber for those Packs that contain *new* TV and Radio servicing data issued each month. About 15 Packs make up a Rider Manual. Rider-released service data is the best there is, because it is set manufacturer conceived!

DON'T BE SWITCHED!

There is only one Rider Tek-File. It is *not* the same as any other publisher's service. If your jobber doesn't carry Rider Tek-File DON'T BE SWITCHED . . . write us direct—we'll sell you! Please include your jobber's name. Combat unfair press . . . combat national ads that say "fix your own set"! You can do this if you use Rider Manuals and Tek-Files because then you can tell your customers that you are using *factory-prepared, official, authorized, complete servicing information.*

TRY A PACK! Once you've tried Rider Tek-File we are convinced you'll never use any other service. Make this simple test. Use Tek-File for seven days—if you're not convinced, return it to us and receive full refund!

Free Rider Tek-File Index.

Rider Tek-File indexes covering all issued packs are available at your jobbers. If your jobber doesn't have Rider Tek-File Indexes—write us direct . . . it's free.

John F. Rider Publisher, Inc. 480 Canal St. New York 13, N. Y. West Coast office: 4216-20 W. Jefferson Blvd. Los Angeles, Calif.

RIDER *Television* MANUALS

RIDER TV MANUALS PROVEN BEST BY TEST

and here are the reasons **WHY!**

➡ You possess the same information which the original receiver manufacturer uses. This means **accuracy, authenticity, and completeness of detail.** NOBODY—BUT NOBODY ELSE—can make this statement!

➡ You have at your fingertips descriptions of the circuit action. The nine Rider TV Manuals contain **nearly a thousand pages of such extremely valuable instructional information.** It is like a teacher telling you how the circuit functions. NOBODY—BUT NOBODY ELSE—furnishes this much of this kind of data necessary for successful and profitable TV servicing!

➡ You have at your fingertips **several hundred pages of official, accurate, unpacking and installation data.** NOBODY—BUT NOBODY ELSE—**gives this much** of this kind of time-saving, money-making TV servicing data!

➡ You have at your fingertips more than **five hundred pages of signal waveforms**—so vital to rapid trouble diagnosis of picture i.f., sound i.f., video, sync and sweep circuits. NO OTHER SOURCE OF SERVICE DATA—even remotely approaches this much of this kind of time-saving and money-making TV servicing information!

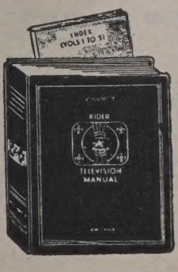
➡ You have at your fingertips the most **complete coverage** of the TV receiver manufacturers' output—**the pilot models and all the changes**—from the very beginning. NOBODY—BUT NOBODY ELSE—who sells service data can make this statement!

➡ Compare the completeness of Rider TV Manuals with any other service and you will see why they are the **Best by Test**—why they are the most economical to buy in the long run, and most popular with all competent TV servicemen. **Complete your Rider TV Manual library! Get the missing copies today!**

Enlarged Size
12" x 15"

TV MANUAL VOLUME 9

Watch for
RIDER'S TV10



Factory-authorized coverage from October 1951 to February 1952

Net Price $24.00
(Cat. No. 2009)

Note: All pages filed in their proper places!

Makes TV Servicing Easy

- ***Circuit action descriptions!***
- ***Unpacking and installation data!***
- ***Signal Waveforms for trouble shooting!***
- ***Complete alignment data!***
- ***Complete parts lists and values!***
- ***Large, easy to read diagrams!***

Equivalent of 2,136 pages (8½x11) . . . . Over 40 manufacturers represented

Schematics — Chassis views — Tube layouts — Voltages and resistance readings — Alignment procedures — Parts lists and parts values — Test patterns — Waveforms — Adjustment of traps, trimmers, transformers — "Changes" section for current revisions of previously published data — Cumulative Index TV Volume 1 through 9.

TV Vol. 8—Dependable, easy-to-use data from 52 manufacturers for the period Summer 1951 through September 1951. All pages inserted in place permit you to start servicing at once. One index for eight TV Volumes enables you to instantly locate all information you require. Easier servicing with the exclusive features available only in Rider servicing data. **(Cat. No. 2008)**
Equiv. to 2,688 pages (8½x11) **Net Price $24.00**

TV Vol. 7—Full TV coverage from Fall 1950 to Summer 1951 on the receivers of 74 manufacturers. Prefiled 12" x 15" pages enable you to start servicing immediately. Circuit tracing is simplified with giant schematics. Cumulative index for TV Volumes 1 through 7 puts all models at your fingertips. **(Cat. No. 2007)**
Equiv. to 2,352 pages (8½x11) **Net Price $24.00**

TV Vol. 6—66 manufacturers contributed their official service data for the period August 1950 through January 1951. All pages, 12" x 15" in size, are prefiled for immediate bench use. **(Cat. No. 2006)**
Equiv. of 2,320 pages (8½x11) **Net Price $24.00**

TV Vol. 5—Covers all TV receivers produced from March through July 1950. Factory-authorized data of 74 manufacturers are contained in this 12" x 15" volume. **(Cat. No. 2005)**
Equiv. of 2,320 pages (8½x11) **Net Price $24.00**

TV Vol. 4—Complete factory-authorized coverage from October 1949 through February 1950. The official servicing data of 73 manufacturers included. **(Cat. No. 2004)**
Equiv. of 2,296 pages (8½x11) **Net Price $24.00**

TV Vol. 3—The productions of 74 manufacturers for the period January through October 1949. **(Cat. No. 2003)**
Equiv. of 2,032 pages (8½x11) **Net Price $24.00**

TV Vol. 2—Another B-I-G TV Manual containing the factory-authorized servicing data of 67 manufacturers. Coverage is from early 1948 to January 1949. **(Cat. No. 2002)**
Equiv. of 1,896 pages (8½x11) **Net Price $24.00**

TV Vol. 1—It contains the factory-accurate data of 34 manufacturers up to early 1948. Giant pages for easy circuit tracing. **(Cat. No. 2001)**
Equiv. of 2,000 pages (8½x11) **Net Price $19.80**

RIDER *Radio* MANUALS

The Sign of Successful Servicing

RIDER MANUALS ARE THE GREATEST DOLLAR FOR DOLLAR VALUE IN SERVICING DATA!

It is more than coincidence that practically every successful servicing shop has a complete set of RIDER MANUALS. It is the direct result of their *profit-making, time-saving* value. Here you find data on alignment, i.f. peaks, operating voltages, parts lists and parts values, voltage ratings of condensers, wattage ratings of resistors, coil resistance data, gain data, dial drives, in fact, all information necessary to speedier, more profitable servicing.

The financial success of your service shop depends, in addition to your time and energy, on the equipment and reference information you use. When it comes to servicing data you need information to cover every receiver that comes in for repair, not just data on a few popular models. In AM-FM servicing there's only *one source* that is thoroughly complete, that offers the *most* for the *least*—RIDER MANUALS.

PROVEN BEST by 23 years of continuous TEST, RIDER AM-FM MANUALS contain this substantial amount of information in 22 volumes to date.
32,902 Pages . . . 28,968 Models . . . 15,320 Chassis

Competent, progressive servicemen prefer RIDER AM-FM MANUALS for these reasons:

GREATEST COVERAGE—Each individual volume is thoroughly up-to-date as of the period covered. Not just a smattering of material from representative producers is included, but *all* data issued during the period, by the manufacturers. This includes the pilot models and *all production changes,* which are absolutely vital to successful and profitable AM-FM servicing. You know for **SURE** you have it in RIDER MANUALS.

FACTORY-AUTHORIZED FACTS—Accurate, reliable servicing information that comes from the manufacturers themselves is included in RIDER MANUALS. The manufacturer has the final word on his own product. He is thoroughly familiar with his production runs, and as such, is the *only* authority competent to issue data for them. This assures faster, more accurate servicing, and consequently time saved, which means money to you.

LOWER COST—RIDER MANUALS deliver data at approximately a penny per receiver chassis. No other service of a similar nature can claim such economical cost. In the long run RIDER MANUALS are the ***cheapest*** and the ***best*** for the money.

SYSTEMATICALLY ORGANIZED—The rugged loose-leaf binding and accurate index assure systematic, easy access to information—and a long useful life. You don't lose material. It's where you want it when you want it. Volume I published 23 years ago is still producing profits for its owners.

Net

Every Service Technician, Set Manufacturer, Design and Research Laboratory, Component Parts Manufacturer, Public Library, Vocational School Library, High School and College Library—SHOULD OWN a complete set of RIDER MANUALS. They're "The Greatest Compilation of Radio Service Data Ever Assembled."

Vol. XXIII (23). Contains all the latest, official, direct from the manufacturers servicing data on AM, FM, and auto radios, changers, tuners, recorders—from September 1951 to date. One index for Volumes XVI through XXIII.
(Cat. No. 1023) Write for price

Vol. XXII. Dependable manufacturers' data giving complete coverage from November 1950 through August 1951 on AM, FM, auto radios, changers, tuners, recorders. Covers all productions of 62 manufacturers. All pages prefiled. Single index for Volumes XVI through XXII.
(Cat. No. 1022) 1,520 pages, Net Price $18.00

Vol. XXI. Complete coverage from December 1949 through October 1950 on the production of 61 manufacturers. All pages are filed in their proper places. Factory-authorized servicing data on AM, FM, auto receivers, record changers, tuners, disc and tape recorders. Cumulative index for Volumes XVI through XXI makes any model instantly accessible.
(Cat. No. 1021) 1,648 pages, Net Price $21.00

Vol. XX. All pages filed in place. 74 manufacturers contribute data covering the period March to November 1949. AM, FM, auto receivers, record changers, and tuners are included. Cumulative index Volumes XVI through XX plus "How It Works" book.
(Cat. No. 1020) 1,776 pages, Net Price $21.00

Vol. XIX. Complete coverage from late 1948 to March 1949 on AM, FM, auto and communications receivers. Over 100 manufacturers. Special Record Changer section. "How It Works" book and cumulative index Volumes XVI through XIX.
(Cat. No. 1019) 2,122 pages, Net Price $22.50

Vol. XVIII. Covers AM, FM receivers, auto radios, and record players manufactured between November 1947 and November 1948. 115 manufacturers. Combined "How It Works" book and cumulative index Volumes XVI, XVII, and XVIII.
(Cat. No. 1018) 2,036 pages, Net Price $22.50

Vol. XVII. More than 100 manufacturers. FM and AM receivers produced during 1947, as well as record changers and wire recorders are covered. "How It Works" book and cumulative index Volumes XVI through XVII.
(Cat. No. 1017) 1,648 pages, Net Price $19.80

Vol. XVI. Covers sets manufactured in late 1946 and early 1947. Separate "How It Works" book and index. 94 manufacturers.
(Cat. No. 1016) 768 pages, Net Price $9.90

Vol. XV. Receivers of 121 manufacturers, built during 1946 and earlier. In addition, 181-page "How It Works" book and index.
(Cat. No. 1015) 2,000 pages, Net Price $22.50

Vol. XIV. Chassis manufactured during the latter part of 1942 when war halted production.
(Cat. No. 1014) 1,376 pages, Net Price $19.80

Vol. XIII. Covers radio receivers manufactured during the latter part of 1941 and the early part of 1942. Separate index for Volumes XI thru XIII is included.
(Cat. No. 1013) 1,672 pages, Net Price $19.80

Vol. XII. Time-saving "clarified schematic" breakdowns of more than 200 complicated models feature another "big" Rider Manual. Coverage up to April 1941.
(Cat. No. 1012) 1,648 pages, Net Price $19.80

Vol. XI. Chassis manufactured in the period from August 1939 to June 1940. Pocket manual on push-button data is included.
(Cat. No. 1011) 1,652 pages, Net Price $19.80

Vol. X. Covering 2416 models and 1140 chassis, it takes in receivers built from October 1938 to August 1939.
(Cat. No. 1010) 1,664 pages, Net Price $19.80

Vol. IX. The produce of radio set manufacturers during the year October 1937 to October 1938.
(Cat. No. 1009) 1,672 pages, Net Price $19.80

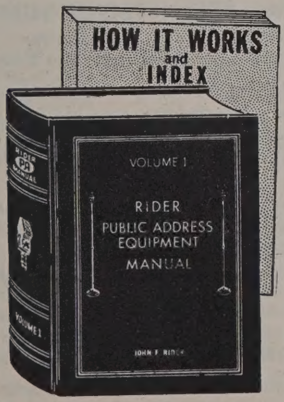
Vol. VIII. Receiver output from October 1936 to October 1937 covered.
(Cat. No. 1008) 1,650 pages, Net Price $19.80

Vol. VII. Sets manufactured from November 1935 to October 1936 included.
(Cat. No. 1007) 1,600 pages, Net Price $19.80

Vol. VI. Covers models produced from late 1934 to November 1935.
(Cat. No. 1006) 1,240 pages, Net Price $15.00

Vols. I-V. Includes those receivers manufactured during the years 1930-1935.
(Cat. No. 1005) 2,000 pages, Net Price $19.80

RIDER'S PUBLIC ADDRESS EQUIPMENT MANUAL — VOLUME 1



Coverage from 1938 to 1948
147 Manufacturers Represented

Public Address Systems — Outdoor Announcing — Musical Instruments and Phonographs — Theater, Church Hearing Aids — Electronic Megaphones — Intercommunication Systems — Theater and Home Motion Pictures — School, Hotel, Hospital Sound Systems — Mobile and Portable Sound Systems

SCHEMATICS — VOLTAGE and RESISTANCE TABLES — TUBE and CHASSIS LAYOUTS — INSTALLATION NOTES — OPERATIONAL INSTRUCTIONS — IMPEDANCE MATCHING

2024 Pages Plus a "HOW IT WORKS" and INDEX . . . Net Price . . . $18.00

(Cat. No. 3001)

If You Install and Service PA Systems You NEED this Exclusive RIDER MANUAL

The prices listed on these John F. Rider Publisher pages are subject to revision

Indispensable Rider Texts for Electronic maintenance — research — education

ENCYCLOPEDIA ON CATHODE-RAY OSCILLOSCOPES AND THEIR USES

by John F. Rider and Seymour D. Uslan

THE ONLY BOOK of its kind that tells you all you should know about an oscilloscope, this text fully and clearly describes the device, its construction and its capabilities. It explains what a scope is, what it can do, and how it is used. The authors thoroughly cover the applications of the oscilloscope in servicing, engineering, and research, and offer thousands of time-saving, labor-saving references, charts, waveforms, etc.

All oscilloscopes produced during the past ten years, a total of more than 70 different models, are accurately described, with specifications and wiring diagrams.

If you are planning to buy a scope, this book will help you select the type best suited to your needs. If you already own one, it will show you how to increase your instrument's usefulness and value to you. **We guarantee this book will save and earn many, many times its cost to you!**

CHAPTERS: 1. Introduction; 2. Principles of Electrostatic Deflection and Focusing; 3. Principles of Electromagnetic Deflection and Focusing; 4. Mechanical Characteristics; 5. The Electron Gun; 6. Deflection Systems in Cathode-Ray Tubes; 7. Screens; 8. Spot Displacement; 9. Linear Time Bases (Sweep Circuits); 10. The Basic Oscilloscope and Its Modifications; 11. Synchronization; 12. Phase and Frequency Measurements; 13. Nonlinear Time Bases; 14. Auxiliary Equipment; 15. Testing Audio Frequency Circuits; 16. Visual Alignment of AM, FM, and Television Receivers; 17. Waveform Observation in Television Receivers; 18. Transmitter Tests; 19. Electrical Measurements, Scientific and Engineering Applications; 20. Complex Waveform Patterns; 21. Special Purpose Cathode-Ray Tubes; 22. Commercial Oscilloscopes and Related Equipment. ***Appendices***: 1. Characteristics of Cathode-Ray Tube Basing; 2. RMA Cathode-Ray Tube Basing; 3. Photography. Bibliography. Index.

(Cat. No. 133) • Half a million words • Easy to read
992 pages 3,000 Illustrations 8½"x11" Net Price $9.00

VACUUM-TUBE VOLTMETERS

Second Edition (April, 1951) by John F. Rider

ALL THE FACTS on the many types of vacuum-tube voltmeters are here—this is the only book devoted exclusively to the subject! Especially valuable are the step-by-step procedures applying the device to many uses. The new edition is thoroughly revised and completely rewritten. It contains a new chapter on commercial VTVM's, covering more than 40 commercial VTVM's with accompanying schematics and parts values, and a new chapter on probes for D-C and R-F. Factory maintenance instructions are included for the models discussed as well as general maintenance information.

CHAPTERS: 1. Fundamentals of Vacuum-Tube Voltmeters; 2. Diode Vacuum-Tube Voltmeters; 3. Triode Vacuum-Tube Voltmeters; 4. Rectifier-Amplifier Vacuum-Tube Voltmeters; 5. Tuned Vacuum-Tube Voltmeters; 6. Amplifier-Rectifier Vacuum-Tube Voltmeters; 7. Slide-Back Vacuum-Tube Voltmeters; 8. Vacuum-Tube Voltmeters for D-C Voltage, Current, and Resistance Measurements; 9. Probes for D-C and R-F; 10. Design and Construction of Vacuum-Tube Voltmeters; 11. Calibration and Testing of Vacuum-Tube Voltmeters; 12. Applications of Vacuum-Tube Voltmeters; 13. Commercial Vacuum-Tube Voltmeters; 14. Maintenance of Vacuum-Tube Voltmeters. Bibliography. Index. **(Cat. No. 132)**

432 pages 210 Illustrations 5½"x8½" Net Price $4.50

FM TRANSMISSION AND RECEPTION

Second Edition (November, 1950) by Rider & Uslan

ALL YOUR QUESTIONS about new developments in f.m. are answered in this text. The latest functions and applications of f.m. are thoroughly and clearly discussed. Transmitting and receiving antennas are covered as well as various types of receivers, including television, their functioning and servicing. Radio servicemen, radio amateurs, engineers, students will find this an indispensable reference volume combining theory and practice.

You will learn the basic principles underlying the operation of the complete f-m transmitter as well as the receiver. Both narrow-band and wide-band transmitters being manufactured today are discussed. Says *Electronic Engineering*: "Its 400 pages represent good value for money . . ."

EXTRA: Review Questions at the end of each chapter.

CHAPTERS: PART I: 1. Fundamental Considerations; 2. Frequency Modulation; 3. Essentials of F-M Transmitters; 4. Transmitters of Today; 5. The Transmission of F-M Signals. PART II: 6. Receiving Antennas; 7. The F-M Receiver; 8. Alignment of F-M Receivers; 9. Servicing F-M Receivers; 10. F.M. in Television Receivers. Appendix. Bibliography. Index. **(Cat. No. 102)**

460 pages 5½"x8½" Illustrated Net Price $4.95

TV AND OTHER RECEIVING ANTENNAS

(THEORY & PRACTICE) *by Arnold B. Bailey, Antenna Consultant*

THIS BOOK ANSWERS the questions of service technicians, engineers, students and teachers about receiving antennas. Much of the data in this authoritative, up-to-the-minute text has never before been published anywhere!

Data pages on approximately 50 different basic types aid analysis and preselection of antennas. The advantages and disadvantages of each type are discussed, and suggestions are given concerning antenna requirements in various reception areas. Mathematics is translated into tables, charts, and graphs, making the book easily understandable and highly readable. **We guarantee it will answer all your questions.**

CHAPTERS: 1. Review of Definitions and Terminology; 2. The Television Signal and Its Bandwidth; 3. Problems of Television Reception; 4. The Electromagnetic Wave; 5. The Radio Path; 6. The Theory of Signal Interception; 7. The Center-Fed Zero-db Half-Wave Antenna; 8. Comparison of Zero-db Half-Wave Antennas; 9. Parasitic-Element Antennas; 10. Horizontally Polarized Antennas; 11. Vertically Polarized Antennas and Special Types; 12. Practical Aspects of TV and Other Receiving Antennas. Review Questions. Index. Chapter-End Bibliographies. **(Cat. No. 134)**

606 pages 5½"x8½" 310 Illustrations Net Price $6.60

TV INSTALLATION TECHNIQUES

by Samuel L. Marshall, TV Instructor,
George Westinghouse Vocational High School

THE MOST PRACTICAL book of its kind, this text is designed to help you make the best possible installation and eliminate return calls. It offers complete information on all the mechanical and electrical considerations of TV installation.

Wherever and whenever an installation is a problem, this authoritative book will help you. It puts at your fingertips accurate data on receiver adjustments in the home, municipal regulations governing the installation of TV antennas and masts in all the major TV areas in the United States. You get the facts about such matters as ice loading and wind surface. Mounting requirements, whether for a short chimney-attached mast or an 80-foot tower, are explained thoroughly.

CHAPTERS: 1. Nature of Television; 2. Radio Propagation; 3. Antennas; 4. Transmission Lines and Special Antenna Systems; 5. Materials and Methods Used in Installations; 6. High Masts and Tower Installations; 7. Problems Arising in Television Installations; 8. Receiver Adjustment and Service in the Home; 9. Municipal Regulations. Appendix. Index. **(Cat. No. 131)**

336 pages 5½"x8½" 270 Illustrations Net Price $4.50

RIDER BOOKS FOR PRACTICE AND THEORY

TV MASTER ANTENNA SYSTEMS

by Ira Kamen and Richard H. Dorf

A PRACTICAL WORKING MANUAL dealing with the installation, maintenance, usage, and merchandising of TV master antenna systems—solves all problems from start to finish. Virtually all amplified and nonamplified systems are discussed.

Written in a clear style that strikes a balance between elementary and technical, it is ideally suited to those technically trained, and also completely meets the needs of the nontechnical man. This is the only available source book of its kind.

CHAPTERS: 1. Basic Television Antenna Systems; 2. The Need for Master Antenna Systems; 3. Nonamplified Master Antenna Systems; 4. Amplified Master Antenna Systems; 5. Installing Master Antenna Systems; 6. Video Distribution Systems; 7. Merchandising Master Antenna Systems; *Appendices:* A. Temporary Landlord Agreement; B. Sample Electrical Specifications; C. Survey Report, Landlord Agreement, and Tenant Letter; D. Cautions. Index. **(Cat. No. 136)**

368 pages 5½"x8½" 234 illustrations Net Price $5.00

RECEIVING TUBE SUBSTITUTION GUIDE BOOK

by H. A. Middleton

ANSWERS ALL TUBE PROBLEMS by listing 2,500 radio-television tube substitutions in numerical sequence with accompanying wiring instructions, original and substitute tube socket illustrations. You will find information to help you turn out jobs that would otherwise remain on the shelf because of lack of proper tubes.

CONTENTS INCLUDE: Background of Substitutions; Servicing Suggestions; CRT Tube Bases and Characteristics; Receiving Tube Bases, Characteristics, and Ratings; Capacitor, Resistor, and Transformer Color Codes; Pilot Lamp Table; TV Receiver Filament Circuit Arrangements; etc.

224 pages 8½"x11" (Cat. No. 135) Net Price $3.00

FIRST SUPPLEMENT, RECEIVING TUBE SUBSTITUTION GUIDE BOOK

750 completely new and different radio-TV tube substitutions not listed in the first edition. Special section on substituting tubes in television receivers.

48 pages 8½"x11" (Cat. No. 139) Net Price $ .99

RADIO OPERATOR'S LICENSE Q&A MANUAL

by Milton Kaufman, Instructor, RCA Institutes, Inc.

THIRD EDITION, Up-to-date as of August 1951

(New Elements 2, 5, 7, 8 and Revised Elements 3, 6)

SYSTEMATICALLY LISTED are the questions and answers to past FCC exams *plus* a FOLLOW-THROUGH discussion of the answer, so necessary for a complete understanding of the technical question. Abundant illustrations make difficult technical questions picture-clear.

Not simply an optional text, ***but an indispensable reference volume*** for student, operator, and radio amateur, it is up-to-date in all respects as of the August, 1951 publication date. Based on the Government Study Guide and supplementary FCC releases, the volume offers valuable appendices (Small Vessel Direction Finders and Automatic Alarm) never before available in a book of this type.

You will find yourself constantly referring to this complete, comprehensive handbook for a thorough review of essential theory, as well as for a refresher for advancement in the field.

CONTENTS: Element I—Basic Radio Laws, Rules, and Regulations; Element II—(New) Radiotelephone Operating Practice; Element III—Basic Theory and Practice, Radiotelephone, and (New) Basic Radiotelephone; Element IV—Advanced Radiotelephone; Element V—(New) Radiotelegraph Operating Practice; Element VI—Radiotelegraph and Advanced Radiotelegraphy; Element VII—Aircraft Radiotelegraph for Flight Radio Operator; Element VIII—Ship Radar Techniques; *Appendices:* 1. Part 13—Rules Governing Commercial Radio Operators; 2. Extracts from Radio Laws; 3. Conventional Abbreviations; International Morse Code; 4. Small Vessel Direction Finders; 5. Automatic Alarm; Index of Subjects. **(Cat. No. 130)**

734 pages 5½"x8½" 243 Illustrations Net Price $6.60

ELEMENT VIII—SHIP RADAR TECHNIQUES

Identical text as in book, separately bound for those specially interested in Ship Radar. Uses the same question-answer-discussion pattern.

32 pages 5½"x8½" (Cat. No. 130A) Net Price $ .78

SERVICING BY SIGNAL TRACING

by John F. Rider

LEARN HOW to locate defects in any type of receiver—radio, television, public address system, etc. The text explains what happens to the signal from the instant it enters the antenna post of a set until it energizes the loud speaker. Signal tracing enables you to test the components of a set by checking their functions. Repair receivers faster, easier, and more accurately by using the information contained here.

CHAPTERS: 1. What Is Meant by Signal Tracing?; 2. Signal Amplification; 3. Detection; 4. Coupling Devices; 5. Signal Tracing in Oscillator Circuits; 6. Signal Tracing in Mixer Circuits; 7. Signal Tracing in Control Circuits; 8. Public Address Systems; 9. Localizing Defects by Signal Tracing; 10. Signal Tracing in Television Receivers; 11. Signal Tracing in Receiver Design; 12. Signal-Tracing Instruments.

360 pages 188 illus. (Cat. No. 109) Net Price $4.00

Spanish Ed. (Cat. No. 110) Net Price $4.00

UNDERSTANDING VECTORS AND PHASE IN RADIO

by John F. Rider and Seymour D. Uslan

A SHORTHAND METHOD to easier understanding of radio theory, the text is written for every man in radio and electronics who has not had the advantage of technical training. Vectors are the engineer's shorthand—a picture-graph adopted to eliminate mathematical and complex waveform presentations; an understanding of which is necessary in following developments in FM and television. Numerous drawings and diagrams illustrate the text. The concluding chapter analyzes everyday radio circuit problems, and in so doing clarifies them.

CHAPTERS: 1. What Is a Vector?; 2. The Coordinate System; 3. Single Vector Representation; 4. Multiple Vector Presentation; 5. Resolution of Vectors; 6. Addition of Vectors; 7. Subtraction, Multiplication, and Division of Vectors; 8. Radio Circuit Problems; Bibliography. Index.

160 pages Paper Cover (Cat. No. 103) Net Price $ .99

Cloth-bound (Cat. No. 104) Net Price $1.89

TV PICTURE PROJECTION AND ENLARGEMENT

by Allan Lytel

THE STORY behind TV picture enlargement by viewing lenses and by projection systems is important to every serviceman. Read this text, which explains "how" and "why," and you will find adjustments of these receivers can be simple and rapid. It is a combination of theory and practice . . . dollar-making, time-saving practice!

CHAPTERS: 1. Properties of Light; Reflection and Mirrors; 2. Refraction and Lenses; 3. The Television Picture; 4. Commercial Applications of the Modified Schmidt Projection System; 5. Commercial Receivers Using Refractive Projection; 6. Television and Motion Pictures. Bibliography. Index.

192 pages 140 illus. (Cat. No. 128) Net Price $3.30

Net

RIDER BOOKS—THE STANDARD OF THE INDUSTRY

TV TROUBLESHOOTING & REPAIR GUIDE BOOK

by John F. Rider and Robert G. Middleton

A NEW, PRACTICAL, easy-to-use book for the TV service technician. It tells you how to spot receiver troubles and correct them. Contains factual information right from the manufacturers, things you must know to be a TV troubleshooting and repair expert. **The Contents include:** split-circuit and intercarrier receivers, circuit variations and how they affect operating waveforms, simplified TV receiver troubleshooting by scope and picture tube screen display analysis, remedies for circuit troubles, rapid methods of alignment and recognition of alignment problems. Also hundreds of handy hints and time-saving short cuts for troubleshooting sync circuits, video-amplifier circuits, locating buzz, etc. TV troubleshooting charts included. Not a theory book—but a practical, down-to-earth troubleshooting and repair guide that will help you earn more money.

200 pages 8½"x11" (Cat. No. 140) Net Price $3.90

UHF PRACTICES AND PRINCIPLES

by Allan Lytel

LEARN NOW about the uhf practices and principles that will affect you in your everyday work in the near future. Operate successfully and profitably with the knowledge of special uhf techniques, concepts, and circuits explained here. UHF transmitting and receiving equipment is discussed as it applies to the various services using it. Much of the emphasis is on the practical applications to uhf television. UHF will mean added income for you. Learn about it now! CHAPTERS: 1. Introduction to UHF; 2. What's Different About UHF; 3. Electromagnetic Radio Wave; 4. Receiving Antennas; 5. Transmission Lines and Waveguides; 6. New Types of Tuned Circuits; 7. Oscillator Tubes and Circuits; 8. Receivers and Converters; 9. Transmitters; 10. Developmental Vacuum Tubes; 11. Test Equipment and Techniques; Appendix; Bibliography; Index; Chapter-end questions. **(Cat. No. 141)**

Approx. 375 pages 5½"x8½" 285 illus. Net Price $6.60

BROADCAST OPERATOR'S HANDBOOK

Second Edition (October, 1951) by Harold E. Ennes

COMPLETELY REVISED and brought up to date, the text deals with the practical considerations of radio broadcasting and its equipment. It explains all the why's and wherefore's of daily studio routine. The first four parts of the book cover actual operating procedure in control rooms, the master control, remote controls, and the transmitter; the fifth and sixth parts discuss technical data for operators and technicians, including vital preventive maintenance. Intended not only for students, but veteran operators also, who wish to keep abreast of current practices in the field, it is written in the broadcast operator's language.

CONTENTS: 1. Operating in the Control Room and Studio; 2. Operating the Master Control; 3. Operating Outside the Studio; 4. Operating the Transmitter; 5. We're Off the Air; 6. Technically Speaking; Bibliography; Index. **(Cat. No. 138)**

440 pages 5½"x8½" 226 illustrations Net Price $5.40

TV AND ELECTRONICS AS A CAREER

by Ira Kamen and Richard H. Dorf and others

HERE'S YOUR GUIDEBOOK to a profitable career in the electronics industry. Experts tell you what opportunities are offered, how to prepare yourself for them, how to go about getting the job you want. These are the actual facts told by men who know. This is the only book that gives all the requirements to the newcomer preparing for a career, and to the man already in electronics who wants to switch to another field of specialization within the industry.

CONTENTS INCLUDE: Selecting A Career; TV Broadcasting; AM-FM Broadcasting and Communications; Radio and TV Manufacturing; Electronic Engineering; TV Servicing; *Appendices:* Electrical Engineering Curricula; Pay Scales for Broadcast Personnel; Pay Scales for TV Service Branch Personnel; Technical institutions teaching Radio, Television, and Electronics. **(Cat. No. 137)**

326 pages 5½"x8½" 136 illustrations Net Price $4.95

INSTALLATION AND SERVICING OF LOW-POWER PA SYSTEMS

by John F. Rider

The do's and don'ts for installing and servicing PA systems.

CONTENTS: Fundamentals of Sound; Microphones and Phonograph Pickups; Impedance Matching; Amplifier Specifications; Loudspeakers; Installation; Servicing. Index. **(Cat. No. 127)**

208 pages 5½"x7¾" Illustrated Net Price $3.00

TELEVISION — HOW IT WORKS

by the John F. Rider Editorial Staff

A theoretical and practical treatment of TV techniques.

CONTENTS: General Aspects of the Television System; Frequency Characteristics of the Television Signal; Television Receiving Antennas; R-F Amplifier, Oscillator, and Mixer Circuits; The F-M Sound Channel; The Video I-F and Detector Section; Video Amplifiers and D-C Restorers; Synchronizing Circuits; Sweep Circuits; The Picture Tube; Power Supplies; Alignment and Servicing. **(Cat. No. 101)**

203 pages 8½"x11" Illustrated Net Price $2.70

AN HOUR-A-DAY WITH RIDER SERIES

by John F. Rider

ALTERNATING CURRENTS IN RADIO RECEIVERS **(Cat. No. 120)**
D.C. VOLTAGE DISTRIBUTION **(Cat. No. 121)**
RESONANCE AND ALIGNMENT **(Cat. No. 122)**
AUTOMATIC VOLUME CONTROL **(Cat. No. 123)**

Each Volume: 96 pages 5½"x8" Illustrated Net Price $1.25

UNDERSTANDING MICROWAVES

by Victor J. Young

The principles and practice of microwave radio and radar.

CONTENTS: The Ultra High Frequency Concept; Stationary Charge and Its Field; Magnetostatics; Alternating Current and Lumped Constants; Transmission Lines; Poynting's Vector and Maxwell's Equations; Waveguides; Resonant Cavities; Antennas; Microwave Oscillators; Radar and Communications; Microwave Terms, Ideas, and Theorems. Index. **(Cat. No. 107)**

385 pages 5½"x8½" Illustrated Net Price $6.00

INSIDE THE VACUUM TUBE

by John F. Rider

Clear, simple discussion of the theory of the vacuum tube and its operation.

CONTENTS: Introducing the Electron; Electron Emission; Movement of Charges; Space Charge and Plate Current; Fundamentals of Tube Characteristics; The Diode; The Triode; Static Characteristics of Triodes; Triode Dynamic Characteristics and Load Lines; Dynamic Transfer Characteristics; Voltage Amplification; The Tetrode and Pentode Vacuum Tubes; The Cathode Circuit; Power Amplifiers; Miscellaneous Vacuum Tubes. Appendix. Index. **(Cat. No. 115)**

424 pages 5½"x8½" Illustrated Net Price $4.50

HIGH FREQUENCY MEASURING TECHNIQUES USING TRANSMISSION LINES

by E. N. Phillips, W. G. Sterns, and N. J. Gamara

Shows how to measure wavelength, impedance, etc., in four-terminal networks. **(Cat. No. 125)**

58 pages 8½"x11" Illustrated Net Price $1.50

RADAR — WHAT IT IS

by John F. Rider and G. C. Baxter Rowe

A technical subject made easy by a simple discussion aided by cartoons and diagrams. **(Cat. No. 124)**

72 pages 8½"x11" Illustrated Net Price $1.00

THE RADIO AMATEUR'S HANDBOOK $3.00

The authoritative radio manual used extensively by engineers, laboratories, the armed forces, schools, amateurs. Complete basic theory and full directions on how to build test and measuring instruments as well as communication equipment for reception and transmission on high frequencies, VHF and UHF. Contains 59 pages of vacuum tube data. Thorough discussion of power supplies, mobile equipment, antennas, and various phases of operating an amateur radio station.

THE ARRL ANTENNA BOOK $1.00

Theoretical explanation and complete instructions with diagrams and patterns for building different types of antennas for amateur work. Beams for VHF and UHF, many antennas for all amateur frequency bands. Transmission lines are exhaustively discussed.

HINTS AND KINKS $1.00

Whatever the radio problem, whether in hook-up, use of tools, gadget design, instrument adjustment, it's probably been solved by an amateur's ingenuity. Hints and Kinks contains 222 of these practical solutions plus a 32-page Surplus Conversion Section.

HOW TO BECOME A RADIO AMATEUR $.50

The book that points the way for the prospective amateur. It tells how to get on the air. Contains directions for building 3 complete amateur radio stations, hints on learning the code, elementary theory of radio, table of frequency bands assigned to amateurs.

A COURSE IN RADIO FUNDAMENTALS $.50

Ideal for home study, this book covers a carefully worked out and thoroughly tested course to be used in conjunction with the Handbook. Its 8 sections contain 35 assignments and 40 experiments with answers in the back of the book for the questions in each assignment.

THE RADIO AMATEUR'S LICENSE MANUAL $.50

This booklet asks more than 300 questions like the ones FCC asks in the various classes of amateur examinations—and gives the complete answers with diagrams. Also it has up-to-the minute information on FCC Amateur Regulations.

LEARNING THE RADIOTELEGRAPH CODE $.25

Full, detailed instructions on how to copy code and how to send it, with five pages of practice material. Full directions on how to build practice equipment for group as well as self instruction.

THE ARRL MAP $2.00

Radio data by ARRL; cartography by Rand-McNally. Modified azimuthal projection gives U. S. amateurs direction and distance to any place in the world. Shows 267 countries with prefixes printed on them, boundaries of the six continents, time zones, principal cities, scale of miles and kilometers. On heavy map paper, 40" x 30" in eight colors.

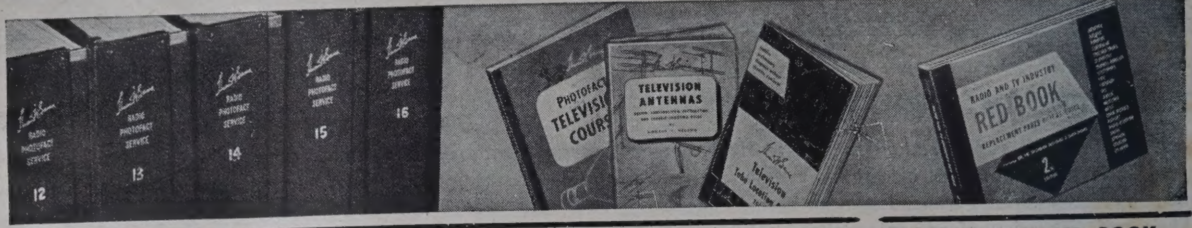
LIGHTNING CALCULATORS each $1.00

For engineers, experimenters, amateurs. They make struggling with formulas unnecessary. Radio Calculator (Type A) has scales giving direct answers to problems involving frequency, inductance, capacity, "how many turns." Ohm's Law Calculator (Type B) is the time saver for questions regarding voltage, current, resistance. Both are printed in color.

THE AMERICAN RADIO RELAY LEAGUE, Inc.

Net

Howard W. Sams Publications



PHOTOFACT SERVICE MANUALS

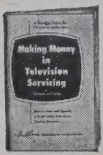
Here's the radio-TV service data that saves time and helps you earn more! Preferred and used daily by thousands of Radio Service Technicians. Complete, accurate—based on analysis of the actual equipment. Uniform treatment for each model: includes Standard Notation Schematics; full chassis photo coverage; complete circuit analysis and replacement parts data; oscilloscope wave forms; record changer analysis—everything you need for quick, profitable servicing. Each volume deluxe bound.

Vol. 1. Post-war models to Jan. 1, 1947
Vol. 2. Jan. 1, 1947—July 1, 1947
Vol. 3. July 1, 1947—Jan. 1, 1948
Vol. 4. Jan. 1, 1948—July 1, 1948
Vol. 5. July 1, 1948—Dec. 1, 1948
Vol. 6. Dec. 1, 1948—May 1, 1949
Vol. 7. May 1, 1949—Oct. 1, 1949
Vol. 8. Oct. 1, 1949—Dec. 1, 1949
Vol. 9. Dec. 1, 1949—Mar. 31, 1950
Vol. 10. Mar. 31, 1950—July 31, 1950
Vol. 11. July 31, 1950—Oct. 31, 1950
Vol. 12. Oct. 31, 1950—Jan. 10, 1951
Vol. 13. Jan. 10, 1951—April 15, 1951
Vol. 14. April 15, 1951—Aug. 1, 1951
Vol. 15. Aug. 1, 1951—Nov. 1, 1951
Vol. 16. Nov. 1, 1951—Jan. 31, 1952
Vol. 17. Jan. 31, 1952—April 31, 1952
Vol. 18. Apr. 31, 1952—July 1, 1952

Each Volume in DeLuxe Binder.......................... **$\$18^{39}$**

PHOTOFACT FOLDER SETS

The easiest way to own the world's finest Radio-TV Service Data. Keeps you ahead on AM-FM-TV! Issued three to four sets per month. Per Set ....Net **$\$1^{50}$**
Binders only for Photofact sets......$3.39
Write for FREE Cumulative Index. Lists sets by make and model; helps you find the Folders you need.



MAKING MONEY IN TV SERVICING

Written by Eugene Ecklund, B.E.E., former manager of the National Service Department, Allen B. DuMont Laboratories, Inc. This practical guide tells you how to make TV servicing profitable. Packed with proved successful methods and ideas. 5½x8½"; paper bound.
Cat. No. MM-1 ....Net **$\$1^{25}$**

HANDY SERVICE GUIDES

DIAL CORD STRINGING GUIDE. New Volume 2. The book that shows you the **one right** way to string a dial cord. Here, in one handy pocket-sized book, are all available dial cord diagrams covering receivers produced 1947 through 1949. Makes restringing easy.
Cat. No. DC-2 ....Net **$\$1^{00}$**

Vol. 1. Covers receivers produced through 1946.
Cat. No. DC-1 ....Net **$\$1^{00}$**

RADIO RECEIVER TUBE REPLACEMENT GUIDE. Shows you exactly where to replace each tube in approximately 5500 receivers made 1938 to 1947. Each tube layout is illustrated by a clear, accurate diagram. Saves time — eliminates risky hit-and-miss methods. 192 pages; handy index.
Cat. No. TP-1 ....Net **$\$1^{25}$**

INVALUABLE TELEVISION BOOKS

PHOTOFACT TELEVISION COURSE. A "must" for everyone interested in Television. Gives you a clear, complete understanding of TV principles, operation and practice. With glossary of terms. 216 pages; 8½x11"; profusely illustrated; sturdily bound.
Cat. No. TV-1 ....Net **$\$3^{00}$**

SERVICING TV IN THE CUSTOMER'S HOME. Show how to diagnose trouble using capacitor probe and VTVM. Shortcut methods help save time, eliminate chassis hauling, earn more on outside calls. An invaluable book.
Cat. No. TC-1.........................Net **$\$1^{50}$**

TELEVISION ANTENNAS. 2nd Edition. Completely revised and enlarged up-to-date edition describes all TV antenna types. Tells how to select and install antennas, find troubles, use short cuts. Full coverage on built-in types, phased arrays; greatly expanded ready-reference section on commercial antennas. Over 200 pages; 5½x8½"; fully illustrated. Cat. No. TAG-1 ......Net **$\$2^{00}$**

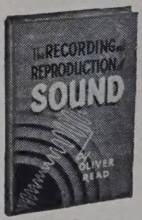
TV TUBE LOCATION GUIDE. Vol. 2, 1950. This book tells you the position and function of every tube in hundreds of popular TV receivers. Helps diagnose failures and replace tubes without removing chassis! Clear accurate diagram for each model. Pays for itself immediately. Cat. No. TGL-2 **$\$2^{00}$**

Vol. 1, 1949. Over 200 pages of TV receiver tube position diagrams, covering hundreds of models. 5½x8½".
Cat. No. TGL-1 ....Net **$\$1^{50}$**

RADIO INDUSTRY RED BOOK

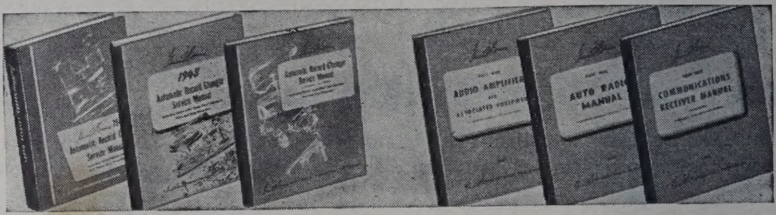
NEW SECOND EDITION. All you need to know about TV and radio replacements for approximately 22,000 sets made from 1938 through July 1950. Complete, accurate replacement numbers cover parts made by 21 manufacturers. Gives original parts numbers and replacement numbers of Radio and TV Tubes, Capacitors, Transformers, Controls, IF's, Speakers, Vibrators, Phono-Cartridges, Batteries, with valuable installation notes—plus the first complete TV parts compilation, including replacements for sweep oscillator and horizontal and vertical output systems. Over 600 pages; 8½x11"; sewed binding. Net.... **$\$3^{95}$**

SPECIAL: If you own the First Edition Red Book, tear out the first page and receive 95c credit for it on the purchase of the Second Edition.



THE RECORDING and REPRODUCTION OF SOUND

(Enlarged 2nd Edition) Completely revised and vastly enlarged; biggest selling book on Audio. Covers all aspects of recording, with full analysis of recorders and techniques. Complete data on amplifiers, speakers, mikes, phono equip., P.A., etc. A "must" for Sound Engineers, P.A. Men, Hi-Fi fans. Over 800 pages. 6x9"; deluxe binding. Cat. No. RR-2........Net **$\$7^{95}$**


1948 Automatic Record Changer Service Manual
Automatic Record Changer Service Manual
AUDIO AMPLIFIERS
AUTO RADIO MANUAL
COMMUNICATIONS RECEIVER MANUAL

RECORD CHANGER MANUALS

VOL. 3, 1949-50. It's easy to service record changers when you own this outstanding Photofact manual. Covers 44 models made in 1949, including wire and tape recorders. Data on newest designs in multi-speed changers, dual-purpose rotatable pick-up systems, double track tape mechanisms, etc. with explicit service procedure text. "Exploded" diagrams, parts lists, full change cycle data, adjustments, hints and kinks. Based on actual analysis of equipment. 286 pages; 8½x11"; paper bound. Cat. No. CM-3.........Net **$\$3^{00}$**

VOL. 2, 1948-49. Covers 45 models made in 1948, including LP and dual speed changers, leading wire and tape recorders. Fully illustrated. 400 pages; 8½x11"; paper bound.
Cat. No. CM-2 ....Net **$\$4^{95}$**

VOL. 1, 1947-48. Covers over 40 post-war models made to 1948. Full data on leading wire, ribbon tape and paper disc recorders. Fully illustrated. 400 pages; 8½x11"; paper bound.
Cat. No. CM-1 ....Net **$\$3^{95}$**

SPECIALIZED DATA MANUALS

POST-WAR AUDIO AMPLIFIERS. Vol. 3. Clear, uniform accurate data on many important audio amplifiers and 22 FM and AM tuners produced during 1950. 362 pages. 8½x11".
Cat. No. AA-3..........................Net **$\$3^{95}$**

Vol. 2. A complete analysis of 104 audio amplifiers and 12 tuners made 1949-50. 368 pages. 8½x11".
Cat. No. AA-2..........................Net **$\$3^{95}$**

Volume 1. Covers 102 amplifiers and FM tuners made through 1948. 352 pages; 8½x11".
Cat. No. AA-1 ....Net **$\$3^{95}$**

POST-WAR AUTO RADIOS. Covers 100 different models made by 24 different manufacturers. Profusely illustrated; each model treated uniformly, accurately, in complete detail. Over 300 pages; 8½x11"; sturdy binding.
Cat. No. AR-1 ....Net **$\$4^{95}$**

POST-WAR COMMUNICATIONS RECEIVERS. Covers more than 50 of the most popular communications sets. An invaluable service aid; a perfect buying guide for receiver purchasers. All data is accurate, based on actual laboratory examination. 264 pages; 8½x11".
Cat. No. CR-1 ....Net **$\$3^{00}$**

The Radio Service Publications that Pay for Themselves Over and Over Again

COYNE SHOP-TESTED TECHNICAL BOOKS

Electricity • Radio • Television • Electronics • Refrigeration

DISTRIBUTED BY:
HOWARD W. SAMS & CO., INC.
Indianapolis 5, Indiana

APPLIED PRACTICAL RADIO - TELEVISION

A **brand new** set of invaluable books — over 1500 pages of **practical, profitable** working information on the latest in Radio and TV. It's ALL here — EVEN COLOR TELEVISION AND UHF. Over 5,000 subjects, with 1000 crystal-clear illustrations and "step by step" photos to show you what makes the equipment "tick". Shows how to install, align, balance **all** Radio and TV sets . . . how to use new and old test instruments for TV service . . . latest data on adaptors, converters, and much more. Own this amazing, money-making 5-Volume Radio-TV Library now. It's **complete,** up-to-the-minute, helpful!

Vol. 1. Cat. No. CTB-11	$3.25
Vol. 2. Cat. No. CTB-12	3.25
Vol. 3. Cat. No. CTB-13	3.25
Vol. 4. Cat. No. CTB-14	3.25
Vol. 5. Cat. No. CTB-15	4.25

5 VOLUME SET COMPLETE—
Cat. No. CTB-50 **$15.00**

See Special Free Offer at right below.

CYCLOPEDIA OF TELEVISION

Complete, Up to Date Reference Manual

The famous fact-packed reference book that covers every phase of Television, including latest data on COLOR TV and UHF (printed in 4 colors). Written by H. P. Manly, the field's outstanding authority. Gives you complete understanding of how TV receivers work, how to repair and keep them operating properly. Special complete section on **picture pattern servicing** (dozens of actual photos). 750 pages cover: testing and measuring performance in each section of any TV set; alignment, amplifiers, antennas, frequencies, RF, ion traps, sync circuits, power supplies, video IF amplifiers, sweep oscillators, adapters, converters. Over 450 photos, diagrams, charts, drawings, test patterns. See subject in quick-reference alphabetical order. It's indispensable — order your copy now!
Cat. No. CTB-1 **$5.95**

PRACTICAL TELEVISION SERVICING AND TROUBLE-SHOOTING MANUAL

The complete, authoritative book that SHOWS YOU HOW TO: align sets; service by patterns; install antennas; use deflection methods; install, adjust and tune every part of the audio and video sections; handle all problems in high and low voltage power supply. Covers sweep oscillators, frequency control, FM, amplifiers, tuners, etc. Latest data on COLOR TV and UHF! 18 **big** chapters, 300 illustrations (many in 4 colors)—1500 TV facts. Complete, practical, up-to-date.
Cat. No. CTB-4 **$4.25**

ELECTRONICS

Electricians will find this book a "gold mine" of easy-to-follow "on-the-job" electronic data. Starts right at the beginning —explains in simple language all the basic principles of electronics. Fully illustrated with helpful photographs, diagrams and tables. Endorsed by leading manufacturers, union officials and educators. 400 pages.
Cat. No. CTB-2 **$3.75**

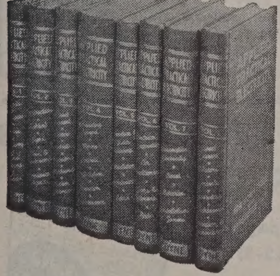
MODERN RADIO INSTRUMENTS AND TESTING METHODS

This up-to-the-minute book tells all about modern radio and electrical testing equipment and how to use it. Packed with money-making short-cuts on trouble-shooting, servicing, construction and other jobs. Over 350 pages, 220 photos and diagrams. Covers Multipliers, Resistors, Ohmmeters, Oscilloscopes and many other subjects. All data has been pre-tested in the Coyne shops.
Cat. No. CTB-3 **$3.25**

RADIOMAN'S HANDBOOK

Here is a remarkable radio "answer" book. 3000 facts packed into 350 pages give you complete instructions to speed trouble-shooting. Illustrated with hundreds of charts, diagrams, tables, circuits and short-cuts. Fully indexed.
Cat. No. CTB-5 **$2.75**

FREE! TV Servicing with Picture Tube Patterns. You get this valuable booklet FREE when you order the complete CTB-50 Radio-TV Book Set. Shows actual tube patterns to help you diagnose trouble fast. Includes wave forms and TV circuit principles. Order CTB-50 and get this book FREE!



APPLIED PRACTICAL ELECTRICITY

Advance yourself in electricity by owning these practical authoritative books which cover everything in home wiring, DC-AC Motors, Refrigeration, Air Conditioning, Automotive Diesel and Battery Construction—Diagrams, Charts, Tables. 3000 subjects. Over 10,000 facts—thousands of new methods clearly explained in easy-to-understand language.

Vol. 1. Electrical principles, circuits, laws, rules, signal systems, etc. 400 pages.
Cat. No. CTB-121 **$3.25**

Vol. 2. Electrical construction, house wiring, neon and fluorescent lighting, aircraft lighting, farm wiring, household appliance repairing, etc. 468 pages.
Cat. No. CTB-122 **$3.25**

Vol. 3. Direct current motors, controllers, generators, power factor, transformers, installation, operation and maintenance, switchboards, etc. 373 pages.
Cat. No. CTB-123 **$3.25**

Vol. 4. Alternating current principles, motors, generators, controls, transformers, equipment, installation, operation, construction, maintenance, etc. 740 pages.
Cat. No. CTB-124 **$3.25**

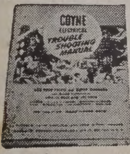
Vol. 5. Armature and stator winding, design, repairing, baking installation, maintenance, collaborating winding data, electronics, etc. 287 pages.
Cat. No. CTB-125 **$3.25**

Vol. 6. Electrical refrigeration and air conditioning, commercial and domestic types, installation, service and maintenance, blowers, fans, etc. 375 pages.
Cat. No. CTB-126 **$3.25**

Vol. 7. Automotive electricity, diesel and battery, service, installation and maintenance, ignition lighting, full and semi-diesel types, etc. 510 pages.
Cat. No. CTB-127 **$3.25**

Vol. 8. Electronics. 400 pages.
Cat. No. CTB-128 **$3.75**

8 VOLUME SET COMPLETE
Cat. No. CTB-180 **$24.00**



ELECTRICAL TROUBLE SHOOTING MANUAL

This Coyne Electrical Trouble Shooting Manual is needed by anyone who expects to make money out of electrical work. Contains a new step-by-step trouble shooting course and over 500 commercial diagrams in its more than 600 pages. Full coverage of Electricity, plus Refrigeration, and a large section on servicing Industrial Electronic Equipment. No other book like it!
Cat. No. CTB-101 **$6.95**

ELECTRICIAN'S HANDBOOK

Here is the book every electrician needs. It includes the latest code requirements, building codes, rules, tables, charts, testing guides, sizes of wire to use on certain jobs; full data on motors, currents, and hundreds of other subjects. Over 600 different electrical subjects, including electronics, all indexed.
Cat. No. CTB-102 **$2.75**

Famous COYNE BOOKS - Shop Tested for Practical, Useful Reference

Net

GHIRARDI RADIO BOOKS

RINEHART BOOKS, INC., Technical Division, 232 Madison Ave., New York 16, N. Y.
(Formerly Murray Hill Books, Inc.)

RINEHART
BOOKS INC.

Ghirardi's Complete New Service Training Course!

Here's the new Ghirardi guide to modern Radio-TV servicing by professional methods! . . . a book that can help give your earning power a big boost by teaching you to work faster, more efficiently on every receiver service job! Fully modern, profusely illustrated and covering television and record-player servicing procedures as well as all present day AM and FM radio types, it provides complete practical training in every step of the work.

RADIO & TELEVISION RECEIVER TROUBLESHOOTING & REPAIR

820 pages, 417 illustrations, Price $6.75
(Cat. No. UC-52-1)

This latest Ghirardi book starts with a careful analysis of radio-TV components and why they fail. Next you get a comprehensive guide to up-to-date service methods — from quick analyses which often disclose the trouble quickly, to "static tests" of voltage, current, capacitance and inductance, and thence to "dynamic" methods including signal tracing and signal injection.

From here you proceed to a clear understanding of special problems in communications receivers, ac/dc and battery sets, television receivers, record changers and others. The sections on television servicing are arranged so that you can find answers to specific TV problems almost instantly.

Big chapters on TV and radio receiver alignment greatly simplify this often puzzling procedure. Six chapters are devoted to every phase of component repair and replacement, tuning problems, loud speaker troubles and other vital servicing subjects. Over 400 illustrations and a summary of each chapter make things doubly easy to understand. All subjects are handled in a manner so you can't fail to understand them! No really practical service procedure has been omitted!

Ghirardi's Guide to Circuits and Their Problems

Get to the heart of your servicing problems faster and more profitably with the one new book that tells you all you need to know about radio and TV circuits. Starting with an explanation of AM and FM processes and characteristics, **Radio, TV Receiver Circuitry and Operation** progresses to a complete understanding of ALL basic circuits — their operation — what they consist of — how to recognize them quickly — how each circuit is related to others — how to trace troubles quickly.

RADIO & TELEVISION RECEIVER CIRCUITRY & OPERATION

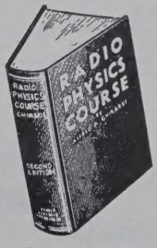
688 pages, 417 illustrations, 6x9, Price $6.00
(Cat. No. UC-52-2)

Actually, there are only a few really basic circuits in radio and TV receivers. Learn these from A to Z and even the most complicated of the countless circuit variations won't bother you! You'll handle tough repair jobs in half the usual time!
Backed with this great new Ghirardi book, you'll be able to understand new circuit developments and their variations as soon as they appear — without laborious study and constant reference to manufacturer's service notes. In short, **Receiver Circuitry and Operation** is the ideal book for the man who wants to be equipped with the real "know-how" for the job that spells more efficient work, better jobs, and bigger pay!

Ghirardi's MONEY-SAVING COMBINATION

Make your radio-electronic servicing library complete and save money in the bargain! Get BOTH Ghirardi Books — RADIO & TV RECEIVER TROUBLE SHOOTING & REPAIR and RADIO & TV CIRCUITRY & OPERATION—for only **$12.00** for the two. If purchased singly, these two books would cost **$12.75.** Save money, get over 1508 pages of valuable servicing information at this low combination price.
(Cat. No. UC-52-3)

RADIO PHYSICS COURSE



36 COURSES IN ONE!

The World's Most Widely Used Basic Training Text for Beginners

972 pages, 508 illustrations, Price $5.00
(Cat. No. UC-52-4)

No matter what part of Electronics-Radio-Television work you plan to enter, a knowledge of basic fundamentals is absolutely essential. Ghirardi's **Radio Physics Course** gives exactly the training you need in a way you can easily understand — **at a price you can afford to pay.** Actually, it has given more beginners their start than any other book or course. It is the basic text used by thousands of students, schools and military courses in many different countries. **Radio Physics Course** starts your training at the very beginning — with Basic Electricity. Step by step it guides you through the entire field of radio-electronics from transmission and receiving, to circuits, components receivers, test equipment and dozens of other subjects. Nothing is omitted — nothing is condensed. You can understand every word of it without previous radio training of any kind. 856 self-test review questions speed your progress from chapter to chapter.

RADIO TROUBLESHOOTER'S HANDBOOK

744 Manual-size (8½x11") pages,
Price $5.00 (Cat. No. UC-52-5)

CUTS SERVICE TIME IN HALF on hundreds of jobs!

This giant Ghirardi book is a dependable guide to locating and repairing common troubles in widely used home radios, auto radios and radio-phonograph combinations of the older types. By eliminating useless testing it saves you time and money on a big percentage of repair jobs — especially on older sets where data is so often lacking. Simply turn to the 404 page Case History section and look up the make and model you want to repair. RADIO TROUBLESHOOTER'S HANDBOOK tells what the trouble is — what causes it — and exactly how to repair it, often in half the usual time. Hundreds of additional pages contain valuable data on tubes, parts and equipment plus graphs, diagrams and money-making service hints. Ideal for training new men and repairing cheap sets profitably.

Ghirardi's MODERN RADIO SERVICING

1300 pages, 706 illustrations, Price $5.00
(Cat. No. UC-52-6)

This world-famous Ghirardi book has been more widely used for professional service training than any other text of its type. Makes even the most difficult service subjects amazingly clear and easy to understand.

famous RINEHART TECHNICAL books

RINEHART
BOOKS INC.

RINEHART BOOKS, Inc., Technical Division — **232 Madison Ave., New York 16, N. Y.**

PRACTICAL TELEVISION SERVICING

Makes TV work easy to understand!

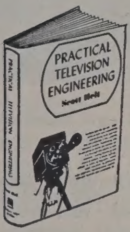
By J. R. JOHNSON and J. H. NEWITT

334 pages, 6 x 9, over 253 illustrations

(Cat. No. UC-52-7) $4.00

At last, a book that ACTUALLY SHOWS YOU HOW TO DO TELEVISION WORK! Explains how television components, construction, and operation differ from radio—shows exactly how to handle TV receiver troubleshooting diagnosing, and repair. Guides you on precautions to take and mistakes to avoid. This isn't a book of theory, mathematics and general discussion. The authors of PRACTICAL TELEVISION SERVICING actually owned and operated a television service shop to get the how-to-do-it information they now pass along to you in easily understood form.

PRACTICAL TELEVISION ENGINEERING



A "must" for equipment engineers, studio technicians, researchers, service workers, students, etc.

By SCOTT HELT

Research Division Allen B. Du Mont Laboratories
Instructor, Columbia University

725 pages, 380 illustrations

(Cat. No. UC-52-8) Price $7.50

Here at last is a book that answers your questions, paves the way for greater efficiency in any phase of TV engineering. Written from the intensely practical viewpoint of a pioneer television engineer, it provides a solid, readily understandable technical background.

After discussing picture transmission, tube and oscillograph fundamentals, the book progresses logically through synchronizing generators, timing, shaping and deflection circuits, video amplifiers, cathode followers, power supplies, camera chains, transmitters and many other subjects. Particular emphasis is placed on modern TV broadcasting techniques.

SERVICING THE MODERN CAR RADIO

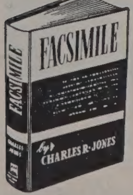
Includes over 500 circuit diagrams!

By A. L. HURLBUT

2nd Edition, 702 pages, 8½ x 11, 222 illus. Over 500 circuit diagrams (Cat. No. UC-52-9) $5.00

This big book makes auto radio repair TWICE AS EASY . . . contains everything needed to help the serviceman gain profitable auto radio servicing skill. Covers all auto radio types from mid-1930's to present, including FM. Describes installation, testing and repair methods fully. Also contains needed special facts on car radio circuits; differences between car and home radio servicing problems; shop set-up and business getting ideas; AND OVER 500 CIRCUIT DIAGRAMS OF THE MOST COMMONLY USED AUTO RADIO MODELS OF DOZENS OF MANUFACTURERS.

FACSIMILE



Cash in on this fast-growing field!

By CHARLES R. JONES

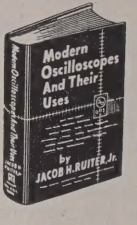
Coordination Engineer, Finch Communications, Inc.

422 pages, 6 x 9, 225 illustrations

(Cat. No. UC-52-10) $6.00

An ideal book for radio men who recognize the value of going beyond the well-worn electronic pathways. Little known beyond a select engineering circle, facsimile is developing rapidly in telegraphy, aviation, banking, mining, law enforcement and dozens of other places. All of these, together with the 100-year background of facsimile are discussed. In addition, the author explains modern equipment, how made, how installed, how operated — plus dozens of detailed notes on facsimile servicing.

MODERN OSCILLOSCOPES AND THEIR USES



No guesswork! No involved mathematics!

By JACOB H. RUITER, Jr., of Allen B. DuMont Laboratories, Inc.

326 pages, 6 x 9, 370 illustrations

(Cat. No. UC-52-11) $6.00

This big book gets right down to brass tacks in explaining the oscilloscope (cathode ray oscillograph) and its use on AM-FM-TV service jobs. No guesswork. No involved mathematics. First the author explains how the instrument is made — when and where to use it — how it works. Then he shows exactly how to employ it on specific jobs. Each operation is carefully explained including the making of connections; adjustment of circuit components; setting controls; and analyzing patterns. Hundreds of illustrations, including literally dozens of pattern photos make things doubly clear.

FREQUENCY MODULATION
FUNDAMENTALS - APPARATUS - SERVICING

By NATHAN MARCHAND

409 pages, 6 x 9, over 317 illustrations

(Cat. No. UC-52-12) $5.00

This new book helps you understand FM clearly and guides you in handling FM service work profitably. Basic theory, circuits, transmitters, receivers and mobile equipment are fully explained. From FM circuit peculiarities, tuning indicators, antennas, FM test units, receiver alignment to general service procedure and dozens of other subjects, this book is a practical, intensely helpful guide.

MAGNETIC RECORDING

By S. J. BEGUN

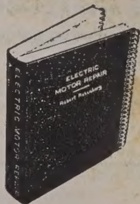
242 pages, 6 x 9, 146 illustrations

(Cat. No. UC-52-13) $5.00

MAGNETIC RECORDING acquaints you with every detail of modern equipment, brings you latest data on applications ranging from home entertainment to movies, broadcasting, professional and amateur radio, and many special uses.

Explains acoustic and magnetic factors. Describes in detail A-C and D-C biasing methods, distortion factors, reproducing heads, drive mechanisms, recording media and methods, reproducing and erasing, instruments for checking performance, and dozens of other subjects.

ELECTRIC MOTOR REPAIR



It pays to specialize in something different!

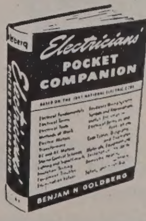
By ROBERT ROSENBERG

570 pages, 6 x 9, over 795 illus. & diagrams

(Cat. No. UC-52-14) $6.00

Based on what can be learned at home from the big ELECTRIC MOTOR REPAIR book, you can train for profitable installation, maintenance, service, repair, and complete rewinding of practically any electric motor. Every subject is clearly explained by text AND ALSO by more than 790 clear-cut illustrations. Quick reference guides show how to handle specific jobs. When certain motors come in for repair, just look them up — ELECTRIC MOTOR REPAIR tells you what to do — how to do it. Covers all commonly used motor types plus motor control systems.

ELECTRICIANS' POCKET COMPANION



By BENJAMIN GOLDBERG

442 pages, 4½ x 7, Hundreds of charts, diagrams, and tables.

(Cat. No. UC-52-15) Only $2.50

Here, in handy pocket size, are hundreds of needed electrical working facts and data. It answers your questions; contains a wealth of tables, charts, diagrams and data. Practical short cuts are described. Covers conduit, cable, open wiring, meters, motors, controllers, transformers, lighting and signal circuits, domestic heating systems, etc.

Net

RCA TECHNICAL LITERATURE

THE MOST AUTHORITATIVE IN THE INDUSTRY

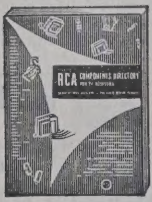
• RCA KINESCOPES

Complete information on Characteristics, Interchangeability, Conversion

Here is the very latest, most authoritative, most complete booklet on kinescopes available in the industry. It was prepared by the RCA Commercial Engineering organization, which has produced the most authoritative and widely used technical literature in the trade. This booklet furnishes you with all the information you need on virtually every kinescope now on the market, well over 100 types. It tells you what to do when converting from glass to metal, from round to rectangular, from small to large size. You'll find that "RCA Kinescopes" is one of the most valuable pieces of literature in your technical library. It's available now, at 25c per copy.

• SERVICE PARTS DIRECTORY FOR RCA VICTOR RADIOS

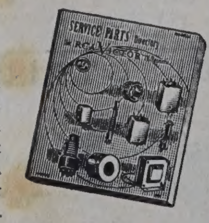
SP-1008 (10⅞" x 8⅜")—24 pages. Lists stock numbers of major replacement parts by receiver model numbers for over 600 RCA Victor Radio receivers. Covers period of 1938 through 1950. Price, 15 cents per copy.



• RCA COMPONENTS DIRECTORY FOR TV RECEIVERS

SP-1006A (10⅞" x 8⅜")—16 pages. Lists major replacement parts for approximately 500 television receivers of 38 manufacturers. Price, 10 cents per copy.

• SERVICE PARTS DIRECTORY FOR RCA VICTOR TV RECEIVERS



SP-1007 (10⅞" x 16¾") — 80 pages. Schematic Diagrams and replacement parts lists for all RCA Victor television receivers manufactured from 1946 thru June 1950 (56 models). Large-size book opens so that each schematic diagram faces its corresponding parts list for quick reference. Price, 75 cents per copy.

• RCA TV COMPONENTS

CTV-1011A (10⅞" x 8⅜")—72 pages. Complete specifications on over 60 RCA TV Components. Gives electrical ratings and characteristics, terminal connection diagrams, outline drawings, typical circuits, associated components, installation recommendations. Price, 25 cents per copy.

• TV SERVICING

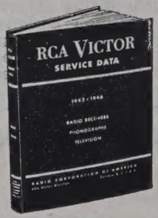
by RCA Television Service Specialists

Practical articles on

- TV TROUBLE SHOOTING
- TV TUNER ALIGNMENT
- TV CIRCUIT ANALYSIS

RCA has combined the entire series of famous articles by John R. Meagher, which originally appeared in RCA's "Radio Service News," in a single bound volume for your reference shelf. It includes a comprehensive article on TV tuner alignment by Art Liebscher, and brand new material by John Meagher.

The articles by Mr. Meagher contain practical and easy-to-understand information on test patterns, linearity, interlacing, video amplifiers, rf-if alignment, deflection and high-voltage circuits, blanking and sync signals, AGC trouble, and hum. List price, 35c each.



• RCA VICTOR SERVICE DATA

- *Schematics*
- *Alignment Procedures*
- *Trouble-Shooting Suggestions*
- *Waveforms*
- *Wiring Diagrams*

Complete, authoritative servicing information on all RCA Victor Radio, Phono, and TV sets . . . which cannot be found elsewhere. You'll find the servicing information you need, quickly and easily in RCA Victor Service Data.

BOUND VOLUMES—RADIO, PHONOGRAPH, TELEVISION

Volume No.	*Years*	*Pages*	*Price*
I	1923 through 1937	880	$3.50
II	1938 through 1942	816	$4.00
III	1943 through 1946	290	$4.00
IV	1947 through 1948	566	$6.00
V	1949	330	$5.00
VI	1950	472	$5.50

• SERVICE PARTS PRICE CATALOG FOR RCA VICTOR RADIOS, TELEVISION AND PHONOGRAPHS

3F659 (10⅞" x 8⅜")—80 pages. Lists over 16,000 RCA Service Parts for RCA Victor Home Instruments in numerical order by stock number. Contains identifying description, package quantity, and suggested list price of each part. Price, 25 cents per copy.

Copies of the publications listed above may be obtained from your RCA Distributor, or direct from Commercial Engineering, Tube Department, Radio Corporation of America, Harrison, New Jersey.

All prices are net and apply in the U.S.A. They are subject to change and cancellation without notice.

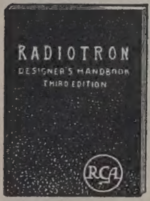
RCA TECHNICAL LITERATURE

THE MOST AUTHORITATIVE IN THE INDUSTRY

• RECEIVING TUBE MANUAL

RC-16 (8⅜" x 5½")—over 300 pages. Contains the latest receiving tubes, including miniature types and kinescopes. Features tube theory written for the layman, application data, up-to-date Resistance-Coupled Amplifier Section, and many new circuits for audio amplifiers and radio receivers. Features lie-flat binding. Price 50 cents.*

RCA
RECEIVING TUBE MANUAL



• RADIOTRON DESIGNER'S HANDBOOK

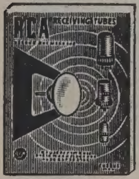
(9" x 6")—356 pages. Edited by F. Langford Smith of Amalgamated Wireless Valve Company Pty. Ltd. in Australia. Of value to anyone interested in fundamental principles of practical circuit design. Copiously illustrated. Price $1.25.*

• PHOTOTUBES, CATHODE-RAY AND SPECIAL TUBES

Bulletin CRPS-102-A (11" x 8½")—20 pages. Completely revised and brought up to date. Technical information on 145 single-unit, twin-unit, and multiplier phototubes, cathode-ray tubes, camera tubes, monoscopes, and types for special applications. Includes terminal connections. Price 15 cents.*

RCA
PHOTOTUBES
CATHODE-RAY
and
SPECIAL TUBES

• RECEIVING TUBES FOR AM, FM, & TELEVISION BROADCAST

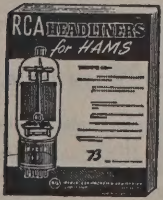


Bulletin 1275-E (11" x 8½")—24 pages. Contains characteristics on more than 450 RCA receiving tubes and kinescopes. Socket connection diagrams arranged for quick and easy reference. Price 10 cents.*

• INSTRUCTION BOOKLETS

Complete authorized information on RCA transmitting tubes and other tubes for communications and industry. Be sure to mention tube-type booklet desired. Single copy on any type free on request.

5770
POWER TRIODE



• HEADLINERS FOR HAMS

Bulletin HAM-103A (11" x 8½")—4 pages. Technical information and terminal connections on 30 RCA "HAM" PREFERENCE TYPES: class B modulators, class C amplifiers and oscillators, frequency multipliers, rectifier tubes, thyratrons, and cold-cathode (glow-discharge tubes). Single copy free on request.

• TUBE HANDBOOK

ALL TYPES HB-3 (7⅜" x 5"). The bible of the industry—contains over 2500 pages of looseleaf data and curves on all RCA receiving tubes including kinescopes, power tubes, cathode-ray tubes, phototubes, and special tubes. Three deluxe 4-prong binders imprinted in gold. Available on subscription basis. Price $10.00* including service for first year. Write to Commercial Engineering for descriptive folder and order form.

RCA TUBE HANDBOOK

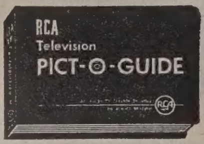
• POWER AND GAS TUBES FOR RADIO AND INDUSTRY

RCA
POWER
AND GAS
TUBES

Bulletin PG-101-A (11" x 8½")—20 pages. Technical information on more than 150 RCA vacuum power tubes, rectifier tubes, thyratrons, ignitrons, and voltage regulators. Includes terminal connections. Price 15 cents.*

• RCA TELEVISION "PICT-O-GUIDE"—Volumes I, II and III

Covers different phases of TV trouble shooting by picture analysis. Vol. I contains 100 pages and more than 40 photographs; Vol. II, 224 pages and more than 80 photographs; Vol. III, 222 pages and more than 95 photographs. Each volume contains circuit diagrams, basic television information, and detailed descriptions of picture troubles. Price for Volumes I and II: $2.50* per volume.



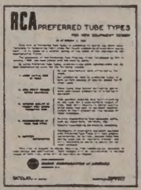
RCA
TRIPLE
PINDEX

• TRIPLE PINDEX (Revised)

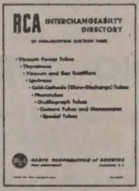
2F366R (8" x 3¾"). Now contains receiving tube base-diagram guide on over 660 tube types including kinescopes arranged in numerical-alphabetical sequence. The diagrams of any three tubes can be located and kept in front of you at the same time. Price 75 cents.*

• RCA PREFERRED TYPES LIST

Bulletin PTL-501-A (11" x 8½")—4 pages. Lists RCA Preferred Tube Types, both receiving and non-receiving, by function. An aid to equipments designers in the selection of tube types for new equipment design. Single copy free on request.



• RCA INTERCHANGEABILITY DIRECTORY ON TUBES FOR COMMUNICATIONS AND INDUSTRY



Bulletin ID-1020 (11" x 8½")—20 pages. Lists 1600 type designations of 24 different manufacturers arranged in alphabetical-numerical sequence; shows the RCA Direct Replacement Type or the RCA Similar Type. Price 15 cents.*

Copies of the publications listed above may be obtained from your RCA Tube Distributor, or direct from Commercial Engineering, Tube Department, Radio Corporation of America, Harrison, New Jersey.

**Prices shown apply in U.S.A. and are subject to change without notice.*

OUTSTANDING RADIO and ELECTRONIC BOOKS FROM *Editors and Engineers* LIMITED

RADIO Handbook

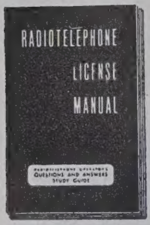
RADIO HANDBOOK (13TH EDITION) . . . . $\$6^{00}$ IN U.S.A.

The most valuable reference work for practical radiomen, radio technicians and advanced amateurs. How to design, construct and operate standard types of radio transmitting and receiving equipment, at both low and high frequencies. Reference data galore; profusely indexed for easy finding, clearly illustrated, easy to read. New information on simplified TVI-proofing, bandswitching fixed-station and mobile transmitters, a remotely-tuned v-f-o for mobile or fixed-station use and many new ideas for improved operation. THE LARGEST "RADIO HANDBOOK" EVER PUBLISHED. 734 pages. Clothbound, goldstamped.

antenna manual

ANTENNA MANUAL . . . . $\$3^{50}$ IN U.S.A.

A necessity for everyone interested in transmission or reception. Gives the "why" and "how" of radio-wave propagation in the HF, VHF and UHF ranges, with a comprehensive coverage of antennas and transmission lines for all frequency ranges. Practical data on all the more popular types of antennas, and constructional information on many new FM, TV and communication antennas. Has the same happy combination of simply explained reference and background material combined with practical how-to-build-it data which has made the RADIO HANDBOOK one of the largest selling radio texts. Clothbound, goldstamped.



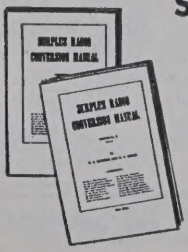
RADIOTELEPHONE LICENSE MANUAL . . . . $\$3^{75}$ IN U.S.A.

Now combined in one convenient, easy to use volume . . . all the information necessary to obtain any commercial radiotelephone license. The complete list of questions and the clear, easily understood answers make this study guide an absolute necessity for everyone interested in any grade of radiotelephone license. Contains four elements: Element I: **Questions On Basic Law;** Element II: **Basic Operating Practice;** Element III: **Basic Radiotelephone;** Element IV: **Advanced Radiotelephone.** Paperbound.

BETTER
TV
RECEPTION-
in fringe and
low-signal areas

BETTER TV RECEPTION in fringe and low signal areas . . $\$2^{50}$ IN U.S.A.

Every TV man needs it; every TV fan needs it. This amazing book has taken the failure out of many unsuccessful installations in low-signal areas, has improved the picture for many discouraged TV owners. Practical, easy to understand. How to select the best transmission lines, boosters and receivers . . . eliminate "ghosts" . . . minimize fading. How to reduce interference and improve receiver performance. The standard guide for every installation engineer as well as a popular text for all TV enthusiasts. Paperbound.


SURPLUS RADIO CONVERSION MANUAL
SURPLUS RADIO CONVERSION MANUAL

SURPLUS RADIO CONVERSION MANUALS . . $\$2^{50}$ Per Volume IN U.S.A.

Conversions and data for: VOLUME I — BC-221 Frequency Meter; BC-342 Receiver; BC-348 Receiver; BC-312 Receiver; BC-412 Oscilloscope as a test scope or as a television receiver; BC-645 420-Mc. Transmitter/Receiver; BC-453A Series Receivers; BC-457A Series Transmitters; SCR-522 144-Mc. Transmitter/Receiver; TBY Transceiver with Xtal Control; PE-103A Dynamotor; BC-1068A V-h-f Receiver; Electronics Surplus Index; Cross Index of VT-Number tubes. VOLUME II — ARC-5 and BC-454 Receivers for 28 Mc; ARC-5 and BC-457 Tx for 28-Mc. Mobile; ART-13 and ATC Xmitter; Surplus Beam Rotating Mechanisms; Selenium-Rect. Power Units; Hi-Fi Tuner from BC-946B Receiver; ARC-5 V-h-f Transmitters; GO-9 and TBW Xmitters; 9-W Amplifier from AM-26; TA-12B & TA-12C Xmitters; AVT-112A Aircraft Xmitter; BC-375 & BC-191 Xmitters; Model LM Freq. Meter; Primary Power Requirements Chart; ARB Recr. Diagram Only. Paperbound.

P. H. Brans'
VADE-MECUM
1952
WORLD'S
transmitting and receiving TUBES

WORLD'S RADIO TUBES (BRAN'S VADE MECUM) . . $\$5^{00}$ IN U.S.A.

The most complete listing of transmitting and receiving tubes ever contained in one book. More than 15,000 tubes from 253 manufacturers. Characteristic tube data of United States, British, French, Czech, German, Russian, Australian, Hungarian, Swedish, Japanese, Danish, Dutch, Swiss, Spanish, Belgian, Argentine and all other available types. Complete new 1952 edition, more comprehensive than ever before. The only book of its kind in the world; available in 16 languages. Paperbound.

VAN NOSTRAND *Publishers of New and Standard Books in* RADIO-TELEVISION-COMMUNICATIONS

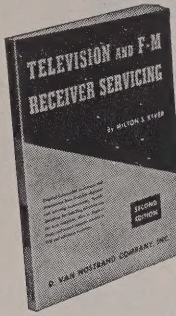
THE KIVER *Simplified* SERIES

These famous reference books, written by Milton S. Kiver, are used the world over in repair shops, radio stations, engineering offices, and schools. Accepted now as the outstanding books in their particular fields, they are equally valuable for reference or home study.

F-M Simplified
By Milton S. Kiver

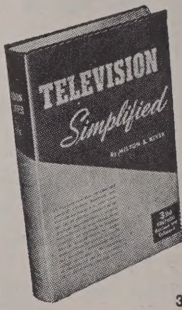
2nd Ed.

Complete procedures for installation, operation, and servicing — based upon a clear, easy-to-understand explanation of fundamental principles. Detailed analysis is given for the component units of each set, with a full explanation of circuit construction and relationship. **347 pages, illustrated, $6.50**


Television and F-M Receiver Servicing
By Milton S. Kiver
Second Edition
D. Van Nostrand Company, Inc.

2nd Ed.

The most economical, up-to-date, and completely practical manual available to servicemen. Theory is presented only insofar as it is required to indicate the solution of problems related to installation and servicing. **250 pages, illustrated, paper bound, large format, $3.25**

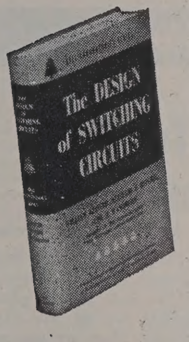


3rd Ed.

Everyone alert to the practical opportunities a working knowledge of television affords can profit from this completely up-to-date, non-technical presentation of television — from the analysis of circuits and operating fundamentals to repair. **608 pages, illustrated, $6.50**

UHF Radio Simplified
By Milton S. Kiver

A step-by-step presentation of U.H.F. radio — from basic principles of ordinary radio circuits to a thorough explanation of the principles and applications of ultra-high-frequency radio, including all types of equipment. **242 pages, illustrated, $4.50**

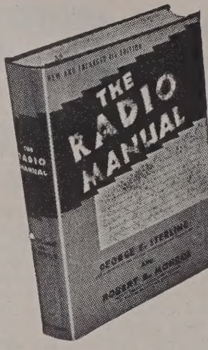


By Keister, Ritchie and Washburn

Presents the basic techniques of switching circuit design applicable to simple control circuits as well as telephone switching systems, digital computors and other large systems. **576 pages, illustrated $8.00**

By G. E. Sterling and R. B. Monroe
4th Edition

An inexhaustible radio reference library in one volume—from elementary electrical and radio theory to the most advanced applications. **890 double column pages, more than 800 illustrations, large format, $12.00**



FUNDAMENTALS OF RADIO COMMUNICATIONS

By Abraham Sheingold

A thorough coverage of the fundamental principles of radio communication suitable for those who do not have an extensive background in mathematics or electricity. **442 pages, illustrated $5.25**

RADAR AND ELECTRONIC NAVIGATION

By G. J. Sonnenberg

Covers the theory and use of radar and electronic navigational equipment such as Decca, Loran and Consol systems, radar and echo sounding. **272 pages, illustrated $6.00**

PRINCIPLES AND PRACTICE OF RADAR

By H. E. Penrose **3rd Edition**

Detailed consideration of pulsed and pulse forming circuits at high and low levels, tuning circuits and applications of micro wave technique to transmitters, receivers, feeders, aerial systems. **704 pages, illustrated $8.75**

BELL LABORATORIES SERIES

For more than twenty years the **Bell Laboratories Series** has represented some of the most notable contributions to the literature of science and engineering. Now numbering nearly thirty titles, these volumes have grown out of the broad investigations of the Bell Telephone Laboratories, a research and development organization whose more than 5,000 members deal with every aspect of communications and allied fields. Recent additions to the series include:

RADAR SYSTEMS AND COMPONENTS

Introduction by M. J. Kelly

This first unified, complete presentation of radar systems and components — from basic theory to final application — was made possible by the cooperative effort of 28 members of the technical staff of the Laboratories. Every detail essential for a complete understanding of the subject is included, with full accounts for every step in the design and construction of magnetrons, pulse modulator tubes, receivers, oscillators, rectifiers, antennas, switches, and other components. **Fully illustrated, 1042 pages, $8.50**

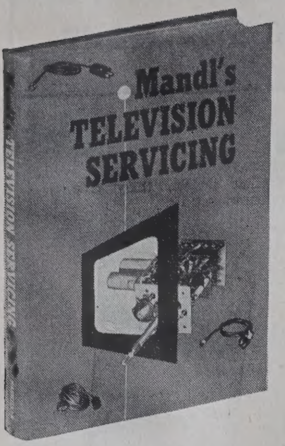
ELECTRICAL TRANSDUCERS AND WAVE FILTERS (Mason)
NETWORK ANALYSIS AND FEEDBACK AMPLIFIER DESIGN (Bode)
EARTH CONDUCTION EFFECTS IN TRANSMISSION SYSTEMS (Sunde)
PIEZOELECTRIC CRYSTALS AND THEIR APPLICATION TO ULTRASONICS (Mason)
TRAVELING-WAVE TUBES (Pierce)
PRINCIPLES AND APPLICATIONS OF WAVEGUIDE TRANSMISSION (Southworth)
ELECTRONS AND HOLES IN SEMICONDUCTORS (Shockley)

Complete descriptive list on request. **D. VAN NOSTRAND COMPANY, Inc., 250 Fourth Avenue, New York 3, N. Y.**

Net

The New

Mandl's Television Servicing



pinpoints the trouble for you; shows you exactly how to correct it.

An easy-to-use 421-page guide

•

with over 300 really helpful illustrations

EVERY FLAW or failure in either sound or picture that you're likely to encounter in today's TV sets is explained in this superb new handbook, including those hard-to-find troubles.

A complete master index of symptoms and their possible causes, and clear pictures of troubles as they appear on the TV screen, enable you to identify any particular failure quickly and to turn directly to the procedures for correcting it.

Large block diagrams show you where each circuit and its elements are in the receiver. Detailed, illustrated trouble-shooting procedures tell you just what to do. Brief, clear reviews of the principles involved and full instruction on the use of test equipment, with oscilloscope patterns for checking test results, help you to be SURE that the adjustments you make will achieve the desired results.

You won't have to thumb through batches of manufacturers' notes, never sure that you have the right directions for the latest improvements. Here is all the information and the detailed how-to-do-it instruction you want in order to KNOW exactly how to get the RIGHT results, with many expert suggestions for improving overall performance. $5.50

- **Handy lists of troubles that may occur in each section of the TV receiver and the exact procedures for correcting each.**
- **Full explanation of unusual hard-to-find troubles, where they occur, how to overcome them.**
- **Ways of improving overall performance, improve gain, reduce ghost reception, minimize interference.**
- **Special servicing instruction for color TV; for VHF and UHF receivers; the latest circuits and innovations.**
- **Large, clear schematics of commercial circuits for all basic parts of the TV receiver.**
- **New, original photographs showing trouble symptoms as they appear on the TV screen for quick identification.**

Men on the job recommend these top-ranking aids

Television for Radiomen

by Edward M. Noll

"By the time you are through with this book you'll have a GOOD foundation in TV," writes a radio and TV engineer. "You'll discover that the author has treated a much written-about subject in a refreshingly original manner." Written by a man nationally known for his many helpful articles on TV operation and servicing, this book explains VERY fully and clearly the construction, function, and operating principles of EVERY circuit and element in TV reception, the principles of transmission, and the techniques of installing, aligning, and adjusting today's TV receivers. From this book you'll find it easy to acquire the fundamental knowledge you MUST have to qualify for the many good jobs now waiting for you in television. $7.75

Television and FM Antenna Guide

by E. M. Noll and M. Mandl

A basic course on antenna theory combined with a complete handbook on all types of antennas, including all commercial models, high-gain antennas for fringe areas, antennas for special locations and for the proposed UHF allocations. Shows you exactly how to determine, quickly and accurately, the best type of antenna for the site and the best position for it; how to minimize standing waves, noise, etc. on the transmission line; how to overcome special kinds of interference, and all other techniques for getting the most out of the antenna system. Based on extensive testing done by the authors, all information on antenna characteristics, dimensions, and comparative performance is completely accurate and reliable. $6.25

An Introduction to Practical Radio

by D. J. Tucker

One of the best "fundamentals" book ever published, widely praised by authorities. "The chapter on Kirchhoff's laws is a model," writes the reviewer in *Electronics*. "Also goes further into the use of vectors for solving a-c circuit problems—a must for today's radio technicians." Here are ALL the basic how's and why's of radio, in terms you can EASILY understand and apply. The necessary mathematics is explained at the points where it is used. Each principle is accompanied by many examples of its use in the construction and operation of radio apparatus. "This book is everything you say it is," says one of the thousands of satisfied users. You'll find it admirable for a solid foundation in radio or for a brush-up on points you may have forgotten. $5.00

Movies for TV

by John Battison

All the information needed to insure success with movies for televising. Clear, simple explanations of the basic TV principles that govern the broadcasting of movies. Complete details on the construction, operation and comparative costs of cameras, projectors, kinescope recording, sound and lighting equipment, equipment for animation, editing, making titles and special effects. Practical advice on the do's and don't's of making newsreels, commercials, and features on film for telecasting. An exceptionally valuable guide both for technicians and for producers. $5.00

Radio and Television Mathematics

by Bernhard Fischer

"By far the best book for preparation for FCC exams," writes one radioman, echoing the opinion of countless others. "A book for the place of honor beside its natural partner, the slide rule," says *Radio-Electronics*. Here are step-by-step solutions not only for every question requiring mathematics in the FCC study guide, but also for hundreds of other circuit problems in radio, TV, and industrial electronics. You'll find, conveniently arranged under radio topics such as antenna power, plate-to-plate voltage and 400 others, the formulas to use, the numerical values to substitute, and the step-by-step solutions to 721 problems. Whatever YOUR problem, whether it is how to correct the power factor of a motor, convert polar to j-notation in a matter of seconds, find the impedance and length of a matching stub between a TV antenna and its transmission line, or any of hundreds of other problems you're apt to encounter, here is the clear and exact solution. $6.75

See them at your local distributor's, or write for on-approval copies

**THE
MACMILLAN
COMPANY**

**60 Fifth Ave., N.Y. 11
Chicago 16 • Dallas 1**

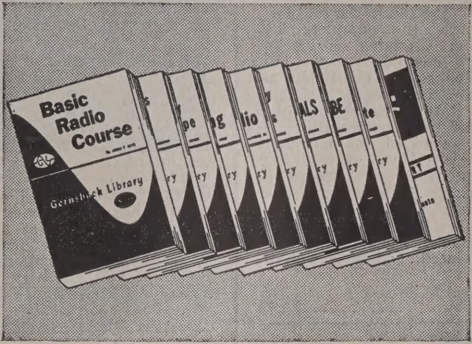
THE MACMILLAN COMPA

Gernsback Library Books

A TREASURY OF TECHNICAL INFORMATION ON RADIO, TELEVISION, AUDIO — AT THE LOWEST PRICES IN THE FIELD!

BASIC RADIO COURSE—No. 44

A practical book on the basic principles of radio. Easy to understand and a pleasure to read. John T. Frye, RADIO-ELECTRONICS' popular technician-writer, backed by 25 years of practical experience, teaches you more about why tubes, capacitors, resistors, and other components act as they do in a modern radio than you'll learn from most books costing dollars more. Begins with Ohm's Law and covers the function of every component from antenna to speaker. Includes tips on advanced servicing techniques. **176 pages. 120 illustrations. Hard cloth cover. 5¾" x 8¾". $2.25**



MODEL CONTROL BY RADIO—No. 43

First complete low-priced book on radio-control! Written by an authority in the field. The author is an instructor in guided missile electronics at Fort Bliss, Texas. He tells what radio control is and how to use it for remote control of model boats, planes, autos, etc. In addition to theory, the book explains to beginners and experts the construction of coders, transmitting and receiving systems, decoders, power control circuits and servomotors, as well as complete control systems. Illustrations explain each step. **112 pages. 5½" x 8½". $1.00**

SIX LOW-PRICED BOOKS ON RADIO • AUDIO • SERVICING

RADIO TUBE FUNDAMENTALS—No. 45

To know radio, you must know tubes—and here's the first complete book to give you a clear-cut explanation of how and why tubes act as they do in modern radio circuits. Talks tubes from the standpoint of the technician, rather than the engineer. Goes from simple diodes to complicated multi-purpose tubes. **96 pages. 74 illustrations. 5½" x 8½". $1.00**

THE CATHODE-RAY OSCILLOSCOPE—No. 40

A comprehensive book that details the how and why of a 'scope and how to use it in servicing and amateur operation. Television, FM and AM receiver alignment described in progressive stages. Also covers audio output measurement, locating hum, checking modulation and general trouble shooting. A great help in TV servicing. **112 pages. Illustrated. 5½" x 8½". 75¢**

HIGH-FIDELITY TECHNIQUES—No. 42

One of the greatest high-fidelity books ever written at any price. At a dollar, it's a buy of a life-time! James R. Langham, RADIO-ELECTRONICS' famous audio writer, an acknowledged authority in the field, tells you how to design, build and get top performance from your high-fidelity equipment. Spiced with humor rare in technical books. **112 pages. Illustrated. 5½" x 8½". $1.00**

PRACTICAL DISC RECORDING—No. 39

The last word in making good recordings. Covers underlying principles as well as actual practical techniques. Tells how to make the best possible records from all types of equipment, what you need to make good records, what to look for in buying it and how to use it to best advantage. A full chapter is devoted to each component. **96 pages. Illustrated. 5½" x 8½". 75¢**

PUBLIC-ADDRESS GUIDE—No. 41

Shows the way to extra income in big-paying P.A. work. Covers microphones, phonographs, amplifiers, speakers, indoor and outdoor work—in fact, every phase of profitable public address installation and maintenance. Concludes with construction details for a P.A. system which will cover 90% of all your P.A. business. **80 pages. Illustrated. 5½" x 8½". 75¢**

AMPLIFIER BUILDER'S GUIDE—No. 33

One of the most popular of all the Gernsback Library Books! Especially valuable to the designer and builder of audio equipment. Part one covers theory with special emphasis on phono pickups, tone control, phase inversion, equalization, etc. Part two gives construction details on a variety of amplifiers with power outputs of from 8 to 30 watts. **64 pages. Illustrated. 5½" x 8½". 50¢**

RADIO-ELECTRONICS

RADIO-ELECTRONICS —
Today's most important magazine in Radio — Television — Audio!

Month after month, RADIO-ELECTRONICS gives you the latest, freshest and most important data on servicing, construction, theory and new developments. Each issue offers top technical articles by the best writers in the field — Mandl, Langham, Frye, Turner, Dorf and others — plus a unique and stimulating editorial by Hugo Gernsback, editor and publisher. The biggest 30¢ buy in the industry. Get your copy every month.

EXTRA! TWO NEW ADDITIONS TO THE GERNSBACK LIBRARY!

TELEVISION TECHNOTES—No. 46

No TV book like it on the market — hundreds of actual case histories of serious troubles found in scores of TV sets made by all the leading manufacturers in the U. S. Compiled from manufacturers' service notes and from reports of practicing service technicians, it lists specific troubles found in actual sets and gives explicit directions for correcting them. **128 pages. 55 illustrations. 5½" x 8½". $1.50**

RADIO & TV HINTS—No. 47

A storehouse of short cuts and kinks for the practicing technician! All new! Hundreds of "tricks of the trade" for adding speed and efficiency to your servicing work. Gathered by the editors of RADIO-ELECTRONICS during the last few years from suggestions by men behind servicing benches all over the United States. **112 pages. Illustrated. 5½" x 8½". $1.00**

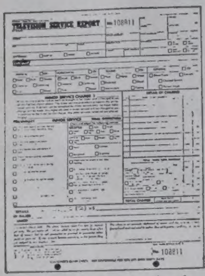
RADCRAFT PUBLICATIONS, INC.

25 West Broadway **New York 7, N. Y.**

OELRICH PUBLICATIONS

TECHNICAL GUIDES AND BUSINESS FORMS FOR THE RADIO & TELEVISION SERVICE INDUSTRY

TELEVISION SERVICE REPORT

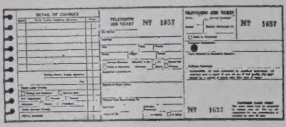


- Merchandise your TV service.
- Check off system breaks down entire job to show price of each item.
- Supplies complete service data for future reference.

3 copy carbon snap out form (8½" x 11") to handle the complete TV service operation. Contains service department copy, customer copy, and office copy. Spaces provided for all necessary information and service data on set repair. Statements of guarantee and responsibility prominently displayed. Space provided for customer receipt signature. Minor service and final inspection details are shown in check off listing. Serially numbered customer claim check is part of first copy and contains space (8¼" x 1") for dealer imprint. Each is serially numbered with space provided for dealer's own job numbers. Forms cannot be supplied to specific serial number or imprinted. Shipping weight, 4 lbs.

TELEVISION SERVICE REPORT
No. 106 (Carton of 100 forms) Net Each................$3.95

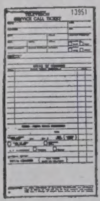
TELEVISION JOB TICKET



Spiral bound book of 100 (3 part) job tickets for TV service. Spaces provided for customer and set information, detail of charges for parts, tubes, material and services, customer complaint, parts-in-warranty, etc. Claim check section has space for dealer imprint. Each ticket individually numbered on all parts. Index Bristol stock used. Numbered books available 1001-1100 through 2901-3000. Book size 11" x 4" x 1¼".

TELEVISION JOB TICKET
No. 107 (Book of 100 TV Job Tickets) Net each.........$1.60

TELEVISION SERVICE CALL BOOK

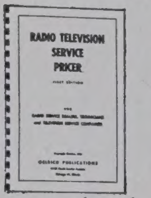


- Supplies important customer receipt.
- Systematizes your service calls.
- Provides complete call data.

The "Television Service Call Book" contains 50 triplicate forms designed specifically for use on home TV service calls. Spaces provided for all essential information. Forms individually numbered. 1st copy white, 2nd copy yellow, 3rd copy pink. Space, 1" x 4¼" provided for dealer rubber stamp imprint. Book measures 9⅛" x 4¼". Fits conveniently into coat pocket or tool kit. Two carbons supplied for neat copies. Books cannot be supplied to specific number.

TELEVISION SERVICE CALL BOOK
No. 104 (Book of 50 Forms) Net each.................$ .75

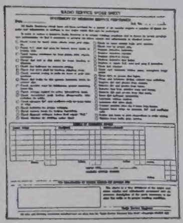
RADIO TELEVISION SERVICE PRICER



Spiral bound book contains 34 pages describing each type service rendered by the Radio & TV service dealer with blank spaces provided for the dealer to record his price for each service. Gummed pricing tabs are supplied to aid in doing a neat pricing job. Complete range of services listed such as home service calls, pickup and delivery, antenna installation, service contracts and many more. Blank gummed pages are supplied to alter, change or add to the description of any service to fit a specific operation if needed. Type of services optional in some cases such as home calls of which three types are shown. Book size 5½" x 8½". Complete instructions for use included.

RADIO TELEVISION SERVICE PRICER
No. 101 Net each.......................................$1.00

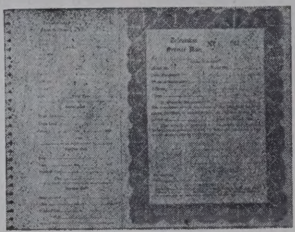
RADIO WORK SHEET



Pad of 50 sheets (8½" x 11") on which spaces are provided for complete details on each repair job. 38 possible check points, adjustments are listed in check-off form. Space provided for listing parts, tubes, material and service rendered as well as dealer rubber stamp imprint. Dealer users find in the "Work Sheet" an excellent means of presenting the set owner with full details on his set repair without spending time in lengthy explanations. Builds customer confidence and good will and assures a thorough repair job every time. Recommended for use with the "Radio Service Record".

RADIO WORK SHEET
No. 109 (Pad of 50 sheets) Net each....................$ .60

TELEVISION SERVICE PLAN

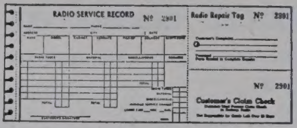


- TV Service Contracts for 30, 90 days or 1 year.
- Contains complete contract terms.
- For complete control during contract period.

Spiral bound book contains 100 TV service contracts. Two part form contains owner certificate with terms and conditions easily understandable. Record stub (3⅛ x 8½) remains in book and contains spaces for all customer and set information plus spaces for details of installation and eight service calls. Each contract and stub numbered individually. Contracts are printed in attractive brown with durable maroon cover. Costs of service throughout the contract period can be readily determined at any time during the period and complete control over each contract is assured. Contracts are numbered in books of 100. Numbers start at 101 and run through 1100 in books of 100 numbers. Set owner certificate measures 6½ x 8½.

TELEVISION SERVICE PLAN
No. 105 (Book of 100 Service Contracts) Net each........$2.25

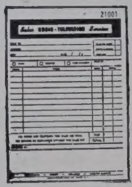
RADIO SERVICE RECORD



Spiral bound book of 100 (3 Part) job tickets for radio service. Spaces provided for customer and set information, detail of charges for parts, tubes, material and services. Claim check section has space for dealer imprint. Each ticket numbered on all parts. Index Bristol stock used. Numbered books available 1001-1100 through 2901-3000. Book size 11" x 4" x 1¼".

RADIO SERVICE RECORD
No. 108 (Book of 100 Radio Job Tickets) Net each........$1.50

RADIO-TV CASH SALES BOOK

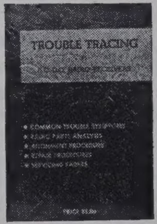


- For billing sales or service.
- Individually numbered.
- The low cost billing method.

The "Radio-TV Cash Sales Book" contains 50 triplicate forms individually numbered Specifically designed for use in billing service in the shop or home. Can also be used on charge sales or as a receipt for cash payments. Book measures 5" x 9" and is supplied with 2 carbons for neat copies. Copy colors are: 1st copy, white, 2nd copy, yellow, 3rd copy, pink. Space 1" x 5" provided for dealer rubber stamp imprint. Books cannot be supplied to specific number.

RADIO-TV CASH SALES BOOK
No. 100 (Book of 50 forms) Net each.................. $ .85

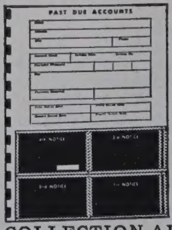
TROUBLE TRACING IN AC-DC RADIOS



Fifty pages packed with essential and fundamental servicing information on A.C. D.C. radios. Simply written so that any one with little radio servicing experience can readily understand. Simple alignment procedures for superhets as well as T.R.F. Fifty case histories with their possible solutions as well as complete individual parts defect analysis are given. Practical down to earth information that can only come from actual experience best describes the book's content.

TROUBLE TRACING IN AC-DC RADIOS
No. 103 Net each.....................$1.00

COLLECTION-AIDER



Spiral bound book containing 50 past due account sheets printed on gummed stock. Sheets contain spaces for all account information for quick reference. Four reminder stickers are part of each sheet, perforated for easy detachment, each containing a message calling the customer's attention to the account delinquency. Stickers are marked 1st Notice, 2nd Notice, 3rd Notice and 4th Notice. Follow-up feature uses the stickers in this way: 1st Notice attached to first past due statement or invoice, 2nd to 2nd, 3rd to 3rd, etc. Spaces provided to enter dates each past due sent to tell progress at a glance.

COLLECTION-AIDER
No. 102 (Book of 50 sheets) Net each...................$1.00

If you want to KNOW about AUDIO *take the lead from* AUDIO ENGINEERING *the leading publication in the field...*

Æ is universally regarded the most Authentic and Reliable exponent devoted exclusively to the subject of high-quality sound reproduction. Every possible subject of interest to the Engineer and the Audio Experimenter is to be found comprehensively and authoritatively covered, practically treated, and profusely illustrated.

Each issue is just 'jam-packed' with important information, new developments, new ideas, and enlightening data. Servicemen and Technicians, particularly, find a wealth of workable, detailed material, presented for ready and practical application.

A partial listing reveals coverage of such subjects as:

Amplifier Design and Construction
Equalizer Networks
Tone Controls
Loudspeaker Enclosures
Speaker Crossover Networks
Tape Recording
Pre-amp Design and Construction.
Low- and High-Pass Filters
Attenuator Design Factors
New Product and Patent Reviews
Record Reviews
Custom Home Installations
Reports on Foreign Developments

In fact, everything worth while, everything worth knowing about Audio finds its way into the many pages of AUDIO ENGINEERING. *Each month . . . every month . . . 12 times a year* Æ is on the job . . . keeping pace with up-to-the-minute progress, faithfully reporting and analyzing every new development for the enlightenment and ultimate benefit of the readers.

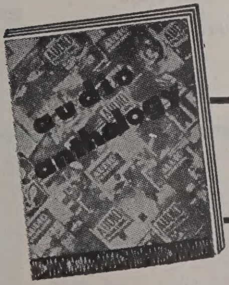
AUDIO ENGINEERING is published *monthly* and is available at your Dealer or Distributor at 35¢ an issue.

A Subscription assures you of Your Personal Copy post delivered regularly, each and every month.

RATES:—U.S.A., Canada, and Pan-American Union:
1 year, $3.00 — 2 years, $5.00.
Other Countries: 1 year, $4.00 — 2 years, $7.00.
SPECIAL GROUP RATE of 6 subscriptions or more:
1 year . . . $2.00 each.

IMPORTANT!

You'll want to see . . . The 2nd AUDIO ANTHOLOGY. Order Your Copy . . . Now

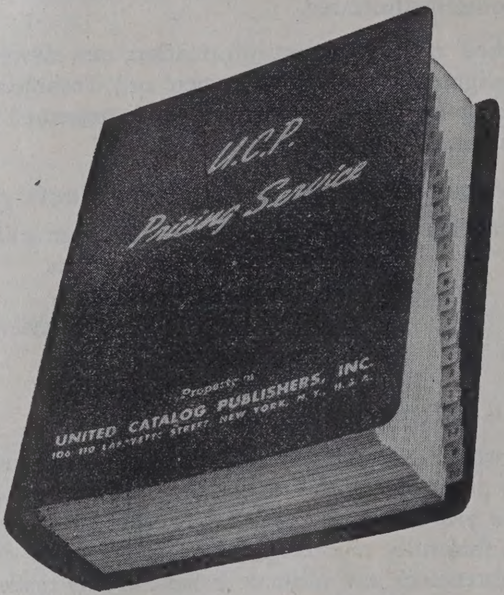


AUDIO ENGINEERING
342 Madison Avenue, New York 17, N. Y.

PRICES

Prices of manufacturers and suppliers' products listed in **RADIO'S MASTER** are subject at all times to change without notice — they should not be considered final.

Get quick on-the-spot quotations from your distributor who subscribes to our perpetual up-to-the-minute **PRICING SERVICE.**


U.C.P.
Pricing Service
Property of
UNITED CATALOG PUBLISHERS, INC.
106-110 Lafayette Street, New York, N. Y., U. S. A.

Official Pricing System of radio - electronic - television parts and equipment. Supported by the industry: distributors, manufacturers, and their sales representatives.

•

Loose-leaf, flexible binder. Contains over 1100 pages.

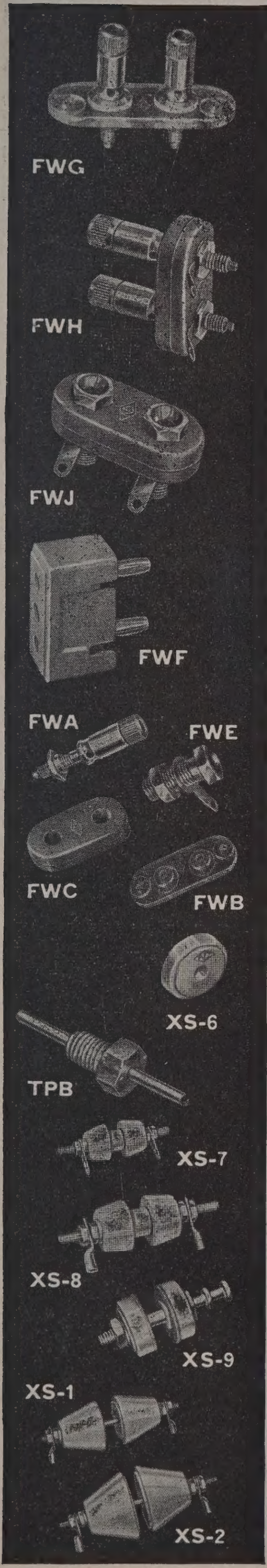
•

Published by
UNITED CATALOG PUBLISHERS, INC.
106-110 Lafayette Street
New York 13, N. Y.

DELIVERY

Delivery is often dependent on the availability of **raw materials.** So check with your distributor for **delivery information.**

POPULAR National COMPONENTS



FWG
A Victron terminal strip for high frequency use. The binding posts take banana plugs at the top, and grip wires through hole at the bottom, simultaneously, if desired.

FWH
The insulators of this terminal assembly are moulded R-39 and have serrated bosses that allow the thinnest panel to be gripped firmly, and yet have ample shoulders. Binding posts same as FWG above.

FWJ
This assembly uses the same insulators as the FWH above, but has jacks. When used with the FWF plug (below), there is no exposed metal when the plug is in place.

FWF
This moulded R-39 plug has two banana plugs on ¾" centers and fits FWG, FWH or FWJ above. Leads may be brought out through the top or side.

FWA, Post
Brass Nickel Plated

FWE, Jack
Brass Nickel Plated

FWC, Insulator
R-39 Insulation.

FWB, Insulator
Polystyrene insulation.

XS-6
A low-loss steatite bushing for ½" holes. Passes 6-32 screw.

TPB
A threaded polystyrene bushing with removable .093 conductor moulded in, ¼" diam., 28 thread.

XS-7, (⅜" Hole)
XS-8, (1½" Hole)
XS-1, (1" Hole)
XS-2, (1½" Hole)

XS-9
Feed-through insulator. Hole size 13/64". Insulators are adjustable on silver-plated terminal stud for different partition thicknesses. Ceramic insulators are of high grade materials designed for high frequency equipment.

AA-3
A low-loss steatite spreader for 6 inch line spacing. (600 ohms impedance with No. 12 wire.)

AA-5
A low-loss steatite aircraft-type strain insulator.

AA-6
A general purpose strain insulator of low-loss steatite.

GS-1, ½" x 1⅜"
GS-2, ½" x 2⅞"
GS-3, ¾" x 2⅞"
GS-4, ¾" x 4⅞"
GS-4A, ¾" x 6⅞"

Cylindrical low-loss steatite standoff insulators with nickel plated caps and bases.

GSJ, (not illustrated)
A special nickel plated jack top threaded to fit the ¾" diameter insulators GS-3, GS-4 & GS-4A.

GS-10, ¾" high

GS-10S (not illustrated) but same as GS-10 except includes threaded stud in top end.

GS-5, 1¼" high
GS-6, 2" high
GS-7, 3" high

These cone type standoff insulators are of low loss steatite. They are moulded with a tapped hole in each end for mounting as follows:

GS-5, 8-32 tap 7/16" deep; GS-6 & GS-7, 10-24 tap 11/16" deep; GS-10, 6-32 tap ¼" deep and GS-10S as noted above.

GS-8, with terminal
GS-9, with jack

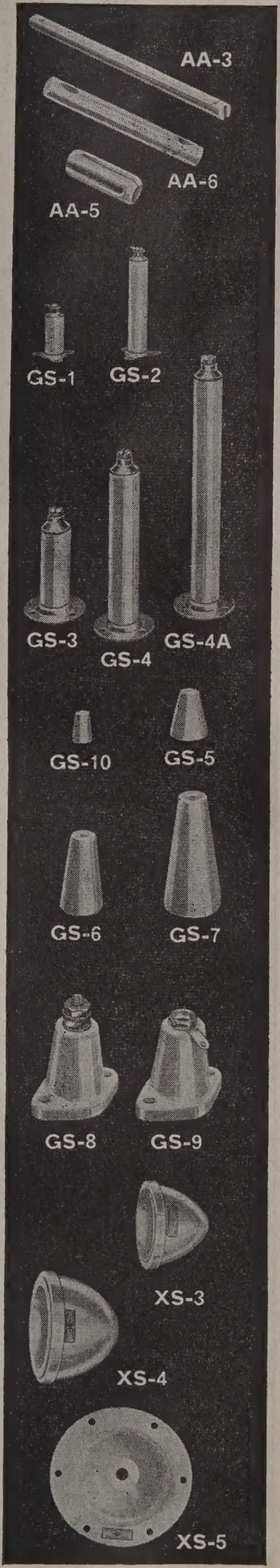
These low-loss steatite standoff Insulators are also useful as lead-through bushings.

XS-3, (2¾" hole)
XS-4, (3¾" hole)

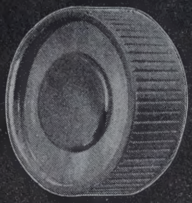
Prices are per pair and include nickel plated spindles, lugs and hardware. These low-loss steatite bowls are ideal for lead-in purposes at high voltages.

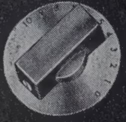
XS-5, Without Fittings

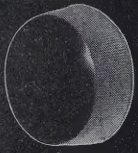
XS-5F, With Fittings
These big low-loss bowls have an extremely long leakage path and a 5¼" flange for bolting in place. Insulation steatite. Fittings include nickel plated brass spindles, lugs, nuts and washers.

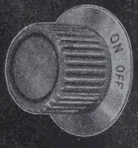


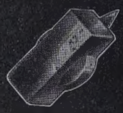
POPULAR National COMPONENTS

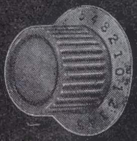

HRT


R

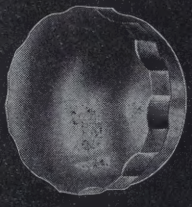

VD-16

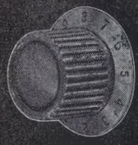

HRS-1


HRP-P

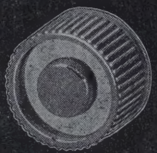

HRS-2

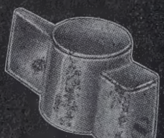
HRP


HRK


HRS-3

HR

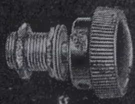

HRT-M


HRB

HRM-

SB

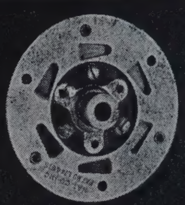
ODL

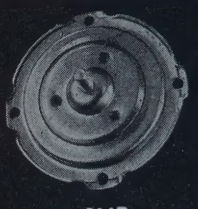

ODD

RSL

DP-1

DP-2


AN


AVD

HRT (gray or black)
The HRT knob is 2⅛" in dia. and fits ¼" shafts. This knob has a chrome appearance circle and combined with the HRS series shown below gives the new look to panel layouts.

HRS (gray or black)
The HRS series knobs are a popular easy to grip knob. They are molded of high quality plastic and have 1⅜" dia. chrome plated bevel skirts fit ¼" shafts available in the following scales:

HRS-1	ON-OFF	through 30°
HRS-2	5-0-5	through 180°
HRS-3	0-10	through 300°
HRS-4		Single etched line
HRS-5	0-10	through 180°

HRT and **HRS** knobs can be supplied in quantity in any color.

HR (gray or black)
An HRS type knob without the chrome plated skirt but with a white dot for spotting relative control settings.

HRB
Ideal for bandswitching or other applications where a switch is turned to several index positions, the new HRB lever knob has just the right feel — a bright zinc alloy die casting.

HRM
Small knurled brass knob, satin chrome finish, arrow head black filled. Two 4-40 Allen set screws used.

SB
A nickel plated brass bushing ½" dia. (Fits ¼" shaft).

ODL
A locking device which clamps the rim of O, K, L and M Dials. Brass, nickel plated.

ODD
Vernier pinch drive for O, L, or other plain dials.

RSL (fits ¼" shaft)
Rotor shaft lock for TMA, TMC and similar condensers.

DP-1
Chrome-plated dial pointer

DP-2
Diamond head dial pointer

AN Vernier Mechanism
A vernier mechanism ratio 5-1 has an insulated output shaft coupling for ¼" shafts. Drive Shaft fits 3/16" knob.

AVD Vernier Mechanism
Similar to AN-Output shaft coupling is non insulated.
For commercial uses many variations available. Write for further particulars.

R
This small dial has a 1⅝" dia. scale calibrated 0-10 in 180° for increased reading with clockwise rotation. Black bakelite knob. Fits ¼" shaft.

VD-16
National's popular dial knob. Same as used on type N knob. Fits ¼" shaft.

VD-16A
Same as above but fits 3/16" shaft.

HRP-P
Black bakelite knob 1¼" long and ½" wide. Equipped with pointer. Especially suitable for use on wafer and other rotary switches on laboratory equipment and the like. (Fits ¼" shaft).

HRP
The type HRP knob has no pointer but is otherwise the same as the knob above. Recommended for uncalibrated or hard-tuning controls. (Fits ¼" shaft).

HRK
Black bakelite knob 2⅜" dial — extremely rugged. This is the knob used on National type O and type L dials.

HRT-M
This is a smaller version of the HRT. Available in choice of gray or black — is 1-7/16" in diameter.

POPULAR National COMPONENTS

N Dial Net $4.50

AD Dial Net $3.00

The four-inch N and AD Dials have engine divided and die stamped scales respectively. The N Dial has a decimal vernier; the AD Dial employs a pointer. The planetary drive has a ratio of 5 to 1, and is contained within the body of the dial. 2, 3, 4, 5 or blank scale. Fits 1/4" shaft. **Specify scale.**

B Dial Net $2.70

"Velvet Vernier" Dial, Type B, has a compact veriable ratio 6 to 1 min., 20 to 1 max. drive that is smooth and trouble free. The case is black bakelite. 1 or 5 scale. 4" dia. Fits 1/4" shaft. **Specify scale.**

BM Dial Net $2.10

The BM Dial is a smaller version of the B for use where space is limited. The drive ratio is fixed. Although small in size, the BM Dial has the same smooth action as the larger units. 1 or 5 scale. 3" dia. Fits 1/4" shaft. **Specify scale.**

AM Dial Net $2.25

The original "Velvet Vernier" mechanism in a metal skirted dial 3" in dia. ratio 5 to 1. It is available with 2, 3, 4, 5 or 6 scale and fits 1/4" shaft.

P Dial Net $1.00

The new P dial is the same as the AM except direct drive.

Type O, 3 1/2" dia., scale 2, with HRK knob, fits 1/4" shafts. Net $1.00

Type L, same as O except 5" dia., scale 2 only. Net $1.95

Type K, same as O except less knob, complete with ODD vernier drive, scale 2 only. Net $1.50

Type M, same as K except 5" dia., scale 2 only. Net $2.25

The dials at the right are for individual calibration: all four employ the noted 5:1 drive ratio Velvet Vernier mechanism and are of excellent quality.

MCN Dial Net $2.70

The MCN dial has been scaled down to lend itself ideally to mobile installations and small converters and tuners. It may also be mounted on the standard 3 1/2" rack panel where such mounting may be desirable. The dial provides three calibrating scales and a 0-100 logging scale. On the rear side of the dial, the mechanism extends 1/4" below the dial frame. 2 3/4" H. x 3 7/8" W.

SCN Dial Net $3.00

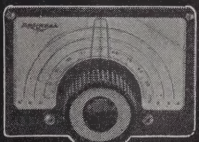
The SCN dial provides the same dial scales as the ACN dial but in a reduced size. It is used where economy of panel-mounting space is desirable and where a smaller dial would be out of proportion with the size of the panel. 4-7/16" H. x 6 1/4" W.

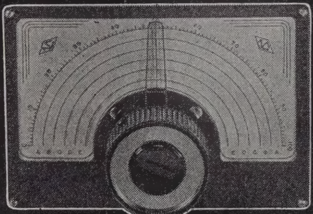
ICN Dial Net $6.00

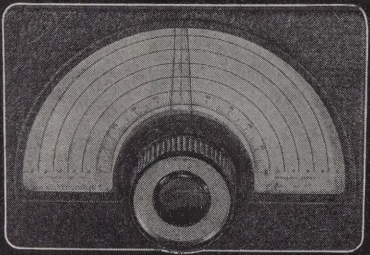
The ICN dial meets those hundreds of requests from amateurs the world over for an illuminated ACN dial. Two dial lights mounted on the top corners of the dial provide efficient and even illumination on all bands. The dial window has been blanked out in semi-circular shape to prevent shadow casting. Dial scales are the same as those used on the ACN dial. 5 1/8" H. x 7 1/4" W.

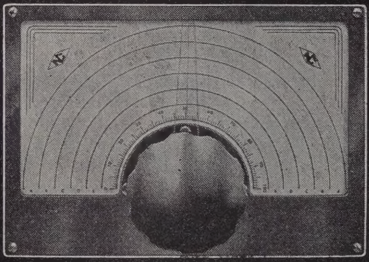
ACN Dial Net $3.30

The ACN is the original of this type dial, a National design for the benefit of experimenters who "build their own" and desire direct calibration. 5" H. x 7 1/4" W.


MCN

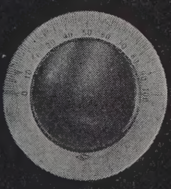

SCN


ICN

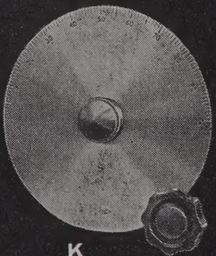

ACN

DIAL SCALES

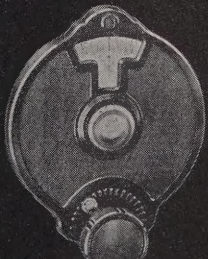
Scale	Divisions	Rotation	Direction of Condenser Rotation for increase of dial reading
1	0–100–0	180°	Either
2	0–100	180°	Counter Clockwise
3	100–0	180°	Clockwise
4	150–0	270°	Clockwise
5	200–0	360°	Clockwise
6	0–150	270°	Counter Clockwise

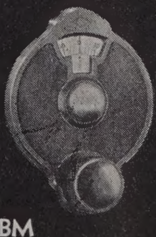

AM

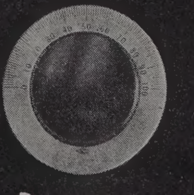
O
L


K
M

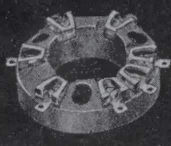
N
AD


B

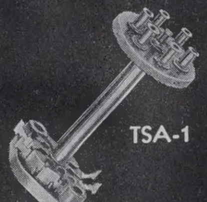

BM


P

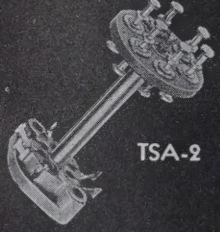
POPULAR National COMPONENTS



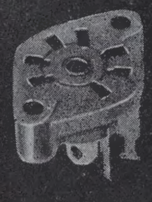
XLA



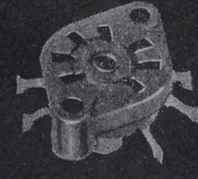
TSA-1



TSA-2



XOA-7 (Axial)



XOR-7 (Radial)

XLA
A low-loss socket for the 6F4 and 950 series acorn tubes for frequencies as high as 600 Mc. Conventional by-pass condensers may be compactly mounted between the contact terminals and the chassis. Low contact resistance, short and direct leads and low and constant inductance are features.

TURRET SOCKET ASSEMBLIES

TSA-1, TSA-2 Designed for our 7-pin and 9-pin miniature tube sockets. Permits compact sub-assembly wiring at base of socket. Cadmium-plated brass center support has a standard length of two inches. Silver-plated brass terminal studs. Available either with holes through which leads can be drawn, or with solid studs. Center supports of varying lengths and other types of terminals can be supplied to manufacturers in quantity.

XOA-7 (mica-filled bakelite)

XOR-7 (mica-filled bakelite)

These high quality sockets for the 7 pin miniature tubes have silver plated beryllium copper contacts that correctly grip the tube pins close to the base of the tube to provide the short leads and low inductance so necessary in ultra-high frequency design.
A novel feature of these new sockets is the interchangeability of the contacts, which are easily removed for replacement. This permits the use of a mixture of axial (XOA) and radial (XOR) type contacts in the same socket to obtain the shortest possible leads, or minimum size in tight places. The above sockets all mount with two 4-40 screws on .875" centers. Chassis cutout should be ¾" dia. Shields for use with these sockets are available.

XOA-9 (mica-filled bakelite)

XOR-9 (mica-filled bakelite)

These sockets are for the new 9-pin miniature tubes. The XOR-9 (not illustrated) has radial contacts. Each has all of the features described above for the 7-pin types and they also mount with 4-40 screws. Mounting center dimension is 1⅛", the chassis cutout should be 13/16" dia.

TC SERIES MINIATURE TUBE CLAMPS

Easy to assemble — just two pieces — a spring clip and a base of stainless steel. Base mounts in same holes, using same screws or rivets, as sockets. Easy to remove tube, simply snap off spring clip. Made to government specifications. Types available for all standard miniature tubes.

Type No.	Tube Body Length	Type Socket
TC-1	1⅛"	7-pin
TC-2	1½"	7-pin
TC-3	2"	7-pin
TC-4	1⅛"	9-pin
TC-5	1-9/16"	9-pin
TC-6	2"	9-pin

CIR SERIES SOCKETS

Any Type

Always a popular National component, type CIR Sockets feature low-loss steatite insulation, a contact that grips the tube prong for its entire length, and a metal ring for six position mounting.
XC-4, 5, 6, 7S, 7L and CIR-4, 5, 6, 7S and 7L all have 1-27/32" mounting centers. CIR-8E has slotted holes in plate but will mount on 1-27/32" center. CIR-8 and XC-8 have 1½" mounting centers.

XC SERIES SOCKETS

XC-4, XC-5, XC-6, XC-7S, XC-7L, XC-8

National wafer sockets have exceptionally good contacts with high current capacity together with low loss steatite insulation. All types have a locating groove to make tube insertion easy. The XC-6 is ideal for use with AR-17 coils.

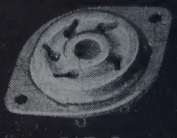
HX-29 A low-loss wafer socket with steatite insulation for the popular 829 and 832 tubes.

JX-51 A low loss steatite wafer socket for the 813 and other tubes having the Giant 7-pin base. (not illustrated)

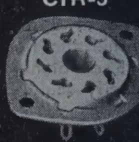
XM-10 A heavy duty metal shell socket for tubes having the XU 4-pin base.

XM-50 (see XM-10 for style) A heavy duty metal shell socket for tubes having the Jumbo 4-pin base ("fifty watters").

HX-100 A low loss wafer socket suitable for the type 4-125-A, 4-250-A and other tubes using the Giant 5-pin base. Shield grounding clips are supplied which mount on the chassis with the socket mounting screws to ground the tube shield at three points. Air holes are provided in the socket to permit forced air cooling.



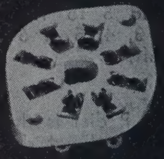
CIR-5



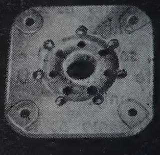
CIR-8

CIR-8E

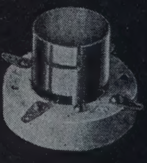
XC-5



XC-8



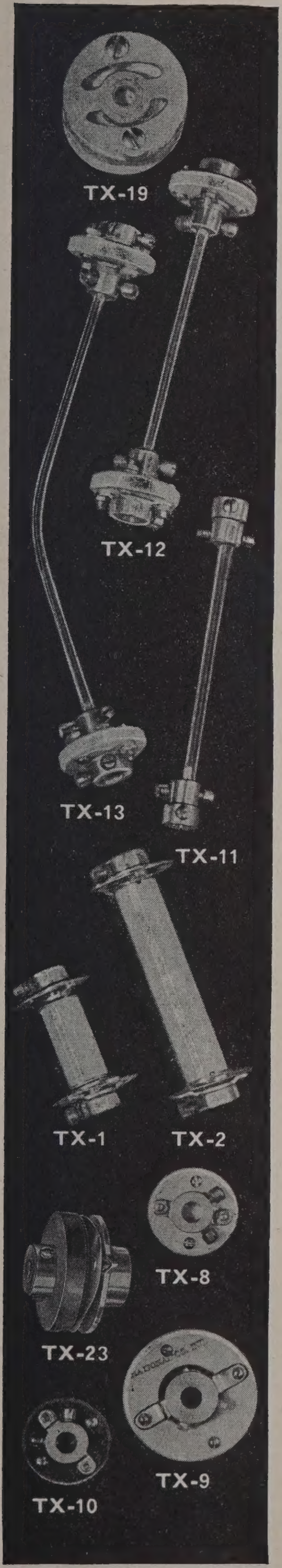
HX-29



XM-10

HX-100

POPULAR National COMPONENTS



SHAFT COUPLINGS

TX-19

A steatite insulated flexible coupling for 1/4" shafts. Conservatively rated at 5000 volts peak. Diameter 1⅜". length 1". Length and flash-over voltage can be increased by turning collars outboard.

TX-11

The flexible shaft of this coupling connects shafts at angles up to 90 degrees, and eliminates misalignment problems. Fits 1/4" shafts. Length 4¼".

TX-12, Length 4⅝"

TX-13, Length 7⅛"

These couplings use flexible shafting like the TX-11 above, but are also provided with steatite insulators at each end.

TX-1, Leakage path 1"

TX-2, Leakage path 2½"

Flexible couplings with glazed steatite insulation which fit 1/4" shafts.

TX-23

A deluxe insulated flexible coupling designed for coupling 1/4" shafts. Will handle a maximum radial misalignment of 1/16" also 2 degrees maximum angular misalignment.

TX-24

Same as TX-23, shaft size 5/32".

TX-25

Same as TX-23, non-insulated.

TX-8

A non-flexible rigid coupling with steatite insulation. 1" diam. Fits 1/4" shaft.

TX-10

A very compact insulated coupling free from backlash. Insulation is canvas bakelite. 1-1/16" diam. Fits 1/4" shaft.

TX-10F (Not illustrated)

A new version of the TX-10 which employs thin canvas bakelite strips for flexibility.

TX-22 (Not illustrated)

A non-insulated coupling identical to TX-10 except of all metal construction. Makes good electrical connection between coupled shafts.

TX-9

This small insulated flexible coupling provides high electrical efficiency when used to isolate circuits. Insulation is steatite. 1⅝" diam. Fits 1/4" shaft.

TX-21 (Not illustrated)

Similar to TX-10 except 13/16" long and couples 1/4" shaft to 5/32" shaft.

SAFETY GRID AND PLATE CAPS

SPP-9

Ceramic insulation. Fits 9/16" diameter.

SPP-3

Ceramic insulation. Fits ⅜" diameter. National Safety Grid and Plate Caps have a ceramic body which offers protection against accidental contact with high voltage caps on tubes.

GRID AND PLATE GRIPS

Type 12, for 9/16" Caps

Type 24, for ⅜" Caps

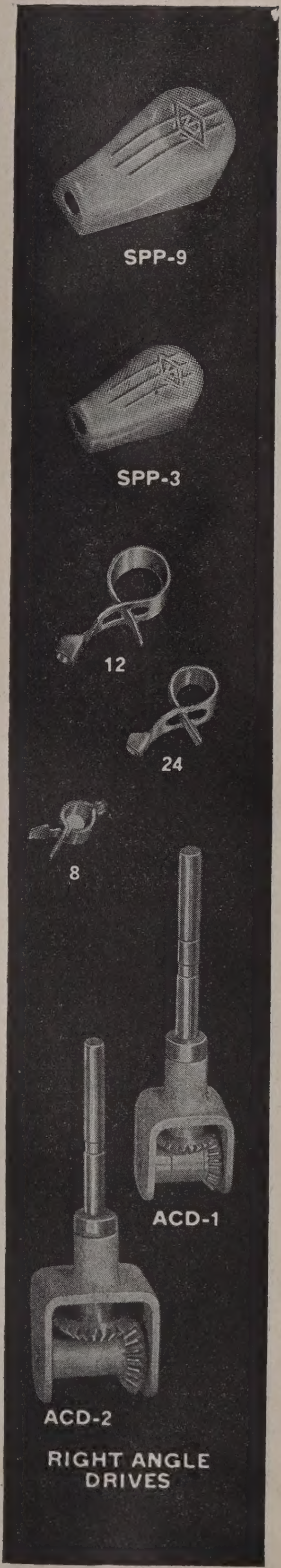
Type 8, for 1/4" Caps

National Grid and Plate Grips provide a secure and positive contact with the tube cap and yet are released easily by a slight pressure on the ear.

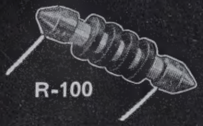
RIGHT ANGLE DRIVES

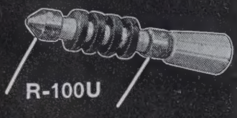
ACD-1, ACD-2, ACD-3

These sturdy drives were developed for use with the new National AMT condensers. They are as compact as the torque requirements will allow and have nickel plated cast frames and bronze gears which operate smoothly without chatter or binding. The ACD-1 has 32 pitch gears and a 1/4" dia. dial shaft and drives 1/4" shafts. ACD-2 has 24 pitch gears (for heavier service) and 1/4" dia. shaft driving 1/4" shafts. ACD-3 is the same as ACD-2 except that it drives ⅜" diameter shafts.

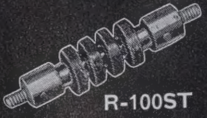


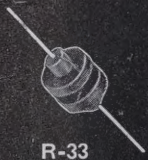
POPULAR National COMPONENTS

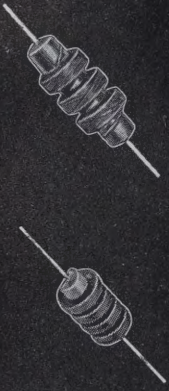

R-100


R-100U

R-100S


R-100ST


R-33


R-50

R-33G

R-60

R-100, R-100U, R-100S, R-100ST

These RF chokes are identical electrically, but differ in mounting provisions. The R-100 employs pigtail leads; the R-100U has pigtail leads and a removable stand-off insulator; the R-100S has cotter-pin lug terminals and a non-removable stand-off insulator; the R-100ST has a 6-32 threaded stud at each end. These chokes are available in 2.5, 5 and 10 millihenry sizes and are rated at 125 milliamperes.

R-33

The R-33 series chokes are 2-section RF chokes available in 10, 50, 100 and 750 microhenry sizes. Also available in this series is a single layer solenoid choke of 1 microhenry inductance. All are rated at 100 milliamperes. The chokes are wound on a ⅝" long form and range in diameter up to 5/16" maximum.

R-50

The R-50 series chokes are 3 and 4-section RF chokes available in 0.5, 1, and 2.5 millihenry sizes. They are rated at 100 milliamperes. The chokes are wound on a 1" long form and have a maximum diameter of 15/32".

R-50-1

A 10 millihenry choke wound on an iron core.

R-33G

The R-33G choke is a 2-section 750 microhenry RF choke hermetically sealed in glass with a current rating of 33 milliamperes. The choke body is 1" long by ⅝" diameter.

R-60

The R-60 choke is a high current RF choke (500 milliamperes) available in 2 and 4 microhenry sizes. The choke is 1⅛" long by 5/16" diameter.

R-300, R-300U, R-300S, R-300ST

These RF chokes are similar in size to R-100 series but have higher current capacity. The R-300U is provided with a removable stand-off insulator at one end. The R-300S has a non-removable stand-off insulator and cotter-pin lug terminals. The R-300ST has a 6-32 threaded stud at each end. Inductance values of 0.5, 1.0, 2.5 and 5.0 millihenries are available with a current rating of 300 milliamperes. R-300, R-300U, R-300S and R-300ST are identical electrically.

R-152

For use in the range between 2 and 4 Mc. Ideal for high power transmitter stages operated in the 80 meter amateur band. Inductance 4 m.h., DC resistance 10 ohms, DC current 600 ma. Coils honeycomb wound on steatite core.

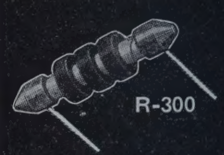
R-154, R-154U

For the 20, 40 and 80 meter bands, Inductance 1 m.h., DC resistance 6 ohms, DC current 600 ma. Coils honeycomb wound on steatite core. The R-154U does not have the third mounting foot and the small insulator, but is otherwise the same as R-154. See illustration.

R-175

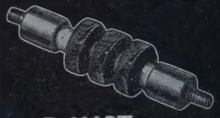
The R-175 Choke is suitable for parallel-feed as well as series-feed in transmitters with plate supply up to 3000 volts modulated or 4000 volts unmodulated. Unlike conventional chokes, the reactance of the R-175 is high throughout the 10 and 20 meter bands as well as the 40 and 80 meter bands. Inductance 225 μh, distributed capacity 0.6 mmf., DC resistance 6 ohms, DC current 800 ma., voltage breakdown to base 12,500 volts.

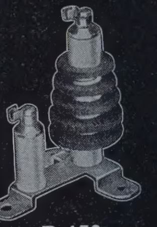
Manufacturers: We have facilities for quantity production of RF chokes of practically any type. Send us your specifications.


R-300

R-300U

R-300S


R-300ST


R-152

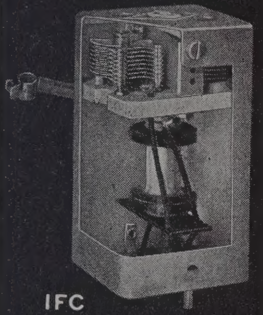
R-154

R-154U

R-175

POPULAR National COMPONENTS

I. F. TRANSFORMERS



IFC
IFCO

IFL
IFM
IFN
IFO

IFR

IFC, Transformer,

IFCO, Oscillator,

Litz coils wound on a polystyrene form and ceramic insulated air-dielectric trimming condensers make these transformers inherently stable and exceptionally retentive of tuning. The 4½" x 2⅜" x 2" shield can has two 6-32 spade bolts for mounting. Available for either 175 KC or 450-550 KC. Specify frequency.

IFL FM Discriminator

IFM IF Transformer

IFN IF Transformer

IFO FM Ratio Discriminator

IFL, IFM, IFN and IFO transformers operate at 10.7 Mc. and are designed for use in FM Superheterodyne receivers. Coils are precision wound on grooved polystyrene forms and tuning is accomplished by movable iron cores. Bandwidth is not affected by tuning slug position. The transformer cans are 1⅜" square and stand 3⅛" above the chassis. Two 6-32 spade bolts are provided for mounting.

The IFL transformer is a 10.7 Mc. FM discriminator transformer suitable for use in conventional FM receiver discriminator circuit and is linear over a band of ±100 Kc.

The IFM transformer is a 10.7 Mc. IF transformer with a 150 Kc. bandwidth at 1.5 db attenuation. Approximate stage gain of 30 is obtained with IFM Transformer and 6SG7 tube.

The IFN transformer is a 10.7 Mc. IF transformer with a 100 Kc. pass band at 1.5 db attenuation. Approximate stage gain of 30 is obtained with IFN transformer and 6SG7 tube.

The IFO transformer is a 10.7 Mc. FM discriminator transformer of the ratio type and is linear over a band of ± 100 Kc.

IFR. Low-priced quality IF transformer. 455 kc. 2⅜" high x 1⅛" square.

IFS. Same as IFR but 1720 kc.

15 Mc. IF transformers suitable for ultra high frequency superheterodynes. They are made in two models with and without variable coupling. Approximate stage gain of 10 is obtained with IFJ or IFK Transformer and 6AB7 tube.

IFJ, with variable coupling

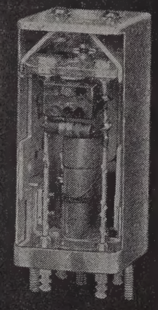
IFK, with fixed coupling

SA:4842

A 456 kc. discriminator transformer for narrow band frequency modulation. Two slug-tuned secondaries are employed and discrimination is accomplished by resonating one at approximately 10 kc. above, the other at approximately 10 kc. below the center frequency of the i.f. channel.

CD-1, ¼ pint can

Liquid Polystyrene Cement — is ideal for windings as it will not spoil the properties of the best coil form.



IFJ
IFK

SA-4842

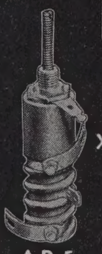
NATIONAL COIL DOPE

CD-1

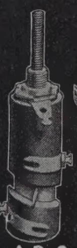
COILS AND COIL FORMS

OSR

XR-50



AR-5



AR-2

AR-2 H.F. Coil

AR-5 H.F. Coil

The AR-2 and AR-5 coils are high Q permeability tuned RF coils on low loss mica-filled bakelite forms. The AR-2 coil tunes from 75 Mc. to 220 Mc. with capacities from 100 to 10 mmfd. The AR-5 coil tunes from 37 Mc. to 110 Mc. with capacities from 100 to 10 mmfd. The inductive windings supplied may be replaced by other windings as desired to modify the tuning range.

XR-50

These mica-filled bakelite coil forms may be wound as desired to provide a permeability tuned coil. The form winding length is 11/16" and the form winding diameter is ½ inch. The iron slug is ⅜" dia. by ½" long.

XR-51 same but with brass slug

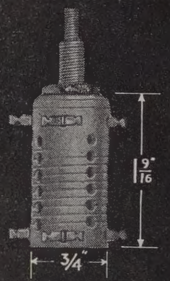
OSR

A shielded oscillator coil which tunes to 100 kc. with .00041 mfd. Two separate inductances, closely coupled. Excellent for interruption-frequency oscillator in super-regenerative receivers.

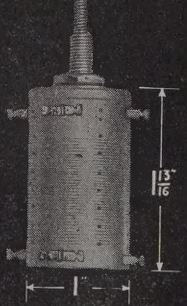
CERAMIC SLUG-TUNED COIL FORMS

XR-70 (grooved for #19 wire, with iron slug)
XR-71 (same, brass slug)
XR-72 (not grooved, winding length 1", with iron slug)
XR-73 (same, brass slug)
XR-60 (grooved for #26 wire, with iron slug)
XR-61 (same, brass slug)
XR-62 (not grooved, winding length 1¼", with iron slug)
XR-63 (same, brass slug)

High-grade ceramic coil forms conforming to JAN specifications. May be wound as desired to provide a permeability-tuned coil. Extra lugs provided.



XR-70 XR-71
XR-72 XR-73

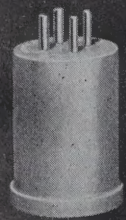


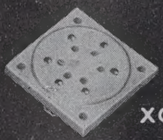
XR-60 XR-61
XR-62 XR-63

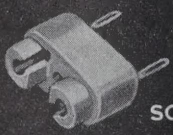
POPULAR National COMPONENTS

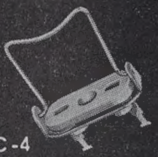
XR-1
XR-2

XR-3

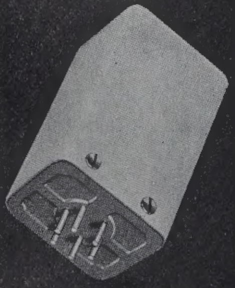

XR-4
XR-5
XR-6


XC-6C


SC-1


SC-4

CFA


PLUG-IN BASE AND SHIELD

Coil Forms molded of R-39 mica-filled bakelite permitting them to be grooved and drilled. Coil Form diameter 1", length 1½".

XR-1, Four Prong

XR-2, Without Prongs

XR-3, molded of R-39 Diameter 9/16", length ¾" without prongs.

XR-4, Four Prong

XR-5, Five Prong

XR-6, Six Prong
Molded of R-39 permitting them to be grooved and drilled. Coil Form Diameter 1½", length 2¼". A special socket is required for the XR-6. National type **XC-6C**

SC, Crystal Sockets
The SC-1, SC-2, and SC-3 are crystal mounting sockets for crystal holders with mounting pins spaced 0.5000", 0.486", and .750" respectively and pin diameters of ⅛" and 3/32" and ⅛" respectively, steatite insulation. Single 4-36 or 4-40 screw mounting for SC-1 and SC-2, single 6-32 screw mounting for SC-3.

SC-4 Ceramic crystal socket with clamp. Pin spacing .500". Pin dia. 1/32".

CFA
The National chart frame is supplied with a celluloid sheet to cover the chart size 2¼" x 3¼" with sides ¼" wide. Durable finish.

PB-10-5
5 Prong base and shield

PB-10-6
6 Prong base and shield

PB-10-A-5
5 Prong base only

PB-10-A-6
6 Prong base only

RZ Coil Shield
1⅜" square x 4" high.

RS Coil Shield
1-7/16" x 1⅞" x 3½" high.

RO Coil Shield
2" x 2⅜" x 4⅛" high. National Coil Shields are formed from a single piece of pure aluminum. They are mechanically strong and have ample thickness to mount small parts on the walls, and include spade belts, for chassis mounting.

T-78 Tube Shield
National Tube Shield type T-78 is a three-piece pure aluminum shield suitable for shielding glass tubes with ST-12 bulb, such as the 6C6 and 6D6 tubes.

JS-1 Jack Shield
For shielding small standard jacks mounted behind a panel, or on the ends of extension coils. Indispensable for reducing hum pickup.

XOS Tube Shields
The XOS tube shield is a two-piece shield for the miniature Button 7 and 9 pin base tubes.

The shield contains a spring which centers tube in shield and holds tube and shield firmly in place.

SHIELDS 7-pin SOCKETS
XOS-1 fit 1-5/16" tube body
XOS-2 fit 1½" tube body
XOS-3 fit 2" tube body

SHIELDS 9-Pin SOCKETS
XOS-4 fit 1-5/16" body
XOS-5 fit 1½" tube body
XOS-6 fit 2" tube body

FXT Fixed tuned exciter tank similar in general construction to National I.F. transformers, this unit has two 25 mmf., 2000 volt air condensers and an unwound XR-2 Coil form.

FXT (Without plug-in base)

FXTB-5 (With 5 prong base)

FXTB-6 (With 6 prong base)

Paint (not illustrated)

CP-1, dark gray

CP-2, black
A high quality air-drying paint that may be applied with a brush.

CP-3, light gray, for spraying and baking.

RZ

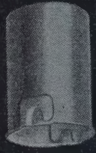
RS

RO

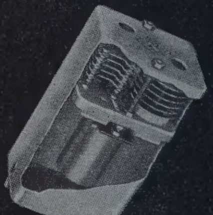
T-78

JS-1

XOS-1


XOS-2

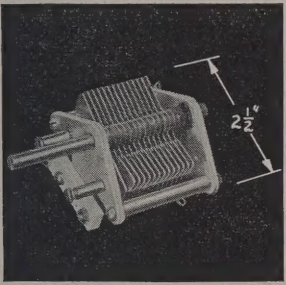
XOS-3


FIXED-TUNED EXCITER TANK

POPULAR National COMPONENTS

TYPE TMS TRANSMITTING CONDENSERS

This is a condenser designed for transmitter use in low power stages. It is compact, rigid, and dependable. Provision has been made for mounting either on the panel, on the chassis, or on two stand-off insulators. Insulation is steatite. Voltage ratings listed are conservative.

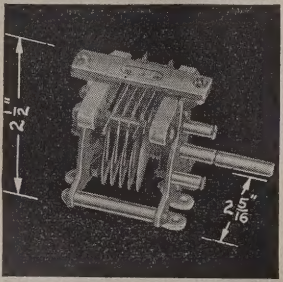


Capacity	Minimum Capacity	Length	Air Gap	Peak Voltage	No. of Plates	Catalog Symbol
SINGLE STATOR MODELS						
100 Mmf.	9.5	3"	.026"	1000v.	9	TMS-100
150	11	3"	.026"	1000v.	14	TMS-150
250	13.5	3"	.026"	1000v.	22	TMS-250
300	15	3"	.026"	1000v.	27	TMS-300
35	8	3"	.065"	2000v.	7	TMSA-35
50	11	3"	.065"	2000v.	11	TMSA-50
DOUBLE STATOR MODELS						
50-50 Mmf.	6-6	3"	.026"	1000v.	5-5	TMS-50D
100-100	7-7	3"	.026"	1000v.	9-9	TMS-100D
125-125	8-8	3"	.026"	1000v.	11-11	TMS-125D
50-50	10.5-10.5	3"	.065"	2000v.	11-11	TMSA-50D

TYPE TMK TRANSMITTING CONDENSERS

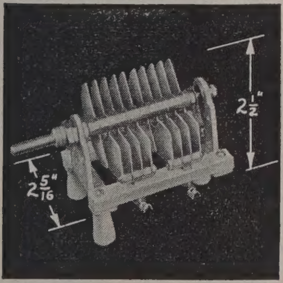
This is a new condenser for exciters and low power transmitters. Special provision has been made for mounting AR-16 coils in a swivel plug-in mount on either the top or rear of the condenser. For stand-off or panel mounting-steatite insulation.

Capacity	Minimum Capacity	Length	Air Gap	Peak Voltage	No. of Plates	Catalog Symbol
SINGLE STATOR MODELS						
35 Mmf.	7.5	2 7/32"	.047"	1500v.	7	TMK-35
50	8	2 3/8"	.047"	1500v.	9	TMK-50
75	9	2 11/16"	.047"	1500v.	13	TMK-75
100	10	3"	.047"	1500v.	17	TMK-100
150	10.5	3 5/8"	.047"	1500v.	25	TMK-150
200	11	4 1/4"	.047"	1500v.	33	TMK-200
250	11.5	4 7/8"	.047"	1500v.	41	TMK-250
DOUBLE STATOR MODELS						
35–35 Mmf.	7.5–7.5	3"	.047"	1500v.	7–7	TMK-35D
50–50	8–8	3 5/8"	.047"	1500v.	9–9	TMK-50D
100–100	10–10	4 1/4"	.047"	1500v.	17–17	TMK-100D
Swivel Mounting Hardware for AR 16 Coils						SMH



TYPE TMH TRANSMITTING CONDENSERS

A condenser that features very compact construction. Excellent power factor, and aluminum plates .0400" thick with polished edges. It mounts on the panel or on removable stand-off insulators. Steatite insulators have long leakage path.

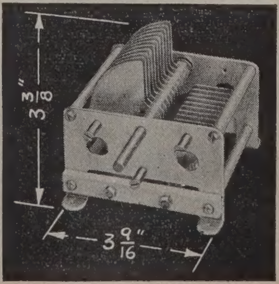


Capacity	Minimum Capacity	Length	Air Gap	Peak Voltage	No. of Plates	Catalog Symbol
SINGLE STATOR MODELS						
50 Mmf.	9	3 3/4"	.085"	3500v.	15	TMH-50
75	11	3 3/4"	.085"	3500v.	19	TMH-75
100	12.5	5 1/8"	.085"	3500v.	25	TMH-100
150	18	6 1/2"	.085"	3500v.	37	TMH-150
35	11	5 1/8"	.180"	6500v.	17	TMH-35A
DOUBLE STATOR MODELS						
35–35 Mmf.	6–6	3 3/4"	.085"	3500v.	9–9	TMH-35D
50–50	8–8	5 1/8"	.085"	3500v.	13–13	TMH-50D
75–75	11–11	6 1/2"	.085"	3500v.	19–19	TMH-75D

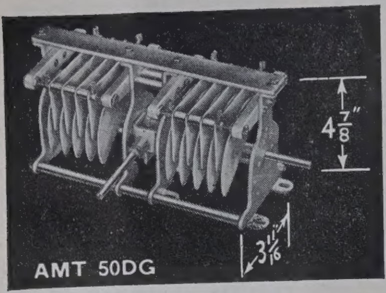
TYPE TMC TRANSMITTING CONDENSERS

A condenser designed for use in the power stages of transmitters where peak voltages do not exceed 3000 volts. The frame is extremely rigid and arranged for mounting on panel, chassis or stand-off insulators. The plates are aluminum with buffed edges. Insulation is steatite. The stator in the split stator models is supported at both ends.

Capacity	Minimum Capacity	Length	Air Gap	Peak Voltage	No. of Plates	Catalog Symbol
SINGLE STATOR MODELS						
50 Mmf.	10	3"	.077"	3000v.	7	TMC-50
100	13	3 1/2"	.077"	3000v.	13	TMC-100
150	17	4 5/8"	.077"	3000v.	21	TMC-150
250	23	6"	.077"	3000v.	32	TMC-250
300	25	6 3/4"	.077"	3000v.	39	TMC-300
DOUBLE STATOR MODELS						
50–50 Mmf.	9–9	4 5/8"	.077"	3000v.	7–7	TMC-50D
100–100	11–11	6 3/4"	.077"	3000v.	13–13	TMC-100D
200–200	18.5–18.5	9 1/4"	.077"	3000v.	25–25	TMC-200D



POPULAR National COMPONENTS

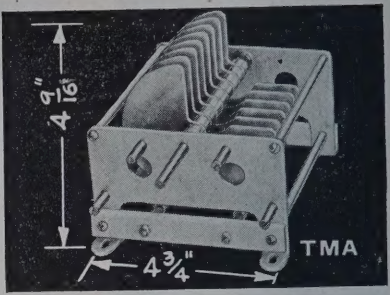


TYPE AMT

A larger and sturdier model of the TMK condenser. The frame is extremely rigid, with mounting feet a part of the end plates. Heavy steatite insulation.

The solid aluminum tie bar across the top of the condenser acts as a mounting for AR-18 series coils in the double stator models.

The double stator models are available in either standard end drive (D series) or center-drive (DG series) with 1/4" dia. shaft extension.



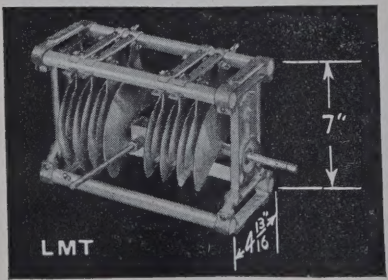
TYPE TMA

This is a larger model of the popular TMC. The frame is extremely rigid and arranged for mounting on panel, chassis or stand-off insulators. The plates are of heavy aluminum with rounded and buffed edges. Insulation is steatite located outside of the concentrated field.

Maximum Capacity	Minimum Capacity	Length	Air Gap	Peak Voltage	No. of Plates	Catalog Symbol
SINGLE STATOR MODELS						
50 Mmf.	13	4 3/4"	.177"	6000 v.	9	AMT-50
100	20	6 3/4"	.177"	6000 v.	17	AMT-100
300	19.5	4 9/16"	.077"	3000 v.	23	TMA-300
50	15	4 9/16"	.171"	6000 v.	7	TMA-50A
100	19.5	6 7/8"	.171"	6000 v.	15	TMA-100A
150	22.5	6 7/8"	.171"	6000 v.	21	TMA-150A
230	33	9 5/16"	.171"	6000 v.	33	TMA-230A
100	30	9 1/4"	.265"	9000 v.	23	TMA-100B
150	40.5	12 1/2"	.265"	9000 v.	33	TMA-150B
50	21	7 1/8"	.359"	12,000 v.	13	TMA-50C
100	37.5	12 7/8"	.359"	12,000 v.	25	TMA-100C
75	25	18 1/16"	.719"	20,000 v.	17	TML-75E
150	60	18 1/16"	.469"	15,000 v.	27	TML-150D
100	45	13 5/8"	.469"	15,000 v.	19	TML-100D
50	22	8 5/16"	.469"	15,000 v.	9	TML-50D
245	54	18 1/16"	.344"	10,000 v.	35	TML-245B
150	45	13 5/8"	.344"	10,000 v.	21	TML-150B
100	32	10 15/16"	.344"	10,000 v.	15	TML-100B
75	23.5	8 5/16"	.344"	10,000 v.	11	TML-75B
500	55	18 1/16"	.219"	7,500 v.	49	TML-500A
350	45	13 5/8"	.219"	7,500 v.	33	TML-350A
250	35	10 15/16"	.219"	7,500 v.	25	TML-250A
DOUBLE STATOR MODELS D—End drive DG—Center drive						
50–50	13–13	9 3/8"	.177"	6000 v.	18	AMT-50D
100–100	20–20	13 3/8"	.177"	6000 v.	34	AMT-100D
50–50	13–13	9 3/8"	.177"	6000 v.	18	AMT-50DG
100–100	20–20	13 3/8"	.177"	6000 v.	34	AMT-100DG
200–200	15–15	6 7/8"	.077"	3000 v.	16–16	TMA-200D
180–180	10–10	12 3/4"	.140"	4000 v.	24–24	TMA-180D
50–50	12.5–12.5	6 7/8"	.155"	6000 v.	8–8	TMA-50DA
100–100	17–17	9 5/16"	.155"	6000 v.	14–14	TMA-100DA
60–60	19.5–19.5	12 1/2"	.249"	9000 v.	15–15	TMA-60DB
40–40	18–18	12 7/8"	.343"	12,000 v.	11–11	TMA-40DC
30–30	12–12	18 1/16"	.719"	20,000 v.	7–7	TML-30DE
60–60	26–26	18 1/16"	.469"	15,000 v.	11–11	TML-60DD
100–100	27–27	18 1/16"	.344"	10,000 v.	15–15	TML-100DB
60–60	20–20	13 5/8"	.344"	10,000 v.	9–9	TML-60DB
200–200	30–30	18 1/16"	.219"	7,500 v.	21–21	TML-200DA
100–100	17–17	10 15/16"	.219"	7,500 v.	11–11	TML-100DA

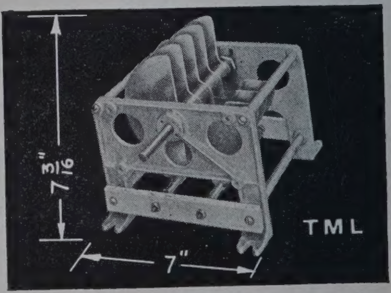
TYPE LMT

A heavy duty transmitting condenser that completely eliminates troublesome closed loops, vastly simplifying the problem of unwanted harmonics. The rotor shaft is completely insulated from the end plates. Long leakage path (higher safety factor). Plates and parts are extra heavy with highly polished rounded edges to prevent flash-over. Adjustable stator plate mounting and end bearings. Available in single-stator, double-stator, or double-stator right angle center drive models. Same capacities and prices as National TML Condenser.

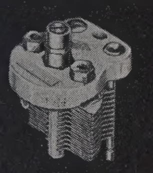


TYPE TML

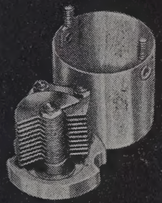
is a heavy duty job throughout. The frame structure (rugged aluminum castings with dural tie bars) and precision bearings assure permanent rotor alignment. All plates are extra thick with rounded and polished edges. This, plus specially treated steatite insulators and a husky self-cleaning rotor contact, provides high flashover, current and voltage ratings.



POPULAR National COMPONENTS

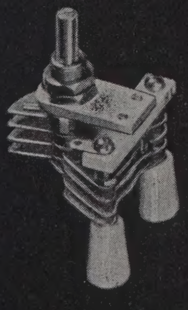

PSR

M30


W100

NC-600U

TU BY


STN

MINIATURE CONDENSERS:

Type PS variable condensers are compact silver plated units of soldered construction for use as semi-fixed bandsets or padders. Base is steatite — bearing is "snug" but smooth. PSR models are screw-driver adjust type; PSE have 1/4" diameter shafts both ends; PSL are similar to PSR but include rotor shaft lock.

Type M-30
The M-30 is a tiny (13/16" x 9/16" x 1/2") mica trimmer — 30 mmf. max. — steatite base.

Type W-75, 75 mmf.

Type W-100, 100 mmf.
Small air-dielectric padding condensers having a very low temperature coefficient. They are mounted in 1 1/4" diameter aluminum shields and have 1/4" hex heads for socket-wrench adjustment.

The UM condensers are low-loss, aluminum plate staked construction miniature variables designed for UHF converters, VFOs and the like — minimum capacity is exceptionally low. The UMs can be mounted in PB-10 or RO shield cans and have 1/4" dia. shafts front and rear for ganging (see pages 21, 23 and 24 for shield cans and couplings). Plates: straight-line-cap., 180° rotation. Dimensions: Base 1" x 2 1/4", mtg. holes on 5/8" x 1-23/32" centers, 2-5/16" max. length.

The UMB-25 and UMB-50 are differential (balanced stator) models. UM-10D and UMA-25 are double-spaced and the latter is bolted construction for experimental capacity reduction. Hardware for panel or chassis mounting is supplied with all UM condensers.

Capacity	Catalog Symbol		
25 mmf.	PSR-25	PSE-25	PSL-25
50	PSR-50	PSE-50	PSL-50
75	PSR-75	PSE-75	PSL-75
100	PSR-100	PSE-100	PSL-100

Capacity	Minimum Capacity	No. of Plates	Air Gap	Catalog Symbol
15 mmf.	1.5	6	.017"	UM-15
35	2.5	12	.017"	UM-35
50	3	16	.017"	UM-50
75	3.5	22	.017"	UM-75
100	4.5	28	.017"	UM-100
10	1	8	.042"	UM-10D
25	3.4	14	.042"	UMA-25
BALANCED STATOR MODEL				
25	2	4-4-4	.017"	UMB-25
50	5	8-8-8	.017"	UMB-50

NEUTRALIZING CONDENSERS:

NC-600U
With standoff insulator

NC-600
Without insulator

For neutralizing low power beam tubes requiring from .5 to 4 mmf., and 1500 max. total volts such as the 6L6. The NC-600U is supplied with a GS-10 standoff insulator screwed on one end, which may be removed for pigtail mounting.

"TU BY" CONDENSERS

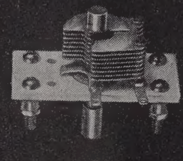
Tubular condensers providing short r.f. path between plate and cathode for tubes having the plate connection at the top. Design reduces harmonics and helps eliminate parasitics. 3,000 volts or 1,500 volts. 15 mmfd.

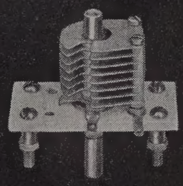
STN
The Type STN has a maximum capacity of 18 mmf. (3000 V), making it suitable for such tubes as the 809. It is supplied with two standoff insulators.

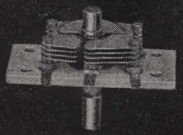
NC-800A
The NC-800A disk-type neutralizing condenser is suitable for the T40, 35TG, 808 and similar tubes. It is equipped with a clamp for locking. The chart below gives capacity and air gap for different settings.

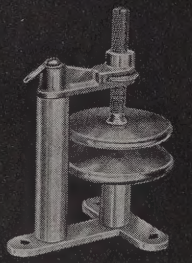
NC-75
For 812, 75TH and similar tubes.

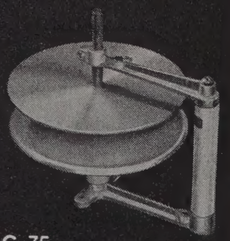
NC-150
For RK36, 100TH, HK354, 250TH, etc.

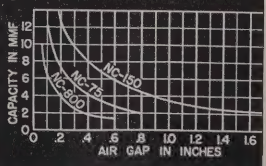

UM


UMA-25


UMB-25

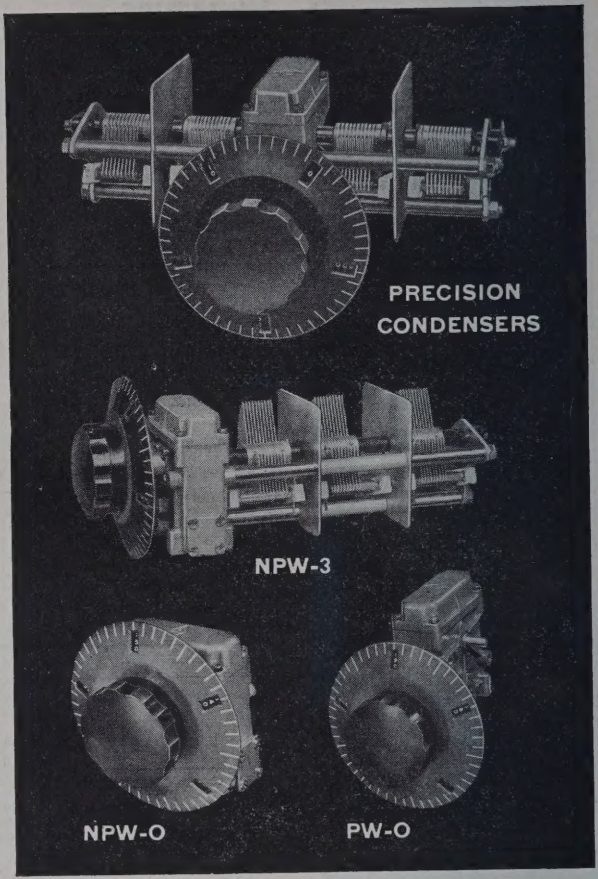

NC-800A


NC-75
NC-150



POPULAR National COMPONENTS

PRECISION CONDENSERS



Originally developed for the famous HRO and NC-100 receivers, National PW and NPW condensers and drive units are well known to professional and amateur radio men throughout the world. Sturdily constructed of the finest materials and carefully adjusted by skilled hands, they have become "standard specifications" for applications requiring smooth, precise control and high re-set accuracy.

The Micrometer Dial reads direct to one part in 500. Division lines are approximately 1/4" apart. The drive, at the mid-point of the rotor, is through an enclosed preloaded worm gear with 20 to 1 ratio. Each rotor is individually insulated from the frame, and each has its own individual rotor contact. Stator insulation is steatite. Plate shape is straight-line frequency when the frequency range is 2:1.

PW Condensers are available in 1, 2, 3 or 4 sections, in either 160 or 225 mmf per section. Larger capacities cannot be supplied.

PW-1R	Single section right
PW-1L	Single section left
PW-2R	Double section right
PW-2L	Double section left
PW-2S	Single section each side
PW-3R	Double section right; single left
PW-3L	Double section left; single right
PW-4	Double section each side

NPW-3 Three sections, each 225 mmf.
Similar to PW models, except that rotor shaft is perpendicular to panel.

NPW-O
Uses parts similar to the NPW condenser. Drive shaft perpendicular to panel. One TX-9 coupling supplied.

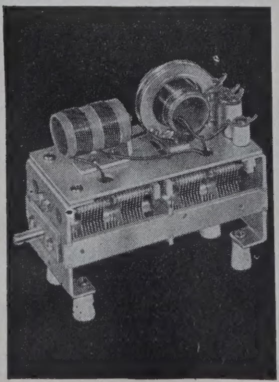
PW-O
Uses parts similar to the PW condenser. Drive shaft parallel to panel. Two TX-9 couplings supplied.

PW-D
The Micrometer Dial used on the condensers and drives above is available separately. It revolves ten times in covering the complete range and as there is no gear reduction unit furnished, the driven shaft will revolve ten times, also. The PW-D dial fits a shaft 5/16" in diameter.

MULTI-BAND TANK ASSEMBLIES

The unique MB-150 Multi-Band Tank tunes all amateur bands from 80 through 10 meters with 180° rotation of the shaft; the coils are never changed. The unit is built around a circuit which tunes to two harmonically unrelated frequencies at the same time. Thus, it becomes possible to cover a wide frequency range and yet maintain a reasonably constant L/C ratio. 3" wide x 8¼" high (including the GS-10 standoffs) x 9" long overall including the ¼" dia. shaft and output terminals.

MB-40L



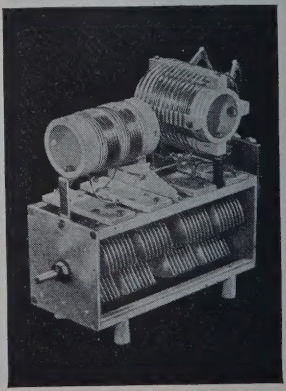
Features of the MB-150:

(1) For use as the all-band plate tank in push-pull or single-ended stages running up to 150-watts input (1500 volts peak). It is ideal for a pair of 807s or 809s or a single 829B.

(2) Separate link coupling coil has special clips which adjust to match impedances up to 600 ohms directly. Output couples into a higher powered amplifier, an antenna or an antenna tuning network.

(3) Fast band changing is accomplished without handling coils, thus removing one of the danger points in the amateur station.

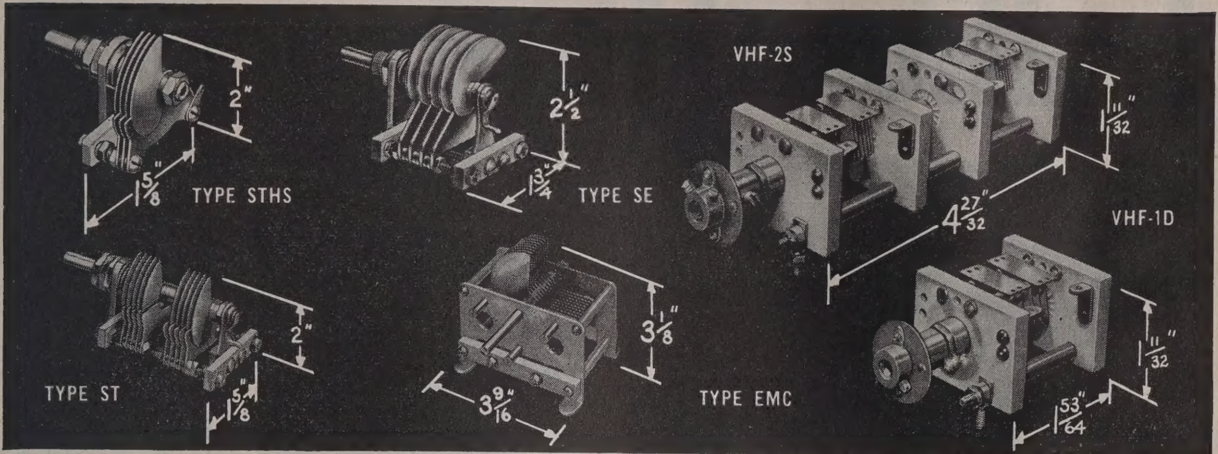
MB-150



MB 40L LOW-POWER MULTI-BAND TANK

Same principle as the famous MB-150. Logical application as grid circuit for tubes having MB-150 in plate circuit. Will handle 40 watts input if link kept loaded

POPULAR National COMPONENTS



TYPE ST (180° Rotation)
STRAIGHT-LINE WAVELENGTH

The ST Type condenser has Straight-Line Wavelength plates. All double-bearing models have the front bearing insulated to prevent noise. On special order a shaft extension at each end is available, for ganging. On double-bearing single shaft models, the rotor contact is through a constant impedance pigtail Steatite insulation.

NOTE — Type SS Condensers, having straight-line capacity plates but otherwise similar to the Type ST, are available. Capacities and Prices same as Type ST.

Capacity	Minimum Capacity	No. of Plates	Air Gap	Length	Catalog Symbol
SINGLE BEARING MODELS					
15 Mmf.	3 Mmf.	3	.018"	1 3/16"	**STHS- 15**
25	3.25	4	.018"	1 3/16"	**STHS- 25**
50	3.5	7	.018"	1 3/16"	**STHS- 50**
SPLIT STATOR DOUBLE BEARING MODELS					
50–50	5–5	11–11	.026"	2 3/4"	**STD- 50**
100–100	5.5–5.5	14–14	.018"	2 3/4"	**STHD-100**
DOUBLE BEARING MODELS					
35 Mmf.	6 Mmf.	8	.026"	2 1/4"	**ST- 35**
50	7	11	.026"	2 1/4"	**ST- 50**
75	8	15	.026"	2 1/4"	**ST- 75**
100	9	20	.026"	2 1/4"	**ST-100**
140	10	27	.026"	2 3/4"	**ST-140**
150	10.5	29	.026"	2 3/4"	**ST-150**
200	12.0	27	.018"	2 1/4"	**STH-200**
250	13.5	32	.018"	2 3/4"	**STH-250**
300	15.0	39	.018"	2 3/4"	**STH-300**
335	17.0	43	.018"	2 3/4"	**STH-335**

TYPE SE (270° Rotation)
STRAIGHT-LINE FREQUENCY

TYPE SE — All models have two rotor bearings, the front bearing being insulated to prevent noise. A shaft extension at each end, for ganging, is available on special order. On models with single shaft extension, the rotor contact is through a constant impedance pigtail. The SEU models (illustrated) are suitable for high voltages as their plates are thick polished aluminum with rounded edges. Other SE condensers do not have polished edges on the plates. Steatite insulation.

15 Mmf.	7 Mmf.	6	.055"	2 1/4"	**SEU- 15**
20	7.5	7	.055"	2 1/4"	**SEU- 20**
25	8	9	.055"	2 1/4"	**SEU- 25**
50	9	11	.026"	2 1/4"	**SE- 50**
75	10	15	.026"	2 1/4"	**SE- 75**
100	11.5	20	.026"	2 1/4"	**SE-100**
150	13	29	.026"	2 3/4"	**SE-150**
200	12	27	.018"	2 1/4"	**SEH-200**
250	14	32	.018"	2 3/4"	**SEH-250**
300	16	39	.018"	2 3/4"	**SEH-300**
335	17	43	.018"	2 3/4"	**SEH-335**

TYPE EMC (180° Rotation)
STRAIGHT-LINE WAVELENGTH

TYPE EMC — A general purpose condenser available in large sizes and having Straight-Line wavelength plates. They are similar in construction to the TMC Transmitting condenser, and have high efficiency and rugged frame Insulation is Steatite, and Peak Voltage Rating is 1000 volts. Same sizes available with straight line capacity plates, type DXC condenser.

Capacity	Minimum Capacity	No. of Plates	Length	Catalog Symbol
150 Mmf.	9 Mmf.	9	2 15/16"	**EMC- 150**
250	11	15	2 15/16"	**EMC- 250**
350	12	20	2 15/16"	**EMC- 350**
500	16	29	4 3/8"	**EMC- 500**
1000	22	56	6 3/4"	**EMC-1000**

VHF CONDENSERS

• Shaft extension at rear for ganging purposes. Dual condensers ideal for mixer-oscillator unit. • Ball bearings front and back for smooth rotation and freedom from back-lash. • Brackets for mounting 7-pin miniature tube sockets, i.e., National XOA for very short leads from tube to condenser essential for VHF efficiency, and rigid compact unit-assembly that produces better stability. • Wide low-inductance stator strap connections raise frequency limit of condensers. Coil or strap tank can be connected directly to stator straps allowing maximum inductance in tank and a minimum of inductance between tank and stator. • Stators, rotors and stator strap connections silver-plated for best efficiency. • Rigid square construction, heavy isolantite end plates. • Spade bolts allow solid connections to chassis for extreme rigidity. • Flexible insulating coupling available to connect condenser shaft to 1/4" dial shaft. • Flexible insulating coupling available to connect two or more condensers together as ganged units. • High capacity single spaced units for general coverage. • Low capacity double spaced units for bandspread, suitable for ham use, particularly in the VHF and UHF ham bands. • Stators solder construction can be removed and replaced by strap tanks for special VHF and UHF application.

DOUBLE SPACED MODELS

Two section VHF-2D,

Maximum capacity per section stator to stator	6.75 mmf.
Minimum capacity per section stator to stator	3.0 mmf.
Net change	3.75 mmf.

Single section VHF-1D,

Maximum capacity stator to stator	6.75 mmf.
Minimum capacity stator to stator	3.0 mmf.
Net change	3.75 mmf.

SINGLE SPACED MODELS

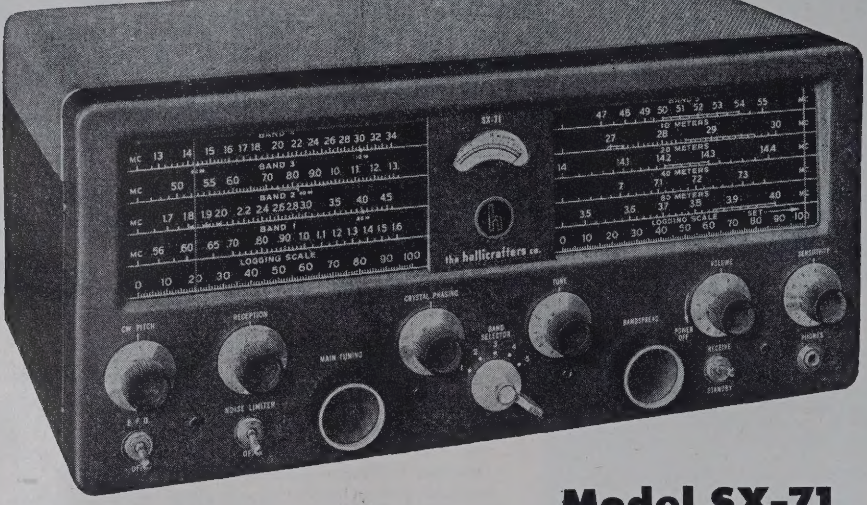
Two section VHF-2S,

Maximum capacity per section stator to stator	22.5 mmf.
Minimum capacity per section stator to stator	3.0 mmf.
Net change	19.5 mmf.

Single section VHF-1S,

Maximum capacity stator to stator	22.5 mmf.
Minimum capacity stator to stator	3.0 mmf.
Net change	19.5 mmf.

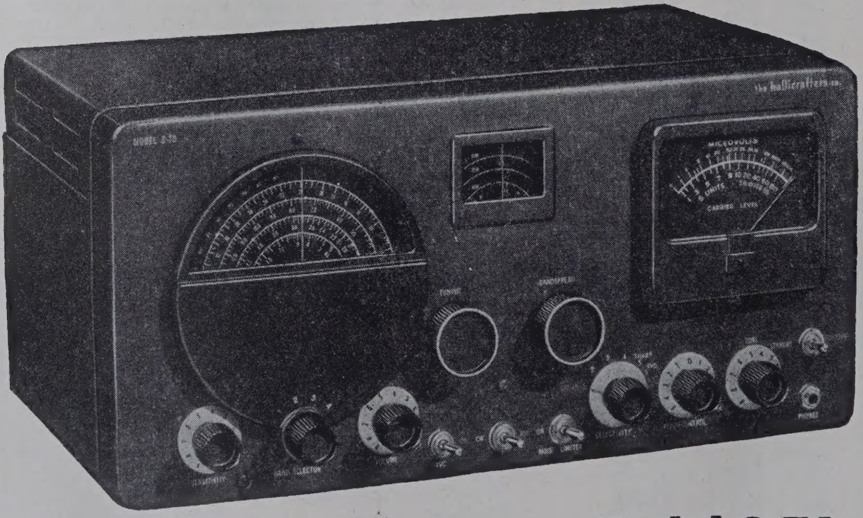
hallicrafters


SX-71
the hallicrafters co.
CW PITCH
RECEPTION
MAIN TUNING
CRYSTAL PHASING
BAND SELECTOR
TONE
BANDSPREAD
VOLUME
SENSITIVITY
NOISE LIMITER
B.F.O.
POWER OFF
RECEIVE
STANDBY
PHONES

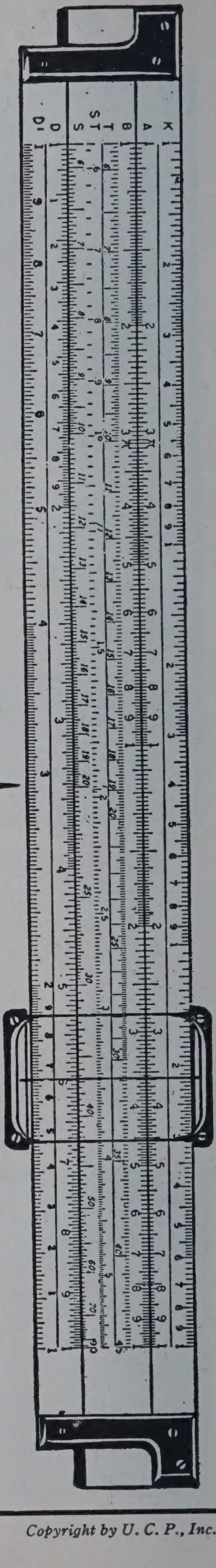
Model SX-71

Precision-built

Communication Equipment


the hallicrafters co.
MICROVOLTS
SENSITIVITY
BAND SELECTOR
PHONES

Model S-76


K
A
B
T
ST
S
D
DI

hallicrafters

For Definitely Superior Ham Performance

From the Hams at Hallicrafters to Hams everywhere comes this top-performing receiver in the medium price class. Extra sensitivity, selectivity, and stability, definitely superior image rejection with double superheterodyne circuit, plus built-in Narrow Band FM reception. Extra wide dials for main and band-spread tuning. Surpasses in ham performance many receivers priced considerably higher.

PERFORMANCE: Continuous AM reception from 538 kc to 35 Mc, and 46 to 56 Mc. Built-in limiter and balanced detector stages for hiss-free NBFM reception. Double conversion (2075 and 455 kc i-f channels) gives image rejection of better than 150 to 1 at 28 Mc. Temperature compensated, voltage regulated. One r-f, two conversion, and 3 i-f stages yield high gain for sensitivity of .7 microvolts with 50 milliwatts output. Audio peaked for communications frequencies, with 3 watt output.

CONTROLS: Band Selector 538-1650 kc, 1600-4800 kc, 4.6-13.5 Mc, 12.5-35 Mc, 46-56 Mc. Separate Main and Bandspread tuning controls; bandspread dial calibrated for 80, 40, 20, 10, and 6 Meter Bands. BFO Pitch 3-position Selectivity, Crystal Phasing, Tone, a-f Gain, and r-f Gain controls. ANL, BFO, and Receive/Send switches. "S" meter adjustment on rear.

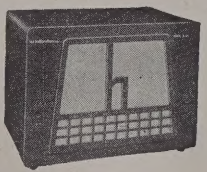
PHYSICAL DATA: Satin black steel cabinet with chrome trim. Piano hinge top. Size 18½ in. wide by 8⅞ in. high by 12 in. deep. Ship. wt. 33 lbs.

EXTERNAL CONNECTIONS: Use doublet or single wire antenna. 500 and 3.2 ohm outputs for separate speaker. Phone jack. Socket for external power supply. Connections for remote control. For 105-125 volts 50/60 cycle AC.

11 TUBES PLUS VOLTAGE REGULATOR AND RECTIFIER: 6BA6 r-f Amp., 6C4 Osc., 6AU6 Mixer, 6BE6 2nd Conv., three 6SK7 i-f Amps., 6H6 ANL and delayed AVC, 6SC7 BFO and a-f Amp., 6AL5 Det., 6K6GT Output, VR-150 Reg., and 5Y3GT Rect.

UNIVERSAL MODEL SX71U: Same as above only for 115/250 volts, 25/60 cycle AC.

R-46 SPEAKER: New 10″ PM in satin black steel cabinet to match SX-71 and S-76 (also suitable for SX-62). 500-ohm transformer. 80 to 5000 cycle range. 15″ wide, 10⅞″ high, 10⅞″ deep.



New! A Double Superhet With 50kc 1-F

A new double conversion receiver just introduced as the lower-priced running mate to the already famous SX-71. The only double superhet with 50 kc second i-f and the only set now known with a giant sized 4-inch "S" Meter. Another new Hallicrafters engineering triumph . . . a special value leader in the moderate price range.

PERFORMANCE: Continuous coverage 538-1580 kc. and 1.72-32 Mc. Double conversion almost completely eliminates images. 50 kc second i-f gives excellent "skirt" selectivity with "nose" selectivity variable from 5.6 kc down to 500 cycles. Temperature compensated, voltage regulated. One r-f, two conversion, and two i-f stages. 2½ watts output, with audio peaked for communications frequencies.

CONTROLS: Band Selector 538-1580 kc, 1.72-4.9 Mc, 4.6-13 Mc, 12-32 Mc; Separate Main and Bandspread tuning; bandspread calibrated for 80, 40, 20, 11, 10 meters; five-position Selectivity with phono switch built-in; BFO Pitch; full-range Tone; AVC, BFO, ANL, Rec./Standby switches. "S" Meter adjustment on rear.

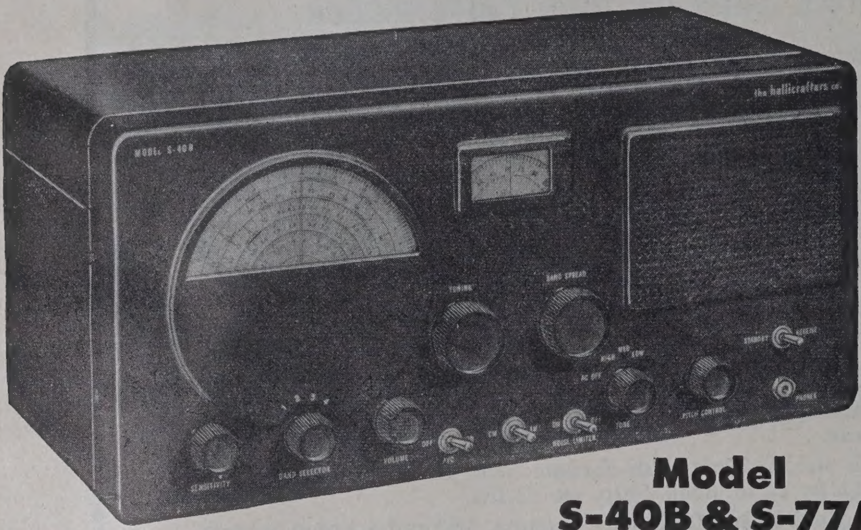
PHYSICAL DATA: Satin black steel cabinet with plastichrome. Piano hinge top. Size 18½″ wide, 8⅞″ high, 9½″ deep. Ship. wt. approx. 46 lbs.

EXTERNAL CONNECTIONS: Use doublet or single wire antenna. 500 or 3.2 ohm outputs. Phone jack. Phono input jack. Connections external power and for remote control. Mounting holes provided for coax connector. For 105-125 volts 50/60 cycle AC.

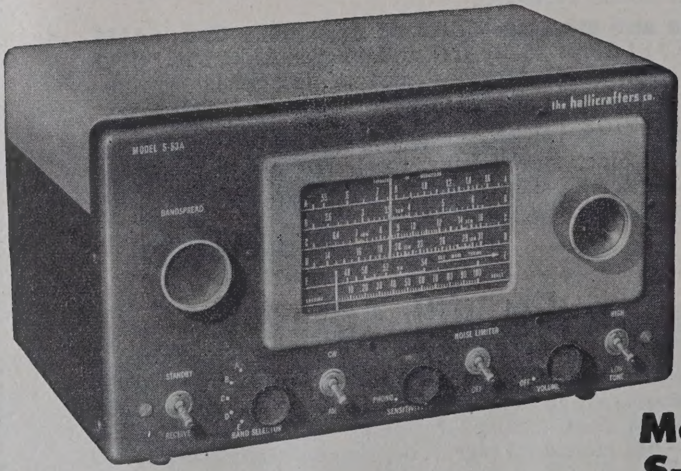
9 TUBES PLUS REGULATOR AND RECTIFIER: 6CB6 r-f Amp., 6AU6 1st Conv., 6C4 Osc., 6BA6 1st i-f, 6BE6 2nd Conv., 6BA6 2nd i-f, 6AL5 Det., ANL, 6SC7 BFO, 6K6GT Output, VR-150 Reg., 5Y3GT Rect.

"The Radio Man's Radio"

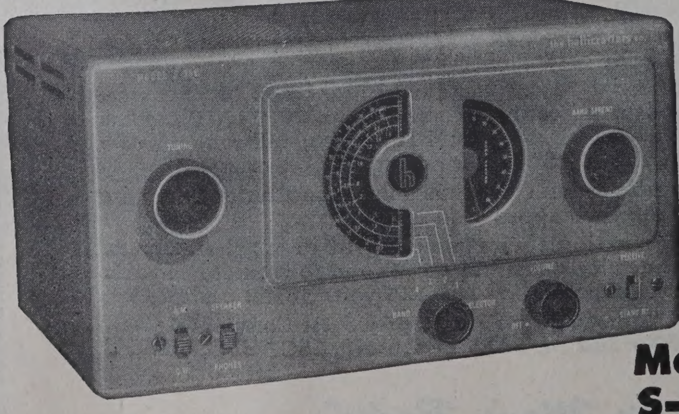
hallicrafters


the hallicrafters co.
MODEL S-40B
TUNING
BAND SPREAD
SENSITIVITY
BAND SELECTOR
VOLUME
NOISE LIMITER
TONE
PITCH CONTROL
STANDBY
RECEIVE
PHONES

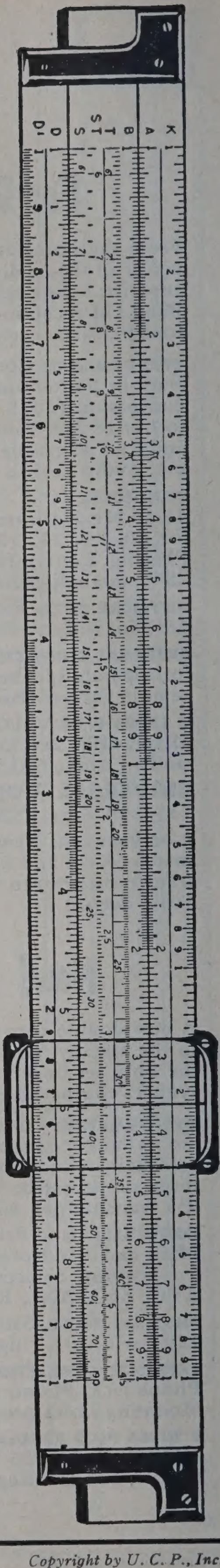
Model S-40B & S-77A


the hallicrafters co.
MODEL S-53A
BANDSPREAD
STANDBY
RECEIVE
BAND SELECTOR
SENSITIVITY
NOISE LIMITER
VOLUME
TONE

Model S-53A


the hallicrafters co.
TUNING
BAND SPREAD
BAND SELECTOR
VOLUME
SPEAKER
PHONES

Model S-38C


K
A
B
ST
S
T
D
DI

hallicrafters

New Versions of an Old Favorite

Offers superior performance in the medium price range, born of Hallicrafters long experience in high-quality communications equipment. Complete in itself, with built-in PM speaker.

PERFORMANCE: AM reception 540 kc to 43 Mc. Temperature compensated oscillator. One RF and two IF stages. Audio response to 10,000 cycles.

CONTROLS: Band Switch 540-1700 kc, 1700-5300 kc, 5.3-15.7 Mc, 15.7-43.0 Mc. Main tuning in Mc; band-spread dial has arbitrary scale. AF and RF Gain controls; AVC, BFO, and Noise Limiter switches; three-position Tone, BFO Pitch, and Receive/Standby controls. Settings for Broadcast Band marked in color for simplified use by others in your family.

PHYSICAL DATA: Satin black steel cabinet. Top opens on piano hinge. Size 18½" wide by 8⅞" high by 9½" deep. Ship. wt. 32 lbs.

EXTERNAL CONNECTIONS: Doublet or single wire antenna. Phone jack. S-40 uses 105-125 V. 50/60 cycles AC only. S-77A uses 105-125 V. DC or 50/60 cycle AC.

7 TUBES PLUS RECTIFIER: (in S-40B) 6SG7 RF Amp., 6SA7 Conv., two 6SK7 IF Amps., 6H6 ANL and AVC, 6SL7 BFO and Det., 6F6G Output, 5Y3GT Rectifier. Comparable AC/DC type tubes used in S-77A.

UNIVERSAL MODEL S-40BU: Same as above only for 115/250 volts, 25/60 cycle AC.

Superb Performance in Compact Size

Unquestionably the finest small communications receiver built. Several steps better than the S-38C but not as good as the S-40B. Complete in itself, with built-in PM speaker.

PERFORMANCE: Coverage 540-1600 kc, 2.6-31 Mc plus 48-54.5 Mc. Two stages IF amplification.

CONTROLS: Main tuning in Mc; separate band-spread dial with logging scale plus Mc calibration for 48-54.5 Mc band; Receive/Standby switch; Band switch 540-1630 kc; 2.5-6.3 Mc, 6.3-16 Mc, 14-31 Mc, and 48-54.5 Mc; AM/CW; RF Gain, Noise Limiter, AF Gain, two-position Tone; Speaker/Phones switch on rear.

PHYSICAL DATA: Satin black steel cabinet with chrome trim. Top opens on piano hinge. Size 12⅞" wide by 7" high by 7¾" deep. Ship. wt. 19 lbs.

EXTERNAL CONNECTIONS: Doublet or single wire antenna. Phone tip jacks. Phonograph input jack. 105-125 V. 50/60 cycle AC line.

7 TUBES PLUS RECTIFIER: 6C4 Osc., 6BA6 Mixer, two 6BA6 IF Amps., 6H6 Det., AVC and ANL, 6SC7 BFO and AF Amp., 6K6GT Output, 5Y3GT Rectifier.

The Radio That Amazes the Experts

The lowest priced communications receiver on the market . . . with many features found in much higher priced sets. Standard Broadcast plus three Short-Wave bands. Built-in PM speaker.

PERFORMANCE: Continuous AM reception 540 kc to 32 Mc. Maximum sensitivity and selectivity from expertly engineered chassis.

CONTROLS: Main Tuning in Mc; separate electrical band-spread dial with arbitrary scale; Speaker/Phones, AM/CW switches; Band Switch 540-1650 kc, 1.65-5 Mc. 5-14.5 Mc, 13.5-32 Mc; AF Gain, Receive/Standby.

PHYSICAL DATA: Steel cabinet in gray hammertone finish. Size 12⅞" wide by 7" high by 7¾" deep. Ship. wt. 14 lbs.

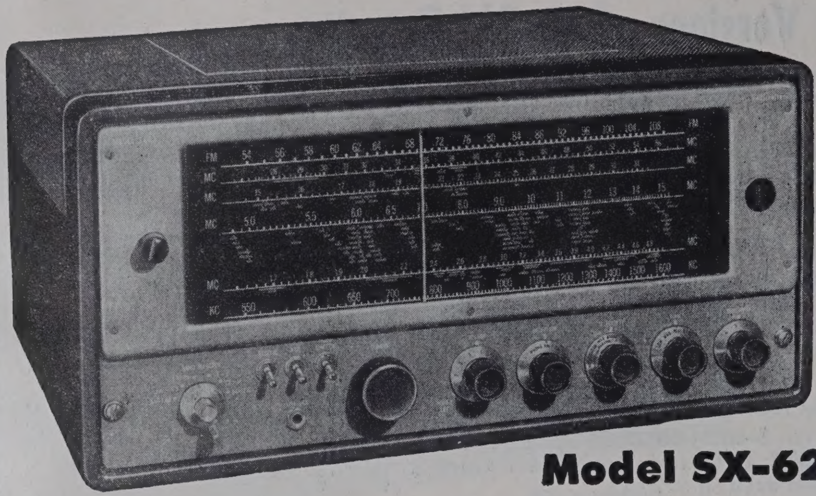
EXTERNAL CONNECTIONS: Doublet or single wire antenna. Phone tip jacks. 105-125 V. DC or 50/60 cycle AC.

4 TUBES PLUS RECTIFIER: 12SA7, Conv., 12SK7 IF Amp. and BFO, 12SQ7 Det. and AVC, 50L6GT Output, 35Z5GT Rectifier.

220-VOLT LINE CORD: Available separately. Works for AC or DC.

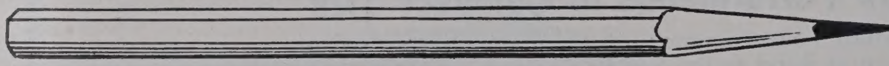
"The Radio Man's Radio"

hallicrafters

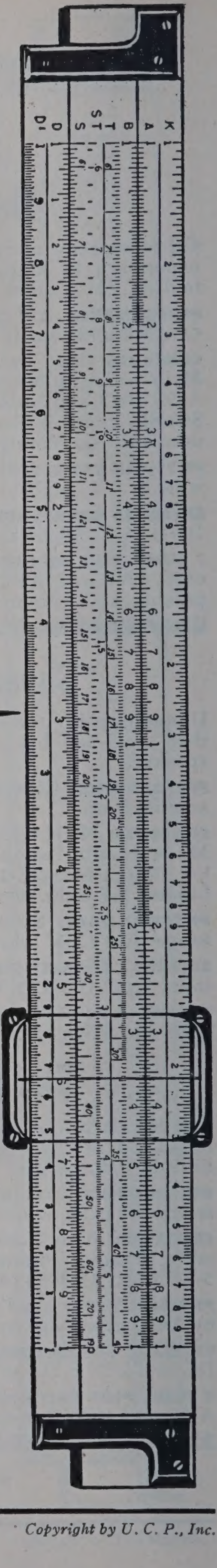


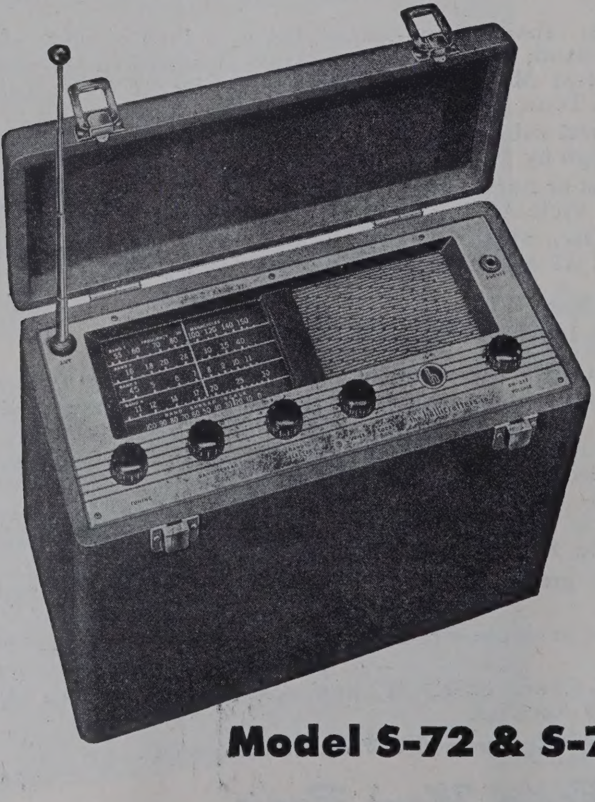
Model SX-62

Precision-built



Communication Equipment





Model S-72 & S-72L

hallicrafters

Designed for Top Broadcast Reception

The world's finest receiver for the All-Wave listener. Unequalled in coverage and performance on all three wave bands—Standard Broadcast, Short-Wave or FM. Continuous coverage from 540 kc to 109 Mc. Having basically the same chassis as a fine communications receiver, the SX-62 provides communications-receiver performance in simplified form. A single tuning control covers the wide-vision dial. Only one band lights up at a time—you always know just where you are tuning. In addition a 500 kc crystal calibration oscillator is built in, enabling you to adjust the dial pointer to show the exact frequency being tuned at any time.

PERFORMANCE: Continuous AM reception 540 kc to 109 Mc; FM reception 27-109 Mc. Temperature compensated, voltage regulated. Two RF, three IF stages; dual IF channels (455 kc and 10.7 Mc.). Audio flat 50-15,000 cycles; 10 watt push-pull output.

CONTROLS: Band Selector 540-1620 kc. 1.62-4.9 Mc, 4.9-15 Mc, 15-32 Mc, 27-56 Mc, 54-109 Mc; Receive/Standby, Calibration Osc. On/Off, Noise Limiter, Tuning, AF Gain, Phono/FM/AM/CW, six-position Selectivity, four-position Tone, RF Gain, Calibration Reset.

PHYSICAL DATA: Gray steel cabinet with satin chrome trim. Top opens on piano hinge. Cabinet 20″ wide by 10¼″ high by 16″ deep. Ship. Wt. 70 lbs.

EXTERNAL CONNECTIONS: Doublet or single wire antenna. 500 and 5000-ohm outputs. Phone jack. Phonograph input jack. Socket for external power and Remote control connections. 105-125 V. 50/60 cycle AC line.

14 TUBES PLUS VOLTAGE REGULATOR AND RECTIFIER: Two 6AG5 RF Amps., 7F8 Conv., 6SK7 IF Amp., 6SG7 IF Amp., 6SG7 IF Amp., 6SG7 FM Limiter and AM Det., 6H6 FM Det., 6J5 BFO, 6H6 ANL, 6SL7 AF Amp., two 6V6 Push-Pull Output, 6C4 Calibration Osc., VR-150 Regulator, 5U4G Rectifier.

UNIVERSAL MODEL SX-62U: Same as above only for 115/250 volts, 25/60 cycle AC.

Regular and Long-Wave 3-Way Portable

You'll always be in touch with the outside world wherever you go with this new Hallicrafters extra-sensitive portable. Designed both for the person who wants better than average operation even in weak signal areas and for the Radio Amateur.

PERFORMANCE: Regular Model S-72 covers standard broadcast and three short-wave bands 540 kc to 30 Mc continuously. Long-Wave Model S-72L covers airways ranges and towers and marine beacons 175-420 kc, plus Broadcast and 2 short-wave bands 540 kc to 12.5 Mc. One stage tuned r-f amplification; separate electrical bandspread tuning. Two built-in antennas—loop for broadcast and 61-inch telescoping whip for short-wave. Overall sensitivity 1.8 microvolts at 30 Mc, ranging to 6 microvolts at 1.7 Mc.

CONTROLS: Band Selector, r-f Gain, AVC, BFO, a-f Gain, Main tuning, Bandspread tuning.

PHYSICAL DATA: Luggage-type cabinet in brown leatherette. Space inside for phones. Size 14″ wide, 12¼″ high, 7¼″ deep. Ship. wt. 16 lbs., less battery pack.

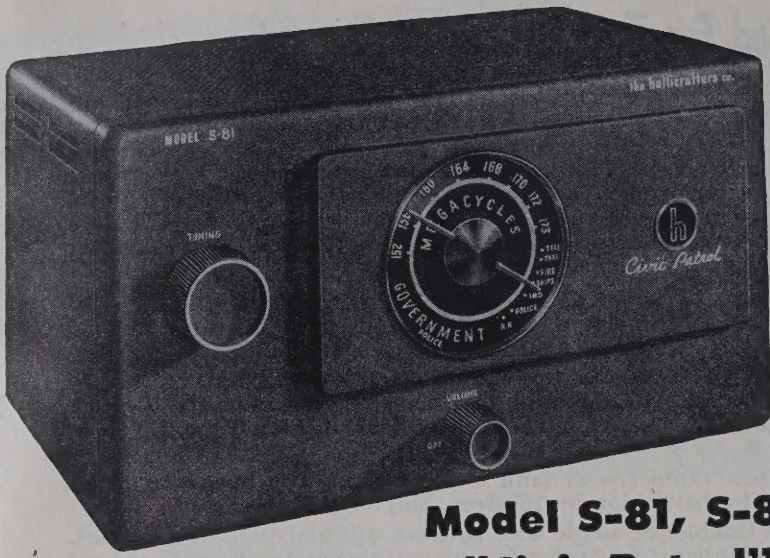
EXTERNAL CONNECTIONS: Phone jack. Antenna terminals if needed. 105-125 V. DC or 50/60 cycle AC line. Battery power 100 ma. at 7.5 V. and 30 ma. at 90 V. Takes RCA VS018, Burgess G6M60, General 60B6F65 and similar packs; life 50 to 100 hours.

8 TUBES PLUS RECT: 1T4 r-f Amp., 1R5 Osc., 1U4 Mixer, two 1U4 i-f Amps., 1U5 Det. and a-f Amp., 1U5 BFO, 3V4 Output, long-life selenium rectifier.

Long Wave Model S-72L is answer to airplane or boat owner's dream. Receives marine beacons, airways ranges and towers, as well as airways and marine short-wave channels and regular broadcast band.

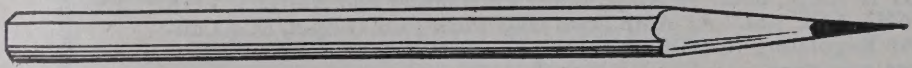
"The Radio Man's Radio"

hallicrafters

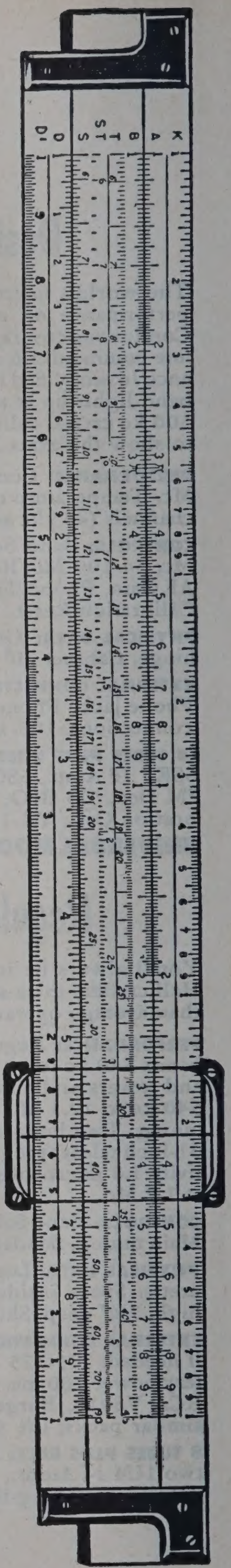

the hallicrafters co.
MODEL S-81
TUNING
MEGACYCLES
GOVERNMENT
POLICE
Civic Patrol
VOLUME
OFF

Model S-81, S-82
"Civic Patrol"

Precision-built



Communication Equipment



the hallicrafters co.
littlefone

the hallicrafters co.
littlefone

littlefone

hallicrafters

New Emergency-Frequency FM Receiver

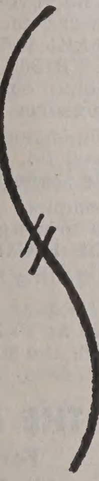
A compact, easy-to-operate new FM receiver covering police, fire, taxicab, truck, private telephone, railroad, and other industrial frequencies. Especially suited for civilian defense groups in metropolitan areas where a reliable, low cost receiver is required to hear industrial and emergency-service communications. Headphone tip jacks on rear. Built-in PM speaker.

PERFORMANCE: Newly designed FM chassis provides low frequency drift and high signal-to-noise ratio. Regular model S-81 covers VHF FM frequencies 152 to 173 Mc; low-band model S-82 covers H/F FM frequencies 30 to 50 Mc. Two i-f stages for extra sensitivity to pull in weak stations.

PHYSICAL DATA: Steel cabinet in black wrinkle enamel finish. Size 12⅞" wide, 7" high, 7¼" deep. Ship. wt. approximately 14 lbs.

EXTERNAL CONNECTIONS: Use single wire or twin-lead antenna. Tip jack for headphones on rear. 105-125 V. DC or 50/60 cycle AC.

6 TUBES PLUS RECTIFIER: 12AT7 Osc. Mixer, 2-12BA6 IF Amps., 12AL5 FM Det., 12SQ7 1st Audio, 50L6 Power Output. Selenium Rectifier.



New Compact, Lightweight Two-Way Radio-Telephone

The *littlefone* series of equipment are FM two-way radio telephone units operating at 25-50 Mc. or 152-174 Mc. Both the receiver and transmitter are crystal controlled and a total of 22 sub-miniature tubes are used. The complete portable model with antenna and telephone hand-set weighs only fourteen pounds and will operate for more than eight hours on the self-contained rechargeable storage batteries. Models for AC power line and 6/12 volts DC operation employ the same rf chassis as the portable units but an audio power output stage is added to drive the loud speaker. Adjustable squelch controls are available on all models. Power outputs—2 watts on 25-50 Mc and 1 watt on 152-173 Mc. Lower powered dry battery models also available.

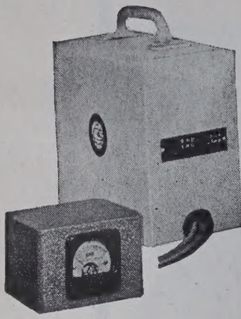
"The Radio Man's Radio"

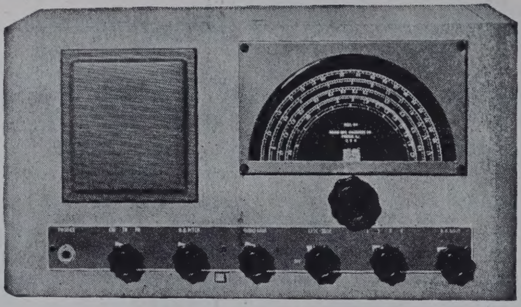
SINCE
1933

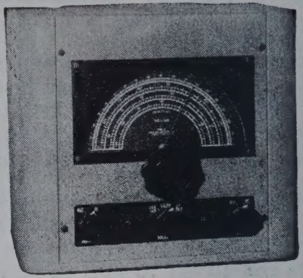
TIME ★ WILL ★ TELL

RME

FINE COMMUNICATIONS EQUIPMENT
RADIO MFG. ENGINEERS, INC.
Peoria 6, Illinois U. S. A.







THE RME 84
FOR HOME—PORTABLE
OR MOBILE OPERATION

RME 84 at right, VP-2—6 volt power pack with cable attached, optional for RME 84 in center, CM-1—Carrier Level "S" Meter with cord and plug, optional for RME 84 at left.

The Coverage Is Complete .540 to 44 Megacycles

An important feature is the continuous coverage ranging from 540 kc to 44 megacycles. This coverage, in addition to providing for the regular broadcast band, takes in the 80, 40, 20, 15 and 10-11 meter amateur bands. The calibration is made on a 7 inch diameter scale. In addition, a smooth-running vernier dial gives band spread on any setting of the main scale. The vernier scale makes five complete revolutions for the 180 degree rotation of the tuning condenser.

Seven Tubes Have Been Chosen For The RME 84

1. A 6BJ6 radio frequency amplifier is ahead of the first detector.
2. A 6U8 is used as a first detector and radio frequency oscillator.
3. A 6BJ6 serves as the first IF operating at 455 kc.
4. A 6BJ6 second IF further amplifies the signal.
5. A 6H6 serves as second detector and noise limiter.
6. A 6SL7 serves as BFO and first a.f. amplifier.
7. The 6G6G provides the final audio frequency output.
8. A 5Y3GT is the power rectifier tube.

Portability Built Into The RME 84

Conscious of the fact that many thousands of amateurs want a receiver for portable operation, the new RME 84 is equipped with a special socket connection making possible connections to either a B battery and an A battery supply or a similar source of power such as an external vibropack. 135 volts of B and 6 volts of A battery will operate the RME 84 at full power. The drain on the B battery is only 32 milliamperes at 135 volts and the 6 volt A battery provides 1.5 amps, including the two dial lights.

The new noise limiter, of the series type, performs exceptionally well. Also made available for future use with the RME 84 is a signal strength meter to be connected through the special socket located on the rear of the chassis apron.

SENSITIVITY: The average sensitivity of the RME 84 is of the order of 2 microvolts over the entire range of the instrument.

RME 84, CODE HANDY, complete for 115 volt, 60 cycle operation and for use with external battery supply. May also be had for 230 volt, 25 cycle operation at additional cost. **f.o.b. Peoria, Illinois, Net Selling Price** $110.00

VP-2, CODE HOMER, A 6 volt power pack with cable attached, optional equipment for RME 84. **f.o.b. Peoria, Illinois, Net Selling Price** $32.00

CM-1, CODE HURST, Carrier Level "S" Meter with cord and plug, optional equipment for RME 84. **f.o.b. Peoria, Illinois, Net Selling Price** $16.00

VHF-152A
3 BAND CONVERTER

Covers the Amateur 11, 10, 6 and 2-meter bands. For use with any receiver tunable to 7.0 mc. Features temperature stabilized oscillator circuits, high image rejection. Full-vision 7" dial. Direct calibration for each band. Built-in power supply. Sensitivity order of 2 microvolts. Output frequency is 7,000 kc. Range: 26.96-29.9 mc, 49.5-54.2 mc, and 143.8-148.2 mc. Uses: 1—6AK5 RF amp., 1—6J6 mixer-osc., 1—5Y3GT rect., and VR150. Has 4 separate 300-ohm antenna inputs; 300-ohm output. Controls: band selector, antenna changeover, tuning, on-off switch.

Dimensions: 11" high, 12" wide, 11" deep, with hinged lid. Standard operation is for 115 volt, 50-60 cycle power source.

Complete with tubes, interconnecting plug and cord to match RME 45 & 50 receivers in appearance. **CODE HAMPY, f.o.b. Peoria, Illinois.**

Net Selling Price $97.00

VHF-152A CONVERTER, same as above, but designated as TYPE S, housed in two tone gray cabinet to match the RME-84 receiver, cabinet size 10¼" wide, 10¼" deep, 9¼" high. **CODE: HARMS** $97.00

THE HF 10-20 CONVERTER
For 10-11-15 and 20 Meters
(Similar in Appearance to VHF-152A)

Covers the 14-14.4, 21-21.5 and 26.96-29.7 mc Amateur bands. Output to any receiver tunable to 7.0 mc—results in complete image suppression. Full temperature compensation and VR150 voltage regulator provide excellent oscillator stability. Uses: 6BA6 TRF, 6J6 oscillator-mixer, 5Y3GT rectifier. Built-in power supply. Average gain 30 db. Output frequency is 7,000 kc. Has 300-ohm antenna input for each band. With shielded output cable for connection to receiver. 300 ohm output. With tubes and instructions.

Model HF 10-20 Converter, Standard Model. CODE HORN, in cabinet to match RME 45 and 50 Receivers in appearance. Dimensions: 11" high, 12" wide, 11" deep. For 115 V. 50-60 cycle operation. **f.o.b. Peoria.**

Net Price $92.00

Model HF 10-20 Type "S" Converter, CODE HILL, in cabinet to match RME 84 in appearance. Dimensions: 9⅛" high, 10¼" wide, 10¼" deep. **f.o.b. Peoria.**

Net Price $92.00

SINCE 1933

TIME ★ WILL ★ TELL

RME

FINE COMMUNICATIONS EQUIPMENT

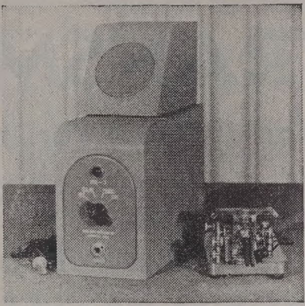
RADIO MFG. ENGINEERS, INC.

Peoria 6, Illinois U. S. A.

THE BOOMERANG

(MB-3)

A Break-In and Monitoring Device for CW & Fone



The "Boomerang" is the solution to rapid and efficient break-in, and the avoidance of needless QRM. Dots and dashes are heard in the headphones or the speaker while sending—a great help in perfecting the fist and avoiding errors.

When the key is down, any signal normally going through the receiver is automatically suppressed. Raise the key and instantaneously the receiver functions.

The "Boomerang" can be used as a handy monitor for phone operation, as a code practice oscillator and a tone modulator. Tubes include a 7K7, a 6SL7 and a 6X4 rectifier. Cabinet two-tone grey finish. For 115 V. 50-60 cycle operation.

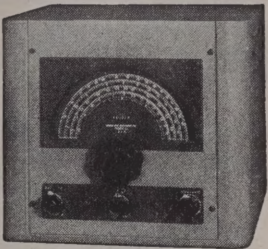
List Price f.o.b. Peoria..**$33.00**

SP-5 Special 3" speaker with amplifier enclosed in housing for MB-3 "BOOMERANG." CODE: HIGH.

Net Price f.o.b. Peoria..**$15.50**

THE DB22A PRESELECTOR

Coverage .54 to 44 Mc. Average Gain 30 DB



Here's the new DB22A completely redesigned for greater efficiency and higher signal to noise ratio. It uses new 6BA6 miniatures. Image ratio is better than 50 DB with a communications receiver having a single stage of RF. It's calibrated, has smooth planetary tuning, self contained power supply, antenna by-pass switch, gain control and many other features. **Model DB22A** Preselector, Standard Model, CODE BONET, in cabinet to match RME 45 and 50 Receivers in appearance. Dimensions: 11" high, 12" wide, 11" deep. For 115 V. 50-60 cycle operation.

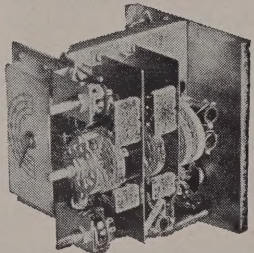
Net Price f.o.b. Peoria..**$86.00**

Model DB22A—Type "S" Preselector, CODE CLEAR, in cabinet to match RME 84 Receiver in appearance. Dimensions: 9⅛" high, 10¼" wide, 10¼" deep.

Net Price f.o.b. Peoria..**$86.00**

MC-53 MOBILE CONVERTER for 2, 6, and 10-11 meters

R
M
E
OUT IN
2 6 10
OFF ON BAT.



The ever increasing demand for mobile equipment and the desire to have portable mobile equipment available for emergency use, which is uniform in performance and operation, has prompted RME to add a mobile converter to the universally popular and efficient line of other converters; namely, the VHF 152A and the HF 10-20.

The MC-53 covers three frequency ranges: 26.5-30 mc, 49.5-54.5 mc and 143.5-149 mc. Each range has its own individual coaxial input connector at an input impedance of 75 ohms. Individual antennas may, therefore, be used for each frequency range and coupled separately. The output cable of the MC-53 converter is connected to the auto-radio antenna socket, the output frequency being 1550 kc into the conventional radio receiver of the car. With an antenna change-over switch in the converter and a separate input connector provided for broadcast reception, the MC-53 may be cut in or out of the antenna circuit at anytime for either high frequency or broadcast reception with a flip of the switch.

The MC-53 requires 200-250 volts at 30 milliamps, which is available from the car radio power supply. The ON-OFF switch has a third position, marked BATT. A separate lead is provided on the converter which may be connected to an auxiliary 6 volt source, and give high-stability operation independent of the car battery voltage. A dry battery source may be employed, since only 150 milliamps are required to heat the oscillator tube heater, and the dry batteries will last a long time. Such operation is optional with the operator.

The tuning mechanism consists of a high ratio worm gear drive, very rugged and stable. The main tuning knob is located on the side of the cabinet.

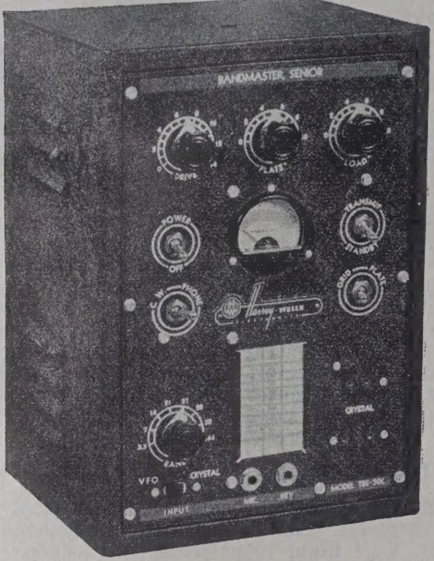
An automatic noise clipper circuit is incorporated in the MC-53 as an integral part of the unit. It is mounted inside the converter cabinet and comes complete with an interconnecting cable to be hooked up with the car radio. The tube complement is as follows: 6AK5 rf amplifier; 12AT7 detector and oscillator; OA2 voltage regulator.

Overall size of the cabinet 5¾" wide, 4⅞" high, 5¼" deep. Finished in dark grey enamel, weight 4#. Complete with tubes and cables. CODE: MONCO.

Net Price f.o.b. Peoria..**$66.60**

Harvey-WELLS ELECTRONICS, INC.
SOUTHBRIDGE, MASS.

BANDMASTER TRANSMITTERS



The World's Most Versatile Transmitter

40 to 50 Watts - 8 Bands - Phone or CW — *No Plug-In Coils*
80, 40, 20, 15, 11, 10, 6 and 2 Meters *(completely wired and tested — not a kit)*

100% BREAK-IN OPERATION

FOR MOBILE OR FIXED OPERATION

FOR *NOVICE OR EXPERT*

BANDMASTER Sr. $111.50

A complete ready to go transmitter including the new crystal-oscillator-vfo switching circuit. Phone or CW — Eight bands — 80, 40, 20, 15, 11, 10, 6 and 2 Meters. Ideal for either mobile or fixed station use. Will operate from A.C. power packs up to 450 volts at 275 ma., vibrator supply or dynamotor supply for portable mobile operation. Employs Pi antenna matching network. Power input to final is 50 watts with 450 volt power supply on Bands 1 through 7, 30 watts on Band 8. No tuning adjustments are necessary except those required to resonate the final output to the antenna. May be mounted on rack panel with power supply. For use with carbon microphone. No plug in coils.

CONTROLS: Band Switch, Excitation Control, Antenna Loading, Amplifier Tuning, Power-on Switch. Carrier-on Switch, Meter Switch. Antenna network will match non-reactive feeder of approximately 50-500 ohms. Frequency calibration chart on front panel as well as two scale grid and plate DC milliammeter.

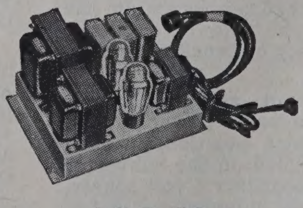
TUBES: 6AQ5 Crystal Oscillator, 6AQ5 Buffer-Multiplier, 807 Final Amplifier, 2—6L6G Class B Modulators. In sturdy steel cabinet, 8″ wide by 12″ high by 8″ deep.

BANDMASTER DELUXE

$137.50

The last word in a versatile small transmitter for ham or commercial use. Used extensively in foreign countries for important commercial applications. Has built-in three tube preamplifier for use with crystal mike, and ALL the features of the Bandmaster Sr.

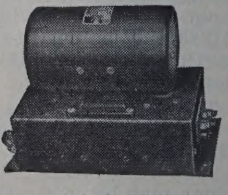
POWER SUPPLIES AND ACCESSORIES



APS-50

Delivers 425 v. at 275. ma. and 6.3 v. at 4 amps. May be mounted on rack panel. For 110 Volt A.C. 50-60 cycles.

$39.50

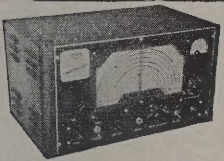


DPS-50

A dynamotor supply for portable operation. Delivers 300 Volts 250 ma.

For 6 Volt operation $87.50
For 12 Volt operation 54.50
(400 Volts 250 ma.)

LYSCO COMMUNICATIONS EQUIPMENT

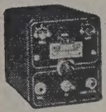


TRANSMITTER-EXCITER TRANSMASTER

Mod. 600—TV Areas
Mod. 500—Wide Open Spaces

FEATURES: Break-in keying, illuminated dial, PA Plate meter, 35 watts input on 160, 80, 40, 20, 15, 11 and 10 meters, provisions for modulator tie-in, Grid Meter Jack, complete with tubes and built-in power supply, VFO or Crystal ("Rubbers" the Crystal also), Cabinet 17" x 9" x 11". Tubes OSC 6AG7, BUFF 6AG7, P. A. 807. Volt. Reg. VR-150 Rect. 5U4G.

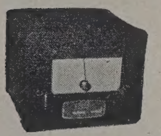
TRANSMITTERS
25 Watts Peak Power Clamp Tube Modulation



Here's a new line of mobile Amateur Units typical of Lysco engineering skill. Installed in beautiful rounded drawn case—black wrinkle finish with attractive silk screened front panel. Dimensions 4" wide x 4½" high x 6" deep. Power input 500v DC. 125 ma. 6.3v AC/DC 1.35 Amps.

Mod.	Band	Tubes	Mod.	Band	Tubes
*A-114T	20 M	3-6AQ5	A-129T	10 M	3-6AQ5
*A-140T	160 M	3-6AQ5	A-175T	75 M	3-6AQ5

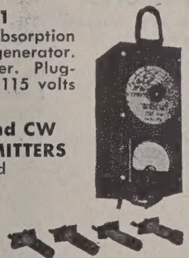
CONVERTERS—Mobile or Fixed



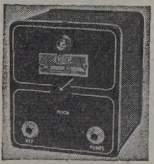
Dimensions 4¼ x 4¾ x 4". Simple installation. Extremely sensitive, will operate on 45 Volt miniature battery for shelf life of battery. Switch connects Antenna to Converter or receiver and controls filaments of converter. Illuminated Dial. Power requirements: Filaments 6.3 V AC/DC 1 Amp. Plate 45 Volts DC 2.5 Ma. 90 Volts DC Max. I.F. Output Freq. 1500 KC. Tube Complements: RF 6AK5, Mixer 9002, OSC 9002.
Model 130—26—30 MC.
Model 132—14-14.4—4 MC.
Model 133—3.5—4 MC.

LYSCO DIPMASTER Mod. D11

Grid dip meter. Range 3.4 to 160 MC. Absorption wave meter. Phone monitor. Signal generator. Range 3.4 to 300 MC. Field Strength meter. Plug-in coils. Tube: 955. Power Req.: 15 watts, 115 volts AC/DC. Dimensions 3" x 9" x 3½".



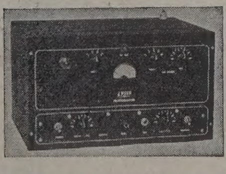
NOVICE CLASS and CW AMATEUR TRANSMITTERS



Factory wired and tested
Rounded drawn case
Black wrinkle finish
Silk screened panel
Crystal controlled
Power Input, 25 watts
Antenna output impedance, 5 ohms
Power requirements: 300 to 500 V. D.C. 75 MA, 6.3 V. AC/DC 1.35 amps.
Keying: Combination Oscillator and Clamp Tube
Dimensions: 4" wide x 4½" high x 6" deep
A127T, 11 Meters, Tubes: 3-6AQ5 • A180T, 80 Meters, Tubes: 3-6AQ5 • A115T, 20 Meters, Tubes: 3-6AQ5 • A107T, 40 Meters, Tubes: 3-6AQ5 • A160T, 160 Meters, Tubes: 3-6AQ5.

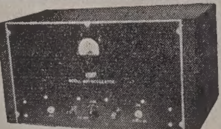
Model 20
Lysco Code Practice OSCILLATOR

Enables the novice to learn code by ear.
Operates on 115 AC/DC or 90V "B" battery.
Provides tone similar to that which is received off the air.
Finished in Black Wrinkle case with silk screened, smooth front panel.
Provisions for key and ear phones.
Variable pitch control, neon lamp indicates operation.



In usual Lysco tradition this New Model 650 Transmaster for the Novice or CW Ham is a sturdily constructed unit. It features: Complete break-in operation • Built-in antenna coupler with neon lamp resonance indicator for single wire operation on all bands, also 72 ohm coaxial output • Plug-in coils • Multimeter reads buffer grid or cathode and power amplifier grid or plate currents • Provisions for Model 401 Clamp Tube Modulator. Tubes: 6V6-GT Crystal controlled oscillator — 6V6-GT Buffer-Multiplier — 6L6G Amplifier — 6V6-GT Dissipation Limiter — 5U4-G Rectifier.

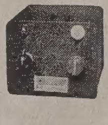
LYSCO MODULATOR
Model 400



Matches Lysco Mod. 500 and 600 TRANSMASTERS

Dimensions: 9" x 17" x 11" Deep • Black Wrinkle Finish • Output: 60 Watts Audio into 4000 Ohms R.F. Load • Input: High impedance (Crystal or Dynamic Mic) • Tube Line-up: 1st Audio 6SJ7, 2nd Audio ½-6SN7, Phase Inverter ½-6SN7, Driver P.P. 6SN7, Modulator P.P. 6L6's, Rectifier 5U4G.
FEATURES: Standby on switch has terminated spare contacts for Transmitter keying control. Milliameter in modulator plate circuit. Will modulate 100 Watt Transmitter.

LYSCO ANTENNA COUPLER
Model 50



For 50' antennas and over. Max. power 75 watts. 5-position switch for coarse tuning, capacitor for fine. Neon indicator. 4" x 4¾" x 5".

MINIATURE VFO
Mobile or Fixed

Dimensions 4¼ x 4¾ x 4". Good stability, Series Tuned, "Colpitts" Oscillator, Illuminated Dial, Calibrated for 80, 40, 20 and 10 Meters. Output on 80 or 40 Meters. Power Requirements 6.3 V AC/DC; 1.35 Amps. 200 V DC Max. 30 Ma. Tube complements: 6AK5 Osc, 6AK5 Buffer, 6AK5 Doubler.
Model 381—High impedance, 14" Ribbon Lead with plug for xtal socket.
Model 381-R—Same as Mod. 381 except that it has Low impedance, 15' Coax cable with remote tuned circuit on 80 or 40 meters.

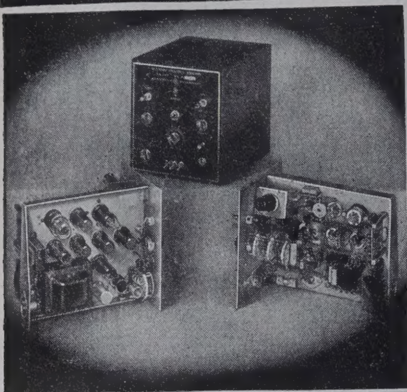
LYSCO PRICE SCHEDULE

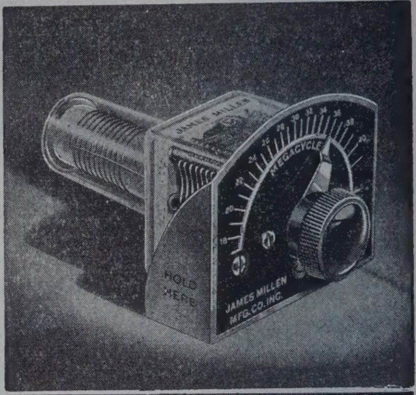
Model		Amateur Net Price
20	Code Practice Oscillator	$ 9.95
30	Noise Limiter (Clips Positive & Negative Peaks)	6.95
50	Antenna Coupler	14.50
60	6 Volt Vibrator supply (300 Volts 80 ma.)	32.95
75	TVI Filter Low Pass 50 OHM Line	10.95
A107T	25 Watt CW Transmaster 40 Meters	28.55
A114T	Mobile Transmaster 20 Meters	33.55
A115T	25 Watt CW Transmaster 20 Meters	28.55
A127T	25 Watt CW Transmaster 10-11 Meters	28.55
A129T	Mobile Transmaster 10-11 Meters	33.55
130	Converter 10-11 Meters	39.00
132	Converter 20 Meters	39.00
133	Converter 75 Meters	39.00
A140T	CAP Mobile Transmaster	33.55
C140T	CAP Mobile Transmaster	34.30
A160T	25 Watt CW Transmaster 160 Meters	28.55
A175T	Mobile Transmaster 75 Meters	33.55
A180T	25 Watt CW Transmaster 80 Meters	28.55
381	Mobile VFO High Impedance	26.95
381R	Mobile VFO Low Impedance Remote Tuned Circuit	33.95
400	60 Watt Modulator 4000 Ohm out	119.95
400L	60 Watt Modulator 500 Ohm out	119.95
400R	Same as 400 except Rack Mounted	119.95
400RL	Same as 400L except Rack Mounted	119.95
401	"Clampmaster" Clamp tube modulator	19.95
402	Class B Modulator	29.95
500	All Band Transmaster	131.95
500R	Same as 500 except Rack Mounted	131.95
500S	Same as 500 with built-in Modulator and "Zero-beating" switch	179.95
500RS	Same as 500S except Rack Mounted	179.95
600	All Band Transmaster TVI Free	143.95
600R	Same as 600 except Rack Mounted	143.95
600S	Same as 600 with built in Modulator and "Zero-beating" switch	189.95
600T	Same as 600 with Class B Modulation	194.95
600TR	Same as 600T except Rack Mounted	194.95
600RS	Same as 600S except Rack Mounted	189.95
650	40 Watt All Band CW Transmaster with built-in Antenna Coupler	109.95
905	2 Meter Receiver and Transmitter	199.95
D11	Grid Dip Meter	39.95

ALL ITEMS COMPLETE WITH TUBES
Prices subject to change without notice.

LYSCO MFG. CO., Inc. • Hoboken, New Jersey

JAMES MILLEN
MALDEN · MASSACHUSETTS





SECONDARY FREQUENCY STANDARD

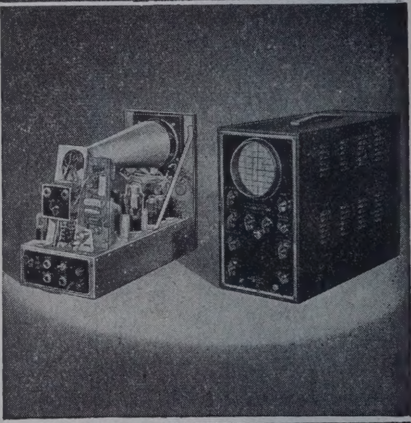
A precision frequency standard for both laboratory and production uses, adjustable output, provided at intervals of 10, 25, 100 and 1000 kc, with magnitude useful to 50 mc. Harmonic amplifier with tuned plate circuit and panel range switch. 800 cycle modulator with panel control switch. In addition to oscillators, multivibrators, modulators and amplifiers, a built-in detector with phone jack and gain control is incorporated. Self-contained power supply.

Model 90505, with tubes............ $

ABSORPTION WAVEMETERS

The 90600 series of absorption wavemeters are available in several styles and many different ranges. Most popular is kit of four units, covering range of 3.0 to 140 mc.

Model 90600..................... $



GRID DIP METER

The No. 90651 MILLEN GRID DIP METER is compact and completely self contained. The AC power supply is of the "transformer" type. The drum dial has seven calibrated uniform length scales from 1.5 MC to 300 MC with generous over laps plus an arbitrary scale for use with special application inductors. Internal terminal strip permits battery operation for antenna measurement.

No. 90651, with tube.............. $

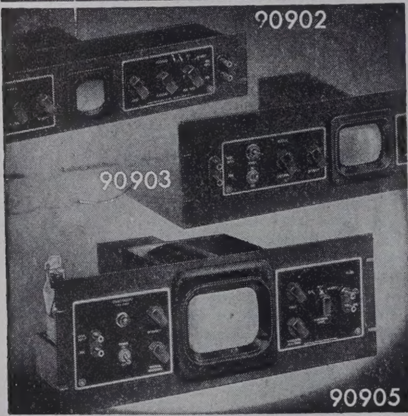
Additional Inductors for Lower Frequencies

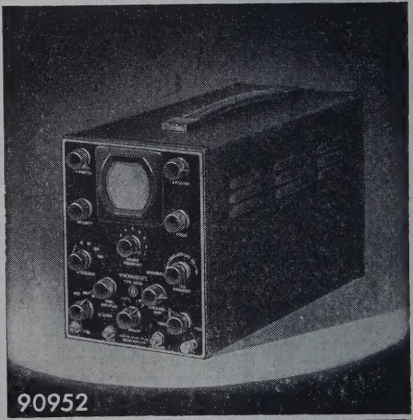
No. 46702—925 to 2000 KC......... $
No. 46703—500 to 1050 KC.........
No. 46704—325 to 600 KC.........
No. 46705—220 to 350 KC.........

LABORATORY SYNCHROSCOPES

The 5" laboratory synchroscopes are available with and without detector-video strips.

Model P-4-2, with tubes............. $
Model P-4E-2, with tubes............





MINIATURE SYNCHROSCOPE

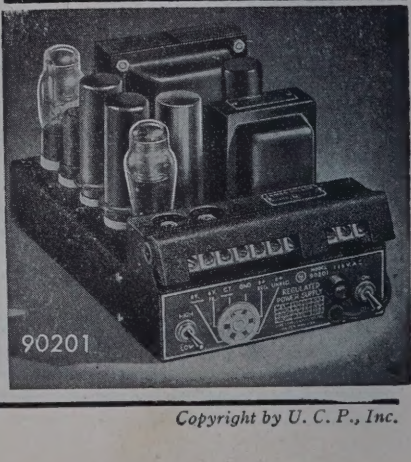
The compact design of the No. 90952, measuring only 7½" x 5⅝" x 13", and weighing only 17 lbs., makes available for the first time a truly DESIGNED FOR APPLICATION "field service" Synchroscope.

No. 90952, with tubes.............. $

CATHODE RAY OSCILLOSCOPES

The No. 90902, No. 90903 and No. 90905 Rack Panel Oscilloscopes, for two, three and five inch tubes, respectively, are inexpensive *basic units* comprising power supply, brilliancy and centering controls, safety features, magnetic shielding, switches, etc. As a transmitter monitor, no additional equipment or accessories are required. The well-known trapezoidal monitoring patterns are secured by feeding modulated carrier voltage from a pickup loop directly to vertical plates of the cathode ray tube and audio modulating voltage to horizontal plates. By the addition of such units as sweeps, pulse generators, amplifiers, servo sweeps, etc., all of which can be conveniently and neatly constructed on companion rack panels, the original basic 'scope unit may be expanded to serve any conceivable industrial or laboratory application.

No. 90902, less tubes............... $
No. 90903, less tubes...............
No. 90905, less tubes...............



'SCOPE AMPLIFIER—SWEEP UNIT

Vertical and horizontal amplifiers along with hard-tube, saw tooth sweep generator. Complete with power supply mounted on a standard 5¼" rack panel.

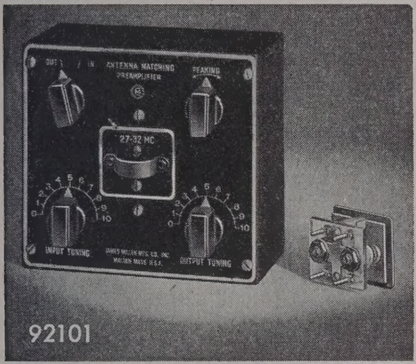
No. 90921, with tubes.............. $

REGULATED POWER SUPPLIES

A compact, uncased, regulated power supply, either for table use in the laboratory or for incorporation as an integral part of larger equipments. 50 watts, with regulated voltage from 0 to 200 volts.

Model 90201, less tubes............ $

JAMES MILLEN
MALDEN · MASSACHUSETTS


92101

R9'er MATCHING PREAMPLIFIER

The Millen 92101 is an electronic impedance matching device and a broad-band preamplifier combined into a single unit, designed primarily for operation on 6 and 10 meters. Coils for 20 meter band also available.

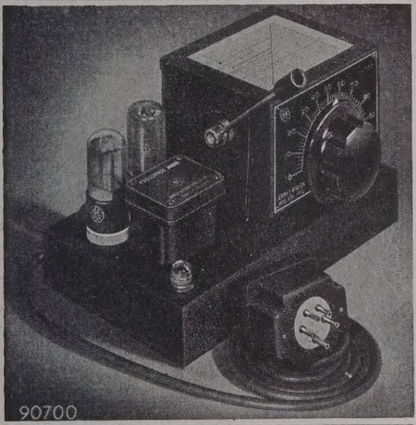
No. 92101, less tubes . . . . $

90671

STANDING WAVE RATIO BRIDGE

The Millen S.W.R. bridge provides easy and inexpensive measurement of standing wave ratio on antennas using co-ax cable. As assembled the bridge is set up for 52 ohm line. A calibrated 75 ohm resistor is mounted inside the case for substitution in the circuit when 75 ohm line is used.

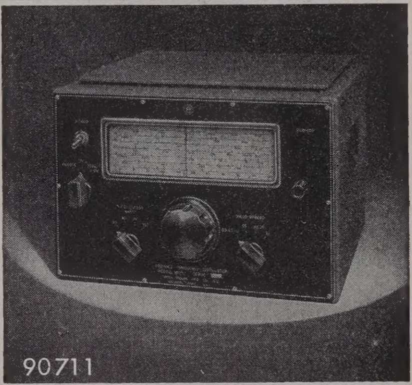
No. 90671 . . . . $


90700

FREQUENCY SHIFTER

A favorite frequency shifter, plugs in, in place of crystal, for instant finger-tip control of carrier frequency. Low drift, chirpless keying, vibration immune, big band spread, accurate calibration.

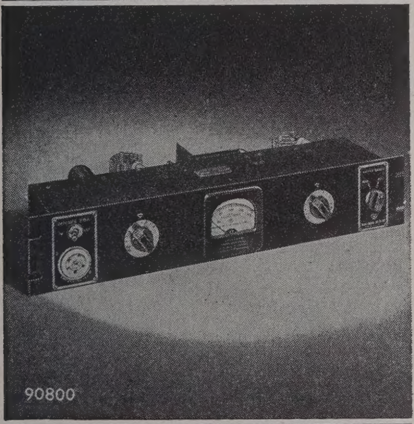
Model 90700, with tubes . . . . $


90711

VARIABLE FREQUENCY OSCILLATOR

The No. 90711 is a complete transmitter control unit with 6SK7 temperature-compensated, electron coupled oscillator of exceptional stability and low drift, a 6SK7 broad-band buffer or frequency doubler, a 6A67 tuned amplifier which tracks with the oscillator tuning, and a regulated power supply. Output sufficient to drive an 807 is available on 160, 80 and 40 meters and reduced output is available on 20 meters. Close frequency setting is obtained by means of the vernier control arm at the right of the dial. Since the output is isolated from the oscillator by two stages, zero frequency shift occurs when the output load is varied from open circuit to short circuit. The entire unit is unusually solidly built so that no frequency shift occurs due to vibration. The keying is clean and free from all annoying chirp, quick drift, jump, and similar difficulties often encountered in keying variable frequency oscillators.

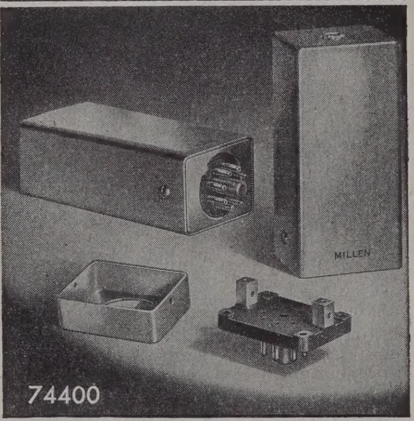
No. 90711, with tubes . . . . $


90800

50 WATT TRANSMITTER

Based on an original Handbook design, this flexible unit is ideal for either low power amateur band transmitter use or as an exciter for high power PA stages.

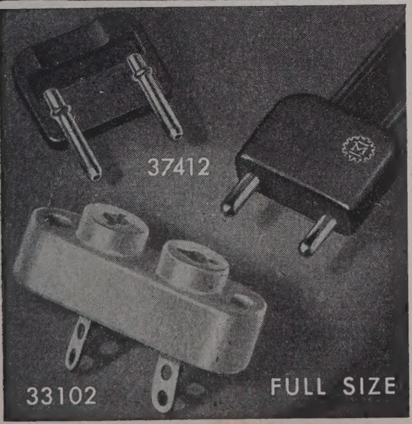
Model 90800, less tubes . . . . $


74400

OCTAL BASE AND SHIELD

Low loss phenolic base with octal socket plug and aluminum shield can $1\frac{7}{16}$ x $1\frac{7}{8}$ x $3\frac{15}{16}$.

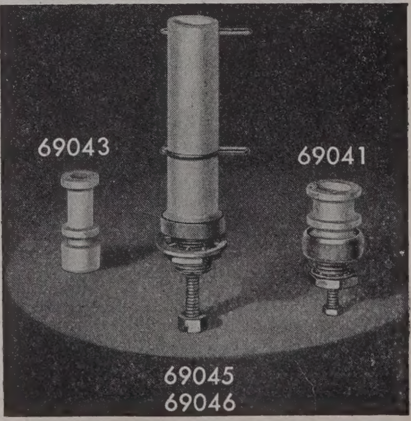
No. 74400 . . . . $



TRANSMISSION LINE PLUG

An inexpensive, compact, and efficient polyethylene unit for use with the 300 ohm ribbon type polyethylene transmission lines. Fits into standard Millen No. 33102 (crystal) socket. Pin spacing ½", diameter .095".

No. 37412 . . . . $

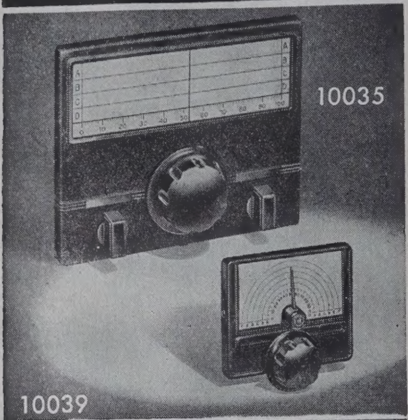


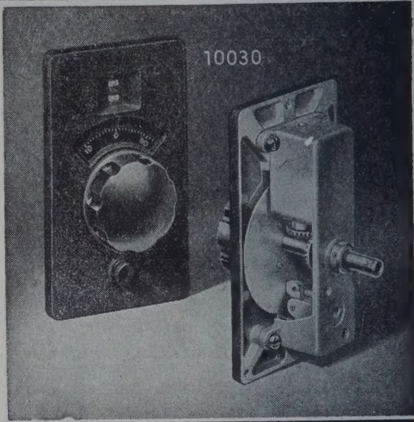
PERMEABILITY TUNED CERAMIC FORMS

In addition to the popular shielded plug-in permeability tuned forms, 74000 series, the 69040 series of ceramic permeability tuned unshielded forms are available as standard stock items. Winding diameters and lengths of winding space are $\frac{13}{32}$ x $\frac{7}{32}$ for 69041–2; ¼ x ⅜ for 69043–7–8; ½ x $1\frac{1}{16}$ for 69045–6; $\frac{3}{16}$ x $\frac{3}{16}$ for 69044.

No. 69041—(Copper Slug) . . . . $
No. 69042—(Iron Core) . . . .
No. 69043—(Iron Core) . . . .
No. 69044—(Copper Slug) . . . .
No. 69045—(Copper Slug) . . . .
No. 69046—(Iron Core) . . . .
No. 69047—(Copper Slug) . . . .
No. 69048—(Iron Core) . . . .

JAMES MILLEN
MALDEN · MASSACHUSETTS



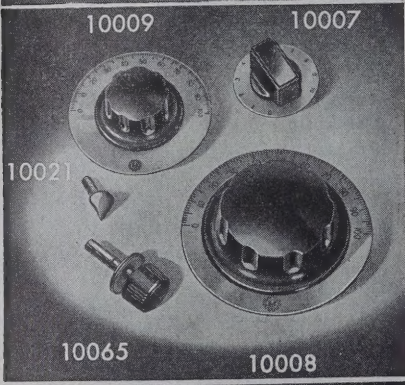


INSTRUMENT DIALS

The No. 10030 is an extremely sturdy instrument type indicator. Control shaft has 1 to 1 ratio. Veeder type counter is direct reading in 99 revolutions and vernier scale permits readings to 1 part in 100 of a single revolution. Has built-in dial lock and ¼" drive shaft coupling. May be used with multi-revolution transmitter controls, etc., or through gear reduction mechanism for control of fractional revolution capacitors, etc., in receivers or laboratory instruments.

The No. 10035 illuminated panel dial has 12 to 1 ratio; size, 8½" x 6½". Small No. 10039 has 8 to 1 ratio; size, 4" x 3¼". Both are of compact mechanical design, easy to mount and have totally self-contained mechanism, thus eliminating back of panel interference. Provision for mounting and marking auxiliary controls, such as switches, potentiometers, etc., provided on the No. 10035. Standard finish, either size, flat black art metal.

No. 10039........................ $
No. 10035........................
No. 10030........................



DIALS AND KNOBS

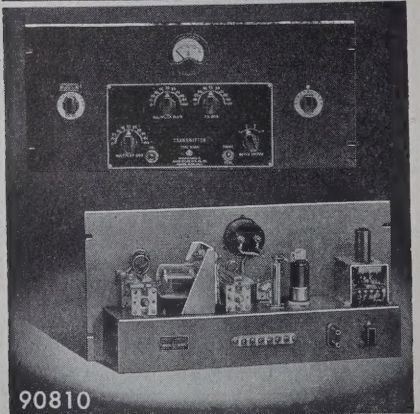
Just a few of the many stock types of small dials and knobs are illustrated herewith. 10007 is 1⅝" diameter, 10009 is 2½" and 10008 is 3½".

No. 10007........................ $
No. 10008........................
No. 10009........................
No. 10021........................
No. 10065........................

PANEL MARKING TRANSFERS

The panel marking transfers have ⅛" block letters. Special solution furnished. Must not be used with water. Equally satisfactory on smooth or wrinkle finished panels or chassis. Ample supply of every popular word or marking required for amateur or commercial equipment.

No. 59001, white letters.............. $



HIGH FREQUENCY TRANSMITTER

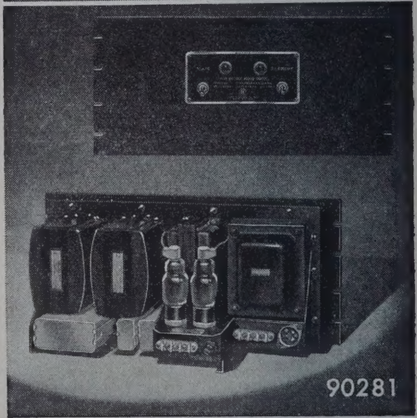
The No. 90810 crystal control transmitter provides 75 watt output (higher output may be obtained by the use of forced cooling) on the 20, 10–11, 6 and 2 meter amateur bands. Provisions are made for quick band shift by means of the new 48000 series high frequency plug-in coils.

No. 90810, less tubes and crystals...... $

HIGH FREQUENCY RF AMPLIFIER

A physically small unit capable of a power output of 70 to 85 watts on 'phone or 87 to 110 watts on C-W on 20, 15, 11, 10, 6 or 2 meter amateur bands. Provision is made for quick band shift by means of the new No. 48000 series VHF plug-in coils. The No. 90811 unit uses either an 829-B or 3E29.

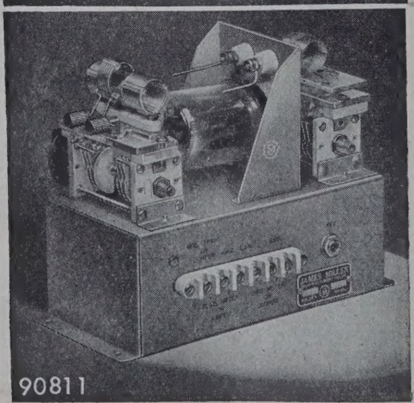
No. 90811 with 10 meter band coils, less tube.............................. $

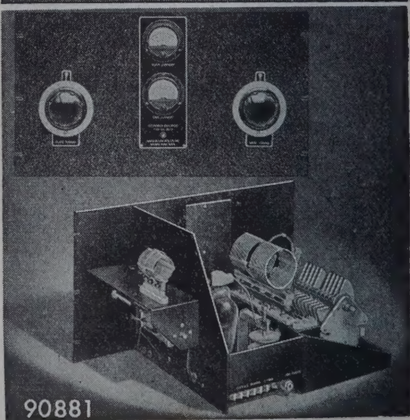


HIGH VOLTAGE POWER SUPPLY

The No. 90281 high voltage power supply has a d.c. output of 700 volts, with maximum current of 250 ma. In addition, a.c. filament power of 6.3 volts at 4 amperes is also available so that this power supply is an ideal unit for use with transmitters, such as the Millen No. 90800, as well as general laboratory purposes. The power supply uses two No. 816 rectifiers and has a two section pi filter with 10 henry General Electric chokes and a 2-2-10 mfd. bank of 1000 volt General Electric Pyranol capacitors. The panel is standard 8¾" x 19" rack mounting.

No. 90281, less tubes................ $



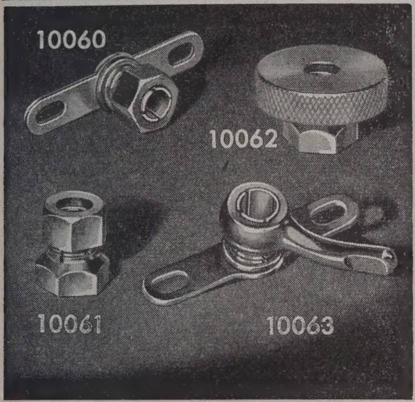


RF POWER AMPLIFIER

This 500 watt amplifier may be used as the basis of a high power amateur transmitter or as a means for increasing the power output of an existing transmitter. As shipped from the factory, the No. 90881 RF power amplifier is wired for use with the popular RCA or G.E. "812" type tubes, but adequate instructions are furnished for readjusting for operation with such other popular amateur style transmitting tubes as Taylor TZ40, Eimac 35T, etc. The amplifier is of unusually sturdy mechanical construction, on a 10½" relay rack panel. Plug-in inductors are furnished for operation on 10, 20, 40 or 80 meter amateur bands. The standard Millen No. 90800 exciter unit is an ideal driver for the new No. 90881 RF power amplifier.

No. 90881, with one set of coils, but less tubes............................. $

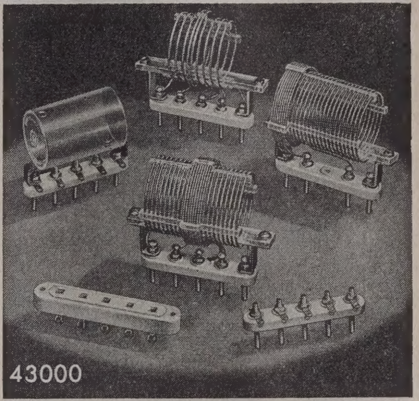
JAMES MILLEN
MALDEN · MASSACHUSETTS



SHAFT LOCKS

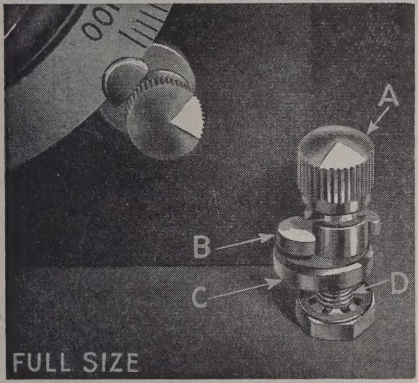
In addition to the original No. 10060 and No. 10061 "DESIGNED FOR APPLICATION" shaft locks, we can also furnish such variations as the No. 10062 and No. 10063 for easy thumb operation as illustrated above. The No. 10061 instantly converts any plain "¼ shaft" volume control, condenser, etc. from "plain" to "shaft locked" type. Each to mount in place of regular mounting nut.

No. 10060 .... $
No. 10061 ....
No. 10062 ....
No. 10063 ....



TRANSMITTING TANK COILS

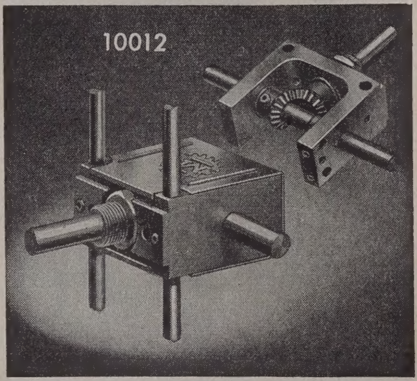
A full line—all popular wattages for all bands. Send for special catalog.



DIAL LOCK

Compact, easy to mount, positive in action, does not alter dial setting in operation! Rotation of knob "A" depresses finger "B" and "C" without imparting any rotary motion to Dial. Single hole mounted.

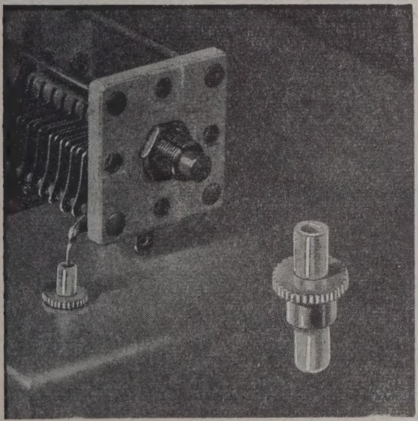
No. 10050 .... $



RIGHT ANGLE DRIVE

Extremely compact, with provisions for many methods of mounting. Ideal for operating potentiometers, switches, etc., that must be located, for short leads, in remote parts of chassis.

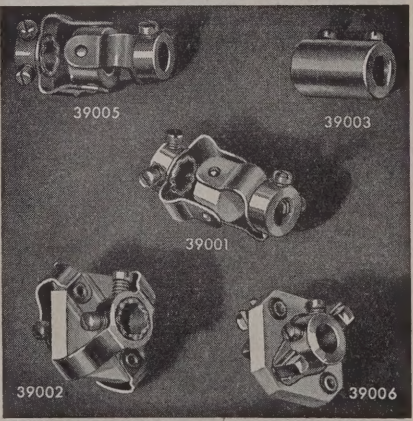
No. 10012 .... $



THRU-BUSHING

Efficient, compact, easy to use and neat appearing. Fits ¼" hole in chassis. Held in place with a drop of solder or a "nick" from a crimping tool.

No. 32150 .... $



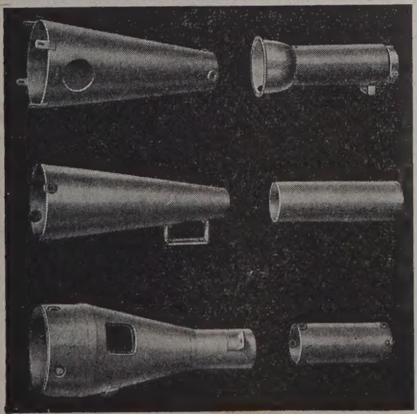
FLEXIBLE COUPLINGS

The No. 39000 series of Millen "Designed for Application" flexible coupling units include, in addition to improved versions of the conventional types, also such exclusive original designs as the No. 39001 insulated universal joint and the No. 39006 "slide-action" coupling (in both steatite and bakelite insulation).

The No. 39006 "slide-action" coupling permits longitudinal shaft motion, eccentric shaft motion and out-of-line operation, as well as angular drive without backlash.

The No. 39005 is similar to the No. 39001, but is not insulated and is designed for applications where relatively high torque is required. The steatite insulated No. 39001 has a special anti-backlash pivot and socket grip feature. All of the above illustrated units are for ¼" shaft and are standard production type units.

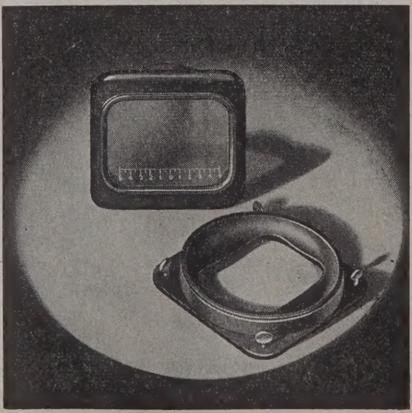
No. 39001 .... $
No. 39002 ....
No. 39003 ....
No. 39005 ....
No. 39006 ....



CATHODE RAY TUBE SHIELDS

For many years we have specialized in the design and manufacture of magnetic metal shields of nicoloi and mumetal for cathode ray tubes in our own complete equipment, as well as for applications of all other principal complete equipment manufacturers. Stock types as well as special designs to customers' specifications promptly available.

No. 80045—Nicoloi for 5" tube....... $
No. 80043—Nicoloi for 3" tube.......
No. 80042—Nicoloi for 2" tube.......

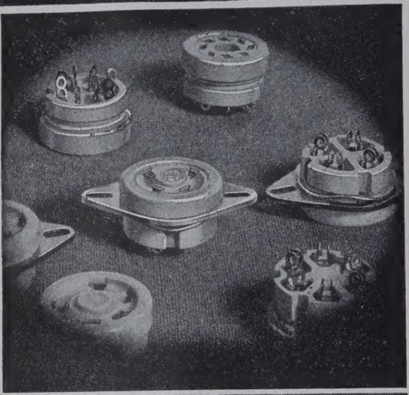


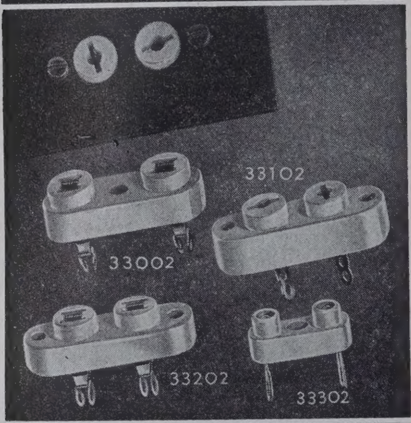
BEZELS FOR CATHODE RAY TUBES

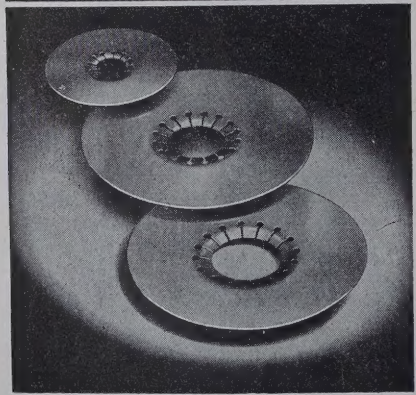
Five inch bezel is of cast aluminum with black wrinkle finish. Complete with neoprene cushion, green lucite filter scale and four screws for quick detachment from panel when inserting tube.

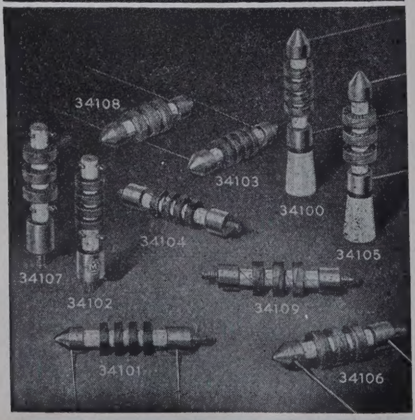
No. 80075—5" .... $
No. 80073—3" ....
No. 80072—2" ....

JAMES MILLEN
MALDEN · MASSACHUSETTS









TUBE SOCKETS DESIGNED FOR APPLICATION

MODERN SOCKETS for MODERN TUBES! Long Flashover path to chassis permits use with transmitting tubes, 866 rectifiers, etc. Long leakage path between contacts. Contacts are type proven by hundreds of millions already in government, commercial and broadcast service, to be extremely dependable. Sockets may be mounted either with or without metal flange. Mounts in standard size chassis hole. All types have barrier between contacts and chassis. All but octal and crystal sockets also have barriers between individual contacts in addition.

The No. 33888 shield is for use with the 33008 octal socket. By its use, the electrostatic isolation of the grid and plate circuits of single-ended metal tubes can be increased to secure greater stability and gain.

The 33087 tube clamp is easy to use, easy to install, effective in function. Available in special sizes for all types of tubes. Single hole mounting. Spring steel, cadmium plated.

Cavity Socket Contact Discs, 33446 are for use with the "Lighthouse" ultra high frequency tube. This set consists of three different size unhardened beryllium copper multi-finger contact discs. Heat treating instructions forwarded with each kit for hardening after spinning or forming to frequency requirements.

Voltage regulator dual contact bayonet socket, 33991 black Bakelite insulation and 33992 with low loss high leakage mica filled Bakelite insulation.

No. 33004	$
No. 33005	
No. 33006	
No. 33007	
No. 33008	
No. 33888	
No. 33087	
No. 33002	
No. 33102	
No. 33202	
No. 33302	
No. 33446*	
No. 33991	
No. 33992	

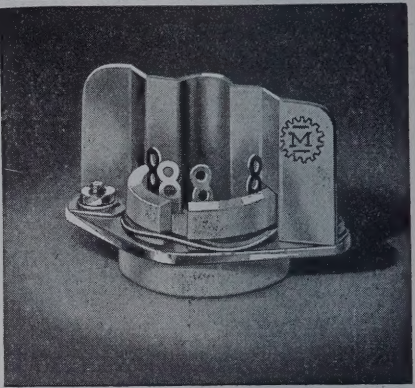
* For set of 3. Single discs $2.00 each.

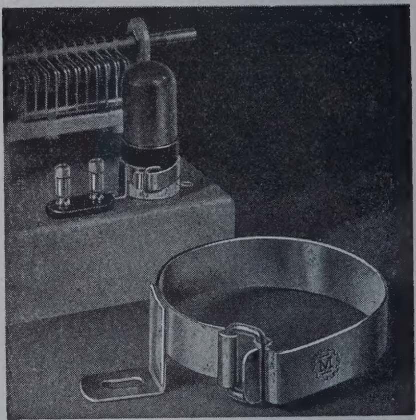
RF CHOKES

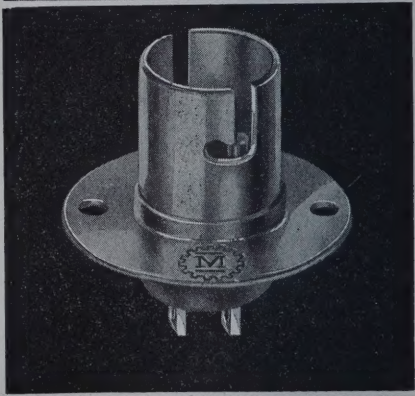
Many have copied, few have equalled, and none have surpassed the genuine original design Millen Designed for Application series of midget RF Chokes. The more popular styles now in constant production are illustrated herewith. Special styles and variations to meet unusual requirements quickly furnished.

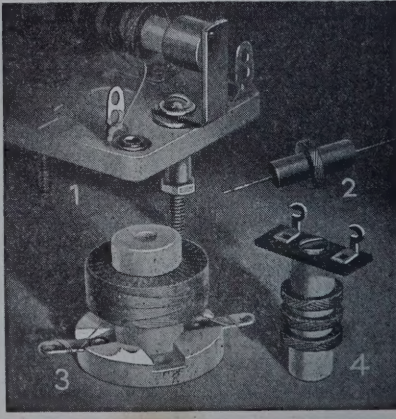
General Specifications: 2.5 mH, 250 mA for types 34100, 34101, 34102, 34103, 34104, and 1 mH, 300 mA for types 34105, 34106, 34107, 34108, 34109.

No. 34100	$
No. 34101	
No. 34102	
No. 34103	
No. 34104	

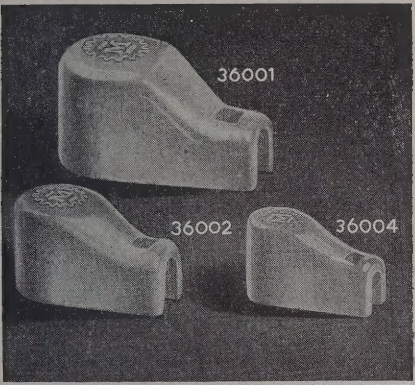


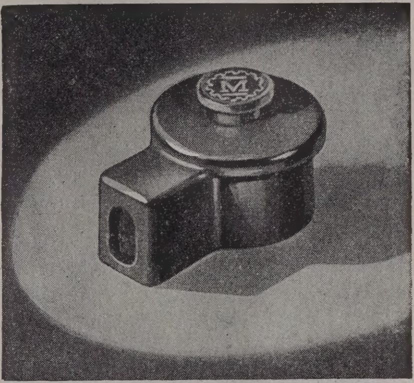






JAMES MILLEN
MALDEN · MASSACHUSETTS





CERAMIC PLATE OR GRID CAPS

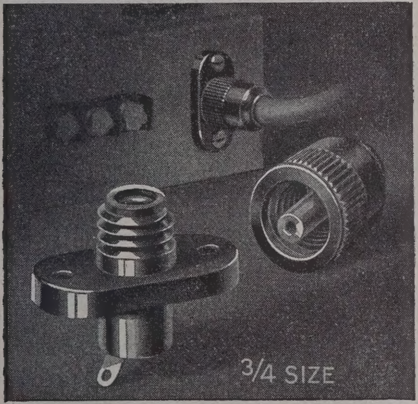
Soldering lug and contact one-piece. Lug ears annealed and solder dipped to facilitate easy combination "mechanical plus soldered" connection of cable.

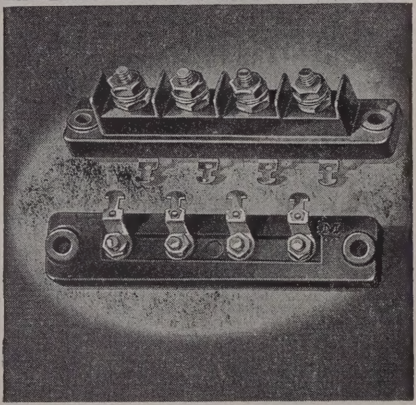
No. 36001—9/16"............ $
No. 36002—⅜"...............
No. 36004—¼"...............

SNAP LOCK PLATE CAP

For Mobile, Industrial and other applications where tighter than normal grip with multiple finger 360° low resistance contact is required. Contact self-locking when cap is pressed into position. Insulated snap button at top releases contact grip for easy removal without damage to tube.

No. 36011—9/16"............ $
No. 36012—⅜"...............





SAFETY TERMINAL

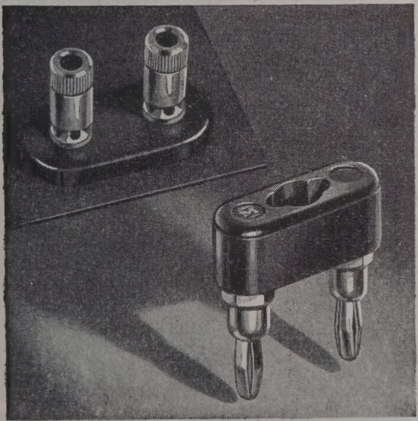
Combination high voltage terminal and thru-bushing. Tapered contact pin fits firmly into conical socket providing large area, low resistance connection. Pin is swivel mounted in cap to prevent twisting of lead wire.

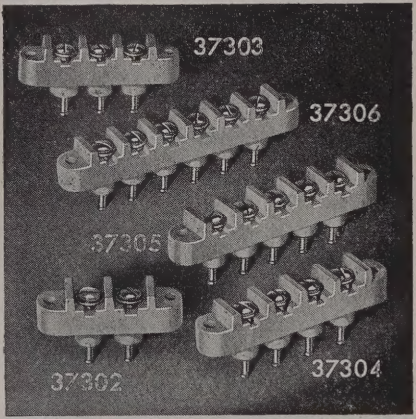
No. 37001, Black or Red......... $
No. 37501, Low loss.............

TERMINAL STRIP

A sturdy four-terminal strip of molded black Textolite. Barriers between contacts. "Non turning" studs, threaded 8/32 each end.

No. 37104.................... $





POSTS, PLATES and PLUGS

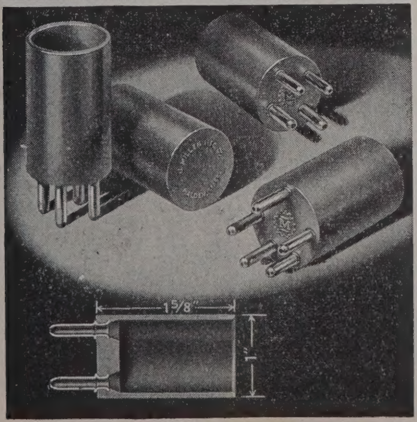
Designed for Application! Compact, easy to use. Made in black and red regular bakelite as well as low loss brown mica filled bakelite or steatite for R.F. uses. Posts have captive head.

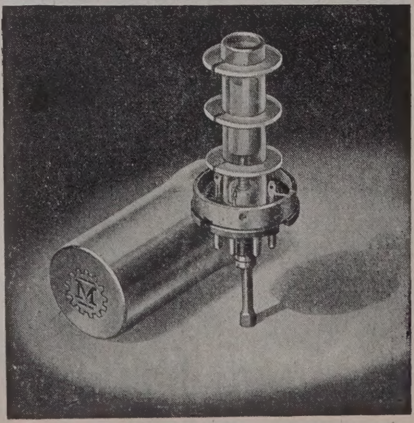
No. 37202 Plates (pr.)........... $
No. 37212 Plugs................
No. 37222 Posts (pr.)............

STEATITE TERMINAL STRIPS

Terminal and lug are one piece. Lugs are Navy turret type and are free floating so as not to strain steatite during wide temperature variations. Easy to mount with series of round holes for integral chassis bushings.

No. 37302.................... $
No. 37303....................
No. 37304....................
No. 37305....................
No. 37306....................





MIDGET COIL FORMS

Made of low loss mica filled brown bakelite. Guide funnel makes for easy threading of leads through pins.

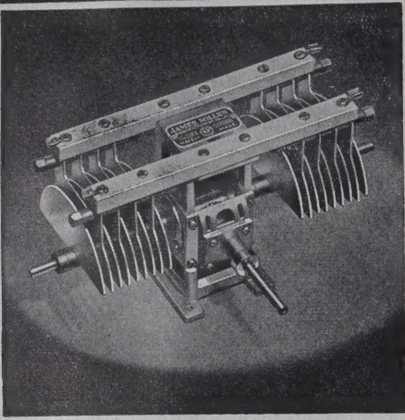
No. 45000.................... $
No. 45004....................
No. 45005....................

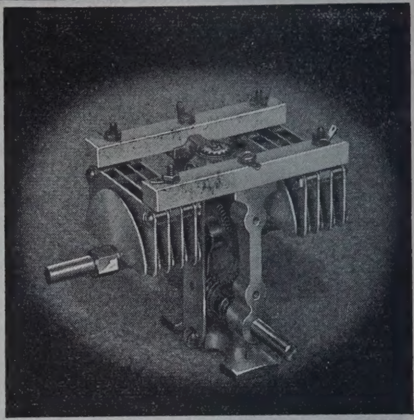
TUNABLE COIL FORM

Standard octal base of low loss mica-filled bakelite, polystyrene ½" diameter coil form, heavy aluminum shield, iron tuning slug of high frequency type, suitable for use up to 35 mc. Adjusting screw protrudes through center hole of standard octal socket.

No. 74001, with iron core........ $
No. 74002, less iron core.........

JAMES MILLEN
MALDEN · MASSACHUSETTS



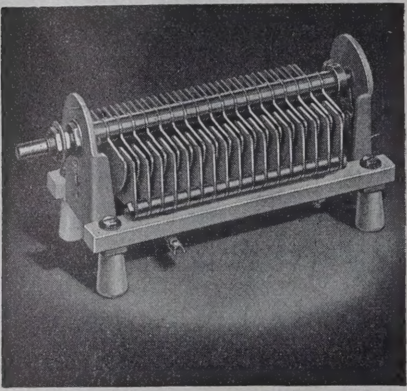


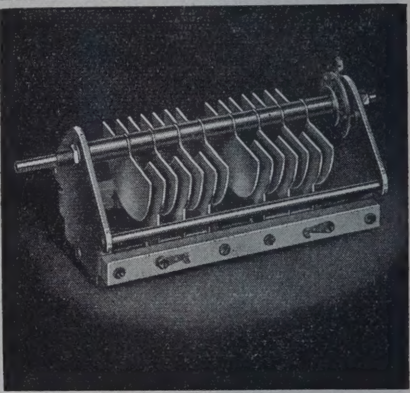
04000 and 11000 SERIES TRANSMITTING CONDENSERS

A new member of the "Designed for Application" series of transmitting variable air capacitors is the 04000 series with peak voltage ratings of 3000, 6000, and 9000 volts. Right angle drive, 1–1 ratio. Adjustable drive shaft angle for either vertical or sloping panels. Sturdy construction, thick, round-edged, polished aluminum plates with 1¾" radius. Constant impedance, heavy current, multiple finger rotor contactor of new design. Available in all normal capacities.

The 11000 series has 16/1 ratio center drive and fixed angle drive shaft.

Code	*Volts*	*Capacity*	*Price*
11035	3000	35	$
11050	3000	50	
11070	3000	70	
04050	6000	50	
04060	9000	60	
04100	6000	90	
04200	3000	205	

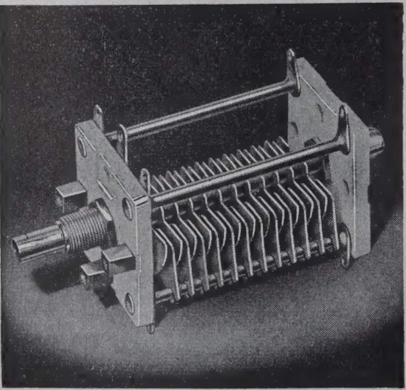


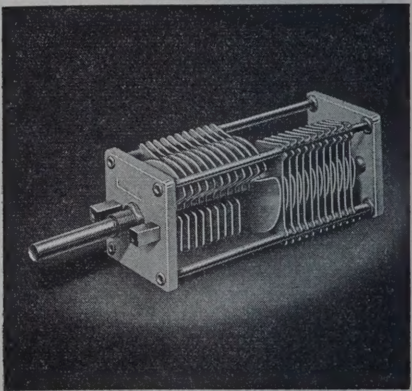


12000 and 16000 SERIES TRANSMITTING CONDENSERS

Rigid heavy channeled aluminum end plates. Isolantite insulation, polished or plain edges. One piece rotor contact spring and connection lug. Compact, easy to mount with connector lugs in convenient locations. Same plate sizes as 11000 series above.

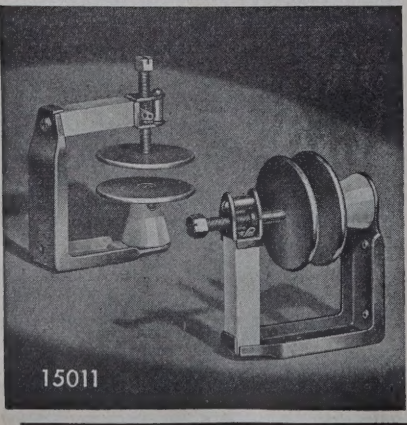
The 16000 series has same plate sizes as 04000 series. Also has constant impedance, heavy current, multiple finger rotor contactor of new design. Both 12000 and 16000 series available in single and double sections and many capacities and plate spacing.





THE 28000–29000 SERIES VARIABLE AIR CAPACITORS

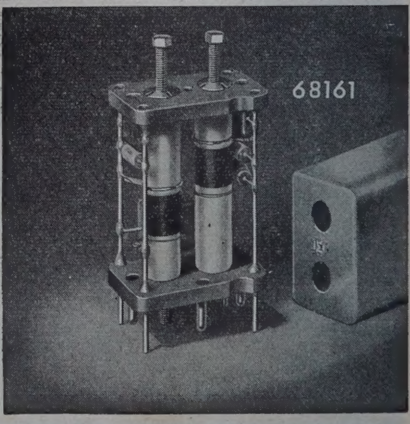
"Designed for Application," double bearings, steatite end plates, cadmium or silver plated brass plates. Single or double section .022" or .066" air gap. End plate size: 19/16" x 11/16". Rotor plate radius: ¾". Shaft lock, rear shaft extension, special mounting brackets, etc., to meet your requirements. The 28000 series has semi-circular rotor plate shape. The 29000 series has approximately straight frequency line rotor plate shape. Prices quoted on request. Many stock sizes.



NEUTRALIZING CAPACITOR

Designed originally for use in our own No. 90881 Power Amplifier, the No. 15011 disc neutralizing capacitor has such unique features as rigid channel frame, horizontal or vertical mounting, fine thread over-size lead screw with stop to prevent shorting and rotor lock. Heavy rounded-edged polished aluminum plates are 2" diameter. Glazed Steatite insulation.

No. 15011 .... $



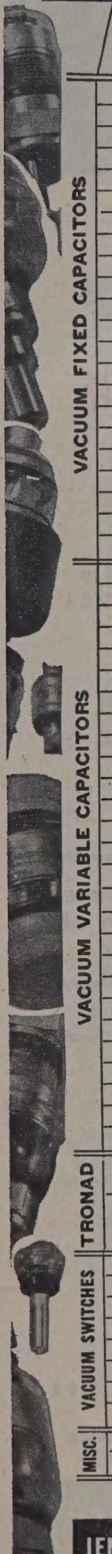
I.F. TRANSFORMERS

The Millen "Designed for Application" line of I.F. transformers includes air condenser tuned, and permeability tuned types for all applications. Standard stock units are for 456, 1600 and 5000 kc. B.F.O. also available.

Jennings
RADIO
VACUUM ELECTRONIC COMPONENTS

FIXED and VARIABLE HIGH VOLTAGE VACUUM CAPACITORS & SWITCHES

SPECIFICATIONS



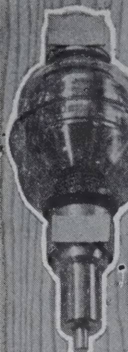
	FIGURES	NICKEL TYPES	COPPER TYPES	CAPACITY MMFD.	PEAK VOLTAGE KILOVOLTS	RMS AMPS NICKEL	RMS AMPS COPPER	OVERALL LENGTH	MAXIMUM O.D.	CONTACT DIAMETER	MOUNTING CENTERS
VACUUM FIXED CAPACITORS	24	VC	VCC	6, 12, 25, 50, 75, 100, 150	20, 25, 30	14	42	6½	2¼	13/16	5⅞
	24	VC	VCC	200, 250	20, 25, 30	14	42	6½	2 11/16	13/16	5⅞
	23	W		6, 12, 25, 50, 100	20	10.5		4 3/16	2¼	⅜	3⅞
	20	X		5, 10, 15, 20, 25	17	7		3¼	1 1/16	11/32	2⅞
	21	Y		1, 2, 3, 4, 5	17	7		3¼	11/16	11/32	2⅞
	26		JCS-1	25, 50, 75, 100, 150	7.5, 10, 15		28	3¾	2⅛	55/64	3¼
	25		JCS-2	5,10,20,50	10, 15		21	2 11/16	1½	⅜	2¼
	27		JCS	250	7.5, 10, 15		42	3¾	2⅝	55/64	3⅛
	28		JCS	500	7.5,10,15		42	4	3 1/16	55/64	3½
	29		JCS	1000	7.5, 10		42	4⅝	3⅝	2	3⅞
	22		JCS-L	250	3, 5		20	2½	1⅞	11/32	2⅛
	31		JC-2	25, 50, 100	15,20,25,30		42	3 15/16	3¼	51/64	3¼
	34		JC-3	20, 40, 50, 60	35, 40, 50, 60		140	8¼	3½	2	6¼
	32		JC-4	100, 125	35, 40, 50, 60		175	9¼	5	3⅛	7
	33		JC-5	200	35, 40, 50, 60		225	11¼	7	4⅛	8¾
	36	M	MC	500, 750, 1000	10, 15, 20	21	60	8⅜	5	2	6¼
	37	ML	MLC	500, 750, 1000	25, 30	21	60	9¼	5	2	7¼
	36	MH	MHC	200 or less	35, 40, 50	21	60	8½	5	2	6⅜
	38	MM	MMC	1500, 2000	10, 15	21	125	9¼	6⅛	4⅛	6¾
	38	MMH	MMHC	450	35, 40, 45	21	125	9¼	6⅛	4⅛	6¾
	35		MC-1	500,750,1000	10, 15		150	3¼	5	2	2 15/16
	30	K		12, 25, 50	35, 40, 50	14		8½	3	13/16	7¾
VACUUM VARIABLE CAPACITORS	14A		TRC-1	1-8, 2-10	15		30	4¼	1⅜	1⅜	2
	14	T		5-25	20	10.5		6¼	2¼	½x⅝	4
	14		TC	5-25	20		21	6⅝	2⅛	⅝	4 5/16
	16	R		2-8	10, 15, 20	10.5		5½	1¾	11/32x⅝	3
	15	TR		2-8	17	10.5		6¼	2⅛	11/32x⅝	4
	18	SS		10-30 per section	25, 30, 35	7		6⅛	3	11/32x⅝	3⅞x2¾
	19		SSC-1	2-10 per section	10		15	6 1/16	2⅝	9/16x⅝	1½x3⅞
	17	AT		10-50	20, 25, 30	10.5		6½	3	½x⅝	4
	13		ATCS	10-110, 20-200	7.5, 10		20	6 15/16	3	⅝	4 7/16
	9		UCS	5-200	7.5,10,15,20		42	8½	2⅝	55/64x2	4⅜
	9		UCS	10-300	7.5, 10, 15		42	8¾	2⅝	55/64x2	4⅝
	10		UCS	25-500	7.5, 10, 15		42	9	3⅛	55/64x2	4⅞
	12		UCS-L	4-250	3, 5		20	4⅞	1¾	⅜	3¾
	11		UCS-V	8-110	7.5, 10, 15		60	4¾	3	⅞	3 3/16
	6		UCSM	3-500	7.5, 10		80	10	3⅝	1 13/16	5¼
	7		UCSX	10-500	7.5,10,15		42	9⅛	3⅜	55/64x3⅛	5
	8		UCSX	25-700	7.5, 10		42	9 9/16	3⅝	2x3⅛	4¾
	8		UCSX	25-1000	7.5, 10		42	9¾	3⅝	2x3⅛	4 15/16
	5		UCSXH	10-200	35, 40, 45		42	10¾	4½	2	5½
	1	U	UC	50-250	10, 15, 20	21	60	11 7/16	5	2	6½
	1	UH	UHC	10-75	35, 40, 50, 60	21	60	11 7/16	5	2	6½
	1	UH	UHC	75-150	35, 40, 50, 60	21	60	12	5	2	7 1/16
	2	UX	UXC	25-500	10, 15, 20	21	60	14	5	3⅛	7 11/16
	2	UXH	UXHC	25-150	35, 40, 50	21	60	14⅝	5	3⅛	8¼
	3	VM	VMMC	50-1000	10, 15	21	100	14½	6⅛	4⅛	7⅞
	4	VMM	VMMC	100-2000	10, 15	21	125	15½	6⅛	4⅛	8⅝
	4	VMMH	VMMHC	25-450	35, 40, 45	21	125	15½	6⅛	4⅛	8⅝
TRONAD			TAS-4 500 JR	Variable Capacitor in above ranges Tube EIMAC Type 4x500							
			TAS-5 2500 JR	Variable Capacitor in above ranges Tube EIMAC Type 3x2500							
	Also available in both air and water-cooled units from 50 watts to 25 kilowatts. Write for details.										
VACUUM SWITCHES			R-1	Vacuum Switch	50		50	7	3	⅝	5⅛
			R-2	Vacuum Switch	65		50	9	3	⅝	7¼
			R-3	Vacuum Switch	35		50	5	1 13/16	9/16	3
			R-4	Vacuum Switch	20		50	5⅛	1 9/16	⅝	3⅛
			R-5	Vacuum Switch	15		35	3⅝	1½	11/32x9/16	2½
			R-6	Vacuum Switch	15		35	3⅝	1 7/16	11/32	2 3/16
			RH-1	Vacuum Switch	35		100	6½	2⅝	⅞	4½
			RK-1	Keying Switch	10		5	5 11/16	4 1/16	½	4½
MISC.			Feed-thru Up to 100 MMFD		20		21	6⅜	2⅝	17/32	5½
				Vacuum Transformer 2:1 step-up to 40 kv.				5¾	2¼	11/32	

Current ratings may be increased by forced cooling with adequate mountings.

Correspondence invited for other capacities and voltages.

JENNINGS RADIO MANUFACTURING CO. • 970 McLAUGHLIN AVE. • P. O. BOX 1278 • SAN JOSE 8, CAL.

SEE TWO FOLLOWING PAGES


1
U
UC
UH
UHC

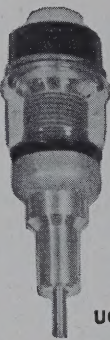
See preceding page for specifications and data for all units illustrated.

Jennings RADIO

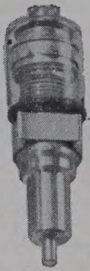
VACUUM ELECTRONIC COMPONENTS

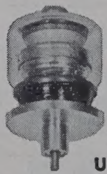
VARIABLE CAPACITORS

2
UX
UXC
UXH
UXHC

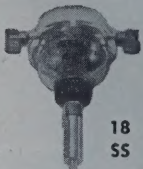

5
UCSXH

7
UCSX
500


9
UCS
300


11
UCSV

13
ATCS

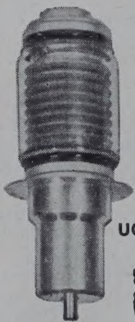

18
SS

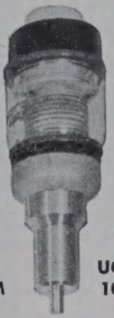
14 A
TRC 1

15
TR

19
SSC 1

3
VM


6
UCSM


8
UCSX
1000

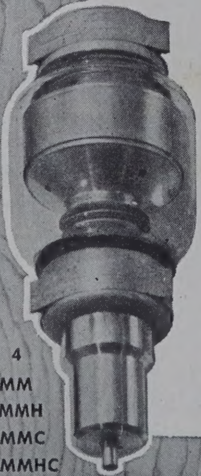
10
UCS
500

12
UCSL
250

14
T

16
R

17
AT


4
VMM
VMMH
VMMC
VMMHC

Jennings Vacuum Capacitors have made effective miniaturization of Radio Transmitters a reality

At the same time making practical wide frequency ranges and automatic tuning.

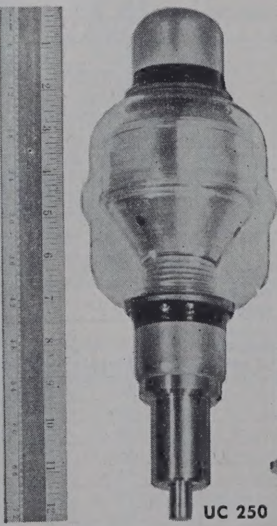
Now Jennings Radio Manufacturing Co. is miniaturizing its own vacuum capacitors.

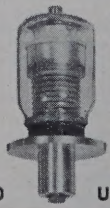
Comparison 1:
Vacuum Variable Capacitors Type UC-50-250 mmfd

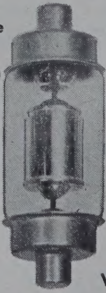
The new UCSL 4-250 mmfd

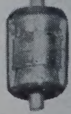
Comparison 2:
Vacuum Fixed Capacitors Type VC-50 mmfd

The new JCS-2, 50 mmfd


UC 250


UCSL 250


VC

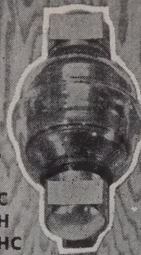

JCS 2

These units are typical of the constant new developments and improvements being carried on in the Jennings Radio Development Laboratory

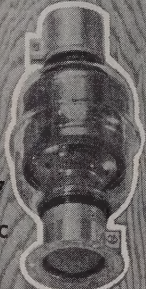
**JENNINGS RADIO MANUFACTURING COMPANY • 970 McLAUGHLIN AVE.
P. O. BOX 1278 • SAN JOSE 8, CALIFORNIA**

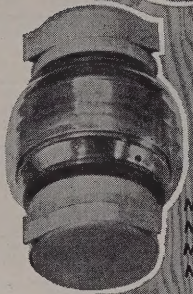
FIXED AND VARIABLE HIGH VOLTAGE VACUUM
CAPACITORS
AND VACUUM
SWITCHES

35
MC 1


36
M
MC
MH
MHC

All cuts appearing on these two pages are in relative proportion to each other.


37
ML
MLC

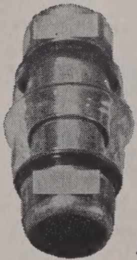

38
MM
MMC
MMH
MMHC

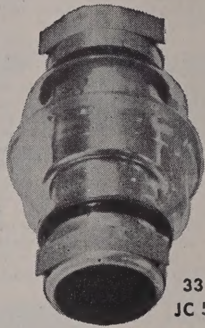
FIXED CAPACITORS

20
X

23
W

30
K


32
JC 4


33
JC 5

21
Y

24
VC
VCC

31
JC 2

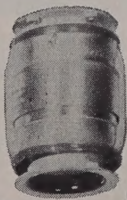
22
JCSL

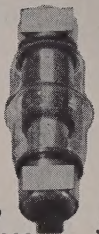
25
JCS 2

26
JCS 1

27
JCS
250

28
JCS
500

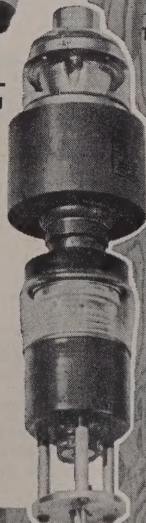

29
JCS 1000


34
JC 3

TAS 4

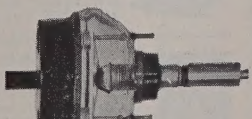
FEED-
THRU

TRONADS

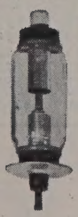

TAS 5

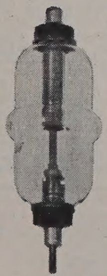
Vacuum Switches for High Voltage

A unit for any circuit requirement


RK 1 KEYING SWITCH

R1
MOUNTED

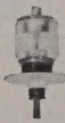

R1

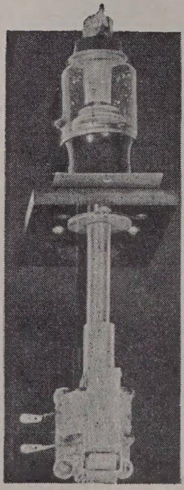

R2

R3

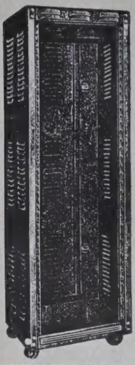
R4

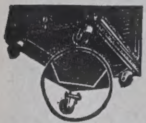
R5


R6


RH 1
MOUNTED

JENNINGS RADIO MANUFACTURING COMPANY • 970 McLAUGHLIN AVE.
P.O. BOX 1278 • SAN JOSE 8, CALIFORNIA





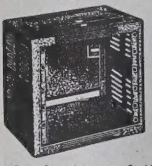
BUD DE LUXE RELAY RACKS

These relay racks are made of 16 gauge steel with ⅛" panel supports. The panel mounting supports are recessed so that no edges of the panel will be exposed.

The front and back of the top, the two sides and the door are well louvered to provide adequate ventilation. Snap catches are positioned on the door. A stream-lined appearance is achieved by the use of rounded corners and red-lined chrome trim. The relay rack is shipped knocked-down and complete with all necessary hardware for assembly. All standard 19" panels will fit these racks.

A SPECIAL FEATURE IS THE USE OF FOUR STURDY SUPPORTS ON THE BOTTOM SO THAT CASTERS CAN BE FASTENED DIRECTLY TO THE BASE, THEREBY ACHIEVING READY MOBILITY. Bud RC-7756 casters will fit this unit. Casters are not included in price of cabinet. These relay racks are supplied in either black or grey wrinkle finish. The overall width is 22" and the depth is 17¼" on all sizes listed.

Catalog No.	Overall Height	Panel Space	Shipping Wt.	Dealer Cost
CR-1774	42-1/16"	36¾"	90 lbs.	**$32.70**
CR-1771	47-5/16"	42"	100 lbs.	**37.45**
CR-1772	66-9/16"	61¼"	135 lbs.	**48.60**
CR-1773	82-5/16"	77"	155 lbs.	**58.50**

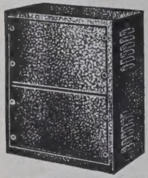


BUD DE LUXE CABINET RACKS

These cabinet racks have rounded corners and attractive red-lined chrome trim. There is a recessed hinged door on the top with a snap catch. These cabinet racks are made of heavy gauge steel and are of sturdy construction. The five large sizes have a hinged rear door, while the small sizes have a welded panel in the rear.

Adequate ventilation is assured by means of louvered sides and a two inch opening in the bottom of the back extends the entire width. "NO-SCRATCH" EXTENDED METAL FEET ARE EMBOSSED ON THE BOTTOM TO MINIMIZE MARRING OF A TABLE TOP. These relay racks are furnished in either black or grey wrinkle finish. Depth 14¾", width 22". Will fit standard 19" panels.

Catalog No.	Overall Height	Panel Space	Shipping Wt.	Dealer Cost
CR-1741	10-9/16"	8¾"	29 lbs.	**$12.00**
CR-1740	12-5/16"	10½"	31 lbs.	**13.70**
CR-1742	14-1/16"	12¼"	32 lbs.	**14.55**
CR-1739	15-13/16"	14"	36 lbs.	**16.20**
CR-1743	19-5/16"	17½"	40 lbs.	**19.20**
CR-1727	22-13/16"	21"	45 lbs.	**20.83**
CR-1744	28-3/16"	26¼"	50 lbs.	**22.50**
CR-1728	33-9/16"	31½"	55 lbs.	**24.00**
CR-1745	36-13/16"	35"	60 lbs.	**24.90**



BUD JUNIOR CABINET RACKS

This cabinet rack is a multi-purpose unit that is inexpensive. The cabinet is constructed to accommodate two panels, one is 10½" by 18-5/16", the other 8¾" by 18-5/16", these panels are supplied with the cabinet. The BUD Junior Cabinet Rack is spacious enough to accommodate a chassis up to 10" x 17".

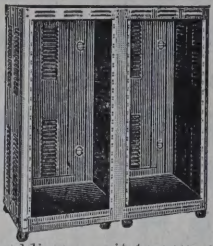
The rear of the cabinet is covered by a hinged door with a locking device. The cabinet is furnished in black wrinkle finish only.

Catalog No.	Overall Height	Depth	Width	Shipping Wt.	Dealer Cost
RC-1749A	21-1/16"	10½"	19⅞"	25 lbs.	**$15.95**

BUD DESK TYPE RELAY RACKS

Perfect for table mounting of low and medium power transmitters, public address systems, and other electronic instruments. Rack has strong chassis for mounting heavy components. Shipped knocked-down, with necessary hardware, easy to assemble. Standard notched 19" wide panels can be used, panels set in recess so that no edges are exposed. Furnished in black wrinkle finish only. Depth. 12".

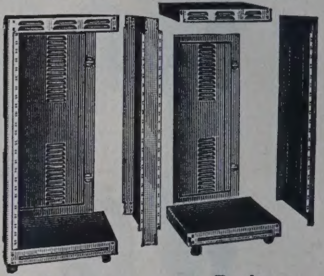
Catalog No.	Height	Panel Space	Shipping Wt.	Dealer Cost
RR-1248	24"	21"	15 lbs.	**$6.71**
RR-1249	31"	28"	17 lbs.	**8.38**



NEW BUD ADD-a-RACK SERIES

It has always been necessary to buy special racks without louvers on one side to obtain a maximum of panel space with a minimum of floor space. Now, you no longer need to buy a whole new cabinet when you want additional panel space. Through our new and exclusive Add-a-Rack series, BUD not only offers additional racks at a lower cost, but provides you with a sturdier, better looking assembly.

The illustration at top shows two Add-a-Rack cabinets assembled together. The illustration below shows the unique and ingenious method of adding a unit to your present equipment. Instead of buying an entire new outfit, you purchase only four parts: (1) a door (2) a top (3) a bottom and (4) an Add-a-Rack coupling-unit. The right (or left) hand side of your present relay rack is removed and replaced by the Add-a-Rack coupling-unit; next, a top and bottom is fastened into place, and the side taken from the first rack is fastened onto the second rack which has been added. Place the additional door into position and you have two racks properly and efficiently coupled together. In the same simple way, more racks can be added at any time and every one will be in a CONTINUOUS ONE-PIECE assembly.



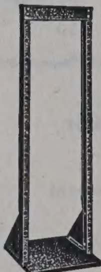
This series is available in two ways. (1) a double unit consisting of two racks and the Add-a-Rack coupling unit, (2) Add-a-Rack unit, consisting of a door, a top, a bottom and an Add-a-Rack coupling-unit. These units are furnished with all necessary assembling and panel mounting hardware.

Add-a-Rack Unit	Used to Add-a-Rack to	Dealer Cost
AR-1778	**CR-1774**	**$31.00**
AR-1775	**CR-1771**	**36.00**
AR-1776	**CR-1772**	**45.00**
AR-1777	**CR-1773**	**55.00**

Complete unit consisting of the knocked-down parts necessary for two relay racks coupled together.

CR-1779	two coupled relay racks same size as **CR-1774**	**$ 63.70**
CR-1780	two coupled relay racks same size as **CR-1771**	**73.45**
CR-1786	two coupled relay racks same size as **CR-1772**	**93.60**
CR-1799	two coupled relay racks same size as **CR-1773**	**113.50**

Bud RC-7756 Casters will fit this unit. Casters are not included in price of cabinet.

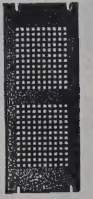


BUD TELEPHONE TYPE RELAY RACKS

Nos. **RR-1263** and **RR-1264** are made of ⅛" steel channels, three inches deep and are held together by angle cross pieces of the same material. The design of the base has been improved to incorporate a chassis type bottom, together with the usual side angles, making the rack stronger and more stable.

RR-1265 is heavy duty and is made of heavy channel iron supported by two ⅜" thick iron angles that are bolted to the channels to provide additional support to the unit. Black wrinkle finish only. All racks accommodate standard 19" panels in accordance with standards set by RMA.

Catalog No.	Height	Depth	Panel Space	Shipping Wt.	Dealer Cost
RR-1263	35½"	22"	31½"	38 lbs.	**$17.60**
RR-1264	70½"	22"	66½"	48 lbs.	**20.06**
RR-1265	72½"	15"	66½"	97 lbs.	**38.10**



BUD VENTILATING GRILLE PANELS

Made of ⅛" thick steel. The grille is stamped into the panel itself, and is recommended for use where additional ventilation is desirable. All panels are 19" long, furnished in either black or grey wrinkle finish.

Catalog No.	Height	Grille Size	Dealer Size
PS-808	5¼"	3⅜" x 14⅜"	**$2.64**
PS-809	7"	4⅞" x 14⅜"	**2.85**
PS-810	8¾"	*3⅞" x 14⅜"	**3.45**
PS-811	10½"	*5⅞" x 14⅜"	**3.65**
PS-812	12¼"	*7⅜" x 14⅜"	**3.90**

* Allows 3½" space for chassis mounting.

BUD CHASSIS MOUNTING BRACKETS

Mounting brackets are essential to insure proper support of the chassis. Formed of heavy gauge steel, cut away at the bottom to provide chassis clearance so that chassis can be mounted flush against panel. Finished in Black. Numbers MB-450 and MB-451 designed for chassis height of 4". Sold in pairs only.

Catalog No.	Height	Depth	Dealer Cost Per Pair
MB-458	6½"	8"	**$0.85**
MB-448	6½"	10"	**1.10**
MB-459	6½"	11"	**1.20**
MB-449	6½"	12"	**1.45**
MB-460	6½"	13"	**1.35**
MB-450	8½"	10"	**1.60**
MB-451	8½"	13"	**1.70**

Where materials are specified Black Wrinkle Finish, and Grey is desired, a charge of 15% additional will be made

Prices on above slightly higher west of the Mississippi River

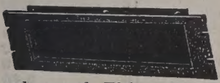
Only a few of many BUD Products are shown. For complete catalog, write BUD RADIO, INC., 2118 E. 55th St., Cleveland, Ohio

BUD STANDARD RELAY RACK PANELS

Made of Steel or Aluminum. Steel Panels are made of high grade steel ⅛" thick. Aluminum Panels are made of ⅛" thick Aluminum. All Panels are 19" wide. Furnished in either Black or Grey Wrinkle. Aluminum panels 3/16" thick may be had if desired at 60% increase in cost over ⅛".

STEEL			ALUMINUM		
Catalog No.	Height	Dealer Cost	Catalog No.	Height	Dealer Cost
PS-1250	1¾"	$ .66	**PA-1101**	1¾"	$ .75
PS-1251	3½"	.75	**PA-1102**	3½"	1.08
PS-1252	5¼"	.93	**PA-1103**	5¼"	1.38
PS-1253	7"	1.08	**PA-1104**	7"	1.80
PS-1254	8¾"	1.30	**PA-1105**	8¾"	2.10
PS-1255	10½"	1.55	**PA-1106**	10½"	2.49
PS-1256	12¼"	1.85	**PA-1107**	12¼"	2.85
PS-1257	14"	2.15	**PA-1108**	14"	3.18
PS-1258	15¾"	2.45	**PA-1109**	15¾"	3.60
PS-1259	17½"	2.70	**PA-1110**	17½"	3.99
PS-1260	19¼"	3.00	**PA-1111**	19¼"	4.35
PS-1261	21"	3.30	**PA-1112**	21"	4.65

BUD ENCLOSED METER PANEL



PS-439 Meter Panel is designed to give maximum protection to meters. The steel panel has a large cut-out, behind which is mounted a blank Masonite sub-panel. This sub-panel has a meter mounting area of 4½" x 15⅛"—sufficient space to mount four 3" meters. The meters are protected by a glass insert that mounts in slides. Due to danger from breakage during shipment, this glass is not supplied with the panel. The glass insert should be cut 16" long x 4⅝" wide. Finished in either Black or Grey Wrinkle.

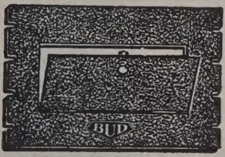
Cat. No.	Length	Width	Dealer Cost
PS-439	19"	5¼"	**$5.85**

BUD STEEL METER PANELS

All meter panels are 5¼" high, 19" wide, available in either black or grey wrinkle finish. Small holes fit either 2" square or round meters, large holes fit either 3" square or round meters.

Cat. No.	No. of Holes	Diameter	Type Material	Dealer Cost
PS-440	3	2.334"	Steel	**$1.30**
PS-441	5	2.334"	Steel	**1.85**
PS-442	3	2.835"	Steel	**1.30**
PS-443	5	2.835"	Steel	**1.85**

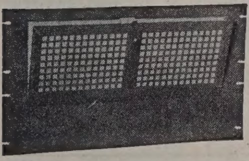
BUD METAL DOOR RACK PANELS



If it is desirable to have accessibility to component parts on the chassis, this panel is ideal. Door opening on No. 615—15⅝" x 6"; door opening on No. 616—15⅝" x 7½". Available in either Grey or Black Wrinkle finish. Made of ⅛" high grade sheet steel.

Cat. No.	Length	Width	Dealer Cost
PS-615	19"	10½"	**$4.50**
PS-616	19"	12¼"	**4.95**

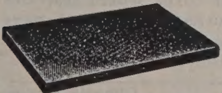
BUD VENTILATED DOOR RACK PANEL



These panels have a generous perforated area in the door, providing adequate ventilation for adjacent units. The panels are 19" long and available in either Black or Grey Wrinkle finish. Door opening on PS-814 15⅝" x 6". Opening on PS-815 15⅝" x 7½".

Cat. No.	Height	Door Height	Dealer Cost
PS-814	10½"	6"	**$5.85**
PS-815	12¼"	7½"	**6.45**

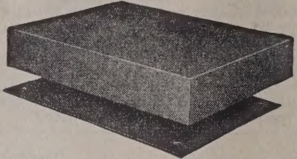
BUD RACK SHELVES



Heavy power supplies, modulator units etc., can be mounted on these rack shelves which are supported in the cabinet by the chassis-supporting angles listed on this page. They are designed to slide in from the rear of the cabinet. Made of heavy gauge steel, finished in Black Wrinkle Enamel only.

Cat. No.	Width	Height	Depth	Dealer Cost
CB-1976	19"	1"	15"	**$3.10**
CB-1977	19"	1"	12"	**2.35**

BUD HEAVY DUTY CHASSIS

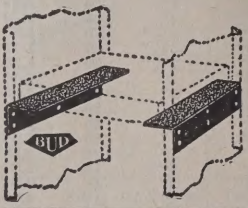


(Furn. with Bottom Plates)

These chassis, made of heavy gauge steel, are intended for applications requiring unusual sturdiness and where large weights are involved. Available in either Black Wrinkle finish or Electro-Zinc Plate.

Black Wrinkle Cat. No.	Zinc Plated Cat No.	Depth	Width	Height	Dealer Cost
CB-1757	**CB-1764**	8"	17"	2"	**$2.90**
CB-1758	**CB-1765**	8"	17"	3"	**3.15**
CB-1759	**CB-1766**	11"	17"	2"	**3.30**
CB-1760	**CB-1767**	11"	17"	3"	**3.65**
CB-1761	**CB-1768**	13"	17"	2"	**4.00**
CB-1762	**CB-1769**	13"	17"	3"	**4.40**
CB-1763	**CB-1770**	13"	17"	4"	**4.84**

BUD CHASSIS SUPPORTING ANGLES



When heavy weights are encountered in chassis construction, Bud Chassis Supporting Angles will distribute the weight on the sides of the rack and relieve the panel. Made in two sizes from Black Painted Steel, ⅛" thick. Sold in pairs only.

Cat. No.	Length	Width	Dealer Cost Per Pair
SA-1349	14½"	3"	**$1.75**
SA-1350	12"	3"	**1.65**

BUD REMOVABLE TOP CHASSIS

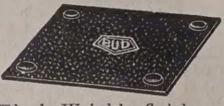
Amateurs and experimenters who make periodic changes can do so with a minimum of waste by just discarding the top that has been drilled and replacing it with a new top. Supplied in Black Wrinkle finish or Electro-Zinc plated.

Black Wrinkle Cat. No.	Zinc Plated Cat No.	Depth	Width	Height	Dealer Cost
CB-196	**CB-193**	10"	17"	3"	**$3.30**
CB-197	**CB-194**	10"	17"	4"	**3.65**
CB-251	**CB-210**	13"	17"	3"	**3.45**
CB-252	**CB-211**	13"	17"	4"	**4.25**

REPLACEMENT CHASSIS TOPS

RT-198	**RT-195**	10"	17"	1/16"	**$1.25**
RT-253	**RT-212**	13"	17"	1/16"	**1.55**

BUD CHASSIS BOTTOM PLATES



These bottom plates make excellent dust covers and protect all wiring and component parts under the chassis. Each plate has four formed bosses that prevent sharp edges from scratching the table top. Supplied in Black Wrinkle finish or Electro-Zinc Plated finish.

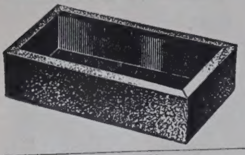
Black Wrinkle Cat. No.	Zinc Plated Cat. No.	Width	Length	Dealer Cost
BP-705	**BP-706**	5"	7"	**$ .46**
BP-680	**BP-667**	5"	9½"	**.43**
BP-536	**BP-538**	5"	10"	**.46**
BP-681	**BP-668**	7"	7"	**.60**
BP-682	**BP-669**	7"	9"	**.62**
BP-683	**BP-670**	7"	11"	**.71**
BP-537	**BP-539**	7"	12"	**.68**
BP-684	**BP-671**	7"	13"	**.75**
BP-685	**BP-672**	5"	13½"	**.60**
BP-516	**BP-513**	7"	15"	**.75**
BP-541	**BP-540**	8½"	15"	**.76**
BP-1069	**BP-1067**	4"	17"	**.60**
BP-686	**BP-673**	7"	17"	**.86**
BP-707	**BP-708**	8"	10"	**.75**
BP-709	**BP-710**	8"	12"	**.86**
BP-687	**BP-674**	8"	17"	**.90**
BP-688	**BP-675**	10"	12"	**.90**
BP-517	**BP-514**	10"	14"	**.85**
BP-689	**BP-676**	10"	17"	**1.10**
BP-690	**BP-677**	11"	17"	**1.10**
BP-691	**BP-678**	12"	17"	**1.20**
BP-692	**BP-679**	13"	17"	**1.40**
BP-518	**BP-515**	10"	23"	**1.40**

Where materials are specified Black Wrinkle Finish only, and Grey is desired, a charge of 15% additional will be made.

Prices on above slightly higher west of the Mississippi River

Only a few of many BUD Products are shown. For complete catalog, write BUD RADIO, INC., 2118 E. 55th St., Cleveland, Ohio

BUD STEEL CHASSIS BASES



These chassis are made from one piece of steel, all corners are reinforced and spot welded. The four sides are folded on bottom for additional strength—this also permits a bottom plate to be attached if desired. Furnished in either Black Wrinkle or Electro-Zinc plated.

Black Wrinkle Cat. No.	Zinc Plated Cat. No.	Depth	Width	Height	Gauge	Dealer Cost
CB-628	**CB-629**	5″	7″	2″	22	**$ .85**
CB-644	**CB-645**	5″	9½″	2½″	22	**.90**
CB-788	**CB-776**	5″	9½″	1½″	22	**.80**
CB-604	**CB-605**	5″	10″	3″	22	**1.05**
CB-789	**CB-1191**	7″	7″	2″	22	**.90**
CB-790	**CB-1192**	7″	9″	2″	22	**1.05**
CB-791	**CB-1193**	7″	11″	2″	20	**1.10**
CB-792	**CB-793**	7″	12″	3″	20	**1.25**
CB-646	**CB-1194**	7″	13″	2″	20	**1.20**
CB-647	**CB-1198**	5″	13½″	2½″	20	**1.30**
CB-649	**CB-1189**	7″	15″	3″	20	**1.45**
CB-665	**CB-666**	8½″	15″	3″	20	**1.65**
CB-1068	**CB-1066**	4″	17″	3″	20	**1.30**
CB-648	**CB-1199**	7″	17″	2½″	20	**1.55**
CB-701	**CB-702**	8″	10″	2½″	20	**1.42**
CB-703	**CB-704**	8″	12″	2½″	20	**1.50**
CB-650	**CB-774**	8″	17″	2″	20	**1.45**
CB-651*	**CB-775**	8″	17″	3″	20	**1.55**
CB-652	**CB-1195**	10″	12″	3″	20	**1.50**
CB-653	**CB-779**	10″	14″	3″	20	**1.60**
CB-654*	**CB-769**	10″	17″	2″	20	**1.60**
CB-636*	**CB-637**	10″	17″	3″	20	**1.60**
CB-655*	**CB-1196**	10″	17″	3″	18	**1.85**
CB-656	**CB-1197**	10″	23″	3″	18	**2.44**
CB-657*	**CB-770**	11″	17″	2″	18	**2.00**
CB-658*	**CB-771**	11″	17″	3″	18	**2.20**
CB-663*	**CB-661**	12″	17″	2″	18	**1.70**
CB-664*	**CB-662**	12″	17″	3″	18	**2.00**
CB-659*	**CB-772**	13″	17″	2″	18	**2.35**
CB-660*	**CB-773**	13″	17″	3″	18	**2.55**
CB-640*	**CB-641**	10″	17″	4″	18	**2.04**
CB-642*	**CB-643**	13″	17″	4″	18	**3.00**
CB-623	**CB-624**	10″	17″	5″	18	**3.65**
CB-625	**CB-626**	13″	17″	5″	18	**4.00**

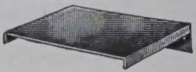
* Indicates chassis which are punched to accommodate Chassis Mounting Brackets.

BUD OPEN-END CHASSIS

Used with the various sizes and styles of Bud metal cabinets, these chassis are ideal for any type of small built-up unit such as a record amplifier, code oscillator, etc. U-shaped construction is used. Ends folded over ⅜″ for more strength. Finish is Electro-Zinc Plating.

Cat. No.	Depth	Width	Height	Fits Cab. No.	Dealer Cost
CB-38	7″	6″	2″	**C-1584**	**$ .66**
CB-30	5″	7″	1½″		**.30**
CB-41	7″	7″	1½″	**C-973**	**.75**
CB-39	7″	8″	2″	**C-1585**	**.84**
CB-996	5½″	9″	1½″	**C-993**	**.70**
CB-976	7½″	9″	1½″	**C-999, C-1746**	**.95**
CB-40	7″	10″	2″	**C-1586**	**.90**
CB-997	7″	11″	1½″	**C-994, C-1747**	**1.00**
CB-998	7″	13″	1½″	**C-995, C-1748**	**1.16**
CB-34	10¾″	14″	2″	**C-975A**	**1.44**
CB-35	7¾″	15″	2″	**C-1190A**	**1.38**

BUD CHASSIS DECKS



Chassis are suitable for use in carrying cases and utility cabinets. Each unit is folded over 1½″ on the front, ½″ on the side. Made from Zinc Plated steel. Useful for interstage shielding and supports in regular panel and chassis layouts.

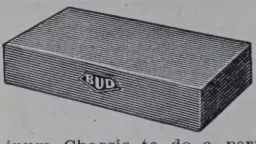
Cat. No.	Width	Depth	Fits Cab. No.	Dealer Cost
CB-522	4¾″	5½″	**CU-1098**	**$ .52**
CB-523	4¾″	4½″	**CU-1099**	**.50**
CB-524	6¾″	6½″	**CU-879**	**.65**
CB-525	5¾″	5½″	**CU-1124, CC-1096**	**.60**
CB-526	8¾″	7½″	**CU-880**	**.92**
CB-527	9¾″	7½″	**CU-881**	**.95**
CB-528	7¾″	6½″	**CU-882**	**.75**
CB-36	6½″	6½″	**CC-1097**	**.66**
CB-37	8¾″	6½″	**CC-1100**	**.82**

BUD BOX SHIELDS

For shielding power transformers and chokes, for covering and protecting various components in other electronic units. Top and sides are one-piece steel. No. **BS-1244** has perforated steel ends for ventilation. **BS-1891** has solid ends. Flanges at bottom provide for mounting. Finished in Black Wrinkle Enamel only.

Cat. No.	Ends	Length	Depth	Height	Dlr. Cost
BS-1244	Ventilated	7½″	4½″	5″	**$1.60**
BS-1891	Solid	7½″	4½″	5″	**1.65**

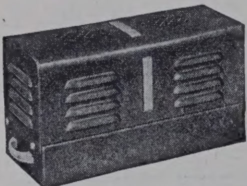
BUD ALUMINUM CHASSIS



The construction and design of these chassis is exactly the same as our steel chassis. The aluminum chassis are welded on government approved spot welders that are the same as used in the welding of aluminum airplane parts. As a result, you can depend on Bud Aluminum Chassis to do a perfect job. Etched Aluminum finish. The gauges in table below are aluminum gauges.

Catalog Number	Depth	Width	Height	Gauge	Dealer Cost
AC-430	4″	6″	3″	18	**$1.02**
AC-431	4″	6″	2″	18	**1.02**
AC-432	4″	17″	3″	16	**1.83**
AC-402	5″	7″	2″	18	**.84**
AC-429	5″	7″	3″	18	**1.05**
AC-403	5″	9½″	2″	18	**.99**
AC-421	5″	9½″	3″	18	**1.17**
AC-404	5″	10″	3″	18	**1.20**
AC-422	5″	13″	3″	18	**1.26**
AC-433	6″	17″	3″	16	**1.89**
AC-405	7″	7″	2″	18	**.99**
AC-406	7″	9″	2″	18	**1.08**
AC-407	7″	11″	2″	18	**1.20**
AC-408	7″	12″	3″	18	**1.41**
AC-409	7″	13″	2″	18	**1.26**
AC-411	7″	15″	2″	16	**2.04**
AC-423	7″	17″	3″	16	**1.83**
AC-424	8″	12″	3″	16	**1.71**
AC-425	8″	17″	2″	16	**1.89**
AC-412	8″	17″	3″	16	**2.22**
AC-413	10″	12″	3″	16	**1.89**
AC-414	10″	14″	3″	16	**2.40**
AC-415	10″	17″	2″	16	**2.28**
AC-416	10″	17″	3″	16	**2.58**
AC-426	11″	17″	2″	14	**2.37**
AC-417	11″	17″	3″	14	**3.00**
AC-418	12″	17″	3″	14	**3.18**
AC-419	13″	17″	2″	14	**2.82**
AC-420	13″	17″	3″	14	**3.36**
AC-427	10″	17″	4″	14	**2.97**
AC-428	13″	17″	4″	14	**3.84**

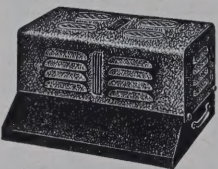
BUD STREAMLINED AMPLIFIER FOUNDATIONS



Use this unit to obtain beauty in an amplifier and similar apparatus. Each foundation consists of a standard chassis on which is mounted a removable top cover. Chromium trim is used to add additional attractiveness to the equipment. All chassis are 3″ high and complete units are 9″ high. Sturdy Easy Grip handles are attached to chassis. Black or Grey Wrinkled Finish.

Cat. No.	Width	Depth	Dealer Cost
CA-1750	10-1/16″	5″	**$3.90**
CA-1751	12-1/16″	7″	**5.06**
CA-1752	17-1/16″	7″	**5.50**
CA-1753	17-1/16″	10″	**6.33**

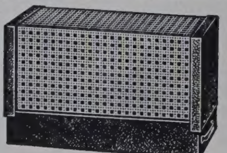
BUD SLOPING PANEL AMPLIFIER FOUNDATIONS



Each foundation consists of a 4″ sloping front chassis on which is mounted a removable top cover. The top cover contains grilled cutouts and louvers for adequate ventilation. All have handles mounted on chassis. All chassis are 3½″ high and all units are 9½″ overall height. Cover is finished in Grey Wrinkle with chrome trim and the chassis is finished in Black Wrinkle.

Cat. No.	Top Depth	Chassis Length	Chassis Depth	Dealer Cost
CA-1980	5″	10″	8″	**$5.10**
CA-1981	7″	12″	10″	**5.94**
CA-1982	7″	17″	10″	**6.85**
CA-1983	10″	17″	13″	**7.50**

BUD AMPLIFIER FOUNDATIONS



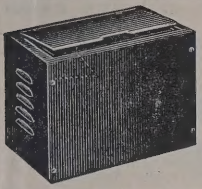
Each unit consists of a regular chassis on which is attached a perforated metal cover which provides a lot of ventilation. Chassis have easy grip handles attached to same. Finished in Black Wrinkle only.

Cat. No.	Height	Width	Depth	Chassis Height	Dealer Cost
CA-699	8-5/16″	9⅝″	5⅛″	2½″	**$3.85**
CA-1125	8-5/16″	13⅝″	5⅛″	2½″	**4.25**
CA-1126	8-5/16″	17⅛″	7⅛″	2½″	**5.50**
CA-1127	8-13/16″	17⅛″	10⅛″	3″	**7.15**
CA-1128	8-13/16″	12⅛″	10⅛″	3″	**6.05**

Where materials are specified Black Wrinkle Finish only, and Grey is desired, a charge of 15% additional will be made.

Prices on above slightly higher west of the Mississippi River

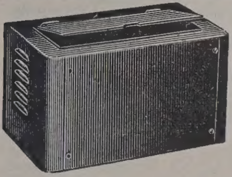
Only a few of many BUD Products are shown. For complete catalog, write BUD RADIO, INC., 2118 E. 55th St., Cleveland, Ohio



BUD INSTRUMENT & RECEIVER CABINETS

Each cabinet has an evenly recessed hinged cover with convenient finger lift. The panel on front of cabinet is readily attached with self-tapping screws. Louvers provide ample ventilation. These Cabinets are finished in Black Wrinkle only. For chassis to fit these cabinets see Open End Chassis listed on other page.

Cat. No.	Height	Width	Depth	Dealer Cost
C-973	7″	8″	8″	**$3.20**
C-993	7″	10″	8″	**3.48**
C-994	7″	12″	8″	**4.00**
C-995	7″	14″	8″	**4.20**
C-1190	8″	16″	8″	**6.00**
C-975	9″	15″	11″	**6.00**



BUD STREAMLINED CABINETS

Distinctive features of these cabinets are the rounded front corners and recessed hinged top. All parts built into this cabinet are easily accessible. Overall height, 8″. Depth, 8¼″. Finished in Black Wrinkle only. Suitable chassis may be found under listing of Open End Chassis on other page.

Catalog Number	Panel Size	Cabinet Width	Cabinet Height	Dealer Cost
C-1789	8″ x 8″	10½″	8″	**$3.25**
C-1746	8″ x 10″	12½″	8″	**4.00**
C-1747	8″ x 12″	14½″	8″	**4.50**
C-1743	8″ x 14″	16½″	8″	**5.15**
C-1790	8″ x 16″	18½″	8″	**5.75**

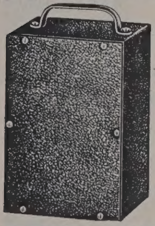
BUD DELUXE STREAMLINED CABINETS

These cabinets are identical with those listed above, except that they have a ½″ vertical chrome strip at each side of the panel, and are supplied in Gray Wrinkle Enamel only.

Catalog Number	Panel Size	Cabinet Width	Cabinet Height	Dealer Cost
C-1791	8″ x 8″	10½″	8″	**$4.15**
C-1781	8″ x 10″	12½″	8″	**4.62**
C-1782	8″ x 12″	14½″	8″	**4.95**
C-1783	8″ x 14″	16½″	8″	**6.18**
C-1792	8″ x 16″	18½″	8″	**6.50**

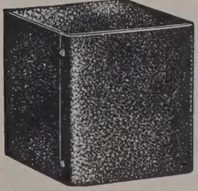
BUD METAL CARRYING CASES

These carrying cases have many uses. An easy grip handle is fastened to the top. Front and back panels are removable. Steel welded construction assures maximum strength with minimum weight, an important requirement for portable work. Finish is Black Wrinkle only. For chassis to fit these cabinets see Chassis Decks on other page.



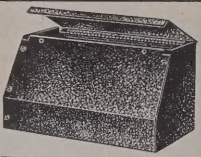
Cat. No.	Depth	Width	Height	Dealer Cost
CC-1095	5″	6″	9″	**$2.48**
CC-1091	5″	9″	6″	**2.48**
CC-1096	6″	7″	12″	**2.90**
CC-1092	6″	12″	7″	**3.42**
CC-1097	7″	7¾″	15″	**3.60**
CC-1100	8″	10″	10″	**3.42**
CC-1093	7″	15″	9″	**5.00**

BUD STREAMLINED SCOPE AND UTILITY CABINETS



These are attractive cabinets that are adaptable to a variety of uses. All cabinets are supplied with chassis. Prices shown below include chassis. The chassis height on all except **CU-1991** and **CU-1992** is 1½″. **CU-1991** is designed for 3″ cathode ray tube and has a hinged cover to provide easy access to tube or other components. Chassis height is 2″. **CU-1992** is designed for a 5″ cathode ray tube and also has a hinged cover. Chassis height, 3″.

Catalog Number	Width	Depth	Height	Dealer Cost
CU-1990	5½″	8¼″	8″	**$3.50**
CU-1984	7½″	8¼″	8″	**3.52**
CU-1985	9½″	8¼″	8″	**3.92**
CU-1986	11½″	8¼″	8″	**4.30**
CU-1987	13½″	8¼″	8″	**5.00**
CU-1988	15⅛″	8¼″	8″	**5.50**
CU-1989	17⅛″	8¼″	8″	**6.25**
CU-1991	7½″	13″	8″	**6.00**
CU-1992	9½″	19″	12″	**8.00**

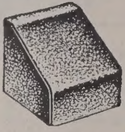


BUD SLOPING PANEL CABINETS

The entire front panel is removable if desired. This cabinet is also provided with a hinged top for easy accessibility to tubes or other parts that are mounted on chassis. All cabinets are finished in Black Wrinkle only.

Catalog Number	Height	Width	Depth	Fits Chassis	Dealer Cost
C-1584	6½″	7-1/16″	7¼″	7″ x 6″ x 2″	**$3.15**
C-1585	6½″	9-1/16″	7¼″	7″ x 8″ x 2″	**3.58**
C-1586	6½″	11-1/16″	7¼″	7″ x 10″ x 2″	**3.96**
C-1892	8″	13-1/16″	8½″	8″ x 12″ x 2½″	**4.75**
C-1893	10″	18-1/16″	10½″	10″ x 17″ x 3″	**6.66**

BUD SLOPING PANEL UTILITY BOX

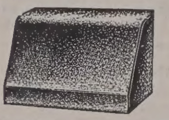


A compact, sloping panel cabinet, providing a streamlined appearance and enough space to house conveniently a 2 or 3 miniature tube amplifier or gadget. A ⅜″ flange around the rear opening of the cabinet provides a convenient back cover mounting. Accommodates a Bud miniature chassis. Finished in black wrinkle.

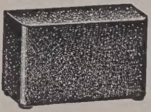
Cat. No.	Height	Width	Depth	Use Chassis No.	Dealer Cost
C-1602	4″	4″	4¼″	**CB-1617**	**$1.20**
C-1603	4″	5″	4¼″	**CB-1618**	**1.30**
C-1604	4″	6″	4¼″	**CB-1619**	**1.40**
C-1605	4″	7″	4¼″	**CB-1620**	**1.50**

BUD SLOPING PANEL UTILITY CABINET

A metal box that can be used for numerous purposes. Finished in Black Wrinkle Enamel only.



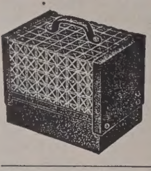
Cat. No.	Height	Width	Depth	Dealer Cost
C-1578	4¼″	4″	4″	**$1.00**
C-1579	4¼″	5″	4″	**1.15**
C-1580	4¼″	6″	4″	**1.32**
C-1581	4¼″	7″	4″	**1.59**



BUD STREAMLINED MULTI-PURPOSE CABINETS

Handsome streamlined metal cabinet, finished in grey wrinkle. Back of Cabinet open for ventilation.

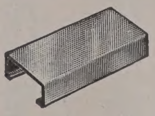
Cat No.	Height	Width	Depth	Use Chassis No.	Dealer Cost
C-1784	4½″	3⅝″	3⅛″	**CB-1623**	**$1.65**
C-1785	4½″	7⅛″	3⅛″	**CB-1628**	**1.93**
C-1787	4½″	5½″	3½″	**CB-1625**	**1.70**
C-1788	6½″	5½″	3½″	**CB-1625**	**1.75**



BUD MINIATURE AMPLIFIER FOUNDATION

With the increased use of miniature tubes, smaller cabinets can be used when designing a compact amplifier. This amplifier foundation was designed expressly for this purpose. The chassis is a 5″ x 7″ x 2″. The cover is made of perforated metal. A streamlined handle makes this cabinet portable. Finished in black wrinkle.

Cat. No.	Height	Width	Depth	Chassis Height	Dealer Cost
CA-1754	6″	7-3/16″	5-3/32″	2″	**$3.50**



BUD ALUMINUM MINIATURE CHASSIS

These small, open end aluminum chassis are just the thing for miniature tube applications or sub-assemblies. Made of hard aluminum with ¼″ flange on bottom, allowing the chassis to be fastened down or a bottom plate to be attached. Extremely useful for small receivers, outboard uses, such as narrow band FM adapters or any use where space is limited. Finish is etched aluminum.

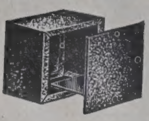
Cat. No.	Depth	Width	Height	Fits Cabinet No.	Dealer Cost
CB-1623	2⅝″	2¾″	1¼″	**C-1784**	**$ .30**
CB-1624	1¾″	3⅛″	1″	**CU-883**	**.33**
CB-1625	3¼″	4½″	2″	**C-1788**	**.36**
CB-1626	2¾″	4⅛″	1″	**CU-728**	**.36**
CB-1627	3¾″	4⅛″	1½″	**CU-729**	**.36**
CB-1628	3″	6⅛″	1¼″	**C-1785**	**.42**
CB-1629	5¾″	4⅞″	1½″	**CU-1098**	**.45**
CB-1617	4″	3⅛″	1″	**C-1602**	**.36**
CB-1618	4″	4⅛″	1″	**C-1603**	**.39**
CB-1619	4″	5⅛″	1″	**C-1604**	**.42**
CB-1620	4″	6⅛″	1″	**C-1605**	**.45**

Where materials are specified Black Wrinkle Finish only, and Grey is desired, a charge of 15% additional will be made.

Prices on above slightly higher west of the Mississippi River

Only a few of many BUD Products are shown. For complete catalog, write BUD RADIO, INC., 2118 E. 55th St., Cleveland, Ohio

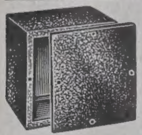
BUD MINIATURE UTILITY CABINETS with Attached Chassis



Filling a long wanted need for a small cabinet with a chassis attached to the front panel, these cabinets are indispensable when building electronic devices using miniature tubes. Front and rear panels are removable and fastened with self-tapping screws, permitting easy accessibility. Especially useful for HF converters, television amplifiers and power supplies. Finished in black wrinkle.

Cat. No.	Height	Width	Depth	CHASSIS SIZE			Dealer Cost
C-1793	4″	4″	2″	1″	3⅛″	1⅞″	**$1.05**
C-1794	4″	5″	3″	1″	4⅛″	2⅞″	**1.15**
C-1795	5″	4″	3″	1¼″	3⅛″	2⅞″	**1.15**
C-1796	6″	5″	4″	1¾″	4⅛″	3⅞″	**1.43**
C-1797	5″	6″	4″	1¼″	5⅛″	3⅞″	**1.43**
C-1798	6″	6″	6″	1¾″	4⅞″	5⅞″	**1.48**

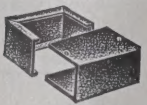
BUD METAL UTILITY CABINETS



The large number of sizes available makes this line useful for all sorts of electronic equipment, monitors, frequency meters, etc. These cabinets have two removable sides for easy accessibility. Finished in Black Wrinkle.

Cat. No.	Depth	Width	Height	Dealer Cost
CU-883	2″	4″	4″	**$ .85**
CU-728	3″	5″	4″	**.95**
CU-729	4″	5″	6″	**1.20**
CU-1098	6″	6″	6″	**1.30**
CU-1099	5″	6″	9″	**1.86**
CU-879	7″	8″	10″	**2.30**
CU-1124	6″	7″	12″	**2.46**
CU-880	8″	10″	10″	**2.90**
CU-881	8″	11″	12″	**3.60**
CU-882	7″	9″	15″	**4.10**

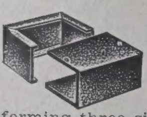
BUD HANDY BOXES



Something new in box design permits a large number of small components to be **easily** wired or serviced. The cover is held by 4 self-tapping screws. Black wrinkle finished steel.

Cat. No.	Height	Width	Depth	Dlr. Cost
HB-1621	2¼″	4¼″	1½″	**$ .90**
HB-1622	2″	4″	2¾″	**1.00**

BUD MINIBOXES

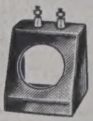


There are thousands of uses in the fields of radio and electronics for these new boxes. They are made from heavy gauge aluminum. The design of the box permits installation of more components than would be possible in the conventionally designed box of the same size. It is of two piece construction, each half forming three sides. The flange type construction assures adequate shielding. Available in etched aluminum finish and gray hammerloid finish.

Gray Cat. No.	Etched Cat. No.	Length	Width	Height	Dealer Cost
CU-2100	**CU-3000**	2¾″	2⅛″	1⅝″	**$ .63**
CU-2101	**CU-3001**	3¼″	2⅛″	1⅝″	**.63**
CU-2102	**CU-3002**	4″	2⅛″	1⅝″	**.66**
CU-2103	**CU-3003**	4″	2¼″	2¼″	**.87**
CU-2104	**CU-3004**	5″	2¼″	2¼″	**.90**
CU-2105	**CU-3005**	5″	4″	3″	**.99**
CU-2106	**CU-3006**	5¼″	3″	2⅛″	**.96**
CU-2107	**CU-3007**	6″	5″	4″	**1.23**
CU-2108	**CU-3008**	7″	5″	3″	**1.38**
CU-2109	**CU-3009**	8″	6″	3½″	**2.01**
CU-2110	**CU-3010**	10″	6″	3½″	**2.49**
CU-2111	**CU-3011**	12″	7″	4″	**2.94**
CU-2112	**CU-3012**	17″	5″	4″	**3.45**
CU-2113	**CU-3013**	10″	2″	1⅝″	**.99**
CU-2114	**CU-3014**	12″	2½″	2¼″	**1.35**
CU-2115	**CU-3015**	4″	2″	2¾″	**.84**
CU-2116	**CU-3016**	4¼″	2¼″	1½″	**.87**

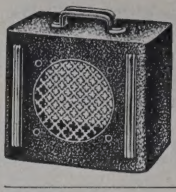
BUD STREAMLINED METER CASES

Designed for all applications requiring a modern meter case. All cases have a sloping front with top corner rounded. Meter cases CM-1241 and CM-1242 have insulators on top for leads to meter. CM-1965 and SM-1966 are furnished without insulators. Finished in Black Wrinkle.



Catalog Number	Hole Diameter	Fits Meter Size	Dealer Cost
CM-1241	2-3/16″	2″	**$1.25**
CM-1242	2-13/16″	3″	**1.25**
CM-1965	2-3/16″	2″	**.95**
CM-1966	2-13/16″	3″	**.95**

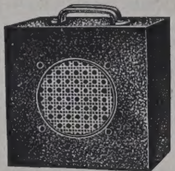
BUD STREAMLINED SPEAKER CASES



For an attractive Speaker Housing that is portable, choose these Speaker Cases. No baffle required with these Speaker Cases. Quality of reproduction is equal to that of a good wood speaker housing. Front vertical corners are rounded and the speaker opening is covered with artistic metal grille. Two strips of chrome are mounted on front. Drilled to take size of speaker intended for case. Black or Grey Wrinkle finish.

Cat. No.	Hole Size	Speaker Size	Height	Width	Depth	Dealer Cost
CS-1935	4¾″	6″	8″	9″	6″	**$3.50**
CS-1936	6½″	8″	9¾″	11″	7″	**4.50**
CS-1937	8½″	10″	11½″	13″	8″	**5.70**
CS-1938	10½″	12″	13½″	15″	8″	**7.00**

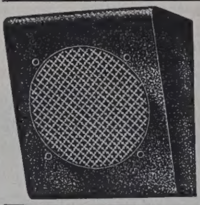
BUD GENERAL SPEAKER CABINETS



In making permanent or portable public address installations, this line of speaker cabinets will be found very useful. No baffle required with these speaker housings. Quality of reproduction is equal to that of fine wood speaker cases. Construction is of heavy, cold-rolled steel. A carrying handle is attached to each cabinet for portable purposes. Finished in Black Wrinkle Enamel.

Cat. No.	Hole Size	Speaker Size	Height	Width	Depth	Dealer Cost
CS-471	4¾″	6″	9″	9″	6″	**$3.45**
CS-472	6½″	8″	11″	11″	7″	**4.35**
CS-473	8½″	10″	13″	13″	8″	**5.50**
CS-474	10½″	12″	15″	15″	8″	**7.40**

BUD WALL OR TABLE TYPE SPEAKER CASE

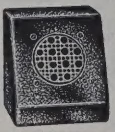


A distinctive line of new metal speaker cabinets with reproduction capabilities equal to wood cabinets. All troubles with wood warping and splitting are eliminated.

Keyway holes are provided for wall mounting and four embossed feet on the bottom prevent damaging table surfaces. Finished in Brown Wrinkle only.

Cat. No.	Hole Size	Speaker Size	Height	Width	Depth	Dealer Cost
CS-1948	3½″	4″	7½″	6½″	4¼″	**$2.85**
CS-1939	4″	5″	7½″	6½″	4¼″	**3.00**
CS-1940	4¾″	6″	9½″	8″	5⅝″	**3.40**
CS-1941	6½″	8″	11½″	9½″	7″	**3.90**
CS-1942	8½″	10″	13½″	11½″	8¼″	**4.50**
CS-1943	10½″	12″	15½″	13½″	9¾″	**5.00**

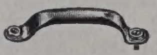
BUD MIDGET SPEAKER CASES



A safe, convenient housing for midget 2″ and 3″ speakers. Size 4″ wide, 4″ deep, 4¼″ high. Furnished in Black Wrinkle Finish only.

Catalog Number	Hole Diameter	Speaker Size	Dealer Cost
CS-1685	2-3/16″	2″	**$1.50**
CS-1686	2-13/16″	3″	**1.50**

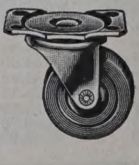
BUD IMPROVED UTILITY HANDLES



These handles are designed to provide sufficient strength and comfortable hand-grip. They are made from aluminum tubing and are given an etched aluminum finish. Made in two sizes and furnished complete with screws, washers and nuts.

Catalog Number	Overall Length	Overall Width	Mtg. Hole Center	Dealer Cost
UH-70A	5⅝″	11/16″	4⅝″	**$ .33**
UH-71A	3¾″	½″	3¼″	**.27**

TRUCK CASTERS



No. RC-7756—Heavy Duty type casters, for weights of 400 lbs. or less. No. RC-7757 Casters are Light Duty for lighter weights. Wheels, hard rubber composition and ball bearing.

Catalog No.	Height	Type	Dealer Cost
RC-7756	2⅝″	Heavy Duty	**$ .90**
RC-7757	2″	Light Duty	**.40**

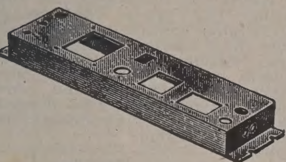
Where materials are specified Black Wrinkle Finish, and Gray is desired, a charge of 15% additional will be made.

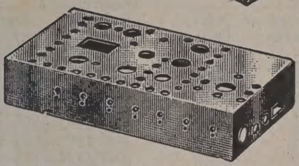
Prices on above slightly higher west of the Mississippi River

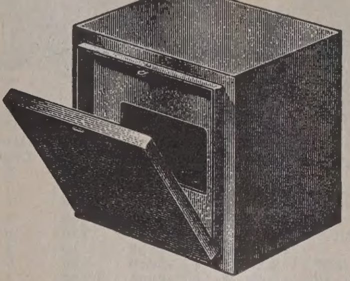
Only a few of many BUD Products are shown. For complete catalog, write BUD RADIO, INC., 2118 E. 55th St., Cleveland, Ohio

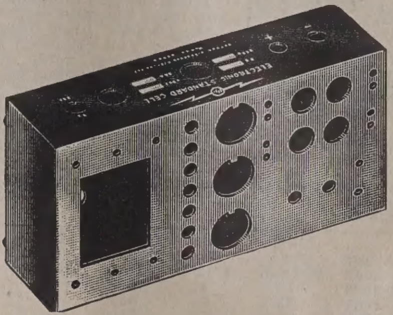
Net

Special Sheet Metal Fabrication Facilities









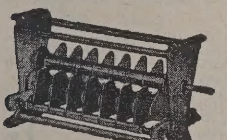
NOW, BUD RADIO, through its Metal Products Division, offers greatly increased facilities for the production of special sheet metal items. New machinery has been added, departments have been modernized and streamlined and new methods have been developed.

We make over 400 different sheet metal products as stock items. Often a slight change in one of our standard models will eliminate the necessity of special tools and dies, thereby reducing costs. Since we produce thousands of sheet metal products every month for ourselves and for leading firms throughout the country we are able to effect economies in production which mean lower prices and faster delivery.

Our expanded facilities, expert workmanship, years of experience and manufacturing "know-how" assure high quality products. In addition, our engineering staff is always available for consultation and advice. Send us your blue prints for estimates.

Illustrated above are a few examples of specially fabricated sheet metal products.

BUD GIANT TRANSMITTER CONDENSER—Single Section



BUD GIANT TRANSMITTER CONDENSERS are built with a sturdy frame consisting of 3/16″ thick aluminum end plates, connected by ⅝″ diameter duraluminum rods. Formed brackets at top and bottom of end plates provide for mounting these units, and permit placing of associated inductances directly on the condenser. Rotor and stator plates are accurately stamped from 0.064″ thick highly polished aluminum with all edges rounded to minimize corona loss and danger of peak-voltage flash-over. The plates are separated by accurately machined duraluminum spacers that insure a constant air-gap throughout the entire length of the condenser.

The large two-finger rotor-contact spring, made from plated spring brass, assures positive contact with noise-free operation. Steatite bars insulate the stator, and are placed well outside the electrostatic field to keep dielectric losses at a minimum.

Catalog Number	Max. Cap. MMFD.	Min Cap. MMFD.	No. of Plates	Air Gap	Mtg. Hole Spcg.	Over-All Length	Dealer Cost
GC-1800	195	24	15	.250″	8½″	12⅜″	$26.13
GC-1801	345	32	27	.250″	12¼″	16⅛″	37.02
GC-1802	530	48	41	.250″	16⅝″	20½″	49.68
GC-1803	55	19	7	.500″	7½″	11⅜″	20.85
GC-1804	95	25	15	.500″	12″	15⅞″	29.19
GC-1805	150	33	21	.500″	15⅝″	19¼″	34.98
GC-1806	255	52	35	.500″	23¼″	27⅛″	49.02
GC-1807	50	22	9	.750″	10″⅝	14½″	24.21
GC-1808	75	27	13	.750″	13⅞″	17¾″	29.34
GC-1809	110	40	19	.750″	18¾″	22⅝″	32.67
GC-1810	160	50	29	.750″	26⅞″	30¾″	46.86
GC-1811	55	30	11	1.000″	14¾″	18⅝″	28.11
GC-1812	85	40	17	1.000″	21⅛″	25″	36.03
GC-1813	105	45	23	1.000″	27½″	31⅜″	44.43

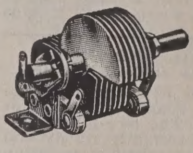
BUD MASTER TRANSMITTING CONDENSERS—Dual Section

All tie-rods in this series are insulated by glazed Steatite pillars, thus completely eliminating all closed metallic loops in the condenser frame. A special outstanding feature, developed by BUD engineers, is that of placing the positive double wiping rotor contact between the two sections at the center of the rotor. These features contribute to perfect circuit balance and eliminate the majority of difficulties encountered in high frequency equipment due to parasitics, circulating currents and poor neutralization. Use BUD condensers throughout and be trouble free.

Catalog Number	Cap. Per Sec. Max.	Cap. Per Sec. Min.	No. Plates Per Sec.	Air Gap.	Mtg. Hole Spcg.	Over-all Length	Dealer Cost
BC-1635A	25	9	5	.200″	6-13/32″	8-1/32″	$13.91
BC-1636A	35	12	7	.200″	7-13/32″	9-1/32″	14.70
BC-1637A	50	13	11	.200″	9-13/32″	11-1/32″	15.96
BC-1638A	75	16	15	.200″	11-13/32″	13-1/32″	17.28
BC-1633A	100	20	21	.300″	14-13/32″	16-1/32″	19.35
BC-1634A	50	15	13	.300″	12-13/16″	14-7/16″	17.43

Panel space to mount Master Condensers 3¾″ wide by 4⅞″ high

BUD MIDGET CONDENSERS



Small size, sturdy construction and high mechanical and electrical efficiency are the outstanding features. Insulation used is Steatite. Rotor and Stator plates are brass and are electro-soldered to their respective rods. All metal parts are cadmium plated. These condensers have both front and rear bearings and are furnished in either mid-line type plates (straight line wave length), or semi-circular plates (straight line capacity).

SEMI-CIRCULAR TYPE — DOUBLE BEARING

Catalog Number	Cap. in MMFD. Max.	Cap. in MMFD. Min.	Air Gap	Number Plates	Dealer Cost
MC-1850	15	3	.024″	3	$1.53
MC-1852	33	4	.024″	5	1.65
MC-1853	50	5	.024″	7	1.92
MC-1855	100	7	.024″	14	2.10
MC-1856	140	7	.024″	19	2.43
MC-1858	190	9	.024″	27	2.58
MC-1859	235	10	.024″	33	2.91
MC-1860	300	12	.024″	43	3.18
MC-1861	15	4	.060″	5	1.65
MC-1862	35	5	.060″	11	2.10
MC-1863	50	7	.060″	15	2.31
MC-1864	75	9	.060″	23	2.70
MC-1865	100	12	.060″	31	2.94
MC-1866	35	8	.095″	15	2.43
MC-1867	50	10	.095″	23	2.76
MC-1868	75	13	.095″	33	3.18

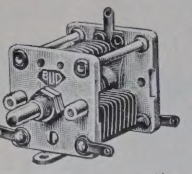
MID-LINE TYPE — DOUBLE BEARING

Catalog Number	Cap. in MMFD. Max.	Cap. in MMFD. Min.	Air Gap	Number Plates	Dealer Cost
MC-900	25	4	.024″	4	$1.71
MC-902	35	5	.024″	6	1.74
MC-903	50	6	.024″	8	2.01
MC-904	75	7	.024″	11	2.10
MC-905	100	7	.024″	15	2.28
MC-906	140	7	.024″	20	2.61
MC-908	190	9	.024″	27	2.73
MC-909	250	11	.024″	36	2.97
MC-910	300	13	.024″	43	3.33
MC-565	15	4	.060″	5	2.01
MC-897	35	6	.060″	11	2.10
MC-898	50	7	.060″	16	2.40
MC-899	75	8	.060″	23	2.76
MC-941	100	11	.060″	31	3.00
MC-965	35	8	.095″	15	2.49
MC-966	50	12	.095″	23	2.70
MC-967	75	14	.095″	33	3.18

Prices on above slightly higher west of the Mississippi River

Only a few of many BUD Products are shown. For complete catalog, write BUD RADIO, INC., 2118 E. 55th St., Cleveland, Ohio

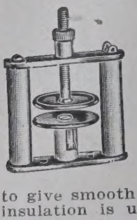
BUD "CE" MIDGET CONDENSERS SINGLE SECTION DOUBLE BEARING



These Midget Condensers were designed to meet the rigid requirements in design of efficient high frequency electronic devices and precision laboratory equipment. Brass rotor and stator plate stacks are assembled into permanent units by means of electro-soldering, which assures long life and accurate plate spacing. End-plates of Steatite insulate the mounting bushings and angles from the rotor and stator assemblies. A large front sleeve bearing provides for smooth rotation. Special wiper contact provides noise-free tuning. All metal parts are cadmium plated. Rotor plates are semi-circular shaped. Provision for either panel or base mounting.

Catalog Number	Max. Cap. MMFD.	Min. Cap. MMFD.	Air Gap	No. of Plates	Over-all Length	Dealer Cost
CE-2000	15	4	.030"	3	2½"	**$1.98**
CE-2001	35	6	.030"	7	2-23/32"	**2.22**
CE-2002	50	7	.030"	9	2-27/32"	**2.49**
CE-2003	75	8	.030"	14	3-5/32"	**2.76**
CE-2004	100	9	.030"	18	3-11/32"	**3.00**
CE-2005	150	10	.030"	27	3-13/16"	**3.21**
CE-2006	200	11	.030"	35	4¼"	**3.81**
CE-2007	250	12	.030"	44	4¾"	**4.05**
CE-2008	300	15	.030"	52	5-3/16"	**4.29**
CE-2011	15	5	.060"	5	2¾"	**2.07**
CE-2012	35	7	.060"	11	3¼"	**2.31**
CE-2013	50	8	.060"	15	3-9/16"	**2.70**
CE-2014	75	10	.060"	23	3¼"	**3.12**
CE-2015	100	13	.060"	31	4-9/16"	**3.63**
CE-2016	35	9	.095"	15	4-1/16"	**2.82**
CE-2017	50	10	.095"	23	5-1/32"	**3.12**
CE-2018	75	14	.095"	33	6-7/32"	**3.66**

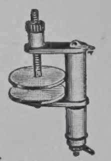
BUD NEUTRALIZING AND HIGH FREQUENCY TUNING CONDENSERS



This line of condensers will fill every neutralizing and high frequency tuning requirement that modern circuits pose. The two-pillar construction makes this unit unusually sturdy and eliminates any possibility of capacity variation due to vibration. The movable plate is adjusted by means of the threaded shaft to which it is attached, and it is permanently locked in any position by the lock-nut provided. Any loose thread is taken up by a special nut and locked to give smooth operation. Plates have rounded edges. Steatite insulation is used.

Catalog Number	Plate Diameter	MMFD. Capacity Max.	Min.	Dealer Cost
NC-1000	1-27/32"	11	1	**$2.58**
NC-1001	2-13/16"	24	2	**3.75**
NC-1002	4¾"	27	6	**5.25**

BUD FEED-THROUGH AND BASE MOUNTED NEUTRALIZING CONDENSERS

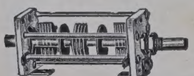


In circuits utilizing tubes with the grid lead terminated in the base a feed-through type of neutralizing condenser is particularly suited. One hole is required for mounting of feed-through condensers. Neutralizing condenser illustrated is feed-through type. Plates are made of aluminum rounded at edges to cut down losses. After proper tuning is attained, movable plate can be locked with the knurled nut.

No. 890 and No. 852 are ideal neutralizers for popular low power beam tubes. No. 890 condenser is based mounted only.

Catalog Number	Plate Diameter	Size Hole for Mtg.	MMFD. Capacity Max.	Min.	Dealer Cost
NC-852	1"	5/16"	6	.5	**$1.26**
NC-853	1-27/32"	13/32"	11	1	**2.73**
NC-890	1"		6	.5	**1.23**

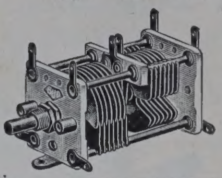
NEW BUD THREE-GANG TINY MITE CONDENSERS



Hams, Radio Constructors and Experimenters can find many uses for these compact, three-gang condensers. Designed particularly for high frequency use, they are adaptable for use in converters, preselectors and receivers covering the Amateur, Television and F.M. bands. Well constructed with soldered brass plates and ceramic brackets. Rotor shaft extended ¼" at rear. Height 1-5/16". Width 1-3/16". Length behind panel 3⅜". Mounting holes 2-3/16" apart.

Catalog Number	Cap. Per Section Max.	Min.	No. of Plates Per Section	Dealer Cost
LC-1845	11	5	3	**$3.81**
LC-1846	17	5	4	**4.32**
LC-1847	25	6	5	**4.71**

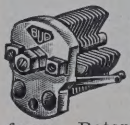
BUD "CE" TYPE DUAL MIDGET CONDENSERS



These well constructed dual condensers are similar in design to the double-bearing "CE" types. They feature a rotor wiping contact placed at center of the rotor assembly to assure maximum efficiency at high frequency Opposed rotor construction assures perfect counterbalance and provides even torque at any position of rotation. Steatite insulation eliminates closed induction in frame.

Catalog Number	PER SECTION Max. Cap.	Min. Cap.	No. of Plates	Air Gap	Distance Behind Panel	Dealer Cost
CE-2032	35	6	7	.030"	3-1/32"	**$2.97**
CE-2033	50	7	9	.030"	3¼"	**3.27**
CE-2034	75	8	14	.030"	3-21/32"	**3.63**
CE-2035	100	9	18	.030"	4-3/32"	**4.14**
CE-2036	150	10	27	.030"	5-3/16"	**4.80**
CE-2039	15	5	5	.060"	3-1/32"	**3.45**
CE-2040	35	7	11	.060"	4-1/32"	**3.96**
CE-2041	50	8	15	.060"	4-23/32"	**4.35**

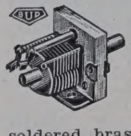
BUD TINY MITE PADDERS



For applications requiring a constant padder capacity under all temperature and humidity conditions, these units are ideal. They lend themselves readily to I. F. transformer applications, fixed tuned circuits for exciters, ganged condenser air trimers, and plug-in-coil padding as they fit inside of standard 1½" diameter coil forms. Rotor and stator assemblies are made up of brass plates (0.015" thick) and rods electrically soldered into a solid unit and then are bright cadmium plated. Insulation is Steatite. Each unit may be adjusted in capacity by either a screw-driver or a ¼" hex. wrench.

Catalog Number	Max. Cap. MMFD.	Min. Cap. MMFD.	Air Gap	No. of Plates	Dealer Cost
LC-2076	15	2	.017"	5	**$1.32**
LC-2077	25	2.5	.017"	7	**1.56**
LC-2078	35	3	.017"	10	**1.74**
LC-2079	50	3.9	.017"	14	**1.92**
LC-2080	75	4.5	.017"	20	**2.28**
LC-2081	100	5.5	.017"	27	**2.64**
LC-2082	140	6.5	.017"	37	**3.21**

BUD TINY MITE TUNING CONDENSER SINGLE SECTION

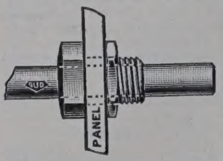


This series of condensers has been designed for applications where space or weight are limiting factors and for tuning of high frequency circuits. Rigid construction, close fitting bearing, positive rotor contact and Steatite insulation are the outstanding features. Cadmium plated, soldered, brass plates and rods insure high frequency efficiency.

Catalog Number	Max. Cap. MMFD.	Min. Cap. MMFD.	Air Gap	No. of Plates	Dealer Cost
LC-1640	8	2.5	.017"	3	**$1.35**
LC-1641	15	3	.017"	5	**1.47**
LC-1642	25	4	.017"	9	**1.53**
LC-1643	35	5	.017"	13	**1.77**
LC-1644	50	6	.017"	19	**1.86**
LC-1645	75	7	.017"	29	**2.01**
LC-1646	100	9	.017"	37	**2.19**
LC-1648	10	4	.037"	7	**1.50**
LC-1649	15	5	.037"	11	**1.62**
LC-1650	25	5.5	.037"	17	**1.92**
LC-1651	35	6	.037"	21	**2.10**
LC-1652*	50	8	.037"	35	**2.64**
LC-1653	6	3.5	.073"	5	**1.59**
LC-1654	15	5.5	.073"	15	**1.92**
LC-1655*	25	9	.073"	27	**2.61**

*Denotes double bearing.

PANEL BEARING ASSEMBLIES



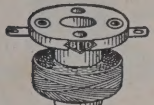
Nos. PB-530 and PB-531 consist of a regular ¼" shaft bearing with 6" and 3" length of ¼" brass rod inserted and held in place by washers to prevent shaft from shifting. These two assemblies will facilitate the panel control of condensers, potentiometers, etc., which must be mounted a distance from the panel. Bearing fits in 13/32" hole and on panels up to 5/16" thick. No. PB-532 is bearing only without shaft.

Catalog Number	Overall Length	Distance in front of panels	Dealer Cost
PB-530	6"	4¾"	**$ .36**
PB-531	3"	1¾"	**.31**
PB-532	Bearing Only	....	**.12**

Prices on above slightly higher west of the Mississippi River

Only a few of many BUD Products are shown. For complete catalog, write BUD RADIO, INC., 2118 E. 55th St., Cleveland, Ohio

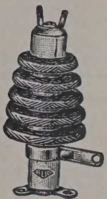
LATTICE WOUND R. F. CHOKES



For all general purpose applications requiring a high quality choke at a reasonable price, this line finds wide acceptance. Each choke is wound from silk-covered enameled copper wire on a white ceramic bobbin. Leads are terminated with two convenient soldering lugs. Chokes can be mounted with a 6-32 screw the center of the form, and each winding is thoroughly impregnated against moisture. The wide range of sizes fills practically every choke requirement in standard radio circuits. Choke base diam. 1-1/16". distance between ends of leads 1⅝"

Catalog Number	Inductance mh.	D.C. Res. Ohms	Current M.A.	Height	Dealer Cost
CH-1212	2.5	28	125	11/16"	**$ .44**
CH-1213	3.4	36	125	11/16"	**.55**
CH-1214	5.5	46	125	11/16"	**.55**
CH-1215	8.	60	125	11/16"	**.66**
CH-1216	10.	65	125	11/16"	**.72**
CH-1217	16.	84	125	11/16"	**.75**
CH-1218	30.	190	100	15/16"	**.85**
CH-1219	60.	279	90	15/16"	**.96**
CH-1220	80.	332	80	15/16"	**1.00**

TRANSMITTING CHOKES

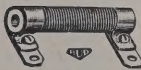


Here are two heavy duty R. F. Chokes that can really take it in high powered transmitter plate circuits. Each choke is wound on 9/16" dia. Steatite rod, has connection lugs and a mounting foot. **All chokes have a heavy ceramic coating which prevents moisture absorption and enables them to withstand momentary overloads without collapsing the individual pies.**

Consists of five graduated pies wound in continuous winding. Care has been taken to prevent any of the pies from being resonant on an amateur band and to keep the distributed capacity at a minimum. Overall height 3¼".

Catalog Number	Inductance	Current Capacity	D. C. Resistance	Dealer Cost
CH-568	2.2 mh.	1 amp.	5 ohms	**$1.98**
CH-569	4.3 mh.	.6 amp.	12 ohms	**1.80**

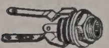
ULTRA HIGH FREQUENCY R. F. CHOKES



These chokes were designed to meet the requirements of builders of high frequency receivers and transmitters. Consists of ceramic rod with a single layer winding terminated with strap leads at each end. Particularly suitable for use on 2 or 6 meters. CH-570 is supplied with a mounting foot and is sometimes used as a filament choke in certain types of high frequency oscillator and amplifier circuits.

Catalog Number	Inductance mh.	Max. Current	D. C. Resistance	Lengths	Dealer Cost
CH-925	5.7 uh.	750 ma	1.4 ohms	1½"	**$ .30**
CH-570	1.5 uh.	1.7 a	0.2 ohms	2¾"	**1.20**

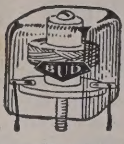
BUD SMALL JACKS



These panel mounting jacks are desirable for control panels and similar applications where space is at a premium. Parts are accurately machined, with cadmium plated finish and contacts are formed from spring brass. Each jack comes complete with insulating washers and will accommodate standard plugs. Overall length 1⅝".

Catalog No.	Contacts	Distance Behind Panel	Dealer Cost
J-1038	2	15/16"	**$ .33**
J-1058	3	15/16"	**.55**

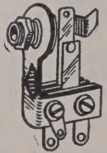
IRON CORE R. F. CHOKES



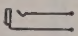
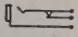
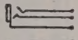
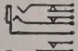
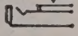
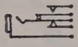
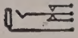
The efficiency of any circuit requiring an R. F. choke will be definitely improved by utilizing one of these chokes with a finely divided molded metallic core. The improved "Q" possible with this construction results from the D. C. resistance of these chokes being from 40 to 50% less for a given inductance than for regular air-core types. Thus, the D. C. voltage drop through the choke is considerably less, yet the choking action is equally as good. Windings are made with silk-covered enameled wire terminated on convenient soldering lugs, and the chokes are mounted in small square shield cans measuring 1⅜" x 1⅜" x 1-7/16".

Catalog Number	Inductance mh.	D. C. Resis. Ohms	Current ma.	Dealer Cost
CH-1277	1.5	11.5	125	**$ .93**
CH-1278	2.5	16.	125	**.96**
CH-1279	3.4	19.5	125	**1.05**
CH-1280	5.5	27.5	125	**1.05**
CH-1281	8.	36.	125	**1.11**
CH-1282	10.	42.5	125	**1.11**
CH-1283	16.	53.	125	**1.23**
CH-1284	30.	82.	100	**1.29**
CH-1285	60.	131.	100	**1.44**
CH-1286	80.	163.	90	**1.53**
CH-1287	125.	221.	90	**1.80**
CH-294	Shield Can Only		....	**.21**

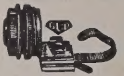
BUD ALL PURPOSE JACKS



Although small in size, this is one of the finest lines of jacks available. The careful design and high quality materials used in these components assure long, dependable service. Circuit opening contacts are made of pure silver and the laminated bakelite insulation prevents breakdown between springs at all ordinary voltages. Supplied with panel insulating washers. Height 1⅞", distance behind panel ⅞".

Catalog Number	Circuit Design	Contact Arrangement	Dealer Cost
J-1324		Open Circuit	**$ .33**
J-1325		Closed circuit	**.39**
J-1326		3-Contact open circuit	**.42**
J-1327		Break contact on tip and ring spring	**.54**
J-1328		Separate make-contact springs	**.54**
J-1329		Break contact on tip spring—separate make-contact spring	**.57**
J-1330		Break-make contact on tip spring	**.54**

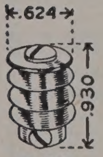
BUD MIDGET JACK



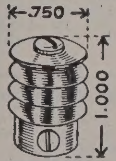
The construction of this jack allows its use in applications having limited space behind the panel. The spring brass contact assures a good connection. These jacks come with insulating washers and accommodate standard phone plugs.

Catalog No.	Type	Distance Behind Panel	Dealer Cost
J-232A	Open Circuit	13/16"	**$ .35**
J-233A	Closed Circuit	13/16"	**.40**

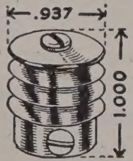
HEAT RADIATING PLATE AND GRIDE TUBE CONNECTORS



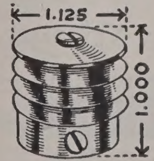
TC 488
TC 487
TC 489



TC 1924
TC 1920



TC 1925
TC 1921



TC 1926

Bud heat radiating connectors fit all sizes of industrial and transmitting vacuum tubes. These connectors serve a dual purpose, not only are they useful to make connections to plate or grid terminals, but they provide a large heat radiating surface that will dissipate heat from the glass seal and tube element. Eight sizes fit all grid and plate leads and also provide sufficient heat radiation for any tube operating in the range of 50 to 2000 watts. All radiators are machined from special aluminum rod. Edges are rounded to minimize corona loss.

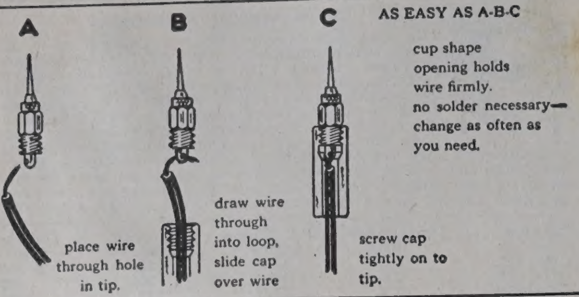
Table below lists Connectors to fit various Tubes

Cat. No.	Hole Size for Lead	Head Radiating Connectors to Fit the Following Tubes	Dealer Cost
TC-488	.052	3C24, 24, 24G, 25T, 27	**$ .36**
TC-487	.062	UH50, HK24, 304B, 829B, 832A, 834	**.36**
TC-489	.072	35T, 35TG, 75TH, HK254, HK257B, 484, 8001	**.36**
TC-1924	.125	HK57, 152TH	**.50**
TC-1920	.375	4-125A, 150TH, 2-150D, 250R, 250TH, 250TL, 420A, 802, 803, 804, 807, 808 Grid, 814, 815, 828	**.50**
TC-1925	.125	304TH, 304TL	**.60**
TC-1921	.570	ZB60, HF60, HF100, 111H, 211H, 203H, HF175, HF300 Grid, 100R, HK357C, 450TH, 454, 750TH, 805, 806, 808, 809, 810, 811, 812, 813, 828, 833, 866, 854, 1500T, 2000T, 1054, 5331, 5332, 8000, 8003, 8005	**.60**
TC-1926	.810	WL468, WL463, WL460, HF200, HF201, HF300	**.80**

NOTE: TC-1923 Heat Radiating Connector with hole size of .110" is still in our line and can be furnished. . Dlr. Cost **$ .50**

Prices on above slightly higher west of the Mississippi River

Only a few of many BUD Products are shown. For complete catalog, write BUD RADIO, INC., 2118 E. 55th St., Cleveland, Ohio


A
B
C
AS EASY AS A-B-C
cup shape opening holds wire firmly. no solder necessary—change as often as you need.
place wire through hole in tip.
draw wire through into loop, slide cap over wire
screw cap tightly on to tip.

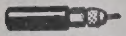
NEW SENSATIONAL!

BUD "VISE-GRIP" TEST PRODS

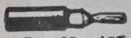
(Pat. applied for)

No longer is it necessary to use a soldering iron or screw-driver to replace a broken or worn lead on a test prod or plug. To install a wire in this unique, patented prod, merely insert end of wire in hole, screw down handle to finger tightness and a positive contact is assured. By far the fastest, most efficient way of doing this job.

BUD VISE-GRIP TEST PRODS WITH 1" PLASTIC HANDLE


Cat. No. 93

Cat. No. 94


Cat. No. 477

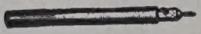
Prod is made of brass rod, and is nickel plated. 1" plastic handle is threaded at one end and prod screws into same.

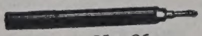
Needle Chuck—Black or Red.
Cat. No. **TP-93**.............Dealer Cost **$ .21**

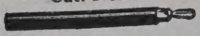
Phone Tip—Black or Red.
Cat. No. **TP-94**.............Dealer Cost **$ .30**

Banana Plug—Black or Red.
Cat. No. **TP-477A**...........Dealer Cost **$ .18**

BUD VISE-GRIP TEST PRODS WITH 4" PLASTIC HANDLE


Cat. No. 95


Cat. No. 96


Cat. No. 97

Prods are identical to those described on the left. Plastic handle is 4" long and made of the best material obtainable.

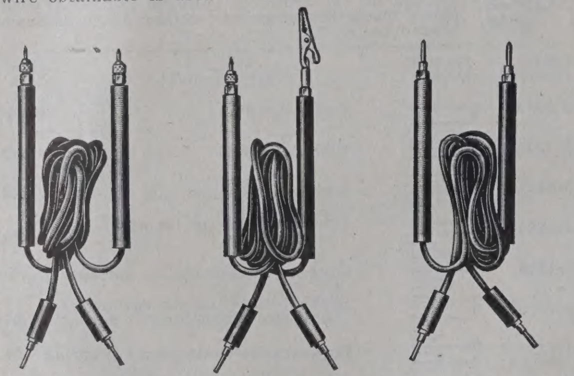
Needle Chuck—Black or Red.
Cat. No. **TP-95**......Dealer Cost **$ .30**

Phone Tip—Black or Red.
Cat. No. **TP-96**......Dealer Cost **$ .27**

Banana Plug—Black or Red.
Cat. No. **TP-97**......Dealer Cost **$ .30**

BUD SUPER TEST LEADS

All BUD Super Test Leads use BUD "Vise-Grip" Prods that screw into the highly polished 4" or 1" plastic handles on each end of the leads. The finest, flexible, kinkless, rubber covered wire obtainable is used on all BUD Test Leads.

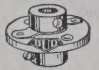


No. **TL-178** is supplied with 4" handles at one end of the wires with removable needle points and on other end 1" handle with phone tips.
Cat No. **TL-178**..........................Dealer Cost **$1.35**

No. **TL-179**—4" handles, one with removable needle point and the other with phone tip and removable alligator clip. 1" handles with phone tips.
Cat. No. **TL-179**.........................Dealer Cost **$1.65**

No. **TL-180** have 4" plastic handles with phone tips on one end. Other end, 1" handles with phone tips as illustrated above.
Cat. No. **TL-180**.........................Dealer Cost **$1.29**

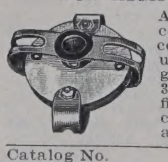
BUD INSULATED FLEXIBLE COUPLINGS



Tandem operation of two or more units is readily accomplished through the use of these couplers. Direct shaft alignment is not essential, and all couplers are made to fit ¼" shafts.

Cat. No.	Diameter	Height	Insulation	Dlr. Cost
FC-795	1-1/16"	11/16"	Ceramic	**$ .48**
FC-845	1-1/16"	⅝"	Bakelite	**.33**
FC-855	1½"	11/16"	Bakelite	**.39**

BUD HIGH VOLTAGE FLEXIBLE COUPLINGS



A new type spring construction in these couplings permits a wide gap between shaft connections, freedom from back-lash, and unusual flexibility. The springs are attached to glazed Steatite discs 1½" in diameter and 3/16" thick, and the overall diameter of the finished coupling is 1-15/16". Coupling accommodates standard ¼" shaft. Springs are also attached to Bakelite discs 1½" in diam.

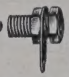
Catalog No.	Insulation	Dealer Cost
FC-614	Steatite	**$ .65**
FC-619	Bakelite	**.50**

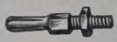
BANANA PLUGS AND JACKS

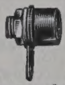
(Brass Nickel Plated)

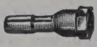
Banana plug jack, threaded ¼ — 28, supplied with nut and solder lug.
Cat. No. **PJ-949**
Dealer Cost **$ .10**

Banana plug
Overall Length 1¼"
Shank threaded 6-32, supplied with 6-32 nut.
Cat. No. **PL-470**
Dealer Cost **$ .15**

PJ-949



PL-470

PJ-478



PL-469

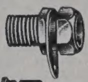
Insulated banana plug jack, complete with insulating washers, solder lug and nut.
Cat. No. **PJ-478**
Dealer Cost **$ .17**

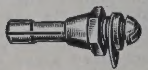
Banana plug. Shank tapped for 6-32 screws. Nickel plated.
Cat. No. **PL-469**
Dealer Cost **$ .10**

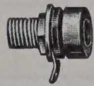
GIANT BANANA PLUGS AND JACKS FOR HEAVY DUTY APPLICATIONS

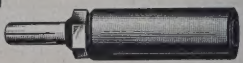
Giant banana jack, complete with nut and solder lug. For mounting, drill ⅜" hole.
Cat. No. **PJ-963**
Dealer Cost **$ .17**

Giant plug, tapped 10-32. Positive spring action assures firm contact.
Cat. No. **PL-962**
Dealer Cost **$ .20**

PJ-963



PL-962

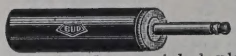
PJ-476A



PL-475A

Giant insulated banana plug jack, complete with insulating washers, solder lug and nut. To mount, drill ½" hole.
Cat. No. **PJ-476A**
Dealer Cost **$ .33**

High voltage insulated banana plug. Over all length 2⅞". Excellent for heavy duty applications.
Cat. No **PL-475A**
Dealer Cost **$ .45**

BUD PHONE PLUGS



All metal parts on these excellent phone plugs are machined from brass, and are nickel plated. Unshielded plugs have handles of black bakelite; shielded types have attractive brass knurled handles bright nickel plated.

No. **FP-1946** is supplied **Without a Handle,** and is used as an adapter between a female microphone cable connector and a regular plug jack.

Catalog Number	Contacts	Handle	Overall Length	Bushing Diam.	Dealer Cost
FP-230	2	Bakelite	2¾"	¾"	**$ .35**
FP-282	2	Shielded	2⅞"	¾"	**.75**
FP-1057	3	Bakelite	2¾"	¾"	**.84**
FP-284	3	Shielded	2⅞"	¾"	**1.10**
FP-1946	2	None	1-7/16"	11/16"	**.24**

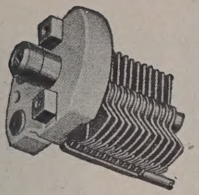
Prices on above slightly higher west of the Mississippi River

Only a few of many BUD Products are shown. For complete catalog, write BUD RADIO, INC., 2118 E. 55th St., Cleveland, Ohio

HAMMARLUND

SINCE 1910

"APC" MICRO CAPACITORS



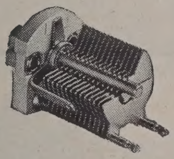
Code	Capacity
APC-25	25 mmf.
APC-50	50 mmf.
APC-75	75 mmf.
APC-100	100 mmf.
APC-140	140 mmf.

The "APC" originated in the Laboratories of the Hammarlund Mfg. Co over twenty years ago and because it is the most widely copied Air Trimmer today, it speaks eloquently for the soundness of its engineering design.

These units feature all brass soldered construction, nickel plating, silicone treated steatite panels, and precision formed rotor contact springs, combined with Hammarlund quality, make this capacitor a necessity for peak performance in today's rigid requirements.

Available in stock sizes as listed with a standard nominal air gap of .015" with a test voltage of 600 V. RMS, 60 cycles. Other air gaps available are .0195", .025", .030", .045". Modifications such as insulated adjustment head, extension shaft, lock type bearing, flats on shaft, etc., are obtainable.

"MAPC" CAPACITORS

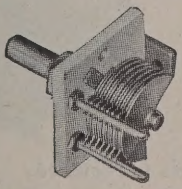


Code	Capacity
MAPC-15	15 mmf.
MAPC-25	25 mmf.
MAPC-35	36 mmf.
MAPC-50	49 mmf.
MAPC-75	75 mmf.
MAPC-100	99 mmf.

The Midget "APC" capacitor or "MAPC" is a worthy mate for the "APC". It is about one-half the size and weight of the "APC" but retains the same constructional features and quality. The "MAPC" has two isolated mounting studs 17/32" apart, shaft slotted for screw driver adjustment. Steatite base size 25/32" x 15/16". Army, Navy, and commercial engineers find this new unit ideal for today's trend towards minaturization.

Standard units as listed have nominal spacing of .0135". Other spacing available are .018" and .027". Modifications such as shaft extension, insulated adjustment head, extension shaft, and locking type bearing are also available.

"HF" MICRO CAPACITORS



Code	Capacity
HF-15	17.5 mmf.
HF-35	36 mmf.
HF-50	52 mmf.
HF-100	102 mmf.
HF-140	142 mmf.
*HF-15-X	15 mmf.
*HF-30-X	30 mmf.

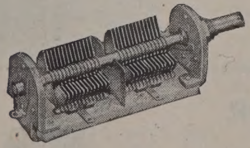
* .045 spacing.

The "HF" employs "APC" construction featuring a special panel permitting either single hole or bracket mounting.

Silicone treated steatite panel 1-5/16" x 1-3/16" coupled with all brass, soldered, nickel plated construction, long sleeve bearing, and positive contact spring give this unit a stable and noiseless quality which accounts for its popularity.

The "HF" is supplied with a standard nominal .015" air gap with a test voltage of 600 V. RMS 60 cycles and the "HF-X" with nominal .045" air gap with a test voltage of 1400 V. RMS 60 cycles. Standard units have ½" long, ¼" shaft. Special spacing and modifications are available.

"HFD" MICRO DUAL CAPACITORS



Code	Capacity
HFD-50	52 mmf. per sect.
HFD-100	102 mmf. per sect.
HFD-140	142 mmf. per sect.
*MFD-15-X	16 mmf. per sect.
*MFD-30-X	28.5 mmf. per sect.

* .045 spacing.

The "HFD" while available as listed and having the same electrical characteristics per section as the "HF" is also one of the most flexible designs to stem from the Hammarlund Laboratories.

This unit has two heavy aluminum end brackets mounted on silicone treated steatite base for strength and stability, long sleeve front bearing and rear bearing, individual silver plated beryllium contact springs on each section for noiseless operation. An electrical shield is provided between sections. This capacitor is 1-½" high x 1" wide, with ½" long ¼" shaft.

Modifications of basic design to include up to five sections of varying capacities are obtainable. This is truly a unit which can be tailored to the engineers individual requirements. Either single hole or base mounting are standard with all versions of this capacitor.

THE SIGN OF QUALITY

HAMMARLUND

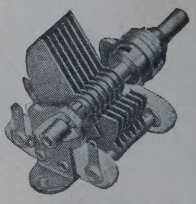
SINCE 1910

THE SIGN OF QUALITY

"MC" AND "MCX" CAPACITORS

The "MC" and "MC-X" capacitors available with SLC or midline plates are widely used in all applications for frequencies up to 60 megacycles, and are designed to satisfy the most critical and exacting requirements. Vibration proof for Aircraft, Marine and mobile use. These units are of brass soldered nickel plated constuction with silicone treated steatite insulation outside of the electrostatic field to reduce dielectric losses and to insure maximum efficiency under various conditions of humidity and temperature. A beryium copper silver plated rotor contact spring and precision sleeve bearings give noise free operation. "MC" types have a nominal .0245″ air gap tested at 1000 V. RMS 60 cycles. "MC-X" types have a nominal .0715″ air gap tested at 1750 V. RMS 60 cycles. The "MC" family have ¼″ shaft with rear extension for gang operation. The whole series have rotational stops which nominally permit increasing capacity with clockwise rotation of shaft. "S" types are 1-11/16″ wide and 2-¾″ high. "M" types are 2-3/32″ wide and 2-⅞″ high. These dimensions include swing of rotor plates.

Code	Capacity
MC-20-S	20 mmf.
MC-35-S	35 mmf.
MC-50-S	50 mmf.
MC-50-M	50 mmf.
MC-75-S	80 mmf.
MC-75-M	80 mmf.
MC-100-S	100 mmf.
MC-100-M	100 mmf.
MC-140-S	140 mmf.
MC-140-M	140 mmf.
MC-200-M	200 mmf.
MC-250-M	260 mmf.
MC-325 C	320 mmf.
MC-20-SX	20 mmf.
MC-20-MX	20 mmf.
MC-35-SX	32 mmf.
MC-35-MX	32 mmf.
MC-50-SX	53 mmf.
MC-50-MX	53 mmf.
MC-100-SX	100 mmf.



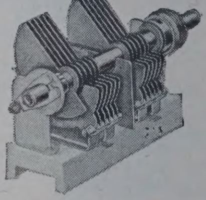
M—Midline Capacity Plates
S—Straight-Line Capacity Plates
X—.0715 Spacing

"MC" AND "MCD-X" CAPACITORS

"MCD" and "MCD-X" capacitors are dual section units having the same constructional feature of the "MC". The "MCD" and "MCD-X" are mounted on a sturdy channel silicone treated steatite base. Same spacings as the "MC" types available.

M—Midline Cap. Plates. S—Straight-Line Cap. Plates.
X—.0715 Spacing.

Code	Capacity per sect.
MCD-50-M	50 mmf.
MCD-100-S	100 mmf.
MCD-100-M	100 mmf.
MCD-140-M	140 mmf.
MCD-35-MX	31 mmf.
MCD-35-SX	31 mmf.

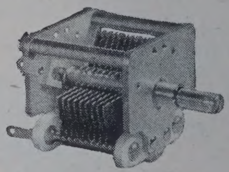


"RMC" CAPACITORS

The "RMC" was born out of the electronic industries demand for the extreme rigidity this capacitor affords. It utilizes the "MC-S" type soldered brass plate assemblies incorporated in a ruggedized frame consisting of aluminum end plates and three tie rods. A front sleeve bearing and single ball thrust rear bearing are used together with a positive rotor contact spring. The resulting unit has many applications where ruggedness is required.

Two removable brackets at the top of panels make for easy mounting of components or with the two tapped holes at the bottom and tapped holes in the panel permit three mounting possibilities. The same airgaps as the "MC" are available. Dimensions are 1-13/16″ wide x 1-11/16″ high with ¼″ shaft.

Code	Capacity
RMC-50-S	50. mmf.
RMC-100-S	105. mmf.
RMC-140-S	143.5 mmf.
RMC-325-S	327. mmf.

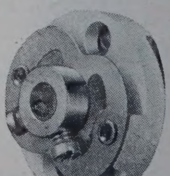


FLEXIBLE COUPLINGS

These flexible couplings come both insulated and non insulated. The insulated "FC-46-S" employs a silicone treated steatite body and provides maximum insulation. It is 13/16″ in width and 1-¼″ in diameter. The metal body of the non insulated "FNC-46-S" is 23/32″ wide with a diameter of 1-¼″. Both take ¼″ shafts and will compensate for considerable misalignment.

Code

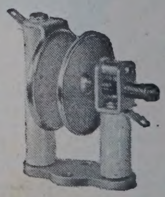
FC-46-S—Insulated
FNC-46-S—Non-insulated



"NZ-10" NEUTRALIZING CAPACITOR

The "NZ-10" has rounded edge formed aluminum plates mounted on glazed isolantite pillars. This unit is rugged and features a fine-threaded horizontal adjusting screw with positive lock. Stands 2-15/16″ high and 1-13/16″ wide x 2-⅞″ in fully open position.

Code
NZ-10—(2.3—10 mmf.)



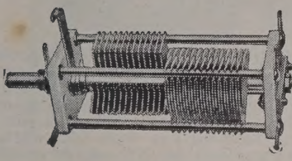
THE SIGN OF QUALITY

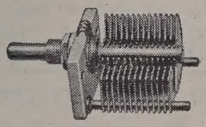
HAMMARLUND

SINCE 1910

THE SIGN OF QUALITY

"HFA" AND "HFAD" CAPACITORS



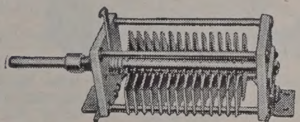


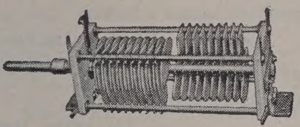
Code	Capacity	Type
HFAD-25-B	25 mmf.	Dual
HFA-100-A	102 mmf.	Single
HFA-140-A	145 mmf.	Single
HFA-10-B	9 mmf.	Single
HFA-15-B	16 mmf.	Single
HFA-25-B	25 mmf.	Single
HFA-50-B	50 mmf.	Single
HFA-100-B	100 mmf.	Single
HFA-15-E	16 mmf.	Single

The "HFA" is a high efficiency, high frequency transmitting type capacitor of unusual design. All parts are brass, soldered and nickel plated mounted on treated steatite end panel 1 13/32″ x 1 1/32″ with ¼″ shaft.

The "HFAD" is a dual unit with balanced opposed sections of the same type construction with two end panels 1 13/16″ square and ¼″ shaft. Both these units are ideal for low power portable transmitters and are available in 3 stock spacings; "A" .020″, "B" .030″, and "E" .070″. The "E" type also has round edge plates. Both of these units may be single hole panel or base mounted.

"HFB" TRANSMITTING CAPACITORS "HFBD"



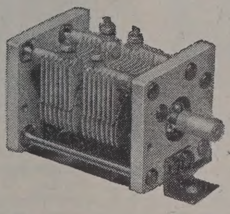


The "HFB" while similar in most respects to the "HFA" types have insulated ¼″ shaft extensions which permit high voltage to be applied to the rotor without danger to the operator. This allows a higher tube voltage for a given plate spacing and results in a less expensive, more compact unit.

The "HFBD" is the dual version with the same features with each section in balanced opposition. Both use 1 13/16″ square steatite panels and are base mounted.

Code	Capacity
HFBD-50-C	50 mmf.
HFBD-100-C	105 mmf.
HFBD-35-E	37 mmf.
HFBD-65-E	63 mmf.
HFB-50-C	48 mmf.

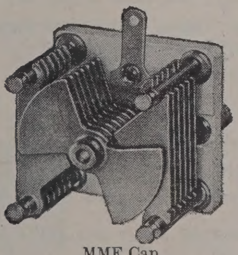
"VU" UHF CAPACITOR



Code	Series Min. Cap.	Series Eff. Capacity
VU-20	3.35	22.5 mmf.
VU-30	3.5	31.5 mmf.
VU-45	3.8	45.0 mmf.

The "VU" Capacitors offer completely silent electrical operation made possible through the use of pyrex glass ball bearings making them adaptable in circuits up to 300 mc. These new bearings completely eliminate wiping contacts and metal sleeves. Elimination of rotor contacts by use of series stators permits a more symmetrical design of the capacitor itself and consequently allows better circuit layout. Two sets of threaded studs are provided, so that a vacuum tube may be mounted on one side and inductor on the other side of the capacitor to minimize lead inductance. The stator sections provide a low inductance path between the two sets of stud contacts. Panel size is 1 7/16″ x 1 7/16″. Shaft size ¼″. These units are supplied in standard sizes as listed in all brass soldered silver plated construction and may be obtained as specially calibrated precision units. Calibration table and complete description furnished on request.

BUTTERFLY CAPACITOR



Code	MMF Cap. per Sec. Max.	MMF Cap. per Sec. Min.	Series Cap. Max.	Series Cap. Min.
BFC-12	14.5	3.5	7.9	2.2
BFC-25	27.5	5.0	14.5	3.0
BFC-38	40.5	6.3	21.0	3.7

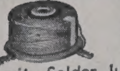
The "BFC" Butterfly type of capacitor is designed to meet the demand for an opposed rotor and stator (90 degree rotation) capacitor for use in commercial VHF equipment. The rugged design of this unit lends itself to mobile use and its brass soldered construction with symmetrical design provides easy association with other components for electrical circuit symmetry. Furnished in standard sizes as listed mounted on silicone treated steatite panel 1⅜″ square. Two studs on 1 3/32″ centers are provided for panel mounting. Shaft size is ¼″.

Modifications may be obtained and by the addition of a rear panel with special ball bearing both front and rear a unit may be obtained for continuous rotation at speeds up to 2400 R.P.M. The "BFC" is also obtainable in different plate spacings and capacities on special order.

Write for a copy of the 1952 HAMMARLUND catalog.

Miller

UNSHIELDED CHOKES



These single section R.F. Chokes are ideally suited for general purpose applications in receiver and filter circuit. Solder lug terminals and single hole mounting.

AIR CORE TYPE

Dimensions: 1-⅛" dia. x ⅝" high.

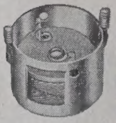
Cat. No.	MH	Ohms	MA	List Price
610	.25	8	125	$.50
620	.75	17	125	.50
630	1.50	21	125	.50
640	2.50	28	125	.60
650	5.0	41	125	.60
660	7.5	53	125	.60
670	10.0	64	125	.70
680	12.5	74	125	.70
690	15.0	83	125	.70
691	20.0	97	125	.90
692	30.0	120	100	.90
693	60.0	175	100	1.15
694	80.0	230	100	1.45

IRON CORE TYPE

These chokes are similar in construction to the No. 600 series except that they are wound on powdered iron cores.

Cat. No.	MH	Ohms	MA	List Price
951	.5	6.8	125	$1.00
952	1.0	10.9	125	1.10
953	2.5	19.5	125	1.15
954	5.0	23.0	125	1.30
955	7.5	37.0	125	1.40
956	10.0	45.0	125	1.45
957	25.0	78.0	100	1.75
958	50.0	130.0	100	1.95
959	75.0	200.0	100	2.20
960	100.0	210.0	100	2.50
961	150.0	268.0	100	2.75

SHIELDED CHOKES



Single section wound R.F. R.F. Chokes assembled in round aluminum shield with two spade bolts for mounting. Solder lug terminals.

Dimensions: 1-¼" dia. x 1" high (No. 758 is 1-⅝" dia.)

Cat. No.	MH	Ohms	MA	List Price
751	.5	10	125	$.90
752	1.0	17	125	.90
753	2.5	30	125	1.00
754	5.0	49	125	1.00
755	7.5	61	125	1.00
756	10.0	75	125	1.10
757	25.0	125	125	1.25
758	50.0	186	100	1.60

IRON CORE TYPE

Similar to the No. 700 series except wound on powdered iron cores for lower circuit loss.

Dimensions: 1-¼" dia. x 1" high.

Cat. No.	MH	Ohms	MA	List Price
851	.5	8.6	125	$1.40
852	1.0	11.5	125	1.50
853	2.5	22.0	125	1.55
854	5.0	31.0	125	1.70
855	7.5	42.0	125	1.75
856	10.0	47.0	125	1.80
857	25.0	100.0	125	2.15
Dimensions: 1-⅝" dia. x 1" high.				
858	50.0	160.0	100	2.30
859	75.0	222.0	100	2.60
860	100.0	348.0	100	2.85
861	150.0	520.0	100	3.15

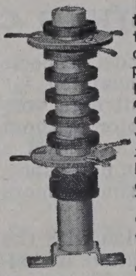
LOW POWER AND RECEIVER CHOKES

These chokes are wound on ¼" dia. forms and feature the exclusive Miller 'Sta-on' terminal clips. Low distributed capacity and accurate inductance values.

Dimensions: (form) ¼" dia. x 1-½" long.

Cat. No.	MH	Ohms	MA	List Price
4531	.5	11	200	$.90
4532	1.5	21	200	.90
4537	2.5	26	200	.90
4538	5.0	40	125	1.10
4539	7.5	79	125	1.40
4540	10.0	95	125	1.65
4541	25.0	160	125	1.95

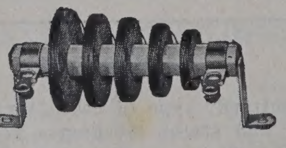
TV POWER TRANSFORMER (R.F.)



These R.F. power supply transformers for use with television receivers and cathode ray oscilloscope make it possible to construct an inexpensive source of high voltage D.C. Two types are available, the #4525 for voltages to 4000 DC and the #4526 for voltages to 10,000 DC (or 30,000 DC in a voltage rectifier tripler circuit). Type 1B3-GT tubes are used as rectifiers and the R.F. oscillator circuit uses one or more type 6V6 or 6Y6 tubes connected in parallel. The high frequency AC source permits use of simple and inexpensive resistive capacitive filters with low ripple content in the output. Typical circuit diagrams are supplied with each coil.

Cat. No.	Item	List Price
4525	H.V. R.F. Trans. (to 4KV) Dimensions—1¼" Dia. x 3¾" high (Illustrated)	$8.25
4526	H.V. R.F. Trans. (to 30 KV) Dimensions—2¼" Dia. x 6" high (not illustrated)	$13.75

HEAVY DUTY TRANSMITTER CHOKES



These heavy duty Navy Type R.F. chokes are sectional wound on Alsimag forms and are provided with removable mounting brackets. Ends of form are tapped for #6-32 machine screw. For general use in amateur and commercial transmitters.

Dimensions: (form) ½" dia. x 3-½" long.

Cat. No.	MH	Ohms	MA	Meters	List Pr.
4534	1.0	2.5	1000	20	$2.20
4535	1.5	3.6	1000	40	2.50
4533	2.5	4.5	750	80	2.75
4536	4.0	5.5	750	160	3.05

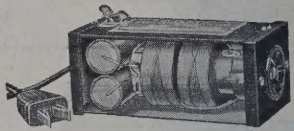
TV APPLIANCE FILTER

These filters are designed to eliminate radio interference caused by horizontal oscillators in T.V. receivers and small electrical appliances such as sewing machines, vacuum cleaners, food mixers, etc., and other similar devices requiring less than 550 watts. Inductive capacitive circuit assures maximum attenuation of interference.

Dimensions: 2¼" square x 4" long.

Cat. No.	Volts	Watts	List Price
7815	115	550	$7.70

GENERAL PURPOSE FILTER

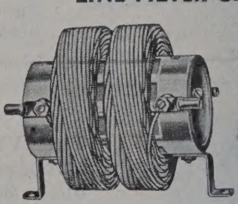


This filter is recommended for use with marine and D.C. appliances and radios. It is also for use with extremely noisy A.C. appliances. A good, permanent connection to ground should be used with this filter.

Dimensions: 2½" square x 5" long.

Cat. No.	Volts	Watts	List Price
7813	115	200	$8.25

LINE FILTER CHOKES



All Miller line filter chokes are duo-lateral wound on ceramic forms (except #7825 & D-7825 are on bakelite). They are for installation in noise producing equipment such as flasher signs, farm lighting plants, motor generators, etc. Also used with radio transmitters to prevent r.f. energy feed-back into the power circuits. Typical circuit diagrams are supplied with each choke. Always select chokes having a current rating at least as high as the maximum current load of the circuit to be filtered.

SINGLE LINE FILTER CHOKES

For use in filtering individual and branch circuits.

Dimensions: #7825 1-⅞" x 1-¾"
Others: 2-½" x 4"

Cat. No.	Amps.	Ohms.	MH	List Price
7825	2	.75	.60	$1.65
7826	5	.28	.57	4.40
7827	10	.15	.37	4.95
7828	20	.08	.20	5.50
7829	30	.05	.13	6.05

DUAL LINE FILTER CHOKES

For use in filtering both sides of single phase circuits.

Dimensions: #D-7825 3-¼" x 2-⅛"
Others: 4-½" x 4"

Cat. No.	Amps.	Ohms.	MH	List Price
D-7825	2	.75	.60	$3.30
D-7826	5	.28	.57	6.60
D-7827	10	.15	.37	7.70
D-7828	20	.08	.20	8.80
D-7829	30	.05	.13	9.90

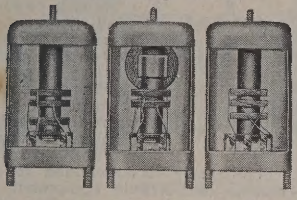
Specifications are for each winding.

For a Complete Listing of MILLER PRODUCTS ask for a copy of our Latest General Catalog.

Miller

UNIVERSAL REPLACEMENT COILS

(Permeability Tuned)



This series of variable inductance iron core coils are well suited for general replacement use and new designs. The inductance may be adjusted to cover the standard broadcast band with tuning condensers having a maximum capacity of between 250 and 450 mmfd. The oscillator coils may be used with any I.F. amplifier operating in the 100 to 550 KC range. Complete instructions are supplied.

UNSHIELDED

Dimensions: 7/8" dia. x 2" high. "L" mtg. Bracket.

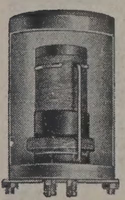
Cat. No.	Use	Freq. Range	List Price
72-A	Antenna Stage	500-1800 KC	$2.20
72-RF	R.F. Stage	500-1800 KC	2.20
72-Osc.	Osc. Coil	100-550 KC I.F.	2.20

SHIELDED

Dimensions: 1-3/8" square x 2-1/2" high

Cat. No.	Use	Freq. Range	List Price
73-A	Antenna Stage	500-1800	$2.75
73-RF	R.F. Stage	500-1800	2.75
73-Osc.	Osc. Coil	100-500 KC I.F.	2.75

DE-LUXE BROADCAST COILS



These coils are used in the finest quality receivers for lasting performance and stability. All coils are wound on XXX grade bakelite tubing and the secondaries are Litz wire wound (except oscillator coils) for maximum "Q". The antenna and R.F. coils are inductive-capacitive coupled for uniform gain. For use with standard 365 mmfd. tuning condensers.

SHIELDED COILS

Dimensions: 1-7/8" dia. x 3" high.

Cat. No.	Use	Freq. Range	List Pr.
242-A	Antenna	540-1750	$1.75
242-RF	Interstage	540-1750	1.75
242-BP	Band-pass	540-1750	1.50
277-C	2-coil Osc.	540-1750*	1.50
279-C	Tapped Osc.	540-1750*	1.35

NOTE: *Oscillator coils are for use with 455KC intermediate frequency and require a 400 mmfd. series pad condenser.

TV ANTENNA COUPLING TRANSFORMERS

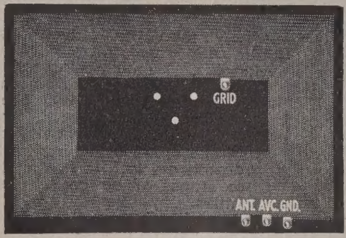
Miller
Cat. No. 6162
Ohm
Coupling Trans

Clearer, brighter pictures when these transformers match antenna impedance to line, or line to TV receiver. Signal input may be improved as much as four times! Designed to couple low-impedance antenna to standard 300-ohm line; or 300-ohm antenna to 72-ohm twin-lead or low-loss 52-ohm coaxial cable. At receiver, low-impedance line matched to standard 300-ohm input. Housed in impregnated, weather-tight aluminum shield.

Dimension: 3/4" by 3/4" by 1-3/8".

Cat. No.	Impedance Ratio	List Price
6161	52/300 or 300/52	2.75
6162	72/300 or 300/72	2.75

LOOP ANTENNA



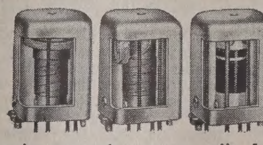
Using the patented "Air Loop"* construction, the No. 703-A Loop Antenna provides high "Q" and mechanical rigidity. The loop as supplied has a secondary inductance of 253 microhenries, which may be reduced as needed. Instructions are supplied. May be used in older sets to replace the antenna coil for local reception without an antenna.

Dimensions: 8-1/8" 5-3/8" x 1/8" thick.

*Mfg. under Franklin Airloop Cp. Pat. #2,401,472

Cat. No.	Use	Frequency	List Price
703-A	Loop Antenna	540-1700 KC	$2.65

STANDARD BROADCAST COILS



High gain general purpose coils featuring high impedance coupled antenna and R.F. units with progressive wound Litz wire secondaries (except oscillator coils). For use with standard 365 mmfd. tuning condenser. All windings are thoroughly impregnated with tropicalized R.F. lacquer.

SHIELDED COILS

Dimensions: 1-3/8" square x 2-1/2" high.

Cat. No.	Use	Freq. Range	List Pr.
44-A	Antenna	540-1700	$1.35
44-RF	Interstage	540-1700	1.35
44-BP	Band-Pass	540-1700	1.35
44-C	2-coil Osc.	540-1700*	1.35
41-C	Tapped Osc.	540-1700*	1.35

NOTE: *Oscillator coils are for use with 455 KC intermediate frequency amplifier and a 400 mmfd. series pad condenser.

UNSHIELDED COILS

Dimensions: 5/8" dia. (form) x 2-1/2" high.

Cat. No.	Use	Freq. Range	List Pr.
43-A	Antenna	540-1700	$1.10
43-RF	Interstage	540-1700	1.10
43-BP	Band-Pass	540-1700	1.10
43-C	2-coil Osc.	540-1700*	1.10
45-C	Tapped Osc.	540-1700*	1.10

NOTE: *Oscillator coils are for use with 455 KC intermediate frequency amplifier and a 400 mmfd. series pad condenser.

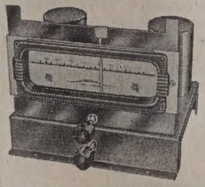
TV HIGH-PASS FILTER

Miller
Cat. No. 6168
High Pass Filter
300 Ohm Line

Improves picture clarity by rejecting interference from short wave stations, amateur transmitters, X-ray and diathermy equipment, electric appliances, etc. Attenuates all signals from zero to 40 megacycles. Passes all television channels with minimum loss. Installed easily in antenna lead-in at receiver. No tuning required. In aluminum can: 1-7/16" by 1-7/8" by 3-1/2".

Cat. No.	
6168	300-ohm line — List $5.50

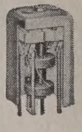
GERMANIUM CRYSTAL DIODE BAND-PASS TRF TUNER KIT



High fidelity! Uses germanium diode detector! No tubes! No power supply! No hum! A simple 2-tuned circuit negative mutual coupled band-pass tuner. Easy to assemble and wire. Full 22 kc. pass-band assures all brilliance of treble tones. Yet selective enough to separate local stations. With good antenna, AM stations in 20-25 mile range give audio output .05V to .5V. Use with your amplifier and speaker system for extra high quality reception. The Miller #585 TRF Tuner Kit contains coupling and TRF coils, 2-gang condenser, slide rule dial, chassis and hardware. Resistors, condensers, germanium crystal and volume control not included.

#585 TRF Tuner Kit — List $19.50

MIDGET I.F. TRANSFORMERS



These mica compression tuned intermediate frequency transformers are well suited for use in small receivers of all types. They measure only 1-1/8" square and 2" high. In spite of their small size, only the highest quality of parts and workmanship has been used in the construction of the Miller Midget transformers.

Dimensions: 1-1/8" square x 2" high.

Cat. No.	Use	Freq.	KC Range	List Price
AIR CORE TYPES				
112-C1	Input	455	450-475	$2.10
112-C2	Interstage	455	450-475	2.10
112-C3	Full Wave	455	450-475	2.10
112-C4	Half Wave	455	450-475	2.10
112-W1		1500	1400-1600	2.10
112-W2		1500	1400-1600	2.10
112-W3		1500	1400-1600	2.10
112-W4		1500	1400-1600	2.10
IRON CORE TYPES				
012-H1		262	250-275	$2.40
012-H2		262	250-275	2.40
012-H3		262	250-275	2.40
012-H4		262	250-275	2.40
012-C1		455	450-475	2.40
012-C2		455	450-475	2.40
012-C3		455	450-475	2.40
012-C4		455	450-475	2.40
012-W1		1500	1400-1600	2.40
012-W2		1500	1400-1600	2.40
012-W3		1500	1400-1600	2.40
012-W4		1500	1400-1600	2.40

TV AND FM WAVE TRAPS

These new high-Q series-resonant traps may completely eliminate interference and undesirable images in television and FM receivers. Assembled in aluminum shields designed for connection direct to antenna twin-lead. Convenient screwdriver tuning adjustment at top. Four traps will cover frequency ranges from 20 to 250 megacycles.

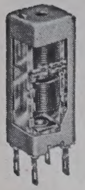
Dimensions: 1-7/16" by 1-7/8" by 3-1/2" high. 1-7/16" mounting centers.

Cat. No.	Frequency Range	List Price
6163	150-250 mc	$4.40
6164	75-150 mc	4.40
6165	40- 80 mc	4.40
6166	20- 40 mc	4.40

For a Complete Listing of MILLER PRODUCTS ask for a copy of our Latest General Catalog.

Miller

MINIATURE I.F. TRANSFORMERS*



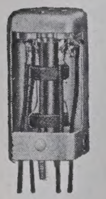
Designed for experimental and custom receivers as well as replacements for 'personal' radios, these transformers are permeability tuned and comparable in performance to standard size components. Expressly designed for use with the new miniature tubes. Plastic insulation throughout. Screw driver adjustment of primary and secondary from top and bottom of shield. Supplied with spring clip for mounting to the chassis.

Dimensions: ¾" square x 2" high.

*Mfg. under K-Trans. Pats. and Pats. Pend.

Cat. No.	Use	Freq.	KC Range	List Price
12-H1	Input	262	250- 275 KC	$2.50
12-H2	Output	262	250- 275 KC	2.50
12-C1		455	440- 480 KC	2.20
12-C2		455	440- 480 KC	2.20
12-W1		1500	1400-1600 KC	2.50
12-W2		1500	1400-1600 KC	2.50

UNIVERSAL I.F. TRANSFORMERS

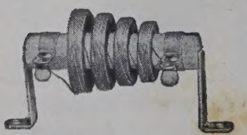


This new series of Miller transformers is used for general replacement purposes and in new designs. High gain and excellent stability are combined in a small transformer designed for use in both home and auto radio receivers. The ceramic mica compression trimmers have been heat cycled for temperature stability. All transformers are assembled in aluminum shields with screw-driver adjustment accessible at the top of the shield.

Dimensions: 1-¼" square x 2-½" high.

Cat. No.	Use	Freq.	KC Range	List Price
AIR CORE TYPES				
312-H2	Input	262	250-275	$1.75
312-H4	Output	262	250-275	1.75
312-C2		455	440-475	1.75
312-C4		455	440-475	1.75
IRON CORE TYPES				
412-H2	Input	262	250-275	$2.40
412-H4	Output	262	250-275	2.40
412-C2		455	440-470	2.40
412-C4		455	440-470	2.40

MEDIUM DUTY TRANSMITTER CHOKES



For use in medium power transmitters, these chokes are similar in construction to our Heavy Duty types. Low distributed capacity and accurate inductance values are features.

Dimensions: (form) ½" dia. x 2-½" long.

Cat. No.	MH	Ohms	MA	List Price
4550	2.0	6.5	400	$1.75
4551	4.0	10.0	400	2.00

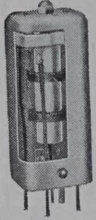
FILAMENT CHOKE

Enclosed solenoid wound chokes for use in the filament and vibrator circuits of battery operated receivers, transmitters, etc.

Dimensions: ¾" Dia. x 1-⅞" long, plus 3" leads.

Cat. No.	uH	Ohms	Amps.	List Price
5221	10	.02	8	$ .75

IRON CORE TRANSFORMERS

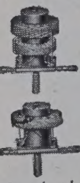


These iron core transformers provide higher gain and selectivity than the conventional air core transformers of similar size. The mica compression trimmers, adjustable from the top of the shield, have been heat cycled for capacity stability. Gain and selectivity of a single stage using iron core transformers is often equal to two stages of air core transformers.

Dimensions: 1-⅜" square x 3-¼" high.

Cat. No.	Use	Freq.	KC Range	List Price
612-H1	Input	262	250-275	$2.90
612-H2	Interstage	262	250-275	2.90
612-H3	Full Wave	262	250-275	2.90
612-H4	Half Wave	262	250-275	2.90
612-C1		455	450-475	2.90
612-C2		455	450-475	2.90
612-C3		455	450-475	2.90
612-C4		455	450-475	2.90
612-W1		1500	1400-1600	2.90
612-W2		1500	1400-1600	2.90
612-W3		1500	1400-1600	2.90
612-W4		1500	1400-1600	2.90

DOWELL TYPE COILS



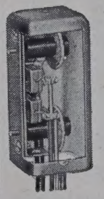
Single section Litz wound secondary coils wound on ½" Dia. lo-loss ceramic dowels, these coils are provided with solder lugs on a bakelite terminal plate and with a #6-32 threaded stud for single hole chassis mounting. For use with standard 365 mmfd. tuning condenser.

Dimensions: ¾" square base x 1" high.
(ABP & RF types 2-⅛" high)

Cat. No.	Use	List Price
5480-A	Antenna	$1.25
5480-RF	Interstage	1.50
5480-BP	Band-Pass	1.75
5480-K	2-coil Osc.	1.15
5480-H	2-coil Osc.	1.15
5480-C	2-coil Osc.	1.15
5481-K	Tapped Osc.	1.15
5481-H	Tapped Osc.	1.15
5481-C	Tapped Osc.	1.15

NOTE:
K for 175 KC I.F. with 1000 mmfd Pad
H for 262 KC I.F. with 600 mmfd. pad
C for 455 KC I.F. with 400 mmfd. pad

PERMEABILITY TUNED TRANSFORMERS



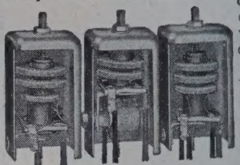
Miller permeability tuned intermediate frequency transformers are recommended for all applications where a high degree of frequency stability and operation under humid conditions are used. The two iron core adjusting screws are accessible from the side of the aluminum shield. These transformers have excellent gain and selectivity characteristics. An internal spring clip prevents vibration from affecting the adjustment.

Dimensions: 1-⅜" square x 3-¼" high.

Cat. No.	Use	Freq.	KC Range	List Price
912-C1	Input	455	450-475	$4.00
912-C2	Interstage	455	450-475	4.00
912-C3	Full Wave	455	450-475	4.00
912-C4	Half Wave	455	450-475	4.00
912-W1		1500	1400-1600	4.00
912-W2		1500	1400-1600	4.00
912-W3		1500	1400-1600	4.00
912-W4		1500	1400-1600	4.00
912-X1		3000	2900-3100	4.00
912-X2		3000	2900-3100	4.00
912-X3		3000	2900-3100	4.00
912-X4		3000	2900-3100	4.00

MIDGET R.F. COILS

(Adjustable Inductance)



This series of compact shielded coils is provided with an adjustable powdered iron core permitting approximately plus or minus 30% secondary inductance deviation from nominal values. Particularly recommended for aircraft, marine and mobile equipment and general custom receiver construction. Core is adjustable from top of aluminum shield. Coils are designed for use with standard 365 mmfd. tuning condenser.

Dimensions: 1-⅛" square x 2" high.
(All Types)

LONG WAVE BAND 140-425 KC

Cat. No.	Use	I.F. Freq.	List Price
X-320-A	Antenna		$2.75
X-320-RF	Interstage		2.75
X-320-M	2-coil Osc.	132 KC	2.20
X-320-C	2-coil Osc.	455 KC	2.20
X-321-M	Tapped Osc.	132 KC	2.20
X-321-C	Tapped Osc.	455 KC	2.20

BROADCAST BAND 540-1700 KC

Cat. No.	Use	I.F. Freq.	List Price
A-320-A	Antenna		$1.95
A-320-RF	Interstage		1.95
A-320-M	2-coil Osc.	132 KC	1.95
A-320-C	2-coil Osc.	455 KC	1.95
A-321-M	Tapped Osc.	132 KC	1.95
A-321-C	Tapped Osc.	455 KC	1.95

MARINE & AIRCRAFT BAND 2100-6300 KC

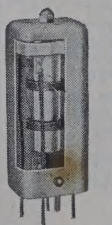
Cat. No.	Use	I.F. Freq.	List Price
B-320-A	Antenna		$1.95
B-320-RF	Interstage		1.95
B-320-M	2-coil Osc.	132 KC	1.95
B-320-C	2-coil Osc.	455 KC	1.95
B-321-M	Tapped Osc.	132 KC	1.95
B-321-C	Tapped Osc.	455 KC	1.95

SHORT WAVE BAND 6.0-18 MC

Cat. No.	Use	I.F. Freq.	List Price
C-320-A	Antenna		$1.95
C-320-RF	Interstage		1.95
C-320-C	2-coil Osc.	455 KC	1.95
C-321-C	Tapped Osc.	455 KC	1.95

REPLACEMENT I. F. TRANSFORMERS

(Double Tuned)



These transformers are an essential part of the stock of every serviceman and dealer. In many cases they will give better performance than the original transformer. All have been pretuned and should require only slight adjustment after installation. Leads are color coded, and the transformers are assembled in aluminum shields. These transformers may be used as replacements in most makes of receivers using transformers of the same physical size. Be sure to order a transformer of the correct frequency.

Dimensions: 1-⅜" square x 2-⅝" high.

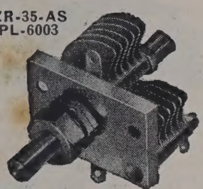
Cat. No.	Freq.	KC Range	Use	List Price
512-K1	175	160-190	Input	$2.65
512-K2	175	160-190	Interstage	2.65
512-K3	175	160-190	Full-Wave	2.65
512-K4	175	160-190	Half-Wave	2.65
512-H1	262	240-280	Input	2.40
512-H2	262	240-280	Interstage	2.40
512-H3	262	240-280	Full Wave	2.40
512-H4	262	240-289	Half Wave	2.40
512-C1	455	425-500	Input	2.40
512-C2	455	425-500	Interstage	2.40
512-C3	455	425-500	Full Wave	2.40
512-C4	455	425-500	Half Wave	2.40

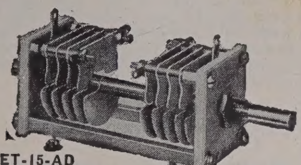
For a Complete Listing of MILLER PRODUCTS ask for a copy of our Latest General Catalog.

STANDARDS OF COMPARISON

TRIM-AIR MIDGET CAPACITORS

Combine essential sturdiness with the flexibility obtained only in a spacer-built rotor and stator type of assembly.


ZR-35-AS
PL-6003


ET-15-AD
PL-6037

GENERAL SPECIFICATIONS:

CAPACITY CHARACTERISTIC: S.L.C.

FRAME: End Plates of 5/32" thick Isolantite.

SHAFT: 1/4" diameter, nickel plated brass.

PLATES: .020" thick aluminum, specially treated to remove burrs.

FINISH: Spacers, bushing nuts and screws nickel plated brass.

MOUNTING: Singles require one 3/8" hole in panel; Duals provided with four No. 4-36 screws in square brass tie rods. Trim-Air mounting posts or brackets fit both single and dual types. Singles are fitted with tapered nuts acting on split bushing for locking rotor shaft for fixed tune. Duals have rear shaft extension for coupling to other units and have a removable intersection shield, on airgaps of .020 and .030.

Note: Single section Trim-Airs normally stocked with full length shaft for knob or dial. Stub shaft equivalents, with slot for screw driver adjustment only, available to order. "ZS" type singles have .040" thick plates with rounded buffed edges.

SINGLE TRIM-AIR CONDENSERS (Long Shaft Construction)

Parts List No.	Type	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length	List Price
PL 6016	ZU-75-AS	75	2.7	15	.020	1 3/8	$2.75
PL 6017	ZU-100-AS	100	3	19	.020	1 1/2	2.81
PL 6018	ZU-140-AS	140	5	27	.020	1 23/32	5.06
PL 6000	ZR-10-AS	10	1.2	3	.030	7/8	2.04
PL 6001	ZR-15-AS	15	1.5	5	.030	31/32	2.09
PL 6002	ZR-25-AS	25	2	7	.030	1 1/16	2.31
PL 6003	ZR-35-AS	35	2.5	11	.030	1 9/32	2.42
PL-6004	ZR-50-AS	50	2.8	13	.030	1 3/8	2.53
PL 6055	ZR-100-AS	108	6.6	29	.030	2 9/64	3.63
PL 6024	ZV-5-TS*	5	1.5	3	.060	7/8	2.04
PL 6044	ZT-5-AS	5	2	3	.070	31/32	2.31
PL 6010	ZT-10-AS	11	3.6	6	.070	1 1/16	2.37
PL 6011	ZT-15-AS	15	3	9	.070	1 1/2	2.48
PL 6012	ZT-30-AS	30	4	17	.070	2 17/64	3.03
PL 6022	ZS-4-SS	4	1.5	5	.140	1 1/2	3.03
PL 6023	ZS-7-SS	7	4	7	.140	1 27/32	3.36

* Supplied with 2 segment stator for UHF circuits. Extra plate also supplied, making 3 plates as listed.

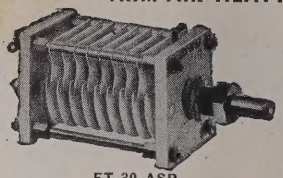
DUAL TRIM-AIR CONDENSERS

Per Section

Parts List No.	Type	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length	List Price
6041	EU-75-AD	75	2.7	15	.020	3 1/32	$5.28
6042	EU-100-AD	100	3	19	.020	3 1/32	5.50
6043	EU-140-AD	140	5	27	.020	3 11/16	9.74
6028	ER-10-AD	10	1.2	3	.030	2 3/16	4.24
6029	ER-15-AD	15	1.5	5	.030	2 3/16	4.24
6030	ER-25-AD	25	2	7	.030	2 3/16	4.35
6031	ER-35-AD	35	2.5	11	.030	3 1/32	4.73
6032	ER-50-AD	50	2.8	13	.030	3 1/32	5.01
6065	ER-100-AD	100	6.9	25	.030	3 11/16	8.97
6037	ET-15-AD	15	3	9	.070	3 1/32	4.84
6039	ET-30-AD	30	4	17	.070	4 15/32	5.83
6033	ES-4-SD	4	1.5	5	.140	3 1/32	5.83
6035	ES-7-SD	7	4	7	.140	3 11/16	6.49
6293	ER-25-ADI*	25	2	7	.030	2 3/16	6.38

* Insulated coupling between rotor sections.

TRIM-AIR HEAVY DUTY SPECIALS

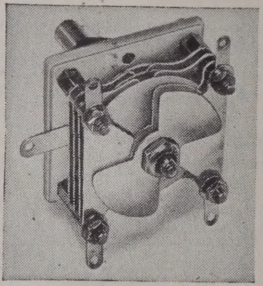

ET-30-ASP
PL-6058

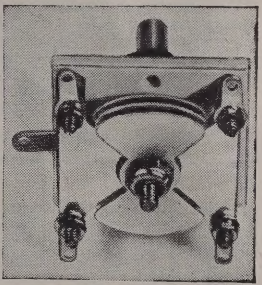
Four-tie-rod frame, ball and strap rear bearing construction, augmenting the simplified Trim-Air construction, to give even greater strength and rigidity. General characteristics otherwise same as standard Trim-Airs.

Dual section units have balanced rotor and stator sections and both single and dual section types may be single hole mounted or used with standard Trim-Air mounting accessories. Standard Trim-Air shaft locking nut may be used for fixed tune. PL-6069 and PL-6068 are duals with rear shaft extended; all others have ball and strap type rear bearing.

SINGLES		LIST	DUALS		LIST
PL 6056	ER-50-ASP	$4.79	PL 6057	ER-50-ADP	$5.28
PL 6059	EU-75-ASP	4.35	PL 6669	ER-50-ADP (rear sh. ext.)	9.57
PL 6058	ET-30-ASP	4.46	PL 6068	EU-140-ADP (rear sh. ext.)	12.76

A NEW LINE OF CARDWELL MIDGET CONDENSERS FOR V.H.F.


PL-6113


PL-6076

Cardwell offers a new line of 90 degree condensers with butterfly rotor plates, fulfilling a demand created by engineers and amateurs since the publication of an article "Stabilizing The 144 Megacycle Transmitter" in April, 1946 "QST." Also see pages 351 to 353 inclusive in the 1946 ARRL Radio Amateurs Handbook. PL-6113 and PL-6076 are specified in these articles. Features of these 90 degree midget condensers are as follows:

Electrical Symmetry
Low Distributed Inductance.
No Moving Contacts.
Plates easily removable to change capacity range.
Isolantite Insulation.
Single Hole Mounting.
Small Size; 1 7/16" x 1 13/32" per general outline dimensions for differential "Trim-Airs" as shown on Page 6 of Catalog No. 46.

These condensers are made to fit all standard Cardwell "Trim-Air" hardware.

Note maximum and minimum capacity values shown are measured from stator-to-stator and are effective values as used when a coil is connected stator-to-stator, with rotor floating.

CARDWELL V.H.F. 90 DEGREE TRIM-AIR MIDGETS

Part List No.	Type	Max. Cap.	Min. Cap.	No. Plates Rotor	No. Plates Stator	Air Gap.	Length Over-all	List Price
6075	ER-3-BF/S	3	1.5	2	1	.030"	1 35/32"	$2.86
6076	ER-6-BF/S	5	1.5	3	2	.030"	1 31/32"	2.97
6077	ER-8-BF/3	7	2.0	4	3	.030"	1 31/32"	3.08
6078	ER-15-BF/S	13	3.0	7	6	.030"	2 3/8"	3.74
6079	EU-25-BF/S	20.4	3.4	8	7	.020"	2 5/32"	4.02
6080	EU-35-BF/S	27	4.0	10	9	.020"	2 3/8"	4.18
**6081	EU-50-BF-S	38	6.0	14	13	.020"	2 31/32"	8.42
*6113	ER-14-BF/SL	13	10.4	(3) Disc (2) 90°	(2) 180° (2) 90°	.030"	2 1/16"	4.40

* Minimum capacity loaded by circular rotor plates.

** Iso. rear end plate—ball and strap rear bearing.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

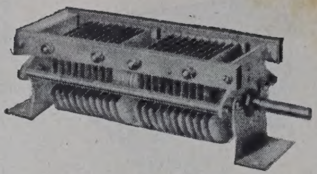
CARDWELL CONDENSERS

THE ALLEN D. CARDWELL MANUFACTURING CORPORATION

STANDARDS OF COMPARISON

MIDWAY TRANSMITTING CAPACITORS

The Midway is ideal for low and medium power transmitters for portable Mobile and aircraft equipment, due to its light weight, compact size and extremely sturdy construction. Incorporates original patented features of the larger "X" type standard transmitting condenser.



MT-100-GD PL-7030
with PL-5051 Mtg. Brackets

GENERAL SPECIFICATIONS:

CAPACITY CHARACTERISTIC: S.L.C.

FRAME: All aluminum end plates and tie rods.

SHAFT: ¼" C.R. steel, cadmium plated.

PLATES: .025" aluminum. On sizes having airgap of .070" or over, plates have rounded edges, buffed to minimize corona loss.

BEARINGS: Brass, nickel plated shoulder type front bearing with ball thrust rear bearing.

INSULATION: Mycalex.

MOUNTING: 3 point front panel mounting by means of 3 screws and hex. posts. Two aluminum mounting feet with screws, Cardwell Part List No. 5052 for regular chassis mounting, provided instead, if so ordered. Type "M" special brackets (Part List No. 5051) permit inverted mounting.

MIDWAY SINGLF CONDENSERS

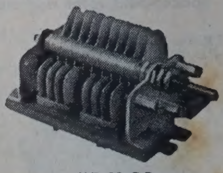
Parts List No.	Type	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length Over End Plates	List Price
PL7000	MR-25-BS	25	6	3	.030	1¾	$4.35
PL7001	MR-50-BS	50	6	5	.030	1¾	5.50
PL7002	MR-70-BS	70	7	7	.030	1¾	5.67
PL7003	MR-105-BS	112	9	11	.030	1¾	5.89
PL7004	MR-150-BS	150	10	15	.030	1¾	6.38
PL7005	MR-260-BS	260	13	25	.030	2¾	7.04
PL7006	MR-365-BS	365	16	35	.030	2¾	7.70
PL7015	MT-20-GS	25	8	5	.070	1¾	5.28
PL7016	MT-35-GS	35	6	7	.070	1¾	5.67
PL7017	MT-50-GS	50	10	11	.070	1¾	6.33
PL7018	MT-70-GS	70	10	15	.070	2¾	7.21
PL7019	MT-100-GS	100	14	21	.070	2¾	7.92
PL7020	MT-150-GS	150	18	31	.070	3 11/16	9.74
PL7021	MG-35-NS	35	14	15	.171	3 11/16	9.74
PL7024	MO-165-BS	165	15	25	.050	2¾	5.39

MIDWAY DUAL CONDENSERS

Parts List No.	Type	Per Section Max. Cap.	Per Section Min. Cap.	Per Section No. Plates	Air Gap	Length Over End Plates	List Price
PL7007	MR-25-BD	25	5	3	.030	1¾	$7.04
PL7008	MR-50-BD	47	7	5	.030	2¾	7.54
PL7009	MR-70-BD	70	8	7	.030	2¾	7.92
PL7010	MR-100-BD	112	9	11	.030	2¾	8.25
PL7011	MR-150-BD	150	10	15	.030	2¾	8.53
PL7013	MR-260-BD	260	13	25	.030	3 11/16	9.63
PL7026	MT-20-GD	20	6	5	.070	2¾	8.97
PL7027	MT-35-GD	35	8	7	.070	2¾	9.74
PL7028	MT-50-GD	50	9	11	.070	2 15/16	10.29
PL7029	MT-70-GD	70	11	15	.070	3 11/16	11.33
PL7030	MT-100-GD	100	13	21	.070	5 11/32	12.93
PL7031	MO-180-BD	190	15	29	.050	5 11/32	12.93

"N" TYPE TRANSMITTING CAPACITORS

Designed for medium power high frequency transmitters and short wave therapy apparatus, the Cardwell "N" series maintains the customary high standard of Cardwell construction, yet eliminates closed circuit loops completelv.



NP-35-DD
PL-7107

GENERAL SPECIFICATIONS:

CAPACITY CHARACTERISTIC: S.L.C.

FRAME: Improved aluminum end plates support heavy lateral ceramic insulating bars which carry the stators.

SHAFT: ¼" diameter cadmium plated steel.

PLATES: Aluminum, .040" thick, with rounded edges. PL-7106 and 7116 have buffed and polished edges. PL-7105 has .025" thick plates, buffed and polished edges.

BEARINGS: Cardwell shoulder type front bearing, with ball thrust rear bearing.

MOUNTING: Can be single hole mounted, or by three mounting posts and screws, to front panel. Chassis mounting on feet which form part of end plates, or use Cardwell "M" brackets, Cardwell part No. 301, for inverted mounting, for lowest stator-to-ground capacity.

ULTRA-HIGH FREQUENCY SINGLE CONDENSERS

Parts List No.	Type	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length Back of Panel	List Price
PL7100	NP-50-DS	50	9	13	.084	3⅜	$5.67
PL7101	NP-75-DS	75	11	19	.084	4 5/32	6.66
PL7102	NP-100-DS	100	13	25	.084	5 7/32	7.54
PL7103	NP-150-DS	150	19	39	.084	6 11/16	9.85
PL7104	NG-35-DS	35	11	15	.171	5 7/32	7.43

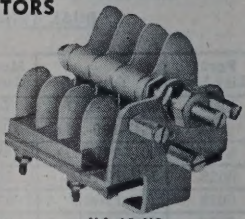
ULTRA-HIGH FREQUENCY DUAL CONDENSERS

Parts List No.	Type	Per Section Max. Cap.	Per Section Min. Cap.	Per Section No. Plates	Air Gap	Length Back of Panel	List Price
PL7105	NT-50-GD	50	7	11	.070	4 5/32	$9.74
PL7116	NP-15-ND	17	4	5	.084	4 5/32	9.24
PL7106	NP-35-ND	35	5	9	.084	4 5/32	9.74
PL7110	NP-15-DD	17	4	5	.084	4 5/32	8.25
PL7107	NP-35-DD	35	5	9	.084	4 5/32	8.69
PL7108	NP-50-DD	50	9	13	.084	5 7/32	9.74
PL7109	NP-75-DD	75	11	19	.084	6 11/16	11.66
PL7115	NA-12-NDI	13	6	7	.218	5 15/16	24.31

Note: NA-12-NDI is dual neutralizer, rotor sections insulated from each other. Capacity and nr. plates shown, is PER SECTION.

"NA" NEUTRALIZING CAPACITORS

The "NA" group offers 180° neutralizing capacitors of restricted range, for dial or screw driver adjustment. Shaft lock for permanent setting. Adjustable airgap on NA-4-NS *only* by adjusting threaded bushing in aluminum end plate. Single rotor bearing with beryllium tension washer and special bushing for rigidity. Plates are .040" thick aluminum, rounded and buffed edges. Three point panel mounting or foot mounting.



NA-16-NS
PL-7114

Parts List No.	Type	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length Back of Panel	List Price
PL7111	NA-4-NS	4	3.25	2	.218	1 19/32	$5.83
PL7112	NA-6-NS	6	4	3	.218	1 19/32	5.83
PL7113	NA-10-NS	12	6	6	.218	2 19/32	7.32
PL7114	NA-16-NS	16	7	8	.218	3 3/32	8.14

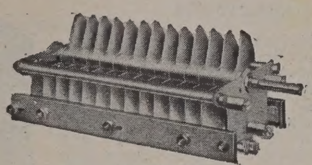
PRICES SUBJECT TO CHANGE WITHOUT NOTICE

CARDWELL CONDENSERS

THE ALLEN D. CARDWELL MANUFACTURING CORPORATION

STANDARDS OF COMPARISON

"X" TYPE STANDARD TRANSMITTING CAPACITOR


XC-100-XS
PL-8023

The original grounded rotor, metal frame variable air capacitor.

Rounded edges, polished aluminum plates, .040" thick on all but "XT" and "XR" types.

Frames, tie rods, bearing bushings, spacers and stator blocks, nickeled brass. Cadmium plated ¼" steel shaft supports securely locked rotor assembly. Mycalex insulation. Panel spaces 4⅛" x 3⅜". Panel mounting. N.P. brass mounting feet provided on special order, for chassis mounting. See Accessories.

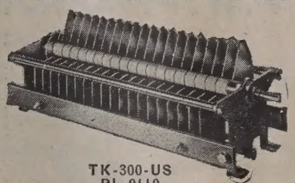
"X" TYPE STANDARD SINGLES

Parts List No.	Type	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length Over End Plates	List Price
PL8000	XR-50-PS	50	11	3	.030	1½	$5.56
PL8001	XR-100-PS	100	12	5	.030	1½	5.67
PL8002	XR-150-PS	150	12.5	7	.030	1½	5.83
PL8003	XR-250-PS	250	13	11	.030	1½	5.94
PL8004	XR-375-PS	375	16	17	.030	$2\frac{1}{16}$	6.77
PL8005	XR-500-PS	475	18	21	.030	$2\frac{1}{16}$	8.31
PL8007	XR-1000-PS	950	30	41	.030	$3\frac{3}{16}$	15.95
PL8013	XR-1500-PS	1500	50	65	.030	5	17.60
PL8048	XT-220-PS	220	20	21	.070	$3\frac{3}{16}$	8.09
PL8050	XT-440-PS	440	40	43	.070	5	12.43
PL8040	XP-90-KS	90	16	11	.084	$2\frac{1}{16}$	7.32
PL8041	XP-165-KS	165	22	19	.084	$3\frac{3}{16}$	10.51
PL8043	XP-290-KS	290	35	33	.084	5	15.40
PL8044	XP-330-KS	330	37	37	.084	5⅝	17.60
PL8029	XE-120-XS	120	19	17	.100	$3\frac{3}{16}$	9.74
PL8031	XE-240-XS	240	30	33	.100	5⅝	17.60
PL8025	XD-160-XS	160	28	27	.125	5⅝	14.63
PL8032	XG-25-XS	25	8	5	.171	$2\frac{1}{16}$	5.67
PL8033	XG-50-XS	50	15	11	.171	$3\frac{3}{16}$	10.51
PL8034	XG-110-XS	110	26	23	.171	5⅝	15.68
PL8020	XC-18-XS	19	8	5	.200	$2\frac{1}{16}$	7.32
PL8021	XC-40-XS	40	15	11	.200	$3\frac{3}{16}$	10.51
PL8022	XC-65-XS	65	20	17	.200	5	13.75
PL8023	XC-100-XS	100	28	25	.200	6⅝	17.05
PL8037	XK-55-XS	55	20	15	.230	5	16.23

"X" TYPE STANDARD DOUBLES

Parts List No.	Type	Per Section Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length Over End Plates	List Price
PL8018	XR-500-PD	500	18	21	.030	$3\frac{3}{16}$	$15.40
PL8068	XT-80-PD	80	11	9	.070	$3\frac{3}{16}$	10.23
PL8070	XT-210-PD	210	22	21	.070	5	14.08
PL8065	XP-90-KD	95	15	11	.084	$3\frac{23}{32}$	12.16
PL8066	XP-165-KD	165	23	19	.084	5⅝	17.82
PL8067	XP-325-KD	325	38	37	.084	$10\frac{3}{16}$	35.70
PL8061	XE-120-XD	120	19	17	.100	5⅝	16.23
PL8062	XE-240-XD	240	32	33	.100	$10\frac{3}{16}$	33.94
PL8060	XD-160-XD	160	28	27	.125	$10\frac{3}{16}$	30.86
PL8063	XG-50-XD	50	14	11	.171	5⅝	17.33
PL8064	XG-110-XD	110	27	21	.171	$10\frac{3}{16}$	29.15
PL8056	XC-40-XD	40	14	11	.200	6⅝	18.65
PL8057	XC-75-XD	75	21	19	.200	$10\frac{3}{16}$	24.31
PL8081	XE-160-70-XQ	Multi-Band			.100	$10\frac{3}{16}$	44.66

"T" TYPE HEAVY DUTY TRANSMITTING CAPACITORS


TK-300-US
PL-9110

6¼" wide, 5⅜" high, plates unmeshed. Corona shields on stators for wider airgap types. End plates ⅛" thick, heavy nickel plated. Massive bearings, ⅜" stainless steel shafts; heavy, two finger phosphor bronze rotor contactor bears on sturdy contact ring built to carry very heavy current without power loss. Rotor plates 4½" diameter, .050" thick aluminum. Heavy mounting feet formed as part of end plates. Ball thrust rear bearing. Mycalex insulation.

SINGLE HEAVY DUTY TRANSMITTING CONDENSERS

Parts List No.	Type	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length Inside End Plates	List Price
PL9009	TJ-315-US	315	36	31	.168	$8\frac{1}{32}$	$44.55
PL9001	TC-200-US	200	35	23	.200	7	38.94
PL9002	TC-300-US	300	42	35	.200	10	44.55
PL9036	TK-300-US	312	53	39	.230	$12\frac{3}{16}$	51.70
PL9011	TL-50-US	45	15	7	.294	$3\frac{9}{16}$	22.99
PL9013	TL-80-US	85	24	13	.294	5⅝	29.21
PL9014	TL-100-US	98	26	15	.294	$6\frac{5}{16}$	30.64
PL9016	TL-160-US	160	40	25	.294	9¾	41.75
PL9019	TZ-40-RS	43	18	11	.500	7	33.39
PL9020	TZ-80-RS	83	32	21	.500	12½	44.55

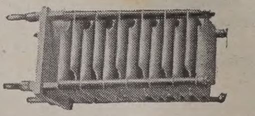
DOUBLE HEAVY DUTY TRANSMITTING CONDENSERS

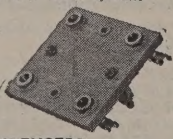
Parts List No.	Type	Per Section Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length Inside End Plates	List Price
PL9026	TJ-150-UD	150	21	15	.168	$8\frac{1}{32}$	$44.55
PL9027	TJ-200-UD	211	30	21	.168	10¾	50.11
PL9021	TC-100-UD	112	20	13	.200	$8\frac{1}{32}$	43.12
PL9022	TC-160-UD	160	30	19	.200	11	47.30
PL9023	TC-200-UD	200	35	23	.200	13	52.86
PL9024	TC-250-UD	255	40	29	.200	16	58.47
PL9030	TL-50-UD	45	15	7	.294	$6\frac{5}{16}$	34.82
PL9031	TL-70-UD	70	19	11	.294	9	40.37
PL9033	TL-100-UD	98	26	15	.294	$11\frac{13}{16}$	48.02
PL9034	TL-160-UD	160	40	25	.294	18¾	61.22
PL9029	TKD-100-UD	110	30	21	.350	18¾	61.22
PL9035	TZ-40-RD	43	18	11	.500	$13\frac{9}{16}$	50.11

TYPE "J" PLUG-IN FIXED AIR CONDENSERS

For fixed capacity loading.

Plates easily removed. All "J" types have 2¼" square x ¼" Alsimag No. 196 ceramic end plates. Supplied with banana plugs to fit "JB" Jack Base. On special order provided with hexagonal brass mounting pillars and mounting screws for permanent installation.


JCO-50-OS
PL-9705


"JB" Jack Base
PL-5102

TYPE "J" PLUG-IN FIXED AIR CONDENSERS

Parts List No.	Type	Capacity	No. Plates	Air Gap	Length Overall	List Price
PL9705	JCO-50-OS	50 mmf.	13	.250	5⅜	$8.91
PL9704	JCO-25-OS	25 mmf.	7	.250	3¾	6.44
PL9703	JD-100-OS	100 mmf.	17	.125	4⅜	10.51
PL9702	JD-80-OS	80 mmf.	13	.125	4	8.91
PL9701	JD-50-OS	50 mmf.	8	.125	$3\frac{3}{16}$	6.44
PL9700	JD-25-OS	25 mmf.	4	.125	2½	4.51
PL9706	JR-750-OS	750 mmf.	33	.030	4⅝	14.30
PL9707	JKD-50-OS	50 mmf.	18	.350	$8\frac{3}{16}$	10.67

JACK BASE FOR "J" FIXED AIR CONDENSERS

Size: 2½" x 3½" x ¼". **Material:** Alsimag No. 196.
Complete with mounting posts, screws and nuts.
Type "JB" (PL-5102) .... **List Price $1.38**

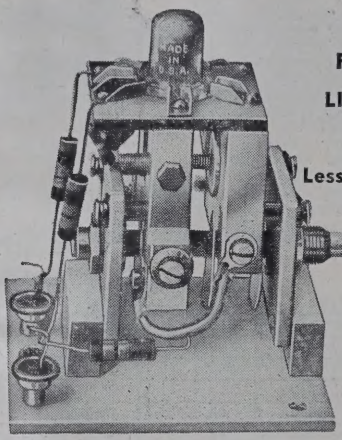
PRICES SUBJECT TO CHANGE WITHOUT NOTICE

CARDWELL CONDENSERS

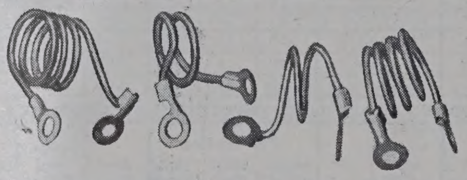
THE ALLEN D. CARDWELL MANUFACTURING CORPORATION

STANDARDS OF COMPARISON

V.H.F. OSCILLATOR KIT



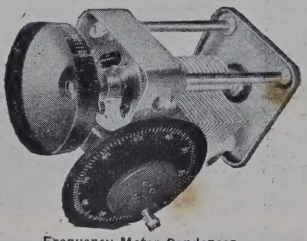
PL-20,024
LIST PRICE
$19.80
Less 6-F-4 Tube



This kit includes 3 sets of coils covering 144-148 mc, 220-225 mc, 420-450 mc bands. (The 6F4 tube is not included.) Ideally suited for local oscillator, for super-heterodyne receiver, as plate modulated oscillator for low power transmitter or transceiver, driver unit for amplifier tube in higher powered transmitter, V.H.F. signal generator, etc., etc.

CARDWELL PRECISION CAPACITOR
Type PL-24,050

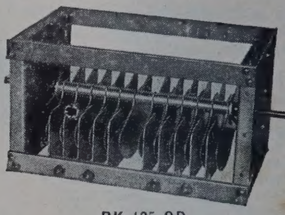
Designed for frequency meters requiring maximum mechanical and electrical precision. Type No. 4.080 gear and worm driven capacitor incorporates special design features representing years of research and usage of this component in special measurement equipment which has successfully withstood most rigorous usage our armed forces could give it.



Frequency Meter Condenser
PL-24,050

CAP. RANGE: Max. Cap. 220 mmfd., Min. Cap. 21 mmfd.
PLATE SHAPE: S.L.F.
DI-ELECTRIC SUPPORTS: Steatite.
BACKLASH: Negligible.
RESETTABILITY: To 10 parts in one million.
GEAR DRIVE: Precision split worm gear, equipped with precision ball bearings. Ratio—100 : 1 over 360 degrees.
DIALS: 3" DRUM: 50 divisions over 180° condenser rotation. 3" FAST RUNNING DIAL: Graduated 100 divisions, makes 1 revolution for each drum division. VERNIER RING: Divides each division on fast running dial into 10 parts.
DIMENSIONS: 5⅝" lg. (over drum dial) x 3⅛" deep x 3⅛" high.
WEIGHT: 1¾ lbs. (with cast aluminum frame).
ROTOR CONTACT: Silver plated phosphor bronze spring, with 2 silver contacts bearing on silver plated disc.
MOUNTING: 3 point, to bottom of main casting.
PRICE: Capacitor, PL-24,050, Type 4.080, only .... List $105.20
Drum Dial .... List 6.25
Fast Running Dial .... List 14.20
Vernier Ring .... List 2.75

TYPE "P" LIGHT HEAVY WEIGHT TRANSMITTING CAPACITORS



PK-125-QD
Special

Designed to accommodate capacitance values up to 150 mmfd. per section in a dual section type having an airgap of .500", the "P" type construction permits higher capacity for a given airgap, and therefore a shorter frame than the "T" type construction. Typical Cardwell sturdiness is built-in, and the "P" type is probably the lightest transmitting condenser built for its size, yet completely satisfactory for heavyweight use. No single section types are catalogued; parallel or series connect for double or half single section capacity listed in table.

GENERAL SPECIFICATIONS:

FRAME: End plates are ⅛" thick formed aluminum, satin finish.
SHAFT: ⅜" diameter, non-magnetic stainless steel, extended both front and rear end.
PLATES: .064" thick, rounded and buffed edges. Rotor plates are 6¾" in diameter.
BEARINGS: Heavy nickel plated brass front and rear shoulder bearings.
ROTOR CONNECTION: Heavy, two finger N.P. phosphor bronze wiper bears on ⅛" thick N.P. brass contact ring, at each end.
STATOR CONSTRUCTION: Plates permanently staked into slotted, rounded edge aluminum stator blocks.
INSULATION: Mycalex (glass bonded mica).
MOUNTING: 3 clearance holes for No. 10 screws in each *side* of each end plate permitting mounting on any side, as well as provision for mounting associated components such as inductance coil mountings, etc.

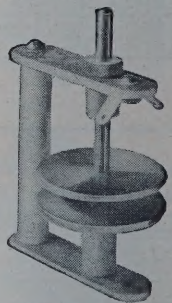
TYPE "P" LIGHT HEAVYWEIGHT DUAL CONDENSERS

Parts List No.	Type	Per Section Max. Cap.	Per Section Min. Cap.	Per Section No. Plates	Air Gap	Length Over End Plates	List Price
PL9208	PJ-750-QD	750	50	35	.168	20½	Special
PL9210	PK-200-QD	210	30	13	.230	$11\frac{27}{64}$	Special
PL9203	PKD-70-QD	70*	15*	7	.350	$9\frac{13}{16}$	82.50
PL9204	PKD-100-QD	115	22	9	.350	$11\frac{27}{64}$	91.85
PL9205	PZ-50-QD	50*	15*	7	.500	11⅞	90.48
PL9206	PZ-70-QD	70*	20*	9	.500	14¼	96.69
PL9207	PZ-100-QD	91	23	11	.500	$16\frac{1}{16}$	110.00
PL9209	PZ-150-QD	150	40	19	.500	$24\frac{9}{16}$	137.50

* Estimated value.
Tolerance for maximum and minimum capacity values: ±10%.

DISC TYPE NEUTRALIZER

For neutralizing low capacity transmitting triodes. Glazed steatite insulation. Polished aluminum discs. Fine screw thread adjustment in long nickel silver bearing—no wabble. Knurled thumb nut for easy locking. Heavy satin finish aluminum support and base plate.



ADN. Neut. Conds.
PL-7118

DISC TYPE NEUTRALIZING CONDENSERS

Item No.	Parts List No.	Type	Max. Cap.	Air Gap	Min. Cap.	Air Gap	List Price
1	PL7118	ADN	7 mmf.	.100"	1 mmf.	.700"	$9.84
2	PL7119	BDN	15 mmf.	.200"	3 mmf.	1.000"	8.14

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

CARDWELL CONDENSERS

THE ALLEN D. CARDWELL MANUFACTURING CORPORATION

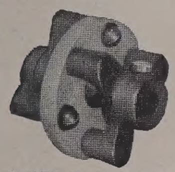
STANDARDS OF COMPARISON

INSULATED COUPLINGS

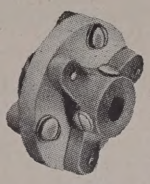
For isolating R.F. controls. Ceramic insulation (Alsimag No. 196). All flexible types have N.P. phosphor bronze springs, and heavy N.P. brass hubs, permanently swedged or spin riveted into the springs. Two fillister head, cup point, case hardened steel set screws in each hub insure positive lock to shaft.

All rigid types have improved three-point-spider construction, carefully machined solid brass castings, and are absolutely rigid.

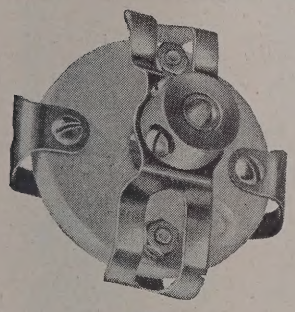
Flexible types C, D, E and F fit both ¼" diameter shaft or a ⅜" shaft by removing bushing supplied.



"LNF" Rigid Coupling
PL-5201



"FNF"
PL-5013



"C"
PL-5004

"A"
PL-5000

INSULATED COUPLINGS—Flexible

Parts List No.	Type	DIMENSIONS "A" (Width)	"B" (Length)	Peak Flashover	To Fit Shaft Diameter	List Price
5000	A	1 9/32″	¾″	3;700 V.	¼″	$0.83
5002	B	1 9/32″	1 3/32″	7,000 V.	¼″	.83
5202	AB	1 9/32″	29/32″	5,000 V.	¼″	1.10
5004	C	2⅝″	2 3/32″	13,500 V.	¼ & ⅜″	3.91
5006	D	2⅝″	1⅜″	9,000 V.	¼ & ⅜″	3.91
5008	E	2 1/16″	1¾″	10,000 V.	¼ & ⅜″	2.09
5010	F	2 1/16″	1 1/16″	5,000 V.	¼ & ⅜″	2.09

INSULATED COUPLINGS—Rigid

5014	CNF	2¼″	2 1/16″	12,000 V.	⅜″	4.90
5201	ENF	1⅜″	1 13/16″	10,000 V.	¼″	1.65
5013	FNF	1⅜″	15/16″	7,500 V.	¼″	1.38

ACCESSORIES

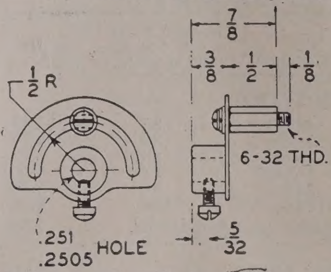
"MIDWAY" MOUNTING FEET

Heavy aluminum, with 2 screws; for Midway condensers.
Parts List No. 5052........................ **List (Pair)...$0.28**

INDUCTANCE CLIPS

For tapping air-wound inductors. Cadmium plated phosphor bronze spring clips for No. 12 or 14 wire. Thin blades prevent shorting turns. Type 804-A. **Parts List No. 5104**........**List Price...$0.22**

ROTOR LOCK



For locking "X" standard or "M" Midway rotor shafts in position for fixed tune. Can be set behind panel or attached to any ¼" shaft, mounted directly on front of panel. Nickel plated brass; diameter 1½".

Parts List No. 5100 (Type ARL)........................ **List Price $0.83**

SHAFT LOCK PANEL BUSHING

Long panel bushing for ¼" shafts, has tapered nut for locking shaft in position. Fits ⅜" hole in panel. Complete with panel nuts. Nickeled brass.
Parts List No. 5055 (Type ALB)........................ **List Price $0.44**

TYPE "M" BRACKET

Use with type "N" U.H.F. duals or "M" Midway condensers. Turns condenser upside down for shortest plate leads in balanced R.F. amplifier. Regular mounting feet can be used to support a tank coil or jack base. Made of strong, satin finished, 1/16" aluminum, and supplied with proper screws and lock washers.
Parts List No. 5051........................ **List Price, each $0.28**

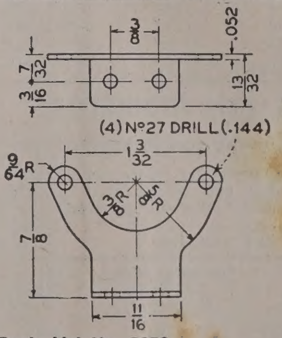
"STANDARD" TYPE "X" MOUNTING FEET

Heavy nickel plated brass; for "X" transmitting types, with four screws.
Parts List No. 5053........................ **List Price, pair $0.28**

TRIM-AIR ACCESSORIES

As catalogued, Trim-Air singles are equipped for single hole mounting. Additional mounting accessories listed below are sold separately.

MOUNTING POSTS—(¼" hex. x ¾" long, tapped 6-32 N.P. brass). Pair, with screws and lockwashers.
Parts List No. 5054........................ **List Price $0.28**



"TRIM-AIR" MOUNTING BRACKET

For dual and single Trim-air condensers. Insulated from rotor and stator; N.P. brass, with two screws and nuts.

Parts List No. 5050........................ **List Price, each $0.22**

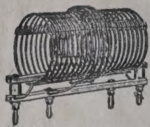
PRICES SUBJECT TO CHANGE WITHOUT NOTICE

CARDWELL CONDENSERS

THE ALLEN D. CARDWELL MANUFACTURING CORPORATION

COMPONENTS for amateurs and experimenters
BARKER & WILLIAMSON, Inc. • UPPER DARBY, PA.

ANTENNA INDUCTORS TYPES TA AND HDA

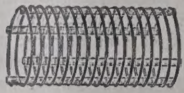


Wound with tinned copper wire for ease in tapping feeders to coils. Equipped with fixed center links for coupling to either fixed or variable linked final tank circuits through a low impedance line. Two tinned clips come with each coil. TYPE TA COILS for power input up to 500 watts. TYPE HDA COILS for power inputs of one kilowatt.

SPECIFICATIONS

Band	Stock No.	Type	Capacity to Res. L.F. End of Band mmfd.	Net Price
		TA TYPES		
10	3601	10TA	20	$3.45
15	3602	15TA	28	3.57
20	3603	20TA	23	3.57
40	3604	40TA	34	3.96
80	3605	80TA	50	4.38
160	3606	160TA	100	4.71
Stock No. 3321 Jack Bar Assembly for TA Inductors.				1.25
		HDA TYPES		
10	3607	10HDA	20	7.02
15	3608	15HDA	20	7.83
20	3609	20HDA	20	7.83
40	3610	40HDA	20	8.25
80	3611	80HDA	34	9.06
160	3612	160HDA	100	10.32
Stock No. 3721 Jack Bar Assembly for HDA Inductors				1.75

B & W MINIDUCTORS

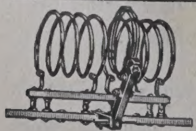


For use in limited space—can be cut to size. Amazingly high Q characteristic. Useful for tank circuit coils, R-F chokes, high-frequency I-F transformers, loading coils, etc.

SPECIFICATIONS

Catalog No.	Diameter	Turns per Inch	Length	Net Price
3001	½"	4	2"	$0.36
3002	½"	8	2"	.36
3003	½"	16	2"	.36
3004	½"	32	2"	.36
3005	⅝"	4	2"	.45
3006	⅝"	8	2"	.45
3007	⅝"	16	2"	.45
3008	⅝"	32	2"	.45
3009	¾"	4	3"	.54
3010	¾"	8	3"	.54
3011	¾"	16	3"	.54
3012	¾"	32	3"	.54
3013	1"	4	3"	.60
3014	1"	8	3"	.60
3015	1"	16	3"	.60
3016	1"	32	3"	.60

TYPE TVH INDUCTORS



For Powers up to 500 Watts Input

A special group of units with eight contact plug bars which gives greater flexibility than otherwise possible.

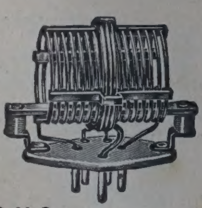
SPECIFICATIONS

Band	Stock No.	Type	*Capacity to Res. L.F. End of Band mmfd.	Net Price
10	3501	10TVH	11	$4.71
15	3502	15TVH	28	4.71
20	3503	20TVH	28	4.71
40	3504	40TVH	28	4.71
80	3505	80TVH	49	4.71
160	3506	160TVH	100	4.71
Stock No. 3566 Jack Bar Assembly for Type TVH Inductors				5.16

*Actual condenser capacity will be smaller by the sum of the tube output and wiring capacities, generally between 5 and 20 mmfd.

PRICE INDICATIONS ARE REVISIONS MADE SEPTEMBER 1, 1951

JUNIOR INDUCTORS



For Powers Up to 75 Watts Input

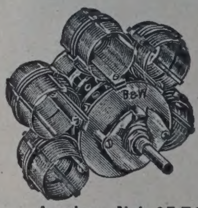
Fitted with standard five-prong steatite base. Small size for compact construction. May be used in the oscillator, buffer or final amplifier stage with input powers up to 75 watts and plate voltages up to 850. Three different assemblies provided, any of which may be used in capacity-coupled circuits by omitting connection to the links.

SPECIFICATIONS

Band	Stock No.	Type	*Cap. to Res. L.F. End of Band mmfd.	Net Price
		End Linked Models		
6	3100	6JEL	15	$1.65
10	3101	10JEL	22	1.65
15	3102	15JEL	22	1.65
20	3103	20JEL	34	1.65
40	3104	40JEL	47	1.65
80	3105	80JEL	60	1.65
160	3106	160JEL	100	1.65
		Center Linked Models		
6	3107	6JCL	15	1.65
10	3108	10JCL	16	1.65
15	3109	15JCL	16	1.65
20	3110	20JCL	16	1.65
40	3111	40JCL	33	1.65
80	3112	80JCL	53	1.65
160	3113	160JCL	100	1.65
		Variable Link Models		
6	3114	6JVL	15	1.65
10	3115	10JVL	22	1.65
15	3116	15JVL	27	1.65
20	3117	20JVL	21	1.65
40	3118	40JVL	31	1.65
80	3119	80JVL	46	1.65
160	3120	160JVL	100	1.65

*Actual condenser capacity will be smaller by the sum of the tube output and wiring capacities, generally between 5 and 20 mmfd.

B & W TURRET ASSEMBLIES



Unique switching assembly makes possible fast, positive band switching without absoption effects. All units cover 80, 40, 20, 15 and 10 meter bands. Also available with 160 meter coil substituted for 15 meter coil.

B & W 75 WATT 2A "BAND HOPPERS" Uses same coil design as B & W Juniors. Unusually compact panel controlled unit. It may be used for interstage coupling between two beam power tubes or between beam power tubes and triodes.

Stock No. 3121 .... **Amateur Net $5.76**

B & W 75-WATT TURRETS—provide a means for link coupling single ended or push-pull low power stages. Complete assembly is mounted on a positive action switch arranged for panel mounting through a single ⅜" hole. Turrets may be used with tubes operating at voltages up to 850.

Stock No. 3810—Type JTCL—Center linked, center tapped coils. **Amateur Net $11.25**

Stock No. 3811—Type JTEL—End linked, untapped coils. **$11.25**

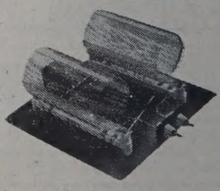
B & W 150-WATT TURRETS—Supplied in both center and end link models for both single- and double-ended circuits. Operation is by a positive action switch arranged for panel mounting through a single ⅜" hole. Turrets may be used with tubes operating at voltages up to 1000 volts.

Stock No. 3812—Type BCL—Center linked, center tapped coils. **Amateur Net $14.01**

Stock No. 3813—Type BEL—End linked, untapped coils. **$14.01**

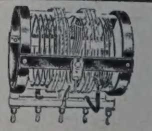
BALUN INDUCTORS

These bifilar balun inductors are specially designed for use with Collins 32-V series and similar transmitters—see "The Impedance Matcher" as described in CQ Magazine for May 1951. Two coils mounted on an 8" square plate serve as a compact, highly efficient all-band (80-10 meters) unit for matching feed line systems to both transmitters and receivers. Can be connected to match 75 ohm unbalanced transmitter outputs to 75 and 300 ohm balanced antenna feed lines. Full instructions included.



Type 3975
$4.65 each coil

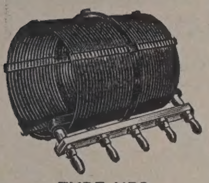
3400 SERIES INDUCTORS
FOR POWERS UP TO 500 WATTS



Each coil has an individual internal center coupling adjustable over 360°, permitting impedance matching up to 600 ohms. 10, 15, 20, 40, 80 and 160 meter band types. Write for details.

B&W COMPONENTS for amateurs and experimenters

BARKER & WILLIAMSON, Inc. • UPPER DARBY, PA.



TYPE HD1
(Fixed Link)

- MINIMUM DIELECTRIC IN THE FIELD OF THE COIL
- EXTREMELY LOW LOSSES
- RUGGED CONSTRUCTION
- EXCELLENT APPEARANCE
- LOW COST

Each AIR INDUCTOR is a completely finished unit. All coils are equipped with banana type plugs . . . Type "B" is for use in oscillator and buffer—doubler stages developing up to 100 Watts power. Type "T" is especially suited for high powered neutralized buffer and final tank stages where powers of 500 Watts are developed. Type "HD" is for maximum power — handles a Kilowatt with ease.

SPECIFICATIONS

Band	Stock No.	Type	Net Price
TYPE B			
MODELS WITHOUT LINK—CENTER TAPPED			
6	3200	6B	$1.65
10	3201	10B	1.65
15	3202	15B	1.74
20	3203	20B	1.74
40	3204	40B	2.16
80	3205	80B	2.58
160	3206	160B	2.88
END LINK MODELS—WITHOUT TAP			
6	3207	6BEL	2.91
10	3208	10BEL	2.91
15	3209	15BEL	2.97
20	3210	20BEL	2.97
40	3211	40BEL	3.39
80	3212	80BEL	3.81
160	3213	160BEL	4.11
CENTER LINK MODELS—CENTER TAPPED			
6	3214	6BCL	2.91
10	3215	10BCL	2.91
15	3216	15BCL	2.97
20	3217	20BCL	2.97
40	3218	40BCL	3.39
80	3219	80BCL	3.81
160	3220	160BCL	4.11
VARIABLE LINK MODELS—CENTER TAPPED			
6	3221	6BVL	2.31
10	3222	10BVL	2.31
15	3223	15BVL	2.40
20	3224	20BVL	2.40
40	3225	40BVL	2.73
80	3226	80BVL	3.12
160	3227	160BVL	3.45

Stock No. 3228—Steatite Jack Bar Assembly for end or center link type B Inductors, old Type A56.
Stock No. 3266—Jack Bar and Swinging Link for BVL Inductors.

TYPE T

Band	Stock No.	Type	Net Price
10	3301	10T	1.80
15	3302	15T	1.92
20	3303	20T	1.92
40	3304	40T	2.31
80	3305	80T	2.73
160	3306	160T	3.06
CENTER LINKED MODELS—CENTER TAPPED			
10	3308	10TCL	$3.45
15	3309	15TCL	3.57
20	3310	20TCL	3.57
40	3311	40TCL	3.96
80	3312	80TCL	4.38
160	3313	160TCL	4.71
VARIABLE LINKED—CENTER TAPPED			
10	3315	10TVL	2.64
15	3316	15TVL	2.73
20	3317	20TVL	2.73
40	3318	40TVL	3.12
80	3319	80TVL	3.57
160	3320	160TVL	3.72

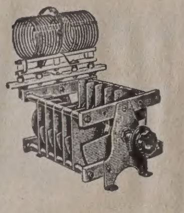
Stock No. 3321—Steatite Jack Bar Assembly for end or center link Type T Inductors, old Type A54.
Stock No. 3366—Base Assy. and Swinging Link for TVL Inductors.

TYPE HD

Band	Stock No.	Type	Net Price
MODELS WITHOUT LINK—CENTER TAPPED			
10	3701	10HD	3.72
15	3702	15HD	4.50
20	3703	20HD	4.50
40	3704	40HD	4.95
80	3705	80HD	5.76
160	3706	160HD	7.02
CENTER LINKED MODELS—CENTER TAPPED			
10	3708	10HDCL	7.02
15	3709	15HDCL	7.83
20	3710	20HDCL	7.83
40	3711	40HDCL	8.25
80	3712	80HDCL	9.06
160	3713	160HDCL	10.32
VARIABLE LINKED MODELS—CENTER TAPPED			
10	3715	10HDVL	5.37
15	3716	15HDVL	6.21
20	3717	20HDVL	6.21
40	3718	40HDVL	6.60
80	3719	80HDVL	7.41
160	3720	160HDVL	8.67

Stock No. 3721—Jack Bar Assembly for HD and HDCL Inductors.
Stock No. 3766—Base Assembly and SL for HDVL Inductors.

TYPE CX CONDENSER



Superior design! Only half the length of conventional units. Perfect electrical and mechanical symmetry. Designed for built-in neutralization. Integral mounting of B & W coils reduces lead lengths and resulting lead inductance to an absolute minimum.

Stock No. 3767—Type HD Jack Bar and SL assembly mounted on any type of condenser.
Stock No. 3721-1—Type HD or HDL Jack Bar mounted on condenser.
Stock No. 3567—Type TVH Jack Bar and SL mounted on condenser.
Stock No. 3930-1—Single Vacuum Condenser mount.
Stock No. 3930-2—Twin Vacuum Condenser mount.

NEUTRALIZING PLATES AVAILABLE IN FOUR TYPES, DESIGNATED N1, N2, N3, and N4.

N1—will neutralize the HY114, HK24, RK31, HK54, TW75, and similar tubes.
N2—will neutralize the 75T, 35T, 808, RK35, 852, and similar tubes.
N3—will neutralize the 801, T-TZ20, T-TZ40, RK18, HK154, 811, 812, T55, 100TH, 250TH, 806, 810, and similar tubes.
N4—will neutralize the 833, T200, 805, GL152, 838, 203A, RK52, and similar tubes

"A" TYPE—.500" AIRGAP

Type	Capacity Per Section Max.	Capacity Per Section Min.	Capacity Sections in Series Max.	Capacity Sections in Series Min.	Net Price
CX11A	11	8	8	6	$15.03
CX20A	20	11	13	8	18.39
CX30A	30	14	18	10	21.12
CX40A	40	18	23	12	23.76
CX49A	49	21	28	14	27.36
CX59A	59	24	33	16	29.13
CX68A	68	27	38	18	31.80
CX77A	77	30	43	20	34.53
CX87A	87	34	48	22	37.17
CX96A	96	37	53	24	39.84
CX105A	105	40	58	26	42.57
CX115A	115	43	62	29	45.21
CX124A	124	46	68	30	47.94
"B" TYPE—.375" AIRGAP					
CX11B	11	8	9	6	14.61
CX22B	22	11	15	8	17.88
CX34B	34	14	21	10	20.61
CX45B	45	17	28	12	23.22
CX58B	58	20	33	13	25.80
CX70B	70	23	38	15	28.47
CX82B	82	26	45	17	30.96
CX94B	94	29	50	19	33.69
CX106B	106	32	56	20	36.21
CX118B	118	36	62	22	38.79
CX130B	130	39	68	24	41.52
CX141B	141	42	74	26	44.10
CX153B	153	45	80	27	46.68
"C" TYPE—.250" AIRGAP					
CX13C	13	8	10	6	14.25
CX30C	30	11	18	8	17.46
CX45C	45	13	26	9	20.07
CX62C	62	16	34	11	22.56
CX78C	78	19	42	12	25.17
CX95C	95	22	50	14	27.75
CX111C	111	25	59	15	30.18
CX127C	127	28	67	17	32.79
CX143C	143	31	75	18	35.31
CX159C	159	33	83	20	37.74
CX175C	175	36	91	21	40.47
CX192C	192	39	100	23	42.99
CX208C	208	42	110	24	45.42

Standard plate thickness in all models, 1/16". • Available on special order, 3/32" plates at 10% additional. • Special features. • Explanation: The type of each condenser designates its capacity and plate spacing as follows: CX100 indicates 100 mmfd. per section. • Letters A, B, C, or D denotes plate spacing: A—.500", B—.375", C—.250", D—.187". Following N# denotes Neutralizing plates.

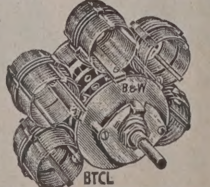
"BABY" AIR INDUCTORS

(25 WATT RATING)

Just the thing for crowded layouts, portables, field transmitters! The smallest, most efficient, most practical 25-Watt coils ever available to amateurs. "BABIES" measure only 1½" x 1¼", are made by a special B&W process which insures perfect air-spacing, maximum strength, fine appearance and ultra-high efficiency with an absolute minimum of insulating material. Available in five types, from 10 to 160 meters. **Conservatively** rated. Universal 5-prong Alsimag 196 bases ....**Net Any Type $1.26**

Straight Coil	Center Tapped	End Linked	Center Linked	Inductance	*Capacity
160M	MC	MEL	MCL	...	100
80M	MC	MEL	MCL	40	50
40M	MC	MEL	MCL	14	35
20M	MC	MEL	MCL	3.5	35
15M	MC	MEL	MCL	2.7	35
10M	MC	MEL	MCL	1.1	30

*Total effective capacity required to effect resonance on low frequency end of specified band.

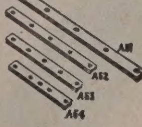


"BABY" TURRETS

35-WATT RATING

These compact 5-band switching units cover amateur bands from 10 to 80 meters with any 50 mmf. midget condenser. Also available with 160 meter coil substituted for the 15 meter coil. (100 mmf. required on 160 meters.) Sturdy construction and unique design assure permanent coil alignment and maximum efficiency with a minimum number of tubes. Four types—BTM, straight untapped; BTCT, center tapped; BTEL, end linked; and BTCL, center linked—provide vastly improved band-switching in low-power transmitters and exciters.
Net Any Type....................$10.14

B & W PLUG AND JACK BARS



Made of high quality steatite. Ample size to insure excellent strength. They provide experimenter with the same units that are used in B & W inductors. Can also be used as spreaders for feeders and other parts of the antenna system.

SPECIFICATIONS

Stock No.	Type	Length	Width	Thickness	Mounting Dimension	Used on Series	Net Price
3914	Plug	3½"	½"	⅜"		B	$0.20
3915	Jack	4½"	⅝"	⅜"	4⅛"	B	.60
3916	Plug	5½"	½"	⅜"		T	.45
3917	Jack	7"	¾"	⅜"	6½"	T	1.00
3918	Plug	6½"	9/16"	⅜"		TVH	.60
3919	Jack	8¼"	11/16"	⅜"	7¾"	TVH	1.10
3920	Plug	8¼"	¾"	⅜"		HD	1.10
3921	Jack	10¾"	1"	½"	9⅝"	HD	1.25
3922	Jack	6⅛"	⅝"	¼"	5½"	BX	.90
3923	Plug	4½"	½"	¼"		BX	.40

PRICE INDICATIONS ARE REVISIONS MADE SEPTEMBER 1, 1951

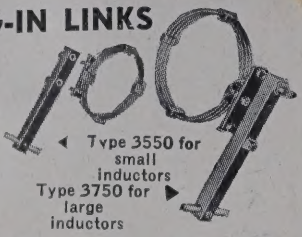
COMPONENTS for amateurs and experimenters

BARKER & WILLIAMSON, Inc. • UPPER DARBY, PA.

B & W NEW PLUG-IN LINKS

FOR IMPEDANCE MATCHING

Adaptable to all B & W Swinging Link assemblies, these B & W plug-in links solve the quick change problem. Just pull out one coil and plug in another with the required number of turns. Old link arm easily replaced with new plug-in type.



ORDERING NUMBERS FOR B & W PLUG-IN LINKS

For Types TVH, TVL, BVL Swinging Link Assemblies	Ordering No.	Price	For Type HDV Swinging Link Assemblies	Ordering No.	Price
Arm Only	3550	$ .70	Arm Only	3750	$1.40
Arm and Hinge	3565	1.00	Arm and Hinge	3765	1.80

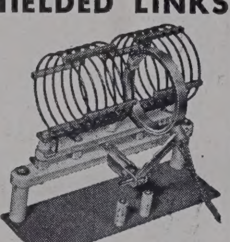
PLUG-IN LINK COILS

	Ordering No.	Price		Ordering No.	Price
1 turn	3551	$ .60	1 turn	3751	$1.25
3 turns	3553	.60	3 turns	3753	1.25
6 turns	3556	.60	6 turns	3756	1.25
10 turns	3560	.95	10 turns	3760	1.75

Above are standard. Other turns available on request.

B & W FARADAY SHIELDED LINKS

. . . fit all B & W variable link air inductors



These shielded links effectively reduce harmonic or spurious signal radiations normally transferred by capacity coupling.

Adaptable to all conventional link coupled circuits, the B & W Faraday Shielded Links materially aid in the reduction of TV and BC interference. They may be used with external antenna tuning units or, in conjunction with harmonic reduction filters of the low-pass or band-pass types.

It is impossible to specify the exact number of link turns required because loading is affected greatly by the antenna input impedance and this is not generally known with any degree of accuracy. On 10 and 20 meters, a one turn link is normally satisfactory for 50 ohm lines, two turns for 75 ohm lines and three turns for lines having higher impedances. For average conditions our two turn link should suffice.

Cat. No.	No. Turns	Wattage	Price
	FOR B & W TVL, TVH, AND BVL SERIES COILS		
3581	1 turn	500 watts	5.10
3582	2 turns	500 watts	5.10
3583	3 turns	500 watts	5.10
3588	Link arm assembly		2.40
3589	Link arm and hinge		2.70
	FOR B & W HDVL SERIES COILS		
3781	1 turn	1000 watts	5.40
3782	2 turns	1000 watts	5.40
3783	3 turns	1000 watts	5.40
3788	Link arm assembly		2.70
3789	Link arm and hinge		3.00

B & W COIL MATERIALS

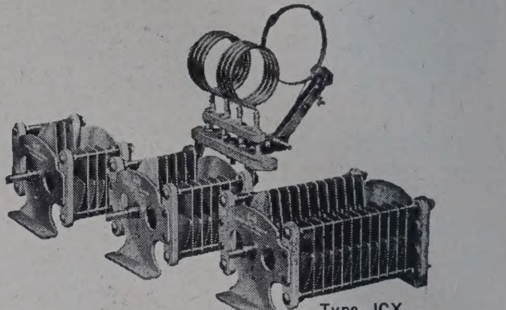
Stock lengths for cutting to size

Often an amateur or experimenter wants to make a special coil or to assemble his own coils. For such purposes, we offer seven popular coils in standard lengths which can readily be cut and mounted to meet your individual requirements.

All coils are 10" long   Net Price each $1.50

Stock No. Enameled	Stock No. Tinned	Wire Size	Diameter	Turns per Inch
....	3900	#14	2"	8
3905	3905-1	#12	2½"	6
3906	3906-1	#14	2½"	8
3907	3907-1	#16	2"	10

B & W NEW, SMALL BUTTERFLY VARIABLE CAPACITORS



Type JCX

These new JCX Variable Capacitors use the popular B&W split stator, butterfly type construction but with just 25% of the frontal area of CX types.

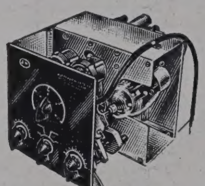
Featuring stainless steel shafts, heavy rounded aluminum plates and high quality insulating materials, the B&W Midget Butterfly will be a welcome addition for the amateur who is looking for peak efficiency in low and medium power transmitter stages.

Stock No. 3238—Type B Jack Bar for JCX Capacitors........**$1.25 Net**
Stock No. 3239—Type BX Jack Bar for JCX Capacitors ..... **1.55 Net**

"E" TYPE .125" AIRGAP

Type	Catalog Stock No.	Capacity Section in Series Max.	Capacity Section in Series Min.	Capacity Per Section Max.	Capacity Per Section Min.	Mounting Length	Net Price
JCX100E	100	80	15	99	23	5½	$10.80
JCX50E	101	25	10	42	13	3⅜	8.10
JCX25E	102	16	8	25	10	2¾	6.60

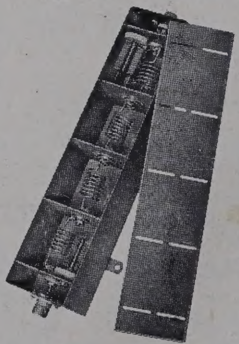
B & W FREQUENCY MULTIPLIER



Price: $85.00 Amateur Net. Complete with tubes. Dimensions: 6½" x 7" x 9¾".

This B & W all-band frequency multiplier solves the difficult problem of developing frequency step-up stages. Packaged unit covers 80-40-20-15-11 and 10 meter bands. Just flip a switch on the attractive reverse etched aluminum panel plate, to get the required band. Operates on either VFO or Crystal input and not less than 30 watt output.

B & W TVI LOW-PASS FILTERS



- Provide extreme attenuation to all harmonics above 30 mc
- Eliminate individual filters for each band
- Handle 1 kilowatt with ease
- Insertion loss less than .25 db

Three years of intensive study of TVI problems made possible the B & W Faraday Shielded Link. Its natural companion, the **B & W Low Pass Filter**, was developed concurrently and is now available. Properly installed in accordance with our recommendations, this filter enables you to attenuate all frequencies above 50 megacycles, approximately 75 db or more, throughout the entire television band.

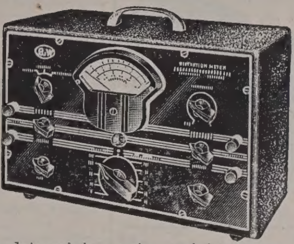
The B & W Low Pass Filter consists of two "m" derived end sections and three mid-sections of constant K type. Each section is contained in a completely sealed copper compartment to prevent inductive transfer of unwanted frequencies from section to section. Complete installation instructions and recommendations to aid you in eliminating TVI are given in "Filter-Facts," packed in each unit. Individual copies of "Filter-Facts" are also available for 15 cents. Filters are supplied in hammered gray metal cabinets 2½" x 2½" x 12" and weigh 2¼ lbs.

The proper filter for the more common types of feed line systems are:

For single 52-ohm coax ....**Net Price $27.00**
Model 52, B & W Cat. No. 415
For single 75-ohm coax ....**Net Price $27.00**
Model 75, B & W Cat. No. 416

PRICE INDICATIONS ARE REVISIONS MADE SEPTEMBER 1, 1951

TEST EQUIPMENT and SPECIAL COMPONENTS
BARKER & WILLIAMSON, Inc. • UPPER DARBY, PA.



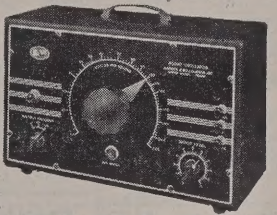
B&W DISTORTION METER
Model 400

Net Price: $168.00.
Dimensions: 13¾" x 7¼" x 9½".

A sensitive instrument having a wide range of applications in the audio frequency measurements field. Ideal for measuring low level audio voltage and determining noise and harmonic content of same. Variable frequency selective filter provides a single frequency suppression circuit for the frequency range of 30 to 15,000 cycles. Small size, light weight and outstanding performance make this instrument an ideal unit for either laboratory or field work.

FEATURES

1. **Frequency Range:**
   (a) Distortion meter. For fundamentals from 30 to 15,000 cycles, measuring harmonics up to 45,000 cycles.
   (b) As voltmeter and D.B. meter from 30 to 45,000 cycles.
2. **Sensitivity:**
   (a) Noise and distortion measurements, minimum input .3 volts.
   (b) Voltmeter, full scale readings of .3, .1, .03, .01, .003 volts.
3. **Calibration:**
   For distortion measurements: ±.5 D.B. For voltage measurements: ±5% of full scale at 1000 cycles.



B&W AUDIO OSCILLATOR
Model 200

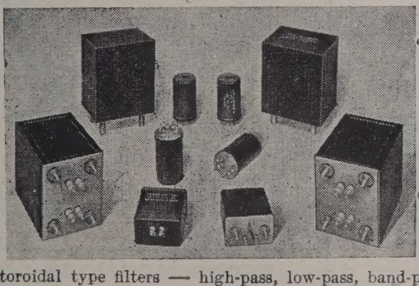
Net Price: $138.00.
Dimensions: 13¾" x 7¼" x 9½".

Ideal for use in distortion measurements, frequency measurements or in any application where a stable, accurately calibrated source of frequencies between 30 and 30,000 cycles is required. No zero reset or line calibration is required. Self-contained power supply. Housed in an attractive black crackle finished steel cabinet with carrying handle and rubber feet. Panel is of 1/16" reverse etched aluminum.

FEATURES

Voltage Output: 10 volts into a 500 ohm load.
Wave Form: RMS harmonics at 3 volts on 500 ohm load less than 1% on all frequencies between 50 and 15,000 cycles.
Frequency Response: Better than ±1 D.B. from 30 to 15,000 cycles with 500 ohm load.
Stability: Better than 1%.
Calibration: ±3% of scale reading.

B & W FILTERS — DISCRIMINATORS SPECIAL COMPONENTS



B & W toroidal type filters — high-pass, low-pass, band-pass, band-suppression and discriminators for RF or audio filtering . . . for line RF suppression . . . for harmonic attenuation . . . for teletype communications . . . for single side band equipment . . . for telemetering equipment, and many other uses. Manufactured to fulfill special requirements in both design and performance.
These units also supplied to meet Mil-T-27 specifications in Class A, Grade 1, where temperature and humidity are important factors.

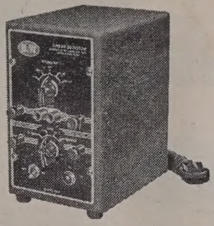
B&W FREQUENCY METER
Model 300

Net Price: $126.00.
Dimensions: 13¾" x 7¼" x 9½".

An accurate and convenient means of making direct measurements of unknown audio frequencies up to 30,000 cycles. Integral power supply. Extremely useful for routine checking of audio oscillators or tone generators. Housed in an attractive black crackle finished steel cabinet with carrying handle and rubber feet.

FEATURES

Frequency Range: 0 to 30,000 cycles in 6 ranges.
Sensitivity: Minimum .25 volts input.
Wave Form: Will operate on any wave form with peak ratios of less than 8 to 1.
Calibration: When referenced against 60 cycles line frequency, all other frequencies will fall within 5%.



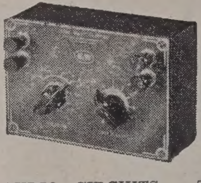
B & W LINEAR DETECTOR

Model 404 — Net Price $85.00
Dimensions: 8¾" x 7½" x 5"

Provides combined RF detection and audio bridging circuits for use with any distortion meter, to measure distortion or noise in AM carriers or in balanced and unbalanced audio circuits. Includes a bridging transformer, a vacuum tube rectifier, a 40 D.B. pad adjustable in 10 D.B. steps, and a function selector switch.

FEATURES

RF Operating Range: 400 kc. to 30 mc.
Input: Single-ended; impedance 10,000 ohms.
Bridging Impedance: 6000 ohms; insertion loss 1 D.B.
Frequency: Essentially flat from 20 to 50,000 CPS.



B & W SINE WAVE CLIPPER
Model 250

Equipped with a pair of input terminals, a pair of output terminals, an output volume control and a selector switch.

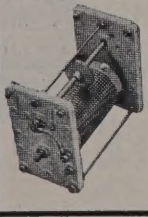
Net Price: $10.00.
Dimensions: 2" x 4" x 5½".

SPEEDS ACCURATE ANALYSIS OF AUDIO CIRCUITS. SIMPLIFIES SELECTIONS OF COMPONENTS. SAVES VALUABLE TIME. Here's an instrument that will do most of the jobs usually assigned to a square wave generator costing about 10 times as much! The B & W Sine Wave Clipper provides a test signal particularly useful in examining the transient and frequency response of audio circuits. Designed to be driven by an audio oscillator, the clipper provides a clipped sine wave — hence the name "Sine Wave Clipper." Used in engineering work, repairs, or with equipment under development, it will quickly pay for itself many times over.

B & W TOROIDS

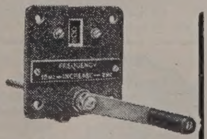
B & W toroidal* coils are available in frequency ranges from 1000 cycles to 200 KC, with inductance and Q value to your specific application requirements. Sizes for these toroids range from ⅞" to 3" diameter.
These coils have a specific application in low and medium frequency ranges and provide a high degree of stability vs. voltage and temperature. Available in either open, cased, potted or hermetically sealed types, wound on cores having any desired properties, including the latest high permeability cores. Where required, they may be designed to compensate for conditions of extreme temperature variations.

*Western Electric license



B & W ROTARY COILS AND CYCLOMETERS

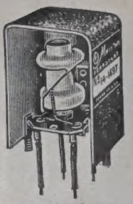
The B & W Rotary Coil offers a practical method of continuously varying circuit inductance over the entire range of the coil. Types are available for powers up to 1000 watts. B & W Cyclometer type counters for rotating and resetting these and other rotary units assure close accuracy. Write for details to Barker & Williamson, Inc., Upper Darby, Pa.



PRICE INDICATIONS ARE REVISIONS MADE SEPTEMBER 1, 1951

Meissner Mt. Carmel, Illinois . . . World's largest precision Coil Manufacturers

UNIVERSAL ADJUSTABLE COILS



These Adjustable - Inductance Ferrocart (iron-core) coils will replace the Broadcast band coils in practically any receiver.

Continuously variable in inductance over a wide range, these coils will accurately "track" with the other coils in the receiver when properly adjusted. The exact inductance of the old coil is easily matched by a simple screwdriver adjustment, regardless of the value of the tuning condenser.

High "Q" iron cores used in these coils add gain and selectivity to the receiver. The oscillator coil provides complete adjustment for intermediate frequencies between 175 and 520 kc. May be used in either "cut-plate" tuning condenser or padded circuits. Available shielded or unshielded, furnished with complete instructions. 1¾" square by 2½" high.

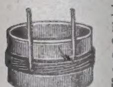
UNSHIELDED

No.	Description	List
14-1026	Universal Ant. Coil	$2.11
14-1027	Universal R.F. Coil	2.11
14-1028	Universal Osc. Coil	2.11

SHIELDED

No.	Description	List
14-7413	Universal Ant. Coil	$3.38
14-7558	Universal R.F. Coil	3.38
14-7560	Universal Osc. Coil	3.38

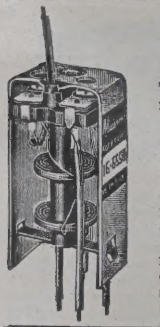
SLIP-OVER PRIMARIES



Designed to provide economical replacement of burned out primaries on all types of Antenna and R.F. coils. All windings are high-impedance type for improved performance. Sizes given below are outside diameter of coil over which the replacement winding will fit. Complete instructions for repair and replacement given.

No.	Size	List
14-6850	For 1¼" O.D. Coil	$0.48
14-6852	For 1" O.D. Coil	.42
14-6854	For ⅞" O.D. Coil	.42
14-6856	For ¾" O.D. Coil	.42
14-8418	For ½" O.D. Coil	.37

"PLASTIC" I-F TRANSFORMERS



These remarkable transformers are only 1¼" square and 2½" high!

The one-piece molded plastic coil-form and trimmer-base eliminates many separate parts that were required with other types of construction. The iron core series are highly recommended for use in compact receivers and auto sets where only one I-F stage is permitted.

			Selectivity Band Width		
No.	Freq. Range	Peak Factory Setting	2x	10x	Use
16-6640	140-200	175	6.0	17.5	Input
16-6650	140-200	175	5.7	15.0	Interstage
16-6651	140-200	175	11.2	29.5	Output
16-6652	200-310	262	9.5	24.7	Input
16-6653	200-310	262	10.4	27.5	Interstage
16-6654	200-310	262	20.5	52.1	Output
16-6655	305-480	370	8.4	24.4	Input
16-6656	305-480	370	11.3	30.0	Interstage
16-6657	305-480	370	18.8	47.7	Output
16-6658	400-550	455	18.8	46.6	Input
16-6659	400-550	455	12.5	33.0	Interstage
16-6660	400-550	455	17.5	50.5	Output

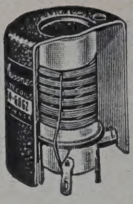
Air-Core "PLASTIC" I-F Transformers
List Price Each $1.69

IRON CORE "PLASTIC" I-F's

16-6662	380-600	455	80	11.2	30.0	Input
16-6663	380-600	455	85	15.0	41.0	Output

Iron-Core "PLASTIC" I-F Transformers
List Price Each $2.54

STANDARD ANTENNA R. F. COILS



Standard type air-core coils of superior construction, designed to cover the Broadcast band from 545 to 1620 kc with a 365-mmfd. tuning condenser. All coils have high-impedance primaries. Secondaries are wound with Litz wire. Fully protected against humidity. Shielded coils are in non-magnetic cans. 1⅞" diameter by 2½" high.

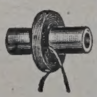
UNSHIELDED

No.	Type	List
14-1010	Standard Antenna Coil	$1.14
14-1011	Standard R.F. Coil	1.14

SHIELDED

No.	Type	List
14-1004	Standard Antenna Coil	$1.51
14-1005	Standard R. F. Coil	1.51

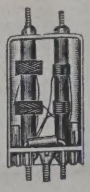
DOWEL TYPE PRIMARY



Popular replacement for burned out primaries in high impedance antenna coils. Universal wound on ¼" dia. by ½" long dowels moisture protected. Inductance 1700 uh.

No. 14-6865 List Price...... .48

FM-AM "COMPOSITE" I.F. TRANSFORMER



Contains a 455 kc. AM and a 10.7 mc. FM I.F. transformer. Can size: 1⅜" square x 2½" long. Spade bolt mounting.

16-6675 10.7 mc.-455 kc.
I.F. Trans., List.................. $4.83

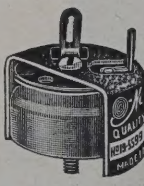
FERROCART I. F. TRANSFORMERS

All units are double-tuned with ceramic-base, mica-dielectric trimmers. Windings are of high-grade Litz wire, throroughly impregnated. Shield is bright aluminum finish, 1⅜" square by 3" high.

No.	Freq. Range	Peak Factory Setting	Use
16-5728	127-206	175	Input
16-5730	127-206	175	Output
16-5740	360-600	455	Input
16-5742	360-600	455	Output
16-8091	1050-2000	1500	Input-Interstage
16-8099	1050-2000	1500	Output

List Price Each $3.38

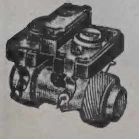
AIR-CORE R-F CHOKES



Accurately wound and individually tested; coils wound on specially treated forms, mounted on bakelite terminal base and thoroughly moisture proofed. Available in shields or without; both single - hole mounting. Shielded chokes have terminals thru top of can so unit may be mounted on inside wall of chassis. Shields are bright aluminum finish, 1⅜" square.

MH	Shielded		Unshielded	
Induct.	No.	List	No.	List
2.5	19-5582	$1.09	19-1994	$0.79
5.5	19-5584	1.09	19-4551	.79
8.0	19-5588	1.14	19-2078	.85
10.0	19-1900	1.27	19-8770	.90
16.0	19-5590	1.33	19-1995	1.03
30.0	19-5592	1.45	19-2330	1.09
60.0	19-5594	1.63	19-3247	1.27
80.0	19-5596	1.69	19-2709	1.33

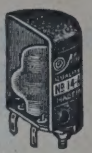
CARTWHEEL I. F. TRANSFORMER



A brand new, ultra-compact, unshielded I-F Transformer, complete with dual trimmers, finds useful application in many types of compact AC-DC or Midget type receivers. Only 1⅜" by 1 1/32" by 1¼" high; one-piece molded plastic trimmer base; for 456-kc only.

List Price **$1.69**

STANDARD OSCILLATOR COILS



High-quality Broadcast band oscillator coils designed for use with any of the Antenna and R. F. coils listed above, using a 365-mmfd. tuning condenser. Frequency coverage is 545 to 1580 kc; units are provided for all popular intermediate frequencies.

Coils are mounted on bakelite base with tinned soldering lugs for connections. Unshielded coils have single-hole stud mounting. All coils are thoroughly impregnated to resist severe climatic conditions. Shielded coils are in cans. 1½" diameter by 1¾" high, black crackle finish.

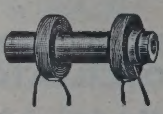
UNSHIELDED

No.	I.F. Freq.	Padder Required	List
14-3732	175 kc	900 mmf	$1.27
14-6590	262 kc	700 mmf	1.27
14-6592	370 kc	350 mmf	1.27
14-4034	456 kc	350 mmf	1.27

SHIELDED

No.	I.F. Freq.	Padder Required	List
14-4242	175 kc	900 mmf	$1.63
14-4243	456 kc	350 mmf	1.63
14-1033	Special Unshielded Osc. for 6SA7; 456 kc	350 mmf	$1.03

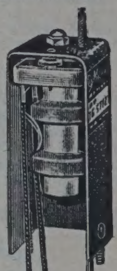
REPLACEMENT I. F. WINDINGS



Coils are wound on wood dowels, ⅜" diameter and 1¾" long; coupling is adjustable by sliding primary coil. Complete instructions furnished with each coil.

No.	Freq.	Type	List
16-6600	175	Standard	$1.03
16-6601	455	Standard	1.03
16-6602	175	Center-tap	1.33
16-6603	455	Center-tap	1.33

STANDARD I. F. TRANSFORMERS

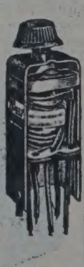


All transformers are double-tuned with ceramic-base, mica-dielectric trimmers. Windings are fully impregnated. Well-insulated RMA color-coded lead wires. Bright aluminum finish shield is 1⅜" square by 3" high.

No.	Freq. Range	Peak Factory Setting	Use
16-5700	121-235	175	Input
16-5702	121-235	175	Output
16-3731	121-235	175	Output C. T.
16-5704	220-360	262	Input
16-5706	190-325	262	Output
16-5712	425-650	455	Input
16-6133	435-1000	455	Interstage
16-5714	425-650	455	Output
16-3736	255-550	455	Output C. T.

List Price Each $2.54

PHONO-OSCILLATOR COIL



For use in building either wireless or direct-connected phonograph-oscillator units for record reproduction through the radio receiver. Knob adjustment permits selection of clear frequency in the broadcast band. Coil is in bright aluminum shield, 1⅜" square by 3½" high.

No. 17-9373 List $3.38

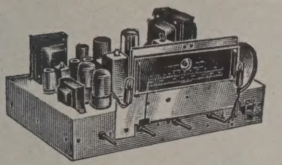
B. F. O. COIL

For use with standard I. F.'s in superhet receivers. They supply the "beat" note necessary to reception of C. W.; materially aid in tuning and locating weak stations. Mica trimmed. Freq. Range 200-650 KC. Peaked at 456 Range 290-650 KC. Peaked at 456 KC. In ⅜" sq. x 3⅛" h. can with knob for pitch control.

No. 17-6753 List Price $2.96

Meissner Mt. Carmel, Illinois . . . World's largest precision Coil Manufacturers

Meissner AM-FM TUNER MODEL 9-1091-C



High fidelity reception! Covers AM Broadcast Band from 527 to 1620, FM Band from 88 to 108 MC (channels 200 to 300). Frequency response is flat with plus or minus 2 db from 30 to 15,000 cycles! Input jack provided for crystal or high level magnetic type phonograph pickup. Extreme sensitivity and selectivity.

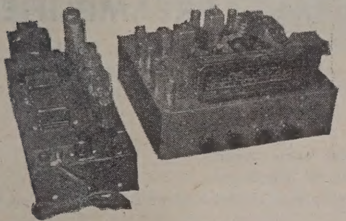
List Price $341.70

Meissner MODEL 8C FM RECEPTOR

Adds superb frequency modulation to any regular AM set. Precision built for simple connection to your present AM radio. Audio fidelity: Flat within plus or minus 2 db from 50 to 15,000 CPS. Frequency range 88 to 108 MC. Power supply 115 volts AC.

List Price $91.15

MODEL 9-1093 AM-FM TUNER AND AMPLIFIER



A high-quality AM-FM tuner and amplifier that is hard to beat. Power output, 18 watts at less than 2% harmonic distortion. Audio fidelity flat within plus or minus 2 db from 50 to 15,000 CPS. Hum level 65 db below full output. Slide rule dial is calibrated in kilocycles (535 to 1620 KC) on the AM band and in megacycles (88 to 108 MC) on the FM band. Sensitivity less 20 microvolts.

A phonograph input jack controlled by a front switch is mounted in rear. The circuit is compensated for either magnetic or crystal pickup. The Tuner can also be used with the new GE Reluctance Pick-up because of a new phonograph preamplifier that has been incorporated in the circuit. Simply plug a 6SC7 in the socket provided. The 6SC7 is not supplied. A combination tone control provides bass boost up to 11 db at 40 CPS and treble attenuation up to 13 db at 10,000 CPS. Amplifier is designed for an 8 to 16-ohm speaker. Power supply: 105-125 volts, 50-60 cycles; consumption, 190 watts.

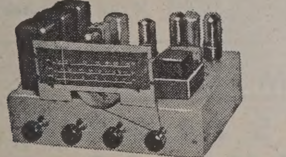
Tube Complement: 3-6SK7, 1-6SA7, 1-6H6, 5-6AG5, 1-6C4, 2-9001, 1-6AL5, 2-6J5, 1-6SN7-GT, 2-6L6 Power Amplifiers, 1 5Y3G Rectifier, 1-5V4G Rectifier and 1-6U5/6G5 Tuning Eye.

Chassis Mounting Space: Tuner — 14⅛" w. x 12¼" d. x 8⅜" h. Amplifier — 7⅛" w. x 16¼" d. x 7" h. (Allow clearance above amplifier for ventilation). Tuner weight is 18 lbs.: amplifier, 27 lbs.

Supplied complete with tubes, two antennas and all hardware required to mount chassis units in cabinet. Antennas consist of a low impedance, 12" x 16", noise reducing loop for AM broadcast and an indoor type folded dipole, 300-ohm, for FM broadcast. Cabinet and speaker not included.

List Price $432.35

MODEL 6BK 3-BAND AC KIT



Frequency Range: 535 KC to 18 MC in 3 overlapping bands.

Sensitivity: 15 microvolts on all bands.

Audio Output: 3 watts maximum, 2 watts at 5% distortion.

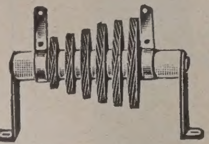
Power Supply: 105 to 125 and 210 to 250 volts, 50 to 60 cycles. Power consumption, 55 watts.

Assembly: Easily assembled from detailed pictorial diagram and simplified schematic. Wire, hardware and solder included.

Weight: 8½ lbs. actual.

Net Price $44.30

TRANSMITTER CHOKES



No. 19-3019 $3.38
Inductance 2.8 mh
Current 1000 ma
Ohms 5.0

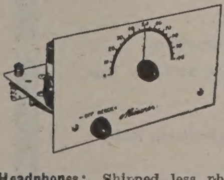
No. 19-3022 $2.96
Inductance 5.5 mh
Current 500 ma
Ohms 12.5

No. 19-3025 $2.96
Inductance 5.9 mh
Current 200 ma
Ohms 34.9

IRON-CORE R-F CHOKES

No.	MH	List
19-6834	2.5	$1.14
19-6840	10.0	1.45
19-6842	30.0	1.69
19-6844	60.8	1.93
19-6846	80.0	2.17
19-6848	125.0	2.78

MODEL 2BK BATTERY TRAINER KIT



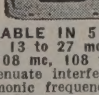
Circuit: Regenerative grid leak detector with resistance coupled pentode audio stage. **Tuning Range:** Shipped with coil to cover the broadcast range of 520 to 1530 KC. Other coils available to cover various ranges are listed below. Batteries and headphones required but not supplied with kit. **Assembly:** The kit is easily assembled from detailed pictorial diagram and simplified schematic. Wire, hardware and solder included. **Size:** 7¾" x 4¼" tall x 4⅛" deep. **Weight** 1½ lb. actual.

Net Price $10.65

MODEL 3BK AC-DC TRAINER KIT

Circuit: Same as 2BK except AC-DC type power supply added. **Power Supply:** 105 to 125 volts, AC or DC. **Power consumption,** 18 watts. **Headphones:** Shipped less phones. **Assembly:** Easily assembled from detailed pictorial diagram and simplified schematic. Wire, hardware and solder included. **Size:** 7¾" x 4¼" tall x 4½" deep. **Weight:** 1¾ lb. actual. **Net Price: $12.25.** **Extra Coils:** 170 to 540 KC and 540 to 1500 KC. **List Price $2.54.** 1.4 to 4.50 MC, 3.2 to 8.2 MC, 8 to 18 MC and 15 to 34 MC. **Weight:** each 1 oz. **List Price $1.03.**

NEW MEISSNER WAVE TRAPPERS

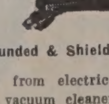


AVAILABLE IN 5 MODELS
6 to 13 mc, 13 to 27 mc, 27 to 54 mc, 54 to 108 mc, 108 to 216 mc.

You can now attenuate interfering signals on fundamental or harmonic frequencies with these new, highly efficient tunable wave traps. Several may be connected in series if interference exists on more than one frequency. Efficient with any balanced or unbalanced line from 50 to 400 ohms impedance.

List Price $6.04

NEW MEISSNER LINE FILTERS

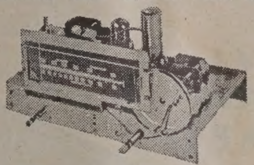


(Grounded & Shielded)

Reject interference from electric shavers, electric fans, food mixers, vacuum cleaners, etc. 300-watt rating.

List Price $7.85

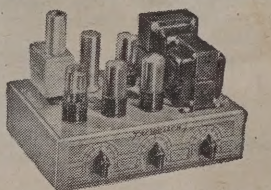
MODEL 8CK RECEPTOR KIT



Frequency Range: New FM band, 88 to 108 MC. **Sensitivity:** 40 microvolts. **Audio Output:** 3 volts R.M.S. at minimum usable signal output, 30% modulation. For greater signal inputs, output voltages as high as 15 volts R.M.S. may be obtained without distortion. **Assembly:** Easily assembled from detailed pictorial diagram and simplified schematic. Front end factory assembled and aligned. Wire, hardware and solder included. I-F Coils prealigned. **Weight:** 4½ lb. actual.

Net Price $42.75

T-32W10 AUDIO AMPLIFIER

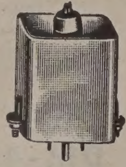


Fidelity: 1DB, 20 to 20,000 c.p.s. **Power output:** 10 watts with less than 2% harmonic distortion. **Hum level:** 70 db below rated output. **Output impedance:** 4, 8, and 16 ohms. Has treble boost and bass boost controls. Complete for use with ordinary pick-up or tuner, can be instantly converted when operation with reluctance pick-ups or high impedance microphones is contemplated. Simply plug-in T-32W10 Pre Amplifier. A pre-wired socket already provided. Here's America's Great Audio Amplifier value!

T-32W10 **Complete** for use with high impedance pick-up or tuner .... **List Price $65.95**

T-32W00 Plug-in Pre-Amplifier for use with reluctance pick-ups or high impedance microphones .... **List Price $11.90**

F. M. COILS—I. F. TRANSFORMER



Permeability tuned; designed for use on newly assigned F. M. Frequencies. Mounted in 1-7/16" x ⅞" x 1-29/32" can. Tuned to 10.7 mc.

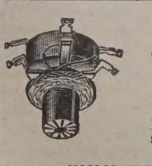
No. 16-6665 List Price $3.56

DISCRIMINATOR TRANSFORMER

Mounted in same size can as I.F. Transformer listed above. Permeability tuned to 10.7 mc.

No. 17-3484 List Price $4.71

"6SA7" OSCILLATOR COIL



Tapped type coil for currently popular 6SA7 tube. For use with 420 uufd. condenser and padder.

14-1033 List **$1.03**

For use with 162 uufd. "cut" section condenser.

14-1053 List **$1.03**

"UNIVERSAL" ADJ. IND. OSCILLATOR COIL

A truly universal oscillator coil for 455 kc. I.F. Primary is tapped for use with any of 25 different type oscillator tubes. Instructions included.

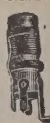
14-1040 List **$2.42**

MIDGET SHIELDED ANT. AND R.F. COILS

A compact, super quality shielded antenna and R.F. coil. Provides full coverage of the broadcast band with a 365 tuning condenser. Special wound litz wire secondaries. High impedance primaries. Capacity coupling used to level gain over frequency range. Coil forms are bakelite ½" diameter; winding protected by wax impregnation. Shields are 1⅜" square x 2" high.

14-2436 Shielded Ant. Coil, List........**$1.51**
14-2437 Shielded R.F. Coil, List........**$1.51**

MIDGET UNSHIELDED B.C. ANT.—R.F. COILS

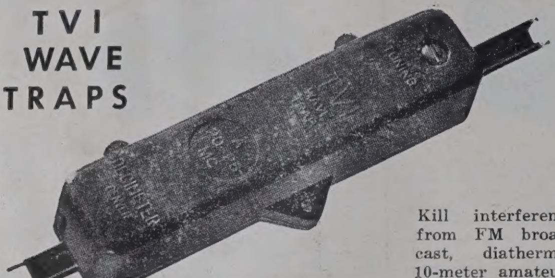


Highly efficient antenna and R.F. coils, especially designed for use where space is at a premium. Cover the regular broadcast band with a 365 uufd. tuning condenser. Coils have high impedance primaries and litz wire secondaries. Windings are impregnated for moisture protection and wound on ⅝" diameter x 1¾" long forms.

14-1022 Unshielded Ant. Coil, List......**$1.03**
14-2023 Unshielded R.F. Coil, List......**$1.03**

DECIMETER Progressive Products

TVI WAVE TRAPS



Kill interference from FM broadcast, diathermy, 10-meter amateur, and spurious IF.

DeciMeter TVI Wave Traps are easy to install — they slide over lead-in — require no cutting of wire, and no ground connection.

In three ranges:

A — 20 MC. to 26 MC.
B — 25 MC. to 35 MC.
C — 88 MC. to 108 MC.

List price, any range $4.95 Write for Bulletin RM-11

DECALS FOR ELECTRONICS

World's largest assortment of Decals for Electronics — over 200 different title plates, dial plates, alphabets and numerals, high-voltage signs in red, call letters in black and gold, and television terms. Printed in neat, opaque letters on clear, tough backing. Top surface has protective coating which provides high resistance to wear. Superior adhesive qualities.

Water-type "slip-off" decals.
Adhere to any clean surface.
Economical to use.
Improve appearance and safety of equipment.
Self-service display assortment for jobbers.

Write for Bulletin RM-14

DM-430 DIVERSE ADAPTOR

. . . brings diversity reception to the ham rig at low cost. The DM-430 is connected to two antennas of different characteristics, and automatically and instantly selects the best antenna for best reception. Minimizes deep fading in HF. Ideal for any communications receiver. Used without tuning.

Range of 3 to 30 Megacycles.
Neon bulb indication of antenna being used.
For AM and FM phone signals and frequency-shift keying.
For either or both balanced or unbalanced antennas.

Net price, assembled $29.50

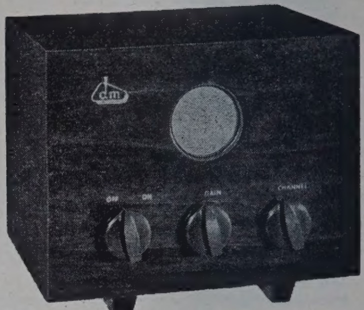
Kit 14.95 Write for Bulletin RM-12

DM-240-A OSCILLATOR

. . . makes 13 CM. receivers and transmitters practical. Uses 2C40 tube. Precise adjustments control tuning, feedback, and output coupling. Supplied complete with all hardware and instructions.

Tuning range of 2000 to 2500 MC.
One watt output.

Net price $19.50
(less tube)
Write for Bulletin RM-15



The New TV "PROFESSIONAL" PREAMPLIFIER

Here is the preamp that does everything a preamp should do—an entirely different approach to and solution of the problems of preamplification. No. 300, dark finish; No. 400, blonde.

Exclusive Features:

Balanced circuit — less noise pickup.
Adjustable gain to suit all conditions.
Constant band width amplifies sound and picture equally on all channels.
Three tuned circuits reject interference.
Shielded transformer reduces line noise.
Channel switch — factory tuned coils.
Picture increased up to 5 times over noise.
Glareless illuminated dial — no squinting at switch numbers.
Handsome cabinets — complement all TV receiver cabinets.

POSITIVELY GUARANTEED TO IMPROVE RECEPTION IN FRINGE AREAS.

List price $59.50 Write for Bulletin RM-16.

The DM-103-W "SLIPSTICK" WAVEMETER

The Slipstick gives quick, accurate frequency readings on oscillators, receivers, or transmitters in the UHF field. A sturdy, every-day tool for the engineer and experimenter. Easy to use, the Slipstick is coupled to the oscillator, receiver, or transmitter by inserting its tip into the rf field, or the antenna circuit.

Enormous range — 90 to 3000 MC.
Rapid, direct-reading scale.
2% accuracy or better; sturdy construction.
Polystyrene insulation for permanence and low loss.

Net price $16.50 Write for Bulletin RM-13.

DECIMETER
INC.
1430 MARKET ST. DENVER 2, COLO

MONITORADIO

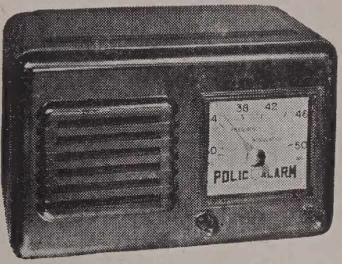
POLICALARM

POLICALARM

model PR-8 FM receiver

115 volt, AC-DC operated receiver for 152-163 MC band.

Net Price $44.95



model PR-31 FM receiver

AC-DC, 115 volt receiver for 30-50 MC band.

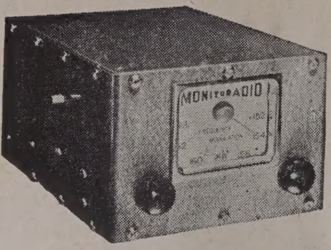
Net Price $44.95

MONITORADIO

model AR-2 and AR-3 AM receivers

AC-DC, amplitude modulated receivers. Model AR-2 for 108-136 MC band. Model AR-3 for 118-149 MC band.

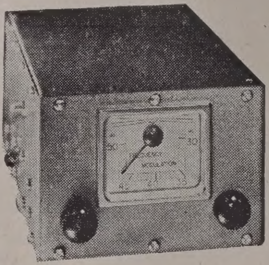
Net Price $49.50



model M-101 FM receiver

This 6 volt, battery operated unit receives all communications in the 152-163 MC band.

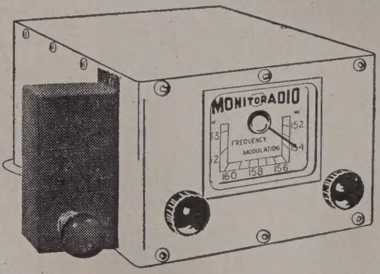
Net Price $72.50



model M-51 FM receiver

For use in the 30-50 MC band — 6 volt, battery operated.

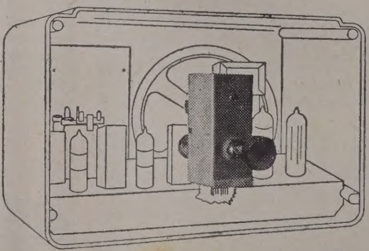
Net Price $72.50



model MS-119 squelch adapter

For use with Monitoradio Models M51, M51A, M101 and M101A. Provides simple means of converting to quiet stand-by.

Net Price $12.50



model S-19 squelch adapter

Converts Policalarm Models PR7, PR8, PR30, PR31A and PR74 to quiet stand-by operation.

Net Price $12.50

see your jobber or write us today

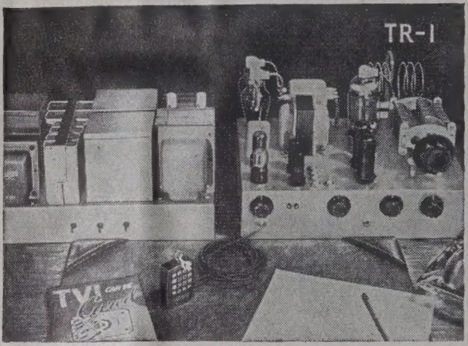
RADIO APPARATUS CORPORATION

COLUMBIA
COLUMBIA
LICENSE MANUAL
PRIVATE TUTOR

PRIVATE TUTOR NOVICE COURSE.

The new Eldico "Private Tutor" Amateur Radio Course is a unique and tested method for learning theory and code for the Novice Amateur Radio license.
The code records are absolutely unique in the educational field, consists of five unbreakable long-playing 12" records, Columbia recording, giving a total course of instructions, of almost five hours, or equal to fifty standard speed records. Code instructions are accompanied by the voice of the instructor, with code groups gradually increased in speed. Communications-type sequences are interspersed, giving practical code experience. Actually, speed develops beyond the requirements of the FCC examinations.
The six theory lessons profusely illustrated, covers theory, rules and regulations, equipment operation and on-the-air techniques; included is step-by-step construction information of a novice transmitter and test equipment.

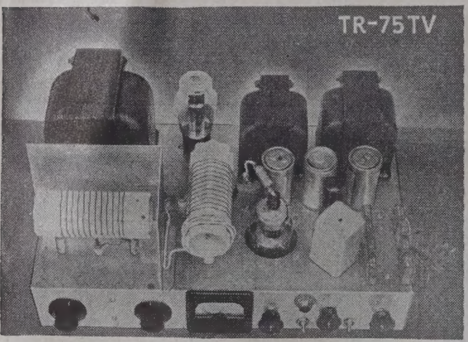
Private Tutor Novice Course complete	**$25.00**
Code records only	**17.00**
Theory lessons only	**10.00**



TR-1 TRANSMITTER.

300-watt c.w. — 250-watt AM Phone. An outstanding all-band transmitter constructed from conservatively designed circuits built around components that loaf at rated power. The lineup consists of a 6V6 crystal-oscillator; 6V6 frequency doubler; 6L6 buffer-amplifier; 813 power amplifier. A 6L6 keyer tube provides clean, clickless electronic keying. For phone a 6SL7GT high-gain input into a 6V6GT drives 811s. Features of Eldico's TR-1 include broadband r.f. driver circuits; band-switching in all stages except the power amplifier; metering of all important circuits through use of meter switching; detailed instructions; all miscellaneous parts. Power supplies on separate chassis; 5U4G medium-voltage rectifier; 866A high-voltage rectifiers. All components and tubes carry standard manufacturers warranty.

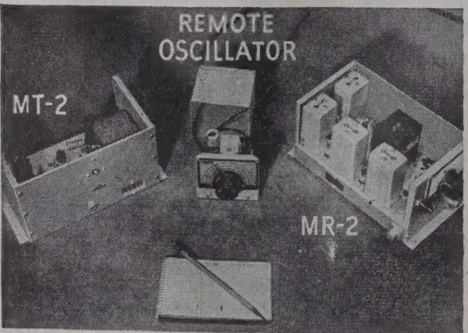
TR-1, complete kit with instructions **$199.95**



TR-75TV TRANSMITTER.

The improved version of the now famous Eldico TR-75 is a rig designed for the CW man. Hundreds of these transmitters have given worldwide performance. Simple enough for the beginner to assemble, sturdy enough for years of trouble-free operation. Uses the time proven crystal oscillator-final amplifier combinations. Circuit permits use of 80 meter or 40 meter crystals to cover all bands. Plug-in coils eliminate trick circuits. Husky power supply delivers 500 volts d.c. to the final. Built-in antenna tuner for matching all types of antennas; ideal for multi-band operation. All stages are metered using a meter which can be switched to oscillator, final grid and final plate. Over-all size with cover 17" x 10" x 9".

TR-75TV, complete kit with instructions (less crystal) **$59.95**



MT-2 — MR-2 2 METER EQUIPMENT.

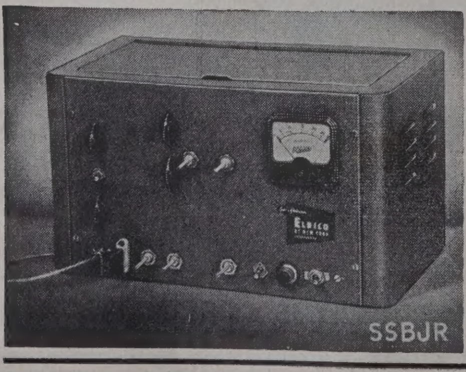
Designed for mobile or fixed station operation. Complete 2-meter superhet receiver tuning 144-150 mc and the crystal controlled transmitter of the same frequency range is available with a.c. or d.c. power supply, non-directional antenna, carbon microphone, crystals, etc. MR-2 Receiver has a sensitivity of better than 1 uv for 6 db signal-to-noise ratio. Using the Walman front end circuit and 9 mc i.f.'s, the ten tube circuit has a total battery drain of only 22 watts. Line-up 6AK5 1st r.f.; 6J6 second r.f.; 6AK5 mixer; three 6BA6 i.f. amplifier; 6AL5 detector and noise limiter; 6AT6 first audio amp.; 6V6GT second audio amp. of 1 Watt into 4 ohms; 6C4 oscillator and OA2 voltage regulator.
Local oscillator is designed as an integral assembly. At additional cost it can be purchased in a small external box for mounting in confined areas or where the feature of separate receiver tuning is wanted. Over-all size 5½" x 9½" x 5½".
MT-2 Transmitter uses 8 m.c. crystal, 6AQ5 doublers; driving 2E26 final up to 22 watts input. 6C4 speech amplifier for carbon microphone input drives 6V6 modulators. A modified pi network is provided for ease of coupling to any type 2-Meter antenna. Low power plate drain is only 300 v. 150 to 200 ma depending upon plate loading. Coax output and integral antenna switching included. Over-all size 5½" x 9½" x 5½".

MR-2 Receiver, kit with instructions........$59.95 MR-2 Receiver, W. & T.........$94.95
For external local oscillator add $5.00 to above prices.
MT-2 Transmitter, kit with instruction....$49.95 MT-2 Transmitter, W. & T.....$74.95
MP-2 AC Power supply for receiver and transmitter-kit....$25.00 W. & T.....$35.00
MA-2 Non-Directional antenna $12.50

SINGLE SIDEBAND TRANSMITTER-EXCITER.

The Eldico SSB Jr., patterned after the revolutionary unit developed by GE engineers is available in either kit form or completely wired and tested. Eldico's SSB Jr. is a complete 7-tube 5-watt single sideband transmitter. Tube complement consists of 12AU7 combination speech amplifier-oscillator; 12AT7 twin-channel amplifier; 6AG7 final; 12AT7 speech preamplifier; 6H6 bias; 5Y3-GT rectifier. The audio phase-shift network is laboratory assembled and adjusted. The Eldico SSB Jr. may be used as a transmitter, as a driver for a high-power linear amplifier, or in conjunction with a v.f.o. A preamplifier is included as an integral part of the Eldico SSB Jr. kit to enable the use of any low-level microphone such as crystal or dynamic.

SSB JR., complete kit with instructions	**$69.95**
SSB JR., wired and tested	**99.95**



Signals of Distinction

ELDICO
OF NEW YORK
INCORPORATED

YOUR FREE
CATALOG
No. 51
ON REQUEST

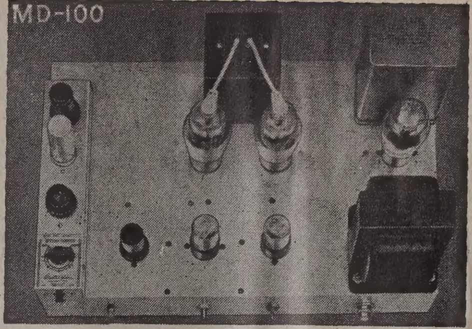
DOUGLASTON, LONG ISLAND, N. Y.

Net

MD-100 MEDIUM POWER MODULATOR.

An unusually compact speech amplifier and modulator capable of delivering 100 to 120 watts maximum of AM audio for 100% plate modulation of any c.w. transmitter up to 250 watts input. Lineup consists of 6SJ7 resistance coupled to 6SN7 dual-voltage amplifier and phase invertor, driving a 6SN7 transformer coupled to a pair of modulators in class AB2. Modulation transformer is matched for a class C r-f plate load of 3000 ohms. This complete package includes everything from a carefully punched and drilled chassis to an Electro Voice 915 crystal microphone. Plate voltage to the low-power speech stages and screen voltage for the modulator is supplied from an integral power supply. The Modulator plate voltage must be obtained from external supply. Size 17" x 11" x 3". For 110-220 v. 50-60 cycles.

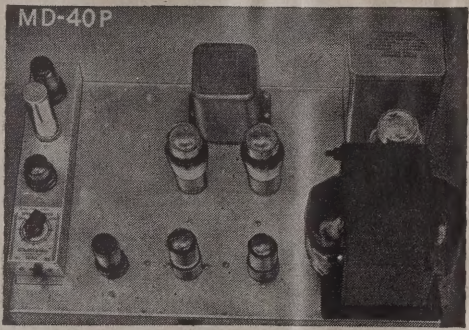
MD-100, complete kit with instructions	**$49.95**



MD-40/MD-40P LOW POWER MODULATOR/ SPEECH AMPLIFIER.

The modulator especially designed for use in conjunction with TR-75TV. 40 watts of audio, the MD-40/MD-40P is a kit of the same superior parts that goes into all Eldico products. Crystal mike input to 6SJ7 drives a 6SN7 amplifier/phase inverter which in turn drives a 6SN7 driving a pair of 6L6G modulator tubes in Class AB2. The output transformer is matched from 6L6's to Class C r-f plate load to the Class C r-f plate load of TR-75TV (6000 ohms).

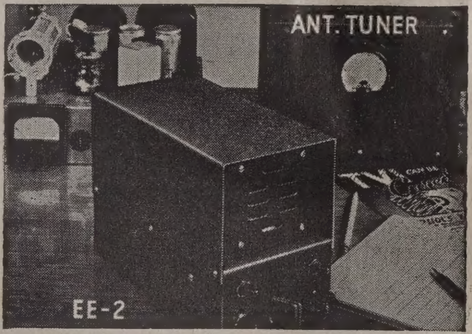
MD-40 Complete kit including tubes and instructions	**$34.95**
MD-40P Complete kit as specified, but including heavy duty power supply on same chassis	**44.95**
MODEL 1000 SPEECH CLIPPER, as shown in photo wired and tested additional	**14.70**



ELECTRONIC BUG.

Self-completing type of automatic keying device incorporating all the latest improvements in automatic keying known to the art. Features self-completing characters that automatically insure perfectly formed sending; continuous variable speed control for any rate of sending from 8 to 50 w.p.m.; separate control for weight of characters and ratio of dashes-to-dot length, allowing individual tailoring to your own fist; self contained with built-in power supply in attractive gray Hammertone portable case complete with automatic key.

EE-1, complete kit with instructions	**$24.95**
EE-1, wired and tested	**29.95**
EE-2, complete kit including addition of integral keying monitor with speaker	**29.95**
EE-2, wired and tested with keying monitor	**39.95**



ALL BAND ANTENNA TUNER.

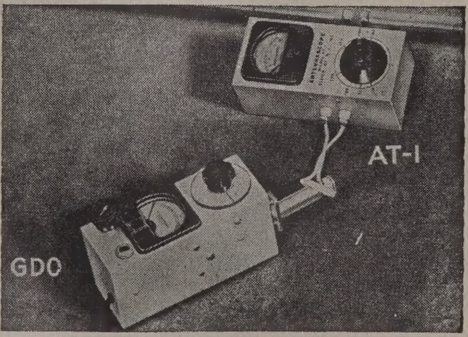
300-watt Universal antenna coupling designed to couple any conventional antenna feedline, regardless of impedance, to any conventional tank circuit. Tuner kit includes split sator capacitor, 500 watt coils with swinging link, shielded case, R.F. ammeter, coax connector from transmitter, coax and open line connectors on output. Complete with coil for one amateur band. Additional coils available.

ANTENNA TUNER, complete kit with instructions	**$21.95**
ANTENNA TUNER, wired and tested	**29.95**

GRID DIPPER.

Based on the original grid-dip oscillator designed by W2AEF, the new model incorporates all the improvements to this basic instrument. High-sensitivity regeneration circuit is now standard part of kit. Large square 0-1 ma meter improves readability of instrument. Special straight-line frequency capacitor is fully assembled with all mounting brackets and coil socket. Assembly time reduced substantially. The GDO is the instrument that enables you to locate resonant circuits for pre-tuning or de-bugging without applying power to the rig or receiver; measures harmonics; may be used as a signal generator; and performs numerous other measuring functions. Grid Dipper kit includes everything required, special case designed to facilitate one-hand operation, tube, internal power supply, meter and detailed instruction book covering assembly and operation. Range 3 mc to 250 mc, covered in six steps. Operation from 115 volts AC or DC.

GDO, complete kit with instructions	**$29.50**
GDO, wired and tested	**43.00**



ANTENNASCOPE.

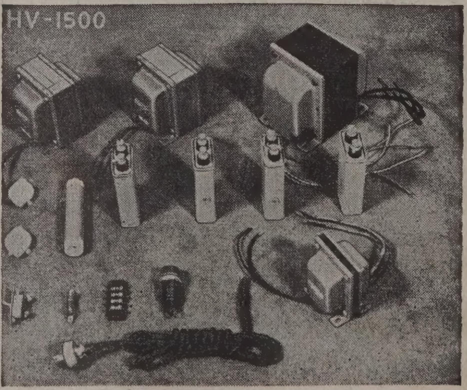
The instrument to give you Positive antenna performance and efficiency! The Antennascope is an impedance measuring meter used in conjunction with the Grid Dipper. With the Antennascope you can measure radiation resistance of your antenna; resonant frequency of your antenna; impedance of your transmission line; input impedance of your receiver; standing-wave ratio of your feedline. Each kit is absolutely complete with special hand-selected pots; 0-100 ua microammeter; silk screened dial; drilled and fabricated case. Each kit includes detailed instructions.

ANTENNASCOPE, complete kit with instructions	**$24.95**
ANTENNASCOPE, wired and tested	**29.95**

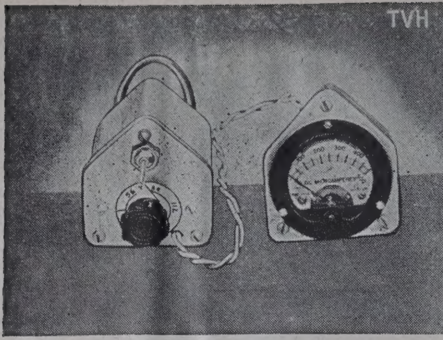
HIGH VOLTAGE POWER SUPPLY KITS.

These kits use all standard components and are conservatively rated to give dependable high voltage under continuous duty service. Because high-voltage supplies generally require little modification upon completion, these units are engineered to give trouble-free performance without attention from the day you solder the last connection. Each kit includes plate transformer, separate filament transformer, smoothing chokes, oil filled condensers, rectifier sockets. Each kit is supplied complete with instruction — less chassis and rectifier tubes. All Eldico High Voltage Power Supply Kits are for 110-120 v, 50 to 60 cycles ac. Total cost of each kit is comparable to what you would expect to pay for the plate transformer alone. 1500 volt supplied uses 866A's, all others use 872A's.

		Kit Complete	Only Transformers
HV-1500	**1500 v.d.c. 350 ma**	**$45.00**	**$24.95**
HV-2000	**2000 v.d.c. 500 ma**	**89.50**	**59.95**
HV-2000SP	**2000 v.d.c. 700 ma**	**109.50**	**79.95**
HV-2500	**2500 v.d.c. 500 ma**	**129.50**	**99.95**



ELDICO OF NEW YORK, INC., DOUGLASTON, NEW YORK



HARMONIC CHASER.

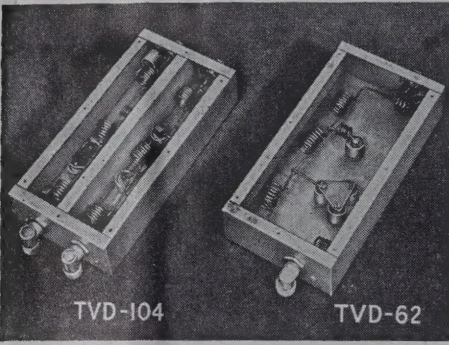
Modified absorption type wave-meter for locating, measuring and identifying transmitter harmonics falling into the television channels. Designed to eliminate swamping by the transmitter fundamental when the unit is tuned to the harmonic. Complete with all parts except indicating meter. Requires a sensitive external current indicator. Can be used with most volt-ohmmeters or with the 500 microampere meter listed below. Size: 3 x 3 x 4". Requires external indicating meter.

TVH, complete kit, with instructions	$6.98
TVH, wired and tested. Harmonic Chaser ready to operate.	10.98
TVH 500 microampere meter in case to match Harmonic Chaser.	7.50

LOW-PASS FILTERS.

Eldico's TVD-62 is a two-section M-derived low-pass filter completely self-contained in a special case measuring 9½" x 4¾" x 2⅛", supplied with coaxial connectors for the input and output. Attenuation of harmonics radiated by the antenna, the source of most TVI, is in excess of 60 db. Cut-off frequency of 40 mc insures maximum performance to 10 meters. Each filter includes six 50-uuf ceramic condensers; pre-wound and formed coils, shielded case and all necessary fittings. The TVD-62 is installed directly between the link output of the final and the antenna or tuner. For stubborn cases of TVI in high-power rigs an additional filter should be installed between driver and final grids. Filter will handle up to 1 kw AM. Insertion loss negligible. 52 or 72-ohm coaxial feedlines or coaxial feed to antenna tuner.

TVD-62, complete kit with instructions	$ 9.99
TVD-62, wired and tested	12.99



DIAXIAL LOW-PASS FILTERS.

To fill the requirements of amateurs using parallel 52-ohm or 72-ohm coaxial feedlines the Diaxial Low-Pass Filter is a modification of the TVD-62. Consists of two TVD-62 filters paralleled in a single case with a nominal impedance of 100 ohms. All parts and instructions included. Supplied with four standard coaxial connectors for input and output and shielded case.

TVD-104, complete kit with instructions	$16.95
TVD-104, wired and tested	19.95

HIGH-PASS FILTERS.

For television interference reduction. Essential filters to be installed directly at the antenna coil of the television receiver. Greatly reduces or completely eliminates r-f interference from amateur or commercial transmitters, industrial equipment, diathermy, oscillator radiation and other sources. Negligible insertion loss. Efficient on any television receiver. 40-mc cut-off, no attenuation to signals above 40 mc, consequently does not affect picture strength or quality. Available for coaxial or 300-ohm twin-lead transmission line. Can be assembled from kit in a few minutes. Size: 2¾ x 1¾ x 1".

TVR-300, 300-ohm. TVR-62, 62-ohm. Either high-pass Model	$1.98
TVR-300, 300-ohm. TVR-62, 62-ohm. Either Model W. & T.	3.98

TVR-300
Eldico INC.

BRUTE FORCE LINE FILTER.

R.F. feeding back through power lines is a serious source of TVI and BCI. Eldico's two-section Brute Force Line Filter will completely eliminate r.f. feed through in an a.c. line, requires only minimum installation. Patterned after the recommended model in the 1949 ARRL Handbook each filter consists of two special coils (3/16" square copper in TVL-2.5KW) pre-formed and wound; 5 oil filled capacitors and 3 mica capacitors, all rated at 400 v.d.c. Metal case measures 4¾" x 9½" x 2⅛". TVL-1KW supplied with heavy duty line cord and plug and female a.c. outlet receptacle. TVL-2.5KW equipped with BX clamps for securing a.c. lines. Complete with instructions.

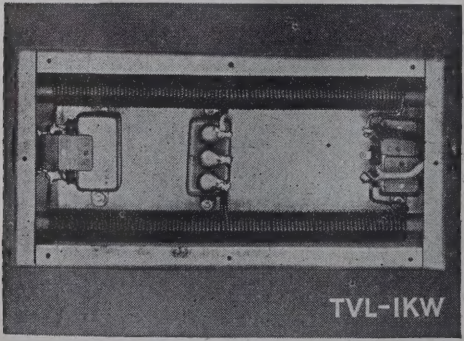
TVL-1KW, in kit form	$ 7.98	**Wired and tested**	$10.98
TVL-2.5KW, in kit form	13.98	**Wired and tested**	19.98

R.F. SHIELDING — COPPER MESH

Heavy duty — tightly wound, far more effective than ordinary copper screen. Minimum order — 6 Sq. Ft. 36" wide. Per Sq. Ft. $.85 plus $.50 handling charge.

R.F. BY-PASSING

Here are the bypasses that really trap the unwanted r.f. All a.c. leads, power leads, relay and switch leads and every connection between chassis should be bypassed. Use our high-voltage ceramic for high voltage our button or feed thru's for medium and low voltages; our micas for a.c.



HI-VOLTAGE CENTRALAB

50 MMFD. Tapped for 6/32 screws — 7500 V. working	**$1.29 ea.**

BUTTON FEED THU AND CERAMICON CONDENSERS

Available in these capacities. Automatically grounded through mounting screws.

40, 100, 180, 500 MMFDS. 500 V.	**$ .21 each**	**$2.25 per dozen**
2400 MMFD. 600 V.	**$ .29 each**	**$3.00 per dozen**
2000 MFD. 1250 V.	**$ .49 each**	**$5.00 per dozen**

Just insert a hole in chassis, tighten nut and you have a feed through connection which is automatically bypassed to ground.

Available in 50 MMF. capacity; with locking nuts .... **$ .21 each $2.25 per dozen**

Ceramicon Condensers — Axial type — Temperature compensated.

Ideal for use in small spaces.

Available in 3, 5, 15, 25, 50, 100 and 300 MMFD .... **$ .18 each $2.00 per dozen**

CAN BE Cured
ELDICO INC.

Signals of Distinction

YOUR FREE
CATALOG
No. 51
ON REQUEST

ELDICO
OF NEW YORK
INCORPORATED

DOUGLASTON, LONG ISLAND, N. Y.

E. F. JOHNSON Company WASECA, MINNESOTA

JOHNSON VIKING II TRANSMITTER KIT • 150 WATTS INPUT

100 Watts Phone Output	*100% AM Modulation*
115 Watts CW Output	*TVI Suppression Features*

The JOHNSON Viking II is a bandswitching 100 watt phone/CW amateur transmitter supplied in kit form. It incorporates all the desirable features of its predecessor plus those required for effective TVI suppression. Full output is available on the 160, 80, 40, 20, 15 and 10 meter amateur bands. The complete range of output frequencies is as follows:

BAND	LOW FREQ. LIMIT	HIGH FREQ. LIMIT
160	1.8 mc.	2.4 mc.
80	2.9	4.4
40	5.2	8.0
20	9.8	15.0
15	15.0	21.8
10	21.0	30.0

The RF section consists of a 6AU6 oscillator, a 6AQ5 buffer/doubler and parallel 6146 output amplifier. Modulator; pp 807s with 6AU6 speech amplifier and 6AU6 driver. Parallel 5R4 HV rectifiers, 5Z4 low voltage rectifier with 6AL5 bias rectifier. Fixed bias applied to buffer and output amplifier for break-in CW operation. Audio response limited to the center of the speech range.

Pi-network amplifier matches a wide range of impedances; provides up to 30 db second harmonic attenuation before filtering. Ventilated copper plated steel cabinet, with phosphor bronze bonding strip, completely shields transmitter, yet provides easy access to chassis. Power leads filtered to eliminate radiation of harmonics by the power line. Shielded coaxial output connector, antenna relay terminals.

All parts furnished including cabinet, punched chassis, wiring harness, wire, solder terminals, grommets and all other hardware. Carefully detailed and illustrated instructions for assembly, test and operation.

For 115 volt 50/60 cycle operation only.

Cat. No.		Amateur Net
240-102	VIKING II, complete with tubes	**$279.50**

VIKING VFO KIT

Variable frequency oscillator with output on 160 and 40 meters for frequency multiplying transmitters. Accurately calibrated for amateur bands 160 thru 10 meters. 6AU6 electron coupled oscillator, OA2 voltage regulator. Temperature compensation and rigid construction insure excellent stability. 6—1 vernier tuning with high reset accuracy. Power requirements 6.3 volts .3 amperes, 250-300 volts 15 ma. DC unregulated. Power and input connections provided on every Viking transmitter. Kit furnished complete with all parts, assembly and calibration instructions.

Cat. No.		Amateur Net
240-122	VIKING VFO Kit	**$42.75**

JOHNSON UNIVERSAL ROTOMATIC ROTATOR

An improved all-weather antenna rotator suitable for the most rigorous service. Housed in a sturdy, light weight, aluminum casting with 1/4" steel rotating table and "tilt head" base plate.

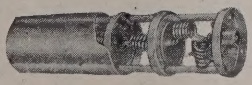
Oversized worm gearing, continuously lubricated, provides large safety factor at high wind loading. The drive unit consists of a 1/20th HP capacitor type gear motor. Motor and integral gears, equipped with ball bearings and special all-weather lubricant, turn beam at approximately 1-1/2 RPM. Full torque delivered at extremely low temperatures. No radio frequency interference. Plated slip rings are quiet; will not corrode. Rotator weight approximately 44 pounds.

Selsyn indicator presents antenna azimuth bearing continuously on illuminated dial of control box. Rotator instantly reversible. Antenna relay slip rings permit use of two beams on one rotator.

JOHNSON PARASITIC BEAMS

Large diameter aluminum alloy elements; galvanized steel boom. Element lengths and spacing are both adjustable for optimum performance. Elements grounded at center, to boom. Driven element equipped with "T" match, beams may be matched to a variety of balanced feed lines. Single or dual band arrays, including 4 element 10 meters and 3 element 20 meters, can be accommodated on one boom.

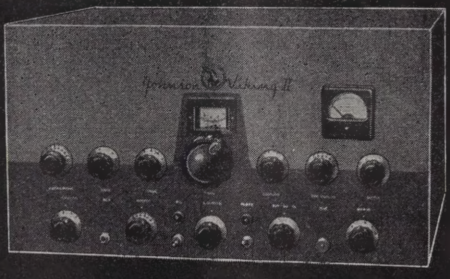
JOHNSON LOW PASS FILTER

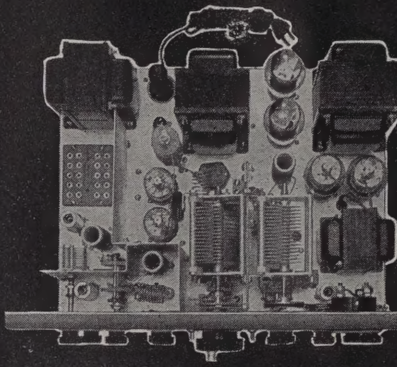


Providing 75DB or more attenuation of transmitter harmonic and spurious output above 54 mcs., it will handle a full kilowatt 100% modulated. Low inductance Teflon insulated capacitors, minimum insertion loss. Characteristic impedance of filter is 52 ohms. Equipped with SO239 coaxial input and output connectors.

Cat. No. **250-20** Low Pass Filter....Net **$16.50**

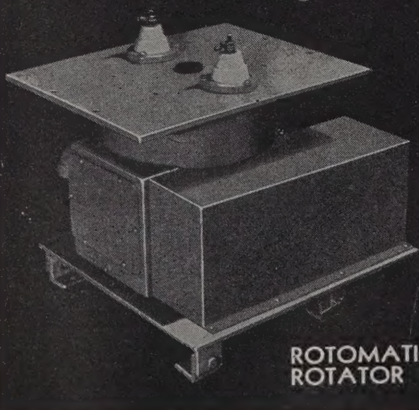
The Prices of all JOHNSON Products are subject to change without notice.





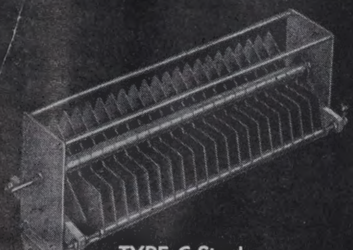
VIKING VFO KIT

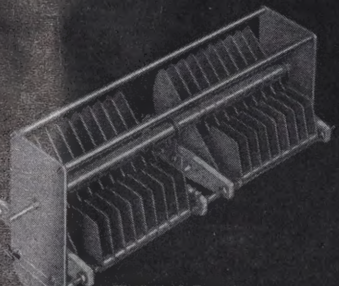
DIRECTION INDICATOR

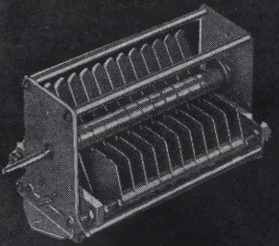


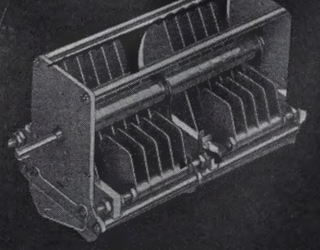
ROTOMATIC ROTATOR

E. F. JOHNSON Company WASECA, MINNESOTA

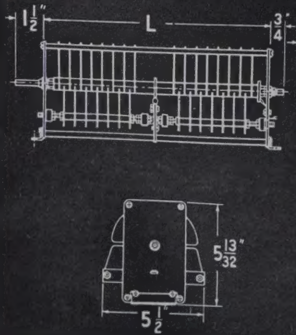

TYPE C Single


TYPE C Dual

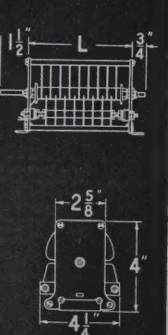

TYPE D Single


TYPE D Dual

TYPE C



TYPE D



TYPES "C" AND "D" VARIABLE CAPACITORS

JOHNSON C and D Capacitors are rugged, reliable and simple. Their functional design permits rapid, accurate assembly which results in lower cost to the user. Materials are appropriate for the application and the finest available today. If you're building medium powered radio frequency equipment it will pay you to use JOHNSON C and D Capacitors.

CONSTRUCTION

Heavy aluminum end frames, .051" plates and 5/16" tie rods assure extreme rigidity. Rotor contacts are laminated phosphor bronze. Dual models have center rotor contact for electrical symmetry. Low-loss Steatite insulators are located outside the most intense RF fields and used solely to support stator assemblies. Shafts are 1/4" diameter, cadmium plated with 3/4" rear extensions.

Mounting brackets furnished for normal or inverted mounting. End frames drilled and tapped for panel mounting, special brackets or mounting of accessory components.

SPECIAL TYPES

Variations from standards such as special capacitances, ball bearings, dynamically balanced rotors, stainless steel shafts and right angle drive duals can be furnished in production quantities.

TYPE C SINGLE SECTION

Cat. No.	Type No.	Net Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Spacing	Number Plates	L
152-1	250C70	$10.80	252	34	.175"	24	6 13/16"
152-2	500C70	15.35	496	56	.175"	47	12 3/16"
152-3	250C90	12.75	245	45	.250"	31	12 3/16"
152-4	350C90	15.05	337	63	.250"	43	14 27/32"
152-5	50C110	7.70	51	19	.350"	8	4 25/32"
152-6	100C110	9.80	103	30	.350"	17	8 19/32"
152-7	250C110	15.20	251	66	.350"	41	18 9/32"
152-8	50C130	8.50	51	24	.500"	10	7 11/16"
152-9	100C130	11.10	102	42	.500"	21	13 11/32"

TYPE C DUAL SECTION

Cat. No.	Type No.	Net Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Spacing	Number Plates	L
152-501	200CD45	$13.40	204	21	.125"	15	8 19/32"
152-502	300CD45	15.70	290	26	.125"	21	10 5/16"
152-503	200CD70	15.35	198	27	.175"	19	12 3/16"
152-504	300CD70	20.30	305	37	.175"	29	16 25/32"
152-505	150CD90	16.35	147	30	.250"	19	14 27/32"
152-507	50CD110	11.45	50	18	.350"	8	10 5/16"
152-509	100CD110	16.00	103	32	.350"	17	16 25/32"
152-510	50CD130	13.10	51	24	.500"	10	14 27/32"

TYPE D SINGLE SECTION

Cat. No.	Type No.	Net Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Spacing	Number Plates	L
153-2	100D35	$5.70	99	14	.080"	8	2 29/32"
153-4	250D35	7.35	252	24	.080"	20	4 25/32"
153-6	500D35	9.65	496	36	.080"	39	6 25/32"
153-7	100D45	6.20	104	19	.125"	12	4 25/32"
153-8	150D45	7.20	146	23	.125"	17	4 25/32"
153-9	50D70	5.70	51	17	.175"	7	2 29/32"
153-10	70D70	6.35	72	18	.175"	11	4 25/32"
153-11	100D70	7.00	98	23	.175"	15	4 25/32"
153-12	150D70	8.15	151	31	.175"	23	6 13/16"
153-13	250D70	10.15	244	45	.175"	37	10 5/16"
153-14	350D70	12.40	351	62	.175"	53	13 11/32"
153-15	50D90	6.55	53	20	.250"	10	4 25/32"
153-16	70D90	7.20	73	25	.250"	14	5 13/16"
153-17	100D90	7.85	99	30	.250"	19	7 11/16"
153-18	150D90	9.30	149	43	.250"	29	10 5/16"

TYPE D DUAL SECTION

Cat. No.	Type No.	Net Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Spacing	Number Plates	L
153-501	100DD35	$7.70	95	13	.080"	8	4 25/32"
153-502	150DD35	8.65	147	15	.080"	12	5 13/16"
153-503	200DD35	10.30	202	19	.080"	16	7 11/16"
153-504	300DD35	12.25	291	24	.080"	23	9 15/32"
153-505	500DD35	16.70	496	38	.080"	39	13 11/32"
153-506	150DD45	10.60	155	24	.125"	18	9 15/32"
153-507	200DD45	12.10	198	27	.125"	23	12 3/16"
153-508	50DD70	8.15	52	15	.175"	8	5 13/16"
153-509	70DD70	9.30	72	17	.175"	11	7 11/16"
153-510	100DD70	10.45	97	22	.175"	15	9 15/32"
153-511	150DD70	13.55	151	31	.175"	23	13 11/32"
153-513	50DD90	9.50	52	19	.250"	10	9 15/32"
153-514	100DD90	12.75	97	30	.250"	19	14 27/32"

See Explanation of Type Numbers on Opposite Page.

Stated maximum and minimum values of capacitors are nominal, subject to plus or minus tolerances. Guaranteed values, or "lowest maximum, highest minimum" should be requested from the factory if necessary.

TYPES "E" AND "F" VARIABLE CAPACITORS

Designed as rugged, compact units for medium and low power transmitters, type E and F capacitors are in a class by themselves. They have more capacity per cubic inch and occupy less panel space for their rating than any other capacitor on the market.

Points of superiority: Heavy aluminum plates, .032" thick, with rounded edges for maximum voltage rating — Heavy aluminum tie rods 1/4" diameter for frame strength and rigidity — Steatite insulation — mount with stator up to reduce capacity to ground — heavy phosphor bronze contact springs, cadmium plated — Center contact on dual models — Chassis or panel mounting — Stainless steel shafts.

In addition to mounting foot shown, removable single hole brackets are furnished so that capacitor may be inverted from position shown, or other components mounted above.

TYPE F SINGLE SECTION

Cat. No.	Type No.	Net Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Spacing	Number Plates	L
155-1	35F20	$2.95	35	7	.045"	6	1 15/32"
155-2	50F20	3.05	54	8	.045"	9	1 5/8"
155-3	70F20	3.20	66	8	.045"	11	1 25/32"
155-4	100F20	3.50	106	10	.045"	17	2 1/4"
155-5	150F20	3.95	154	12	.045"	25	2 7/8"
155-6	250F20	4.75	252	17	.045"	41	4 3/32"
155-8	50F30	3.30	52	9	.075"	13	2 5/16"5
155-9	70F30	3.55	67	11	.075"	17	2 23/32"
155-10	100F30	4.00	99	14	.075"	25	3 19/32"
155-11	150F30	4.65	148	18	.075"	37	4 7/8"

TYPE F DUAL SECTION

Cat. No.	Type No.	Net Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Spacing	Number Plates	L
155-501	50FD20	5.00	53	7	.045"	9	3 1/2"
155-502	70FD20	5.30	66	7	.045"	11	3 27/32"
155-503	100FD20	5.85	104	9	.045"	17	4 11/16"
155-504	150FD20	6.75	153	11	.045"	25	6"
155-505	200FD20	7.55	202	14	.045"	33	7 7/32"
155-506	50FD30	5.40	51	8	.075"	13	4 27/32"
155-507	70FD30	6.05	66	10	.075"	17	5 23/32"
155-508	100FD30	7.00	99	13	.075"	25	7 7/16"

TYPE E SINGLE SECTION

Cat. No.	Type No.	Net Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Spacing	Number Plates	L
154-1	250E20	4.05	244	12	.045"	23	2 25/32"
154-2	350E20	4.55	353	15	.045"	33	3 17/32"
154-3	500E20	5.30	488	19	.045"	45	4 15/32"
154-7	100E30	3.65	100	11	.075"	15	2 9/16"
154-8	150E30	4.10	154	14	.075"	23	3 7/16"
154-9	250E30	4.90	251	20	.075"	37	4 15/16"
154-10	350E30	5.80	347	25	.075"	51	6 7/16"
154-11	35E45	3.35	38	9	.125"	9	2 5/16"
154-12	50E45	3.60	53	11	.125"	12	2 31/32"
154-13	70E45	3.80	74	13	.125"	17	3 9/16"
154-14	100E45	4.15	101	16	.125"	23	4 17/32"
154-15	150E45	4.80	145	20	.125"	33	6 3/32"
154-16	250E45	6.10	241	32	.125"	55	9 9/16"

TYPE E DUAL SECTION

Cat. No.	Type No.	Net Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Spacing	Number Plates	L
154-502	300ED20	7.30	312	13	.045"	29	6 21/32"
154-503	50ED30	5.10	52	8	.075"	8	4 3/32"
154-504	70ED30	5.45	72	8	.075"	11	4 17/32"
154-505	100ED30	6.00	99	10	.075"	15	5 3/8"
154-506	150ED30	6.85	153	13	.075"	23	7 1/16"
154-507	200ED30	7.70	196	15	.075,	29	8 3/8"
154-508	50ED45	5.45	52	10	.125'	12	6 5/32
154-509	70ED45	6.15	74	12	.125"	17	7 7/16"
154-510	100ED45	7.10	100	15	.125"	23	9 9/32"

EXPLANATION OF TYPE NUMBERS

The first part of the type number indicates the capacity per section in mmfd. The following letter indicates the frame size. A second letter D indicates a two section type. The final number multiplied by 100 is the approximate peak breakdown voltage. Capacity measurements of the E and F types are made with the capacitors in the position shown in the above illustration. The C and D types are measured in inverted position.

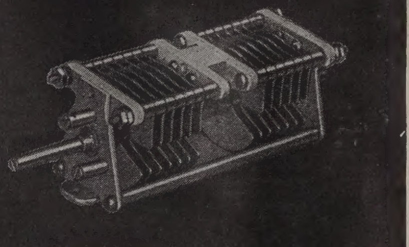
DEPARTURES FROM STANDARD

Special plate spacings, capacities, shaft extensions, insulation, mounting brackets, terminals, etc., can be furnished to specifications for commercial applications.

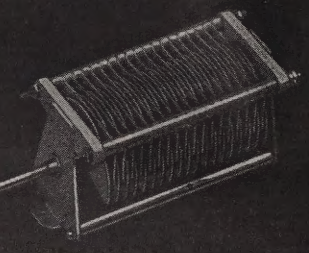
CAPACITORS FOR HIGHER VOLTAGES

The JOHNSON line includes heavy duty pressurized or air dielectric fixed and variable capacitors for high voltage commercial applications. Data sheets furnished on request.

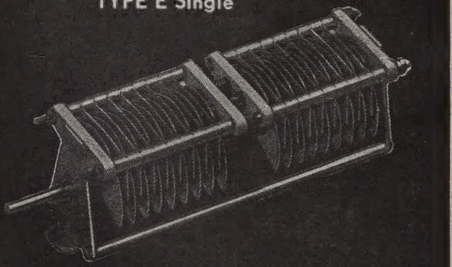
TYPE F Single



TYPE F Dual

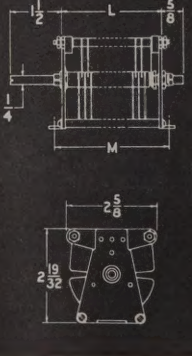


TYPE E Single

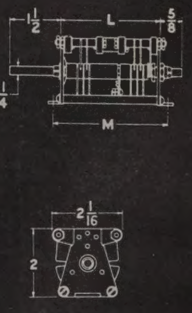


TYPE E Dual

TYPE E

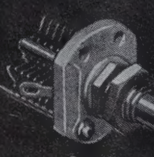


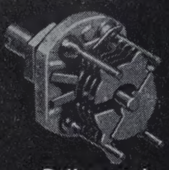
TYPE F

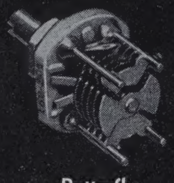


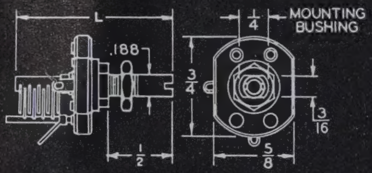
E. F. JOHNSON Company WASECA, MINNESOTA

TYPE M

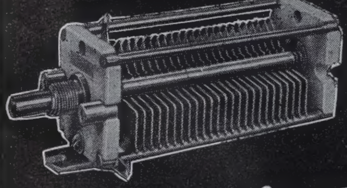

Single

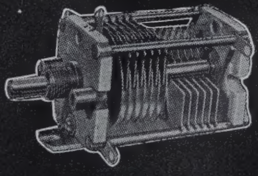

Differential

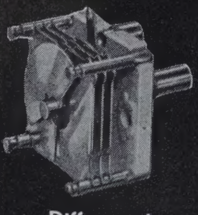

Butterfly

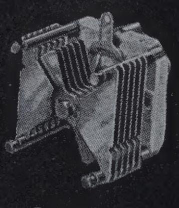


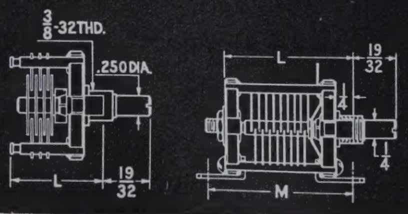
TYPE L


Single


Dual


Differential


Butterfly



MINIATURE AIR VARIABLE CAPACITORS
(Type M)

Requiring a panel area just 5/8" wide by 3/4" high, these diminutive capacitors provide the answers to many problems encountered in the design of compact radio frequency equipment.

JOHNSON Miniature Air Variables are available in three types: single section, differential and butterfly. Ideally suited for portable, mobile and airborne equipment thru the VHF range of frequencies, they are designed and constructed with features that assure reliable performance throughout long service life.

Specifications

Low inductance. Soldered plates assembled with precision tools. Split sleeve bearings. Beryllium copper tension spring contact for permanent alignment, constant torque and low inherent noise. Differential and butterfly types electrically symmetrical. Excellent vibration characteristic due to low inertia. Steatite insulation impregnated with DC-200. Metal parts brass, nickel plated. Single hole mounting bushing threaded 1/4-32 with flats to prevent turning. 3/16" shaft slotted for screw driver adjustment. Plate spacing .017". Peak voltage rating, 1250.

Specials

JOHNSON Miniature Air Variables are available in production quantities with features such as: 1. Locking bearing. 2. With 180° stop. 3. Various shaft extensions. 4. .0135" spacing offering capacities up to 30 mmfd. 5. High torque.
We would be pleased to quote on your special requirements.

Cat. No.	Type No.	Net Price	Nominal Max.	Capacity mmf. Min.	Number Plates	L
			SINGLE			
160-102	**5M11**	**$ .95**	5.0	1.5	5	1 7/64
160-104	**9M11**	**1.01**	8.7	1.8	9	1 7/32
160-107	**15M11**	**1.15**	14.2	2.3	15	1 13/32
160-110	**20M11**	**1.31**	19.6	2.7	21	1 37/64
			DIFFERENTIAL			
160-303	**6MA11**	**1.37**	5.0	1.5	7	1 7/64
160-305	**9MA11**	**1.51**	8.7	1.8	13	1 7/32
160-308	**15MA11**	**1.70**	14.2	2.3	22	1 13/32
160-311	**19MA11**	**1.96**	19.6	2.7	31	1 37/64
			BUTTERFLY			
160-203	**3MB11**	**1.37**	3.1	1.5	7	1 7/64
160-205	**5MB11**	**1.51**	5.1	1.8	13	1 7/32
160-208	**9MB11**	**1.70**	8.0	2.2	22	1 13/32
160-211	**11MB11**	**1.90**	10.8	2.7	31	1 37/64

JOHNSON TYPE "L" VARIABLES
(167 Series)

Perfected ceramic soldering assures permanent rigidity and maintenance of capacitance. JOHNSON ceramic soldering leaves a bond which is stronger than the rugged end plates themselves. There are no eyelets, nuts or screws to work loose which would cause stator wobble and fluctuations in capacity.

Split sleeve tension bearing assures silent operation on highest frequencies. Ceramic end plates, 1 3/8" square with 2 mounting posts tapped for 6-32 screws on 1 3/32" centers. Mounting (M) dimension is 1/2" more than L dimension.

Two sets of stator contacts. Corrosion resistant, bright alloy plating has low electrical resistance.

These new variables are suitable for the severest conditions of portable-mobile operation. Other capacities and spacings on special order in production quantities.

TYPE L SINGLE SECTION

Cat. No.	Type No.	Net Price	Cap. per Sect. Max.	Cap. per Sect. Min.	*Spacing	Plates Per Sec.	L
			Single End Plate				
167-101	**10L15**	**$1.57**	11	2.8	.030"	3	15/16
167-102	**25L15**	**1.67**	27	3.5	.030"	7	1 9/64
167-103	**50L15**	**1.83**	51	4.6	.030"	13	1 7/16
167-104	**75L15**	**1.96**	75	5.7	.030"	19	1 3/4
			Double End Plate				
167-151	**100L15**	**3.17**	99	6.8	.030"	25	2 7/32
167-152	**200L15**	**4.00**	202	11.6	.030"	51	3 33/64
			Dual Section				
167-501	**25LD15**	**3.08**	27	3.5	.030"	7	1 13/16
167-502	**50LD15**	**3.57**	51	4.6	.030"	13	2 27/64
167-503	**100LD15**	**4.29**	99	6.8	.030"	25	3 5/8
			Differential				
167-301	**10LA15**	**1.90**	11	2.8	.030"	3	15/16
167-302	**25LA15**	**2.03**	27	3.5	.030"	7	1 9/64
167-303	**50LA15**	**2.29**	51	4.6	.030"	13	1 7/16
			Butterfly				
167-201	**10LB15**	**2.19**	10.5	2.8	.030"	5	1 3/64
167-202	**25LB15**	**2.49**	26	4.3	.030"	12	1 7/16
167-203	**50LB15**	**2.88**	51	6.8	.030"	23	1 15/16

*.020, .060, .080 spacing also available.

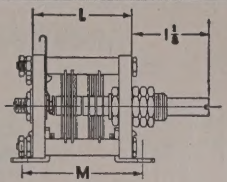
EXPLANATION OF TYPE NUMBERS

The first part of the type number indicates the capacity per section in mmfd. The following letter indicates the frame size or type. A second letter D indicates a two-section type. The final number multiplied by 100 is the approx. peak breakdown voltage.

Net

TYPE "H" CAPACITOR

Minimum weight and size with rugged construction. Steatite end plates 1-1/2" square permit panel mounting with both rotor and stator insulated. Aluminum plates .020" thick. Mounting dimension (M) is 5/16" more than the L dimension. Shaft dia. 1/4".



TYPE H SINGLE SECTION

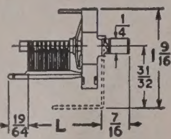
Cat. No.	Type No.	Net Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Spacing	Plates Per Sec.	L
Single End Plate							
156-1	**25H15**	**$1.77**	25	4	.030"	6	11/16
156-2	**35H15**	**1.83**	36	4	.030"	8	13/16
156-3	**50H15**	**1.93**	49	4	.030"	11	7/8
156-4	**70H15**	**2.09**	69	6	.030"	15	1 3/16
156-5	**100H15**	**2.29**	97	7	.030"	21	1 1/2
Double End Plate							
156-6	**150H15**	**3.27**	146	9	.030"	31	2 13/32
156-7	**250H15**	**4.32**	242	13	.030"	51	3 13/32
156-11	**70H30**	**3.76**	74	13	.080"	35	4 13/32

TYPE H DUAL SECTION

Cat. No.	Type No.	Net Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Spacing	Plates Per Sec.	L
156-512	**35HD15**	**3.08**	31	6	.030"	7	1 11/16
156-513	**50HD15**	**3.31**	51	7	.030"	11	2 3/32
156-514	**70HD15**	**3.63**	71	8	.030"	15	2 1/2
156-515	**100HD15**	**4.09**	99	10	.030"	21	3 3/32
156-516	**35HD30**	**3.96**	38	12	.080"	17	4 13/32
156-517	**50HD30**	**4.68**	55	15	.080"	25	6

TYPE "J" CAPACITOR

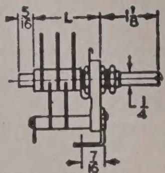
Has wider spacing, .025", than most small types, yet occupies little more space. Ideal for oscillator and low power stages. Steatite end plate is 1-1/8" wide. Mounting brackets included.



Cat. No.	Type No.	Net Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Plates Per Sec.	L
157-1	**7J12**	**$1.28**	8	2.6	3	19/32
157-2	**15J12**	**1.37**	17	3.3	6	23/32
157-3	**25J12**	**1.51**	29	3.6	10	7/8
157-4	**50J12**	**1.77**	52	4.9	19	1 1/4
157-5	**75J12**	**2.06**	73	6	26	1 17/32
157-6	**100J12**	**2.45**	102	7	36	1 31/32

TYPE "G" CAPACITOR

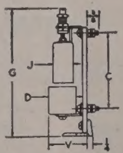
Neutralizing capacitor for medium and low power stages. .032" rounded aluminum plates, Steatite insulation. Furnished with universal mounting bracket and locking nut. Mounting space required: 2-1/16" wide, 2-17/64" high.



Cat. No.	Type No.	Net Price	Cap. per Sect. Max.	Cap. per Sect. Min.	Spacing	Number Plates	L
165-2	**50G20**	**$2.45**	52	5	.045"	9	1 5/32
165-4	**13G45**	**2.26**	13	4.7	.125"	5	1 5/32
165-5	**23G45**	**2.45**	23	6.4	.125"	9	1 13/16
165-6	**6G70**	**2.45**	5.7	3.5	.225"	3	1 1/16
165-7	**12G70**	**2.78**	12	6	.225"	7	2 5/8

TYPE "N" CAPACITOR

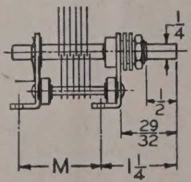
Extremely high voltage rating in proportion to size and requiring small mounting area. Constant voltage rating throughout full capacity range. Plates are aluminum cups supported by Steatite frame with cast aluminum mounting bracket. Peak RF breakdown ratings at 2 Mc., N125—8,500, N250—11,500, N375—14,500.



Cat. No.	Type No.	Net Price	Capacity Max.	Capacity Min.	D	C	G	V	Spacing
159-125	**N125**	**$4.25**	11.0	1.1	1 3/8	3 1/8	6 13/32	1 15/16	.125"
159-250	**N250**	**4.91**	10.6	1.4	1 47/64	3 3/4	7 17/32	2 9/32	.250"
159-375	**N375**	**6.22**	10.7	1.7	2 3/8	5 19/32	8 23/32	2 15/16	.375"

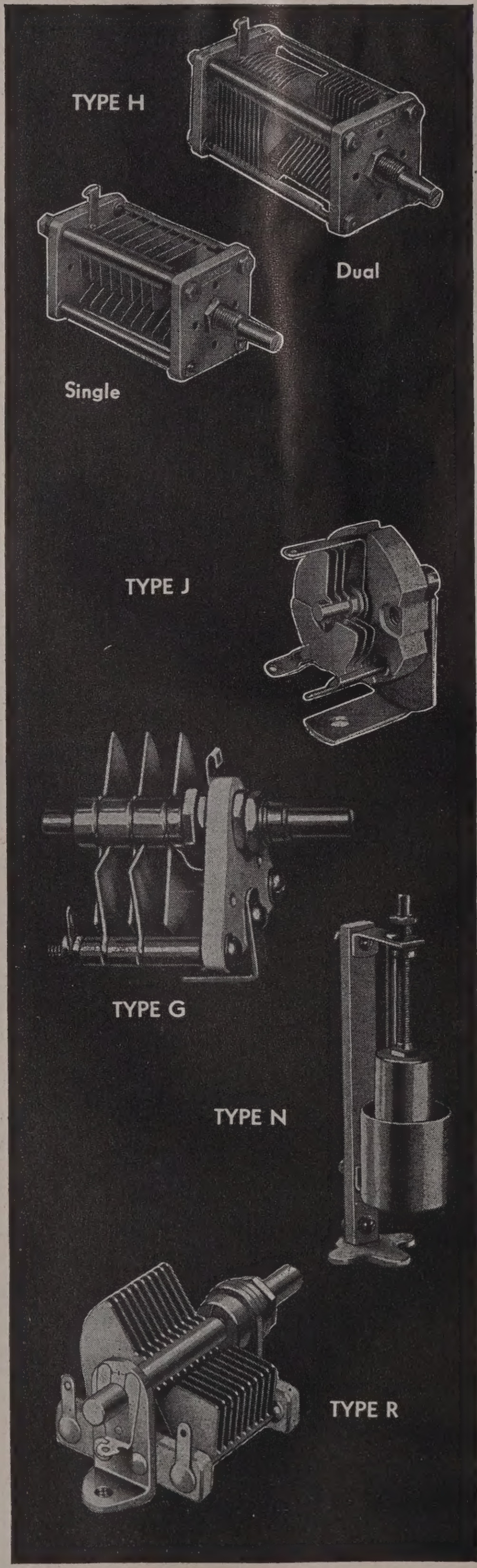
TYPE "R" CAPACITOR

The JOHNSON version of a highly popular standardized capacitor widely used in compact portable and mobile equipment. End plates are of extra heavy nickel-plated brass, Steatite insulating bars. All soldered and riveted construction.



SPECIFICATIONS

All plates are .0225" thick, of brass with bright alloy plating, far more corrosion resistant than cadmium. Spacing is ordinarily .0245", but available on special order in spacings up to .0715". Panel mounting area required; 1-5/8" wide, 1-11/16" deep. Supplied at present only on special order in production quantities. Write for full details.



E. F. JOHNSON Company

WASECA, MINNESOTA

Steatite and porcelain RF insulators with a long history of user satisfaction. Dense molding and glazing impart fracture resistance together with low moisture absorption. Extended creepage paths provide maximum voltage breakdown compatible with compact design. Relatively large mounting faces permit substantial lateral loads. Heavily nickel plated brass hardware suitable for exposed applications.

-20
-22
-24

-20J
-22J

-66
-67

-68

-500
thru
-504

-40
-42
-44

-40J
-42J

-45, -46
-47, -48

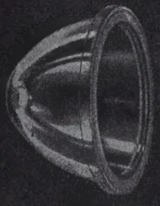
-45J
thru
-48J

-50
-51
-52

-55

-53

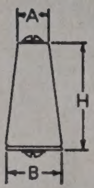
-90
-91

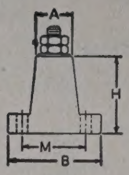

135-15-0

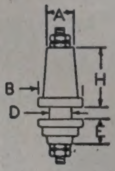
115-240, -241, -242

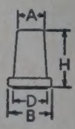
135-54

INSULATORS AND BUSHINGS









STAND-OFF INSULATORS

Steatite insulators combining excellent strength with economy for surface mounting applications. Heavy integral mounting bases; ample clearance for screw heads.

Cat. No.	Net Price	Dimensions H	B	M	A	Hardware
135-20	$0.14	1 9/16	1 3/4	1 5/16	3/4	10-32
135-20J	.18	1 9/16	1 3/4	1 5/16	3/4	74 Jack
135-22	.12	1	1 5/32	13/16	15/32	8-32
135-22J	.15	1	1 5/32	13/16	15/32	74 Jack
135-24	.09	5/8	1	11/16	3/8	6-32

Ribbed porcelain insulators with square mounting bases and four mounting holes; top glazed.

135-60	.59	4 1/2	2 1/2	1 7/8	1 3/16	1/4-20
135-62	.33	2 3/4	1 7/8	1 3/8	7/8	1/4-20

Surface mounting porcelain insulators with drawn and etched aluminum bases. Nos. 135-65, 135-65J, 135-68, 135-68J are ribbed.

135-65	.20	1 3/8	1 7/8	1 1/2	5/8	10-32
135-65J	.23	1 3/8	1 7/8	1 1/2	5/8	74 Jack
135-66	.46	2 3/4	1 3/4	1 3/8	15/16	1/4-20
135-66J	.59	2 3/4	1 3/4	1 3/8	15/16	76 Jack
135-67	.56	4 1/2	2 1/4	1 3/4	1 1/16	1/4-20
135-67J	.72	4 1/2	2 1/4	1 3/4	1 1/16	76 Jack
135-68	.26	2 1/16*	1 3/4	1 3/8	23/32	10-32
135-68J	.33	2 1/16*	1 3/4	1 3/8	23/32	74 Jack

STEATITE CONE INSULATORS

Material, grade L-4 or better, Steatite. Deep clean threads are tapped directly into the ceramic. Furnished complete with machine screws, brass and cork cushion washers.

135-500	$0.20	21/32*	5/8		7/16	6-32
135-501	.23	1 1/32*	3/4		1/2	8-32
135-502	.43	1 9/16*	1		1/2	8-32
135-503	.49	2 1/16*	1 1/8		5/8	10-32
135-504	.95	3 1/16*	1 1/2		3/4	10-32

METAL BASES

Brass bases for replacement on 135-65, -66, -67 and -68 insulators.

Cat. No.	Net Price	For use with
135-865	$0.08	135-65
135-866	.10	135-66,135-68
135-867	.13	135-67

FEED-THRU BOWL ASSEMBLIES

Bowls, electrical glass, 6 15/16" maximum diameter, 4 3/8" high. Steel mounting flange 7 3/4" dia. Stud threaded 1/2" – 13. Cork gaskets and spun aluminum corona shields included in fittings. 135-15-1 consists of single bowl with fittings, 10 1/4" stud; 135-15-3 two bowls and fittings with 16" stud for walls up to 4". 135-15-7 with 24" stud for walls up to 12". Can also be furnished with special hollow studs.

Cat. No.		Net Price
135-15-0	Glass bowl only, less fittings	6.05
135-15-1	One bowl and fittings	11.10
135-15-3	Two bowls and fittings	19.60
135-15-7	Two bowls and fittings	20.30

*Height dimenson includes cushion mounting washer.

THRU-PANEL INSULATORS

High voltage insulators compression mounted by means of a stud throughout length. Extrusion of insulator base extends thru mounting hole increasing breakdown rating. Flat mounting surfaces with cushion washers eliminate breakage. Types equipped with jacks have terminal permitting connection above as well as below the panel.

STEATITE

Cat. No.	Net Price	H	B	D	E	A	Hardware
135-40	$0.23	1 1/4	15/16	7/16	1/2	19/32	10-32
135-40J	.29	1 1/4	15/16	7/16	1/2	19/32	74 Jack
135-42	.20	7/8	3/4	.400	3/8	1/2	10-32
135-42J	.26	7/8	3/4	.400	3/8	1/2	74 Jack
135-44	.16	5/8	5/8	.305	5/16	3/8	6-32

PORCELAIN

135-45	$0.29	1 3/8	1 1/4	1/2	11/16	5/8	10-32
135-45J	.39	1 3/8	1 1/4	1/2	11/16	5/8	74 Jack
135-46	.65	2 3/4	1 5/8	11/16	1	15/16	1/4-20
135-46J	.82	2 3/4	1 5/8	11/16	1	15/16	76 Jack
135-47	.92	4 1/2	2 1/8	31/32	1 1/2	1 1/16	1/4-20
135-47J	1.08	4 1/2	2 1/8	31/32	1 1/2	1 1/16	76 Jack
135-48	.42	2	1 5/8	11/16	7/8	3/4	10-32
135-48J	.52	2	1 5/8	11/16	7/8	3/4	74 Jack

INSULATED THRU-PANEL BUSHINGS

Assemblies consist of a pair of identical steatite insulators, hardware and cushion washers. The 135-55 assembly has interlocking insulators which are self-centering in mounting hole and may be used on very thin panels.

135-50	$0.23	1/2	3/4	15/32		3/8	6-32
135-51	.33	13/16	1 1/4	27/32		5/8	10-32
135-52	.52	1 1/8	1 3/4	1 7/32		7/8	1/4-20
135-55	.20	1/4	3/4	15/32		1/2	6-32

LEAD-IN BUSHINGS

Single porcelain insulators less all hardware except cushion washer. Mounting flanges listed separately.

135-53	$0.20	1 3/4	2 1/2	1 27/32		1 1/16
135-54	.49	4	3 1/2	2 11/16		1

MOUNTING FLANGES

Stamped aluminum mounting flanges for lead-In bushings 135-53 and 135-54. Three mounting holes spaced 120 degrees apart.

Cat. No.	For Bushing No.	Net Price
135-90	135-53	$0.23
135-91	135-54	.46

THREADED BRASS ROD

Intended primarily for use with lead-in bushings 135-53 and 135-54. Rod threaded overall 1/4-20. Complete assembly includes rod, 4 brass washers and 4 nuts, all parts heavily nickel plated.

Cat. No.	Length	Net Price
115-240	8"	$0.33
115-241	10"	.39
115-242	12"	.46

E. F. JOHNSON Company

WASECA, MINNESOTA

ENAMELED COPPERWELD ANTENNA WIRE

JOHNSON Enamelled Copperweld Antenna Wire will not stretch nor sag. Prices are per 100 feet. Carried by most suppliers in bulk, it is available from the factory in any specified length.

Cat. No.	Net Price	B & S Gauge	Ft. per Lb.	Breaking Strength
144-348	**$2.91**	10	34½	1130 lbs.
144-350	**2.13**	12	54	720 lbs.
144-352	**1.44**	14	85	400 lbs.

FEEDER INSULATORS

Nos. 136-122, -124 and -126 are conventional feeder spreaders of high grade low absorption porcelain, Silicone impregnated. No. 136-122 has notches for 1½" line spacing. All have ⅜x½" cross section.

Cat. No.	Net Price	Lgth.	Cat. No.	Net Price	Lgth.	Cat. No.	Net Price	Lgth.
136-122	**$.10**	2"	**136-124**	**$.15**	4"	**136-126**	**$.20**	6"

ANTENNA INSULATORS

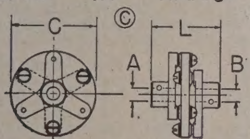
The 136-151, -152, -153 are 1½" in dia., wet process porcelain with non-corrosive aluminum end bells. The 136-107-112, are wet process 1" in dia. The 136-104 is dry process ⅝" square. The 136-32 is dry process compression strain type, 1½" long. All antenna insulators glazed.

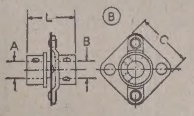
Cat. No.	Net Price	Breaking Strength	Length Net	Length Over-all
136-151	**$5.90**	5000 lbs.	8"	15½"
136-152	**7.85**	5000 lbs.	12"	19½"
136-153	**11.45**	5000 lbs.	20"	25½"
136-104	**.13**	400 lbs.		4"
136-107	**.72**	800 lbs.		7"
136-112	**.79**	800 lbs.		12"
136-32	**.10**			1½"

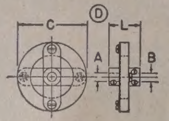
RADIO FREQUENCY CHOKES

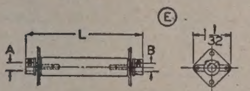
Have high reactance over the range for which they are designed. Coils are of enamelled silk-covered wire impregnated with high grade R.F. lacquer and wound on Steatite cores. Current ratings may be increased for intermittent use.

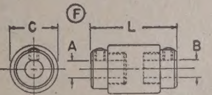
Cat No.	Net Price	Frequency	Current	Induct. (1 mc.)	Ohms DC	Lgth.
10z-750	**$1.15**	1.7 to 30 mc.	150 ma	.83 mh	15	1½"
102-752	**1.64**	1.7 to 30 mc.	500 ma	1.0 mh	5.2	2⅞"
102-754	**1.96**	1.7 to 30 mc.	750 ma	1.9 mh	4	4$\frac{5}{16}$"
101-760	**.39**	Ultra-high	250 ma	6.8 uh	.33	1½"

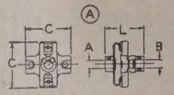












COUPLINGS

All JOHNSON couplings are manufactured with high quality, low loss insulation; accurately machined and suitably finished metal parts. Each is capable of many thousands of operating cycles without failure due to fatigue. DC "breakdown" ratings derated in accordance with good engineering practice. The phosphor bronze springs of the -250 and -251 series couplings provide flexibility without backlash and adjust to minor shaft misalignments. Rigid types -252, -262 and -261 meet the requirements of accurate shaft alignment and high torque. The -259 and -2593 are bar type couplings recommended for high voltages or very high frequencies. The -264 is a small bakelite insulated flexible coupling for DC or low voltage RF applications.

Cat. No.	Net Price	DC "Breakdown"	Dim. Dwg.	Dimension C	Dimension L	Dimension A	Dimension B
104-250	**$.65**	4000	A	1$\frac{5}{16}$	1⅛	¼	¼
104-2503	**.72**	4000	A	1$\frac{5}{16}$	1$\frac{3}{16}$	¼	⅜
104-251	**.92**	8000	A	2⅛	1$\frac{15}{32}$	⅜	⅜
104-251A	**.92**	8000	A	2⅛	1$\frac{15}{32}$	¼	¼
104-251B	**.92**	8000	A	2⅛	1$\frac{15}{32}$	¼	⅜
104-252	**.59**	7000	F	$\frac{11}{16}$	1¼	¼	¼
104-258	**.23**			½	¾	¼	¼
104-259	**.98**	8000	E		3⅜	¼	¼
104-2593	**.95**	5000	E		2⅜	¼	¼
104-261	**2.78**	7500	C	2½	1$\frac{15}{16}$	⅜	⅜
104-262	**.56**	5000	D	2	$\frac{29}{32}$	¼	¼
104-264	**.39**	750	B	$\frac{13}{16}$	$\frac{23}{32}$	¼	¼

PANEL BEARINGS

Nickel plated brass for ¼" shaft and up to ⅜" panels. Also with 3" and 6" nickel-plated brass shafts.

Cat. No. 115-255 Panel bearing only........................**Net Price $.13**
Cat. No. 115-256 Bearing and 3" shaft........................**Net Price .26**
Cat. No. 115-2562 Bearing and 6" shaft........................**Net Price .39**

FLEXIBLE SHAFTS

Phosphor bronze, non-rusting with ¼" hubs. Permit out of line or up to 90 degree angular control.

Cat. No. 115-253 3" flexible shaft........................**Net Price $.33**
Cat. No. 115-254 6" flexible shaft........................**Net Price .46**

CRYSTAL SOCKETS

Designed for HC-6/U crystal holder. Steatite base, DC200 impregnated. Contacts spaced .486" accept pins .050" diameter, .248" long; silver plated, hot tin dipped terminals. Single ⅛" mounting hole. Withdrawal force 1½ lbs. plus or minus 40%.

Cat. No. 126-105 Body glazed, phosphor bronze contacts.......**Net Price $.15**
Cat. No. 126-105-2 Body glazed, beryllium copper contacts.......**Net Price .21**

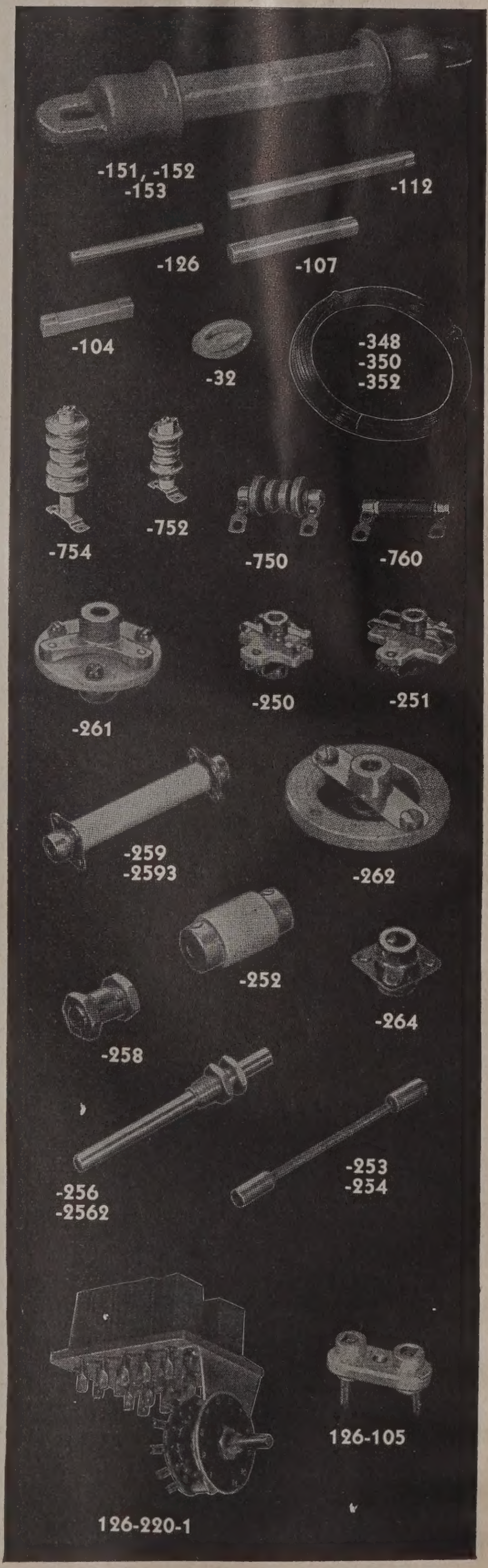
MULTIPLE CRYSTAL SOCKETS

Crystal socket accommodates up to ten FT-243 holders (pin spacing .486"). Base is mica filled phenolic; contacts are brass, cadmium plated, accept pins .400" long, .093" dia.

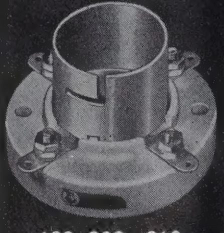
Cat. No. 126-120-1 (Board Only)........................**Net Price $2.00**

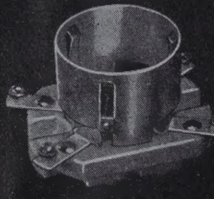
Crystal selector assembly: socket, bracket, 11 position switchand index plate.

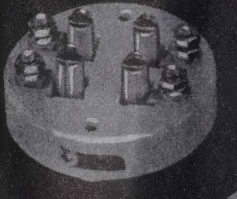
Cat. No. 126-220-1 (Crystal Selector)........................**Net Price $3.80**

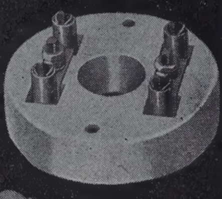


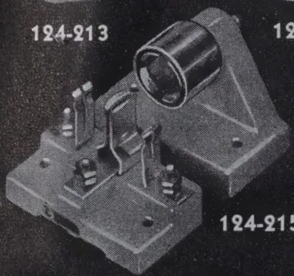
TUBE


123,-209, -210, -211, -216


123-206


124-213

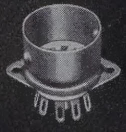

124-214


124-215

120-267

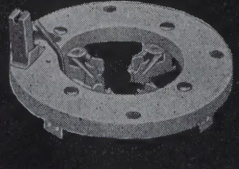
120-277B

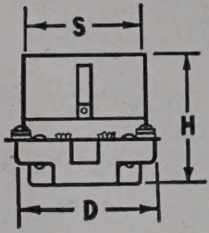
133-278


120-199

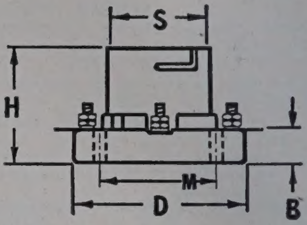
120-177

133-278-10


122-234



123-206



123-209, -210, -211, -216

No. 123-206 industrial bayonet socket with rugged metal shell for extremely high voltage applications. Will accommodate 8008, 5C22, FG104, GL146 and other tubes with similar bases. Has steatite insulation, silver plated beryllium copper contacts, screw terminals and three heavy springs in shell insure tube being held securely in place. No. -209 has 4 mtg. holes, -206, -210, -211, -216 have 2. Nos. -209, -210, -211 and -216 all have heavy phosphor bronze, side wiping type contacts, metal shells and white, glazed porcelain bases. No. -209 is similar to No. -210, but provides greater spacing between contacts and shell, for higher voltages.
No. 211, the standard "50-watt" socket, has double filament contacts for carrying heavy currents. No. -216 is for tubes having a GIANT 5-pin bayonet base such as the 803, RK28, etc. Suffix letters "SB" indicate beryllium copper contacts and steatite bases.

Cat. No.	Net Price	D	H	M	S	Pins	Tube Base
123-206	**$1.96**	$2\frac{5}{8}$x$3\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{3}{4}$	2.250	4	Super Jumbo
123-209	**.98**	$2\frac{13}{16}$	$1\frac{27}{32}$	$2\frac{5}{16}$	1.386	4	Med. Bay.
123-209SB	**1.64**	$2\frac{13}{16}$	$1\frac{27}{32}$	$2\frac{5}{16}$	1.386	4	Med. Bay.
113-210	**.98**	$2\frac{1}{2}$	$1\frac{7}{8}$	$2\frac{1}{16}$	1.386	4	Med. Bay.
123-211	**1.21**	$3\frac{3}{8}$	$2\frac{9}{32}$	$2\frac{13}{16}$	1.886	4	Stand. Jumbo
123-211SB	**2.29**	$3\frac{3}{8}$	$2\frac{9}{32}$	$2\frac{13}{16}$	1.886	4	Stand. Jumbo
123-216	**1.96**	$3\frac{3}{4}$	$2\frac{7}{16}$	$3\frac{1}{8}$	2.198	5	Giant Bay.
123-216SB	**3.37**	$3\frac{3}{4}$	$2\frac{7}{16}$	$3\frac{1}{8}$	2.198	5	Giant Bay.

No. -213 takes Eimac 152TL and 304TL. Contacts for either series or parallel filaments.
No. -214 takes Eimac 1500TH.
No. -215 is for "250 watt" tubes such as 204A, 849, etc.
The plate terminal has a "safety cup" which prevents accidental dislodgement.

Cat. No.	Base	Net Price
124-213	"Eimac"	**$1.31**
124-214	"Eimac"	**1.80**
124-215	"250 Watt"	**2.78**

MINIATURE SOCKETS

Sockets Steatite insulated, with phosphor bronze contacts.

Cat. No.		Net Price
120-267	Miniature socket, all ceramic	**$0.33**
120-277B	Miniature socket with shield base	**.49**
133-277S	Miniature shield base only	**.10**

JAN MINIATURE SOCKETS

Top mounting, saddle type sockets per JAN spec. S-28A. One piece ceramic insulator grade L-4B or better, top glazed, DC 200 impregnated. Brass shell and center shield nickel plated to withstand salt spray test. Contacts beryllium copper, silver plated. Terminals hot tin dipped. Mounting centers ⅞" on 7 prong type; 1⅛" on 9 prong type.

Cat. No.	Military Designation	Type	Net Price
120-177	TS102CO1	7 prong	**$0.59**
120-199	TS103CO1	9 prong	**.79**

MINIATURE SHIELDS

Brass, nickel plated to meet JAN specs.

Cat. No.	Military Designation	Fits Socket	Length	Net Price
133-278-6	TS102UO1	177, 277	$1\frac{3}{8}$"	**$0.14**
133-278-7	TS102UO2	177, 277	$1\frac{3}{4}$"	**.16**
133-278-8	TS102UO3	177, 277	$2\frac{1}{4}$"	**.20**
133-278-9	TS103UO1	199	$1\frac{1}{2}$"	**.20**
133-278-10	TS103UO2	199	$1\frac{15}{16}$"	**.23**
133-278-11	TS103UO3	199	$2\frac{3}{8}$"	**.26**

FOR 5D21, 705A AND 715A & B

No. -234 for Western Electric 5D21, 705A, 715A, 715B includes heavy steatite base and special locking device for retaining tube in socket.

Cat. No.	Net Price
122-234	**$1.96**

SOCKETS

WAFER SOCKETS

JOHNSON wafer sockets are insulated with grade L 4 steatite or better, top and sides glazed, underside impregnated in conformance with latest Army Navy specifications. Contacts are brass with steel spring, cadmium plated and are mounted against phenolic washers in molded recesses to prevent movement. Rivets are countersunk and mounting holes bossed to permit sub-panel mounting. Locating grooves facilitate tube insertion.

Cat. No.		Net Price
122-217	7-pin small	$0.49
122-224	4-pin	.39
122-225	5-pin	.42
122-226	6-pin	.46
122-227	7-pin med.	.49
122-228	Octal	.52

7 PIN WITH BUILT-IN BASE SHIELD

The 122-101 is a 7-pin steatite wafer socket incorporating ventilated base shield, five tube retainer springs and provision for mounting button mica capacitors directly to the socket. Socket is specially designed for UHF use with tubes such as the 826, 829 832, 4D32 and 4D22. Contacts silver plated and recessed to prevent movement. Special terminals permit direct mounting of grid coils. Two holes provided for mounting of buss bar neutralizing leads. .185" mounting holes on 2 5/16" square.

Cat. No.	Net Price
122-101	$1.96

GIANT 7 PIN

No. -237 is a 7-pin large steatite wafer socket for transmitting tubes having a GIANT 7-pin base such as the 4E27A, HK257 and RCA 813. ¾" ventilating hole in base. .174" mounting holes on 1⅞" square.

Cat. No.	Net Price
122-237	$0.72

7 PIN AND BASE SHIELD

No. -247 is a 7-pin steatite wafer socket for transmitting tubes such as the 826. It is furnished with etched aluminum base shield. .174" mounting holes on 1⅞" square.

Cat. No.	Net Price
122-247—Ceramic base 2⅝" square	$0.82
122-248—Same as -247 above except 2⅜" square	.86

SUPER JUMBO 4 PIN

The 122-244 is a 4-pin wafer socket of Steatite insulation, for transmitting tubes having a Super Jumbo base such as the 8008. Brass clip contacts and reinforcing steel springs are cadmium-plated and designed for high currents. .174" mounting holes on 1⅞" square.

Cat. No.	Net Price
122-244	$1.31

FOR 833 AND 833A

The No. -212 socket for RCA833 or 833A. Base of Steatite. Filament clamps incorporate "springs" which minimize strains on the glass tube seals and prevent breakage. Heat radiating plate terminals have 4⅜" flexible laminated leads.

Cat. No.	Net Price
124-212	$6.55

GIANT 5 PIN

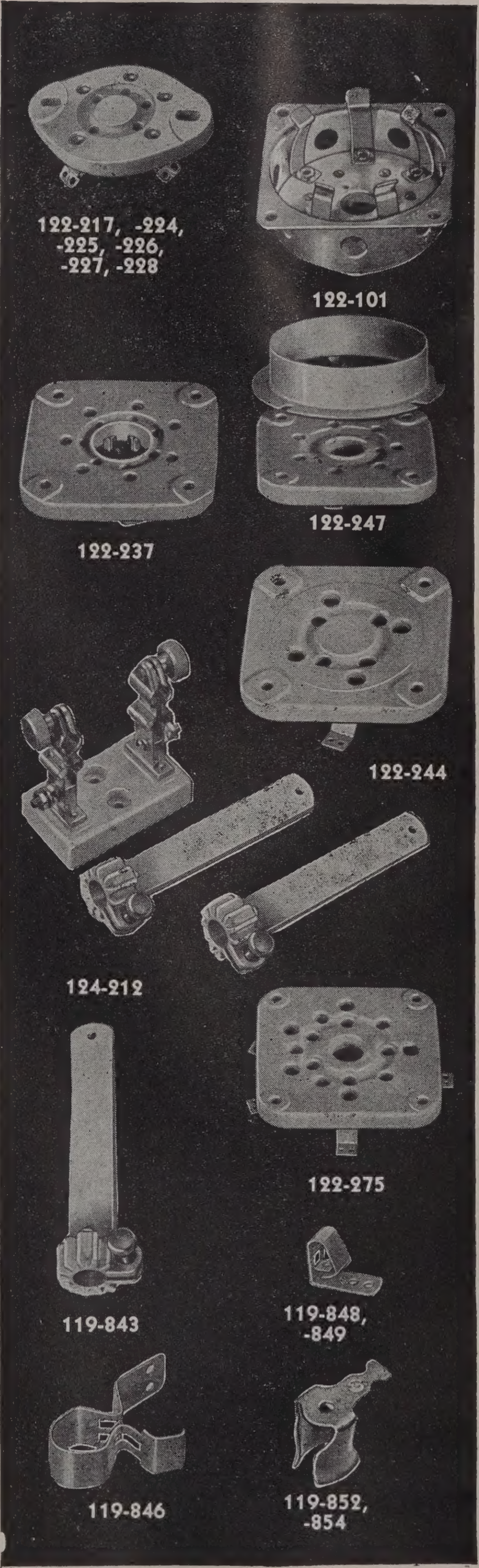
The 122-275 is a 5-pin steatite wafer socket for transmitting tubes having a GIANT 5-pin base such as the 4-125A and RK48. Contacts are designed for high currents. Adequate ventilation for tubes is provided by a central hole and five holes between contacts. .190" mounting holes on 2¼" square.

Cat. No.	Net Price
122-275	$1.15

TUBE CAP CONNECTORS

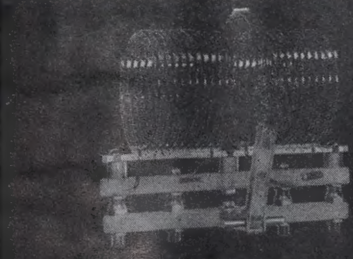
The 119-843 is a part of the 124-212 socket. Types 119-846 to 119-849 are silver-plated beryllium copper plated for permanent low resistance contact. 119-852 and -854 are of phosphor bronze, cadmium plated with high spring tension.

Cat. No.	Tube Cap. Dia.	Net Price
119-843	.567"	$ .98
119-846	.125"	.23
119-848	.070"	10.45/c
119-849	.048"	7.85/c
119-852	.360"	3.90/c
119-854	.566"	7.85/c

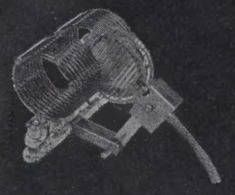


Net

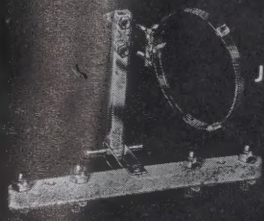
E. F. JOHNSON Company WASECA, MINNESOTA



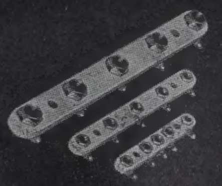
INDUCTOR 1000 HCS 40
LINK 1000 SL5



INDUCTOR
500 LCS 40
WITH LINK
& FARADAY
SHIELD

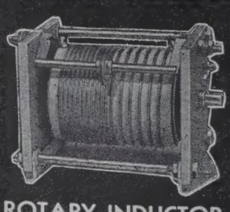


JACK BAR 1000 JBS
WITH 1000 SLA
ARM ASSEMBLY
& 1000 SL5 LINK



JACK BARS
1000 JBS, 500 JBS,
150 JBS

EDGEWISE WOUND
"HI-Q" INDUCTOR



ROTARY INDUCTOR

-804

-860

JOHNSON AIR WOUND INDUCTORS

Swinging link inductors for amateur bands 160 thru 6 meters; 150, 500 and 1000 watt sizes. Two inductance values for each band permits choice of appropriate L/C ratio dictated by amplifier plate voltage and plate current. Polystyrene insulation, Steatite bases and heavier wire sizes insure highest efficiency. HCS—Inductors match high voltage, low current tubes. LCS—Inductors match low voltage, high current tubes.

SWINGING LINK INDUCTORS

1,000 watts

Cat. No.	Type No.	Net Price	Wire Size	Cap.*mmfds.	Height	Width
238-106	1000HCS160	$7.50	10	99	5 11/16"	4 13/32"
238-107	1000LCS160	7.50	10	140	5 11/16"	4 13/32"
238-101	1000HCS80	6.70	10	46	5"	3 23/32"
238-102	1000LCS80	6.70	10	73	5"	3 23/32"
238-103	1000HCS40	6.05	10	24	5"	3 23/32"
238-104	1000LCS40	6.05	8	55	5"	3 3/4"
238-105	1000HCS20	5.55	8	19	4 7/8"	3 3/4"
238-111	1000LCS20	5.55	.250"	26	5 1/8"	4"
238-112	1000H/LCS14	5.20	.250"	19	4 7/8"	3 1/2"
238-113	1000H/LCS10	4.90	.250"	18	4 7/8"	3 1/2"
			500 watts			
238-125	500HCS160	3.75	14	100	4 7/32"	3 1/8"
238-126	500LCS160	3.75	14	148	4 7/32"	3 1/8"
238-121	500HCS80	3.45	14	45	3 23/32"	2 5/8"
238-122	500LCS80	3.45	12	76	3 3/4"	2 21/32"
238-123	500HCS40	3.15	12	27	3 3/4"	2 21/32"
238-124	500LCS40	3.15	10	50	3 25/32"	2 23/32"
238-131	500HCS20	2.70	6	25	3 13/16"	2 13/16"
238-132	500LCS20	2.70	6	37	3 13/16"	2 13/16"
238-133	500H/LCS14	2.25	6	19	3 11/16"	2 9/16"
238-134	500H/LCS10	2.10	6	19	3 9/16"	2 5/16"
238-135	500H/LCS6	2.10	6	18	3 9/16"	2 5/16"
			150 watts			
238-147	150HCS160	3.30	18	102	4 3/16"	3 1/16"
238-148	150LCS160	3.30	16	151	4 7/32"	3 3/32"
238-141	150HCS80	3.00	16	51	4 7/32"	2 19/32"
238-142	150LCS80	3.00	16	68	4 7/32"	2 19/32"
238-143	150HCS40	2.70	14	28	3 23/32"	2 5/8"
238-144	150LCS40	2.70	12	57	3 3/4"	2 21/32"
238-145	150HCS20	2.40	12	21	3 1/2"	2 13/32"
238-146	150LCS20	2.40	12	32	3 1/2"	2 13/32"
238-151	150H/LCS14	2.10	8	19	3 21/32"	2 1/2"
238-152	150H/LCS10	1.95	8	19	3 21/32"	2 1/2"
238-153	150H/LCS6	1.95	8	16	3 13/32"	2"

*Total circuit capacity required to effect resonance at low frequency end of band.

Actual condenser capacity will be smaller by the sum of the tube output and wiring capacities, generally between 5 and 20 mmfd. Height measured from the bottom of the plug bar. Width is O.D. of winding.

PLUG-IN SWINGING LINKS

Plug-in links originated by JOHNSON. Select the link to match your line, coupler or output filter for optimum power transfer.

Cat. No.	Type No.	No. Turns	Net Price	Cat. No.	Type No.	No. Turns	Net Price
238-181	150/500SL12	12	$1.80	238-191	1000SL 10	10	$1.86
238-182	150/500SL5	5	1.14	238-192	1000SL5	5	1.44
238-183	150/500SL2	2	.96	238-193	100SL2	2	1.08

SWINGING LINK ARM ASSEMBLIES

238-179 **150/500SLA**—Arm assembly for 150/500 watt inductors.....**Net $1.11**
238-180 **1000SLA**—Arm assembly for 1000 watt inductors............**Net 1.37**

JACK BAR ASSEMBLIES

238-171 **150JBS**—150 watt 3¾" x 9/16" x ⅜"........................**Net .87**
238-172 **500JBS**—500 watt 5¾" x ⅝" x ⅜"........................**Net 1.20**
238-173 **1000JBS**—1000 watt 7½" x ⅞" x ½"........................**Net 1.80**

JOHNSON FARADAY SHIELD

Faraday shields to minimize capacitively coupled spurious output. Designed for JOHNSON plug-in links, equally effective and readily installed on other links including non-plug-in types. Screen is copper plating on polystyrene. Grounded hood and copper braid complete shielding.

238-303 150/500 watt swinging link shield, hood and lead assembly...**Net $2.45**
238-304 1000 watt swinging link shield, hood and lead assembly .....**Net 2.75**
238-301 150/500 watt link shield only..............................**Net 1.05**
238-302 1000 watt link shield only ....**Net 1.35**

(Link, coil, jack bar and arm not included.)

EDGEWISE WOUND "HI-Q" INDUCTORS

Edgewise wound, ¼" copper strip, bright alloy plated, Mycalex supporting bars. Widely used commercially, they will safely handle more than 1000 watts in continuous service. Write for information on other types for industrial and broadcast applications.

Cat. No.	Net Price	Inductance micro H	Winding L x ID
232-610	$7.60	31	7 13/16" x 2½"
232-620	9.85	84	8 5/16" x 4"
232-622	7.70	41	6 7/16" x 3¼"
232-624	5.95	20	6" x 3¼"
232-626	5.05	10	4¾" x 2½"

ROTARY INDUCTOR

Same efficient inductor used in final tank of the VIKING I. May be used in any low and medium power transmitter with bandswitching exciter to provide continuous tuning throughout the range 3.5 to 30.0 mcs. without changing coils. Variable pitch winding of No. 14 tinned copper wire. Maximum inductance 10 microhenries. Form and end plates Steatite. Positive rolling contact assured by beryllium copper tension springs. Overall size: 2½" wide x 4½" long x 3" high. Supplied with typical tuning curves.

Cat. No. 229-201.......................................**Net Price $8.85**

INDUCTOR CLIPS

Clip No. 235-804 is plated phosphor bronze and is designed for making connections to edgewise wound inductors. No. 235-860 will admit wire from No. 20 to No. 10 without moving and shorting adjacent turns.

Cat. No. 235-804.......................................**Net Price $.20**
Cat. No. 235-860.......................................**Net Price .10**

E. F. JOHNSON Company

WASECA, MINNESOTA

KEYS, PRACTICE SETS, BUZZERS

STANDARD SEMI-AUTOMATIC KEYS

Improved standard model mounted on heavy steel base 6¼" x 3½" x ½". Four rubber feet insure stationary position while operating. Five adjustments with lock nuts assure dependable operation at all speeds. Smooth, easy action, adjustable from lowest to highest speeds. Vibrator arm, posts, circuit closing switch, and all machine parts heavily chrome plated for permanent finish. Heavy brass connector strips under base insure low resistance circuit. Two black fiber paddles can be adjusted separately to best height. Vibrator bearings are perfectly aligned and free-acting. Complete with circuit-closing switch and adjustable weight.

Cat. No.		Net Price
114-500	—⅛" contacts, black wrinkle base	**$13.50**
114-501	—¼" contacts, polished chrone base	**19.20**
114-501L	—Same as 114-501 except left handed	**21.00**

AMATEUR SPECIAL MODEL SEMI-AUTOMATIC KEY

Sturdy steel base 6¼" x 3" x ⅜", attractively finished with black wrinkle enamel. Four rubber feet prevent slipping or tilting. Vibrator and all hardware heavily chrome plated. Two adjustable weights. Contacts are ⅛" coin silver. Adjustments have lock nuts to assure stable operation. No circuit closing switch.

Cat. No.		Net Price
114-515	—Amateur model, semi-automatic	**$9.60**

AMATEUR SEMI-AUTOMATIC KEY WITH SWITCH

For those who prefer a compact, light model. Has circuit closing switch. Base is die cast, 6" x 2¾" x ¾". Base and frame attractively finished in black wrinkle enamel. Vibrator arm is the same as on the Standard model, with the same smooth, easy action. Fully adjustable from eight words per minute to as high a rate as desired. ⅛" coin silver contacts. An outstanding value.

Cat. No.		Net Price
114-510	—Amateur model, with switch	**$10.50**

HEAVY DUTY KEYS

Heavy die cast base, chrome plated key arm, heavy brass connector strips under base Well insulated for heavy duty service. Large ¼" coin silver contacts. Improved Navy type knob. Adjustable steel bearings and well designed spring give a light keying touch. The finest hand key money can buy.

Cat. No.		Net Price
114-320	—Black wrinkle enamel base	**$3.60**
114-321	—Polished chrome plated base	**5.10**

STANDARD KEYS

Heavy die cast base. Smooth adjustable bearings. Provision for plugging in semi-automatic keys. Contacts are ⅛" coin silver. A high quality key at low cost.

Cat. No.		Net Price
114-310	—Black wrinkle, no switch	**$3.00**
114-310S	—Black wrinkle, switch	**3.25**
114-311	—Chrome plated, no switch	**4.90**
114-311S	—Chrome plated, switch	**5.15**
114-316	—Brass wrinkle, no switch	**3.00**

PHENOLIC BASE KEYS

A high quality black phenolic base key. Adjustable, smooth-acting bearings, improved spring, pigtail connection, ⅛" coin silver contacts. All metal parts heavily nickel plated.

Cat. No.		Net Price
114-301	—No circuit-closing switch	**$1.95**

PRACTICE KEYS

Inexpensive practice keys for beginners. All metal parts except base nickel plated. Adjustable key arm spring, smooth action bearings, ⅛" coin silver contacts.

Cat. No.		Net Price
114-300	—Molded brown phenolic base	**$1.45**

PRACTICE SET

Constant frequency buzzer and key on a 4" x 6" molded brown Bakelite base. May be used singly or in pairs for code practice.

Cat. No.		Net Price
114-450	—Practice set	**$3.60**

CORD AND WEDGE FOR SEMI-AUTOMATIC KEYS

Cord and wedge for quick, easy attachment of semi-automatic key across the circuit-closing switch of a standard hand key. Used almost universally by railroad telegraphers, it is also ideal for amateur service where both hand key and semi-automatic are used.

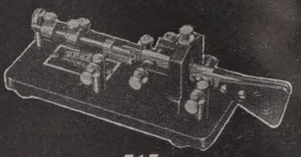
Cat. No.		Net Price
114-380	—Cord and wedge	**$ .90**

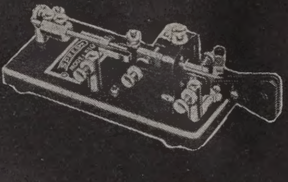
CONSTANT FREQUENCY BUZZER

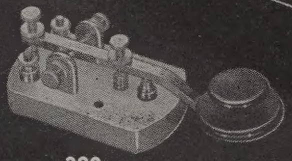
Molded black Bakelite base and cap. Fully adjustable, holds constant frequency. Coin silver contacts. Uses 2 dry cells or "C" battery.

Cat. No.		Net Price
114-400	—Constant frequency buzzer	**$1.35**

-500, -501

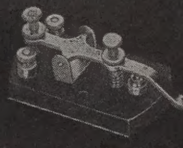

-515


-510


-320, -321

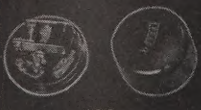
-310, -311

-301


-300, -306

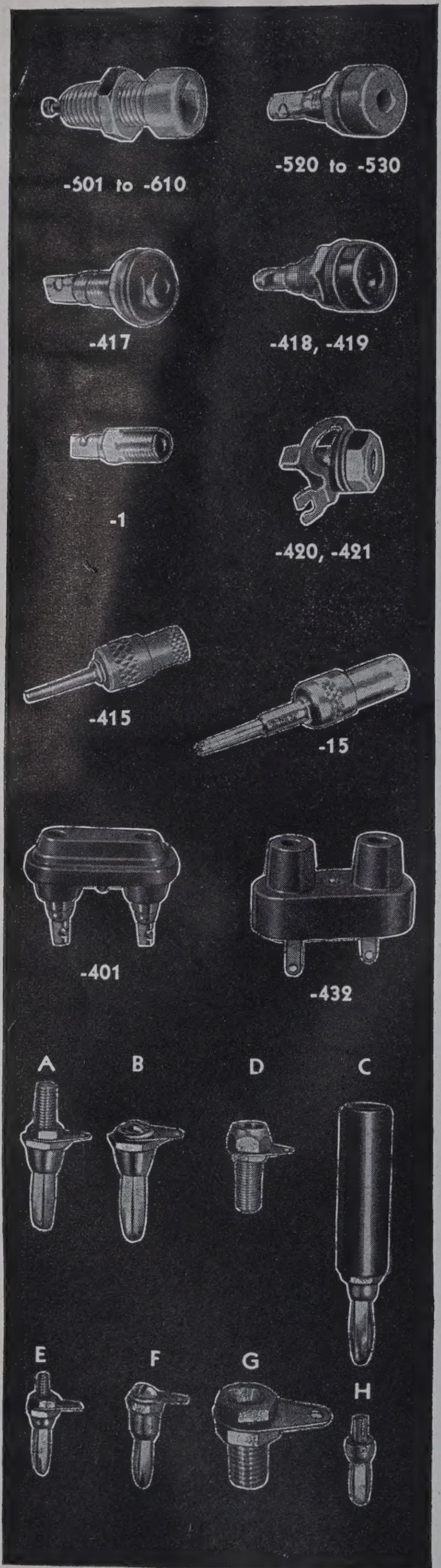
-450

-380


-400

Net

E. F. JOHNSON Company WASECA, MINNESOTA



PLUGS AND JACKS

NYLON TIP JACKS

Completely insulated jack, body molded from low-loss Nylon. Contact recessed for maximum voltage breakdown and safety. Low capacity to panel. One piece phosphor bronze or beryllium copper silver plated contact for .081" diameter pins with integral solder terminal. Threaded 1/4 – 32, jack mounts with single nut. Overall dimensions; diameter 3/8", length 29/32".

B. C. Cont. Cat. No.	P. B. Cont. Cat. No.	Net Price	Color
105-601-1	105-601-2		White
105-602-1	105-602-2	$0.30	Red
105-603-1	105-603-2	with	Black
105-604-1	105-604-2	beryllium-	Dk. Green
105-605-1	105-605-2	copper	Light Blue
105-606-1	105-606-2	contacts;	Orange
105-607-1	105-607-2		Yellow
105-608-1	105-608-2	$0.27	Brown
105-609-1	105-609-2	with	Lt. Green
105-610-1	105-610-2	phosphor-	Dark Blue
105-611-1	105-611-2	bronze	Ivory

PLASTIC HEAD TIP JACKS

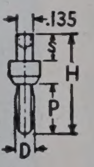
Plastic heads in choice of colors listed. Supplied with fibre shoulder bushing and nickel-plated hex nut. Standard finish is nickel plate on body. Mounts in 3/8" hole. Maximum panel thickness 5/32" where insulating washers are used, 1/4" where omitted. 1/4"-32 thread.

Cat. No.	Net	Color	Cat. No.	Net	Color
105-520	$0.13	Red	105-526	$0.13	Orange
105-521	.13	Black	105-527	.13	Yellow
105-522	.13	Dk.Green	105-528	.13	Lt. Green
105-524	.13	Brown	105-529	.13	Dk. Blue
105-525	.13	Lt. Blue	105-530	.13	Ivory

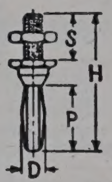
Description similar to above type except that brass body is molded integral with head, and additional phenolic washer is furnished. 5/16"-40 thread.

Cat. No.		Net Price
105-418	Red	$0.20
105-419	Black	0.20

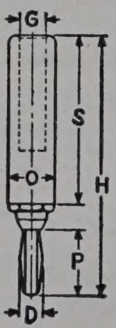
H

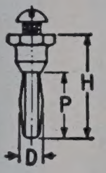


A, E

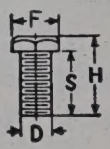


C





B, F



D

ALL METAL TIP JACKS

SMALL HEX HEAD

1/4"-32 thread. Supplied with fibre bushing to fit 3/8" panel hole. 11/32" maximum panel thickness.

Cat. No.	Net Price
105-417	$0.10

HEADLESS TIP JACK

105-1	Body nickel plated. 1/4"-32 thread	.06

INSULATED COMBINATION JACK

Supplied with shoulder bushing, phenolic washer and one piece contact and nut. Maximum chassis thickness 1/8". Mounts in 3/8" diameter hole. Provides insulated jack for phonetip plugs and No. 75 series "banana spring" plugs.

Cat. No.	Color	Net Price
105-420	Red	$0.20
105-421	Black	0.20

LONG SOLDERLESS TIP PLUG. For use with all tip jacks including 105-16 and 105-420.

Cat. No.		Net Price
105-15		$0.13
105-14	Sharpened point	.14

SHORT SOLDERLESS TIP PLUG. For use with all tip jacks except 105-16, -420 and -421.

Cat. No.	Net Price
105-415	$0.12

TWIN TIP JACKS

Twin jacks spaced 7/8". Single hole mounting. Molded black phenolic body.

Cat. No.	Marking	Net Price
105-401	Blank	$0.39
105-4012	Speaker	.39
105-4015	Phono	.39

SHORTING TYPE TWIN TIP JACKS

Circuit closes automatically when tips are removed. Jacks spaced 7/8". Single hole mounting. Molded black or red phenolic body.

Cat. No.	Color	Net Price
105-432	Black	$0.39
105-433	Red	.39

"BANANA SPRING" TYPE

Nickel-silver springs and high grade nickel plated brass screw machine parts with accurate threads and milled nuts. Studs extend full length of springs for added support.

75D is designed for riveting. Spring is beryllium copper.

75BB has 1 3/8" black plastic handle; 75BR same but red.

77BB has 1 3/4" black plastic handle; 77BR same but red.

75 or 75A can be furnished with beryllium copper spring on special order, and all plugs can be furnished with nickel, cadmium or silver plating if required.

108-7451 is a jack similar to the 108-74 with a red plastic insulated head and furnished with fibre washers. 108-7452 same but black.

Cat. No. Plugs	Net Price	Illus. Dwg.	S	P	D	H	G	O	Thread
108-75	$0.08	A	3/8	17/32	.175	1 1/8	....	....	6-32
108-75A	.09	A	3/4	17/32	.175	1 1/2	....	....	6-32
108-75BB	.26	C	1 3/8	17/32	.175	2 1/8	.215	7/16	....
108-75BR	.26	C	1 3/8	17/32	.175	2 1/8	.215	7/16	....
108-75C	.09	B	....	17/32	.175	15/16	....	....	6-32
108-75D	.06	E	7/32	13/32	.155	13/16	....	....	....
108-77	.20	A	5/8	3/4	.300	1 25/32	....	....	1/4-28
108-77A	.23	B	5/8	3/4	.300	1 1/8	....	....	10-32
108-77BB	.33	C	1 3/4	3/4	.300	2 25/32	3/8	5/8	....
108-77BR	.33	C	1 3/4	3/4	.300	2 25/32	3/8	5/8	....
Jacks			F	D	S	H	B		Thread
108-74	.07	D	3/8	1/4	17/32	5/8	.166	....	1/4-28
108-7451	.16	....	7/16	1/4	1/2	21/32	.166	....	1/4-28
108-7452	.16	....	7/16	1/4	1/2	21/32	.166	....	1/4-28
108-76	.23	D	9/16	3/8	15/16	1 9/32	.277	....	3/8-24

E. F. JOHNSON Company WASECA, MINNESOTA

JOHNSON KNOBS AND DIALS

A distinctive line of matching knobs and dials suitable for the finest electronic equipment. All types are derived from a new basic knob design, the first in years. Knobs have twelve well defined flutes and present an essentially round appearance.

Tough, scratch resistant black phenolic is used for all molded parts. Metal dial scales have an etched satin chrome finish. This contrasts greatly with deeply etched and filled engraving, provides maximum legibility under poor lighting conditions. All types have accurately centered brass inserts for ¼" shafts.

In addition to the items listed, JOHNSON is prepared to supply variations (in production quantities) such as; special shaft sizes, scales, set screws or indicators.

Cat. No.	Illus.	Description	Net Price
		KNOBS	
116-220	1	Knob, 1⅛" dia., black phenolic	$ .29
116-260	1	Knob, 1⅝" dia., black phenolic	.39
116-280	1	Knob, 2⅜" dia., black phenolic	.59
		SKIRTED KNOBS	
116-221	2	Knob, 1⅛" dia. with 1½" black phenolic skirt	$ .46
116-261	2	Knob, 1⅝" dia. with 2x1/16" black phenolic skirt	.62
116-281	2	Knob, 2⅜" dia. with 3" black phenolic skirt	.82
		DIALS	
116-222	3	Dial 1½" bevelled satin chrome scale with 1⅛" knob. Scales as follows:	
		116-222-1 100-0 over 180 degrees	$.56
		116-222-2 0-10 over 270 degrees	.56
		116-222-3 1 — 7 over 180 degrees	.56
		116-222-4 ON — OFF over 60 degrees	.56
		116-222-5 Single line	.56
116-262	5	Dial, 2¾" satin chrome scale with single line indicator 0 — 100 over 180 degrees	$1.15
116-282	5	Dial, 4" satin chrome scale with single line indicator. 0 — 100 over 180 degrees	1.64
116-290	5	Dial, 4" satin chrome scale with single line indicator. 100 — 0 over 360 degrees	1.64
		VERNIER DIALS	
116-265	6	Dial, 2¾" satin chrome scale 0 — 100 over 180 degrees with 3 to 1 friction vernier drive and single line indicator	$3.00
116-285	6	Dial, 4" chrome scale 0 — 100 over 180 degrees with 5 to 1 friction vernier drive and single line indicator	$3.60
116-288	6	Dial, 4" satin chrome scale 100 — 0 over 360 degrees with 5 to 1 friction vernier drive and single line indicator	$3.60
		SPINNER KNOBS	
		For multi-turn devices such as variable inductors, potentiometers etc.	
116-226	4	Spinner knob 1⅛" black phenolic	$ .56
116-266	4	Spinner knob 1⅝" black phenolic	.62
116-286	4	Spinner knob 2⅜" black phenolic	.82

COUNTER DIAL

A positively calibrated drive for rotary variable inductors and other multi-turn devices. Counter records up to 99 turns. Vernier dial calibrated 0-100 over 360 degrees, making possible accurate return to any pre-determined setting. Built-in dial lock, "spinner knob" and attractive black phenolic escutcheon. Furnished with mounting template for easy installation.

Cat. No.		Net Price
116-208-1	Counter dial with dial lock, escutcheon and 2⅜" spinner knob	$11.10
116-208-4	Same as above without dial lock	9.80

INSTRUMENT KNOB

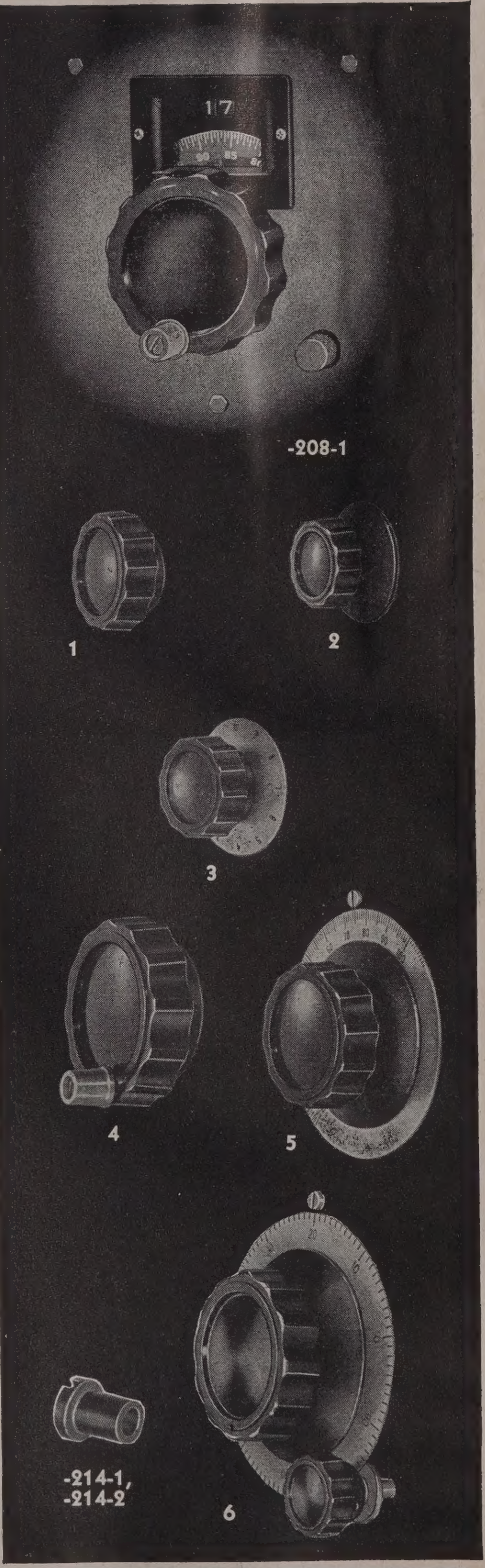
Unique black phenolic knob may be finger operated or mounted so as to project thru panel and screwdriver actuated. Length 13/16", skirt diameter ¾" main body diameter ½". Equipped with set screw.

Cat. No.	Net Price
116-214-1—for ¼" shaft	$ .33
116-214-2—for 3/16" shaft	.33

ESCUTCHEON PLATE

Attractive black phenolic escutcheon shown on 116-208-1 counter dial. Provides neat "window" for back-of-panel dial plate mounting. One edge of escutcheon suitable for attaching standard ⅜" wide etched name plate. Opening 1¼" wide x ⅞" high. Overall size 2¼" x 1 11/16". Furnished with No. 2 screws.

Cat. No.		Net Price
116-201	Escutcheon plate	$ .65



E. F. JOHNSON Company WASECA, MINNESOTA

PILOT LIGHTS

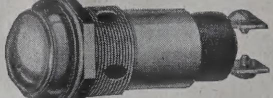
JOHNSON Pilot Lights are built to exacting standards from the finest appropriate materials. The listings on these pages include only those standard units in greatest demand. Many other types and variations from standards including those meeting military specifications are available in production quantities.

Standard finish for jewel holder bezels is polished chrome except for ½" and ⅜" sizes which are finished in nickel. Black oxide finish is frequently supplied to meet special requirements.

In addition to smooth and faceted types, one inch jewels can be furnished with colored, plastic backing discs which impart color to the clear inside frosted jewel only when the lamp is lighted. This prevents external light from giving false indication of illumination. Where required, lettering, numerals or insignia can be printed on the backing disc and arranged to be visible either continuously or only after lamp is lit.

Standard jewel colors are clear, red, green, amber, blue and opal. Be certain to specify jewel color on all orders.

ENCLOSED 1" LIGHT



Underwriters' Laboratories approved. One inch friction type jewel holder, bezel chrome plated brass. Lamp replaceable from front of panel. Mounting hole required 1". Porcelain insulated candelabra screw socket with solder terminals.

Cat. No.	Net Price	Length Behind Panel	Bulb Shape	Jewel
147-1000	$.92	2½"	S-6	Faceted
147-1001	.92	2½"	S-6	Smooth
147-1002	.98	2½"	S-6	Colored Disc
147-1003	.92	2 3/16"	T 4½, NE45	Faceted
147-1004	.92	2 3/16"	T 4½, NE45	Smooth
147-1005	.98	2 3/16"	T 4½, NE45	Colored Disc

The following assemblies are identical except socket bases are phenolic and equipped with screw terminals.

Cat. No.	Net Price	Length Behind Panel	Bulb Shape	Jewel
147-1032	$1.08	2¾"	S-6	Faceted
147-1033	1.08	2¾"	S-6	Smooth
147-1034	1.15	2¾"	S-6	Colored Disc
147-1035	1.08	2 7/16"	T 4½, NE45	Faceted
147-1036	1.08	2 7/16"	T 4½, NE45	Smooth
147-1037	1.15	2 7/16"	T 4½, NE45	Colored Disc

ENCLOSED 1" LIGHTS WITH BAYONET SOCKETS

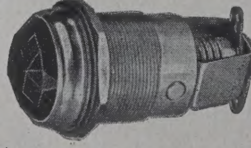
SEE ILLUSTRATION ABOVE

One inch friction type jewel holder, lamp replaceable from front of panel. Hard rubber insulation, screw terminals. All are Underwriters' Laboratories approved except 147-1050, -1051 and -1052 which have single contact bayonet sockets. Mounting hole 1".

Cat. No.	Net Price	Length Behind Panel	Bulb Shape	Lamp Base	Jewel
147-1050	$1.15	2½"	G-6	SC Bayonet	Faceted
147-1051	1.15	2½"	G-6	SC Bayonet	Smooth
147-1052	1.21	2½"	G-6	SC Bayonet	Colored Disc
147-1053	1.15	2½"	G-6	DC Bayonet	Faceted
147-1054	1.15	2½"	G-6	DC Bayonet	Smooth
147-1055	1.21	2½"	G-6	DC Bayonet	Colored Disc
147-1056	1.15	2⅝"	G-6, NE48	DC Bayonet	Faceted
147-1057	1.15	2⅝"	G-6, NE48	DC Bayonet	Smooth
147-1058	1.21	2⅝"	G-6, NE48	DC Bayonet	Colored Disc
147-1076	1.31	2⅝"	G-6, NE48	DC Bayonet*	Faceted
147-1077	1.31	2⅝"	G-6, NE48	DC Bayonet*	Smooth
147-1078	1.38	2⅝"	G-6, NE48	DC Bayonet*	Colored Disc

*Has 30,000 ohm series resistor built in for NE48.

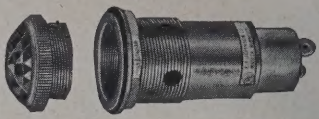
DETACHABLE SOCKET 1" LIGHTS



Economy 1" pilot light. Chrome plated friction jewel holder. Lamp replaceable from front or rear of panel. Socket detachable from panel bushing for applications demanding removable panel. Mounting hole 1". Two solder terminals, both insulated.

Cat. No.	Net Price	Length Behind Panel	Bulb Shape	Lamp Base	Jewel
147-800	$.69	1 11/16"	G 3½, T 3¼	Min. Screw	Faceted
147-801	.69	1 11/16"	G 3½, T 3¼	Min. Screw	Smooth
147-802	.72	2 3/16"	T 4½	Cand. Screw	Faceted
147-803	.72	2 3/16"	T 4½	Cand. Screw	Smooth
147-804	.72	1 11/16"	G 3½, T 3¼	Min. Bay.	Faceted
147-805	.72	1 11/16"	G 3½, T 3¼	Min. Bay.	Smooth
147-808	.73	1 11/16"	G 3½, T 3¼	Min. Bay.	Colored Disc

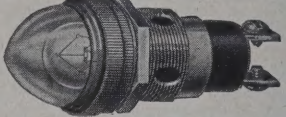
1" THREADED JEWEL HOLDER TYPES



Enclosed 1" light assemblies with candelabra screw bases; phenolic insulated sockets. Underwriters' Laboratories approved. Knurled brass, threaded jewel holder polished chrome plated. Mounting hole size 1".

Cat. No.	Net Price	Length Behind Panel	Bulb Shape	Jewel	Terminals
147-1200	$1.08	2 9/16"	S-6	Faceted	Solder
147-1201	1.08	2 9/16"	S-6	Smooth	Solder
147-1202	1.15	2 9/16"	S-6	Colored Disc	Solder
147-1209	1.25	2¾"	S-6	Faceted	Screw
147-1210	1.25	2¾"	S-6	Smooth	Screw
147-1211	1.31	2¾"	S-6	Colored Disc	Screw
147-1212	1.25	2 7/16"	T4½, NE45	Faceted	Screw
147-1213	1.25	2 7/16"	T4½, NE45	Smooth	Screw
147-1214	1.31	2 7/16"	T4½, NE45	Colored Disc	Screw

WIDE ANGLE LENS TYPES



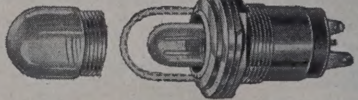
Good visibility from extremely wide angles. Lamp extends well into the internally ribbed, 1⅛" glass bullseye jewel providing diffused light of good intensity. Chrome plated brass bezel; phenolic or hard rubber insulated socket with screw terminals. Mounting hole 1". 147-1600 and 147-1605 Underwriters' Laboratories approved.

Cat. No.	Net Price	Length Behind Panel	Bulb Shape	Lamp Base
147-1600	$1.31	2⅛"	S 6	Cand. Screw
147-1604	1.31	1 13/16"	G 6	SC Cand. Bay.
147-1605	1.31	1 13/16"	G 6	DC Cand. Bay.

WIDE ANGLE LUCITE LENS TYPES

For applications utilizing low powered light sources yet requiring good visibility. Designed for neon or low powered incandescent lamps. While jewels are furnished in all standard colors, only red, amber or clear are recommended for neon lamps. Underwriters' Laboratories approved.

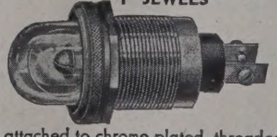
⅝" JEWELS



The three types listed below have ⅝" threaded Lucite jewels, mounting hole required 11/16", length behind panel 1 7/16". Single contact miniature bayonet socket, phenolic socket body, solder terminals.

Cat. No.	Net Price	Bulb Shape	Bulb	
147-1142	$.72	T 3¼	47, 49, 1490	
147-1143	.82	T 3¼	NE-51	Built in 200,000 ohm resistor
147-1144	.82	T 3¼	NE-51	Built in 100,000 ohm resistor

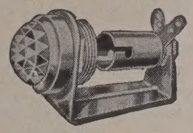
1" JEWELS



Lucite 1" jewels attached to chrome plated, threaded bezels. Hard rubber or phenolic insulation, screw terminals. Mounting hole required, 1".

Cat. No.	Net Price	Length Behind Panel	Bulb Shape	Lamp Base	Insulation
147-1217	$1.25	1 15/16"	T 4½	Cand. Screw	Phenolic
147-1218	1.05	1½	T 3¼	Min. Bayonet	Phenolic
147-1219	1.38	2 1/16"	T 4½, G6	DC Cand. Bay.	Hard Rubber
147-1220	1.48	2 1/16"	T 4½, G6	DC Cand. Bay.	Hard Rubber has 30,000 ohm resistor for NE48

1" OPEN PILOT LIGHTS



One inch friction type jewels removable from front of panel. All parts heavily plated, jewel holder polished chrome. Requires 1" mounting hole. For use on panels up to ⅜" thick.

Cat. No.	Net Price	Length Behind Panel	Bulb Shape	Base	Jewel
147-100	$.52	1½"	G 3½, T 3¼	Min. Screw	Faceted
147-101	.52	1½"	G 3½, T 3¼	Min. Screw	Smooth
147-103	.56	2¹⁄₁₆"	S-6	Cand. Screw	Faceted
147-104	.56	2¹⁄₁₆"	S-6	Cand. Screw	Smooth
147-106	.56	1½"	G 3½, T 3¼	Min. Bay.	Faceted
147-107	.56	1½"	G 3½, T 3¼	Min. Bay.	Smooth

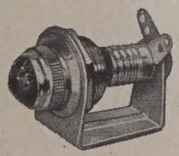
5/8" OPEN LIGHTS

SEE ILLUSTRATION ABOVE

Horizontal lamp bracket and jewel secured by single mounting nut. Mounting hole required ¹¹⁄₁₆" clearance size. For use on panels up to ⁷⁄₃₂" thick. Polished chrome jewel holder.

Cat. No.	Net Price	Length Behind Panel	Bulb Shape	Base	Jewel
147-700	$.39	1¼"	G 3½	Min. Screw	Faceted
147-701	.39	1¼"	G 3½	Min. Screw	Smooth
147-703	.43	1¼"	G 3½	Min. Bay.	Faceted
147-704	.43	1¼"	G 3½	Min. Bay.	Smooth

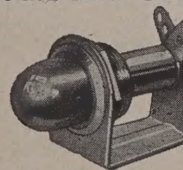
1/2" THREADED JEWEL OPEN LIGHTS



Jewel removable from front of panel. For use on panels up to ⁷⁄₃₂" thick. Nickel plated jewel holder and bracket. Mounting hole clearance for ¹¹⁄₁₆" thread.

Cat. No.	Net Price	Length Behind Panel	Bulb	Base	Jewel
147-400	$.36	1¼"	G 3½, T 3¼	Min. Screw	Faceted
147-401	.36	1¼"	G 3½, T 3¼	Min. Screw	Smooth
147-403	.39	1½"	G 3½, T 3¼	Min. Bay.	Faceted
147-404	.39	1½"	G 3½, T 3¼	Min. Bay.	Smooth

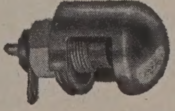
5/8" LUCITE LENS OPEN LIGHTS



For efficient utilization of low powered light sources. Wide angle visibility, low cost. May be used with neon lamps or incandescent lamps with 3 watts or less dissipation. Mounting hole ¹¹⁄₁₆", length behind panel 1¼".

Cat. No.	Net Price	Bulb	Base	
147-406	$.39	T 3¼	Min. Bay.	
147-407	.46	NE51	Min. Bay.	200,000 resistor built in
147-408	.46	NE51	Min. Bay.	100,000 resistor built in

PANEL LIGHT



For front panel illumination. Polished nickel plated hood, easily removable for lamp replacement; can be rotated to any position. Fits ½" mounting hole. Made for miniature bayonet or screw base T3¼ or G3½ bulbs.

Cat. No.		Net Price
147-330	Miniature Screw Base	$.53
147-329	Miniature Bayonet Base	.59

VERTICAL MOUNTING OPEN LIGHTS

Jewel holder and bracket heavily nickel plated. Brackets and nuts are steel, other metal parts brass.

3/8" JEWEL

Mounting Hole ⁹⁄₃₂" Clearance.

Cat. No.	Net Price	Length Behind Panel	Bulb	Base	Jewel
147-500	$.23	1¼"	G 3½	Min. Screw	Faceted
147-501	.23	1¼"	G 3½	Min. Screw	Smooth
147-503	.24	1¼"	G 3½	Min. Bay.	Faceted
147-504	.24	1¼"	G 3½	Min. Bay.	Smooth

1/2" JEWEL

Mounting Hole ⁷⁄₁₆" Clearance.

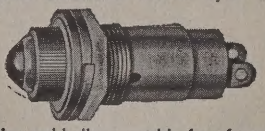
147-300	.26	1¼"	G 3½	Min. Screw	Faceted
147-301	.26	1¼"	G 3½	Min. Screw	Faceted
147-303	.29	1¼"	S-6	Cand. Screw	Faceted
147-304	.29	1¼"	S-6	Cand. Screw	Smooth
147-306	.29	1"	G 3½	Min. Bay.	Faceted
147-307	.29	1"	G 3½	Min. Bay.	Smooth

5/8" JEWEL

Mounting Hole ¹¹⁄₁₆" Jewel Holder
Polished Chrome Plated.

147-200	.39	1¼"	G 3½	Min. Screw	Faceted
147-201	.39	1¼"	G 3½	Min. Screw	Smooth
147-203	.43	1¼"	S-6	Cand. Screw	Faceted
147-204	.43	1¼"	S-6	Cand. Screw	Smooth
147-206	.43	1"	G 3½	Min. Bay.	Faceted
147-207	.43	1"	G 3½	Min. Bay.	Smooth

ENCLOSED LIGHTS WITH 1/2" JEWELS



Threaded jewel holder and bulb removable from front of panel. All brass construction heavily plated. Phenolic insulated miniature bayonet socket equipped with solder terminals. Furnished in two lengths for either T 3¼ or G 3½ bulb. Mounting hole ¹¹⁄₁₆" diameter.

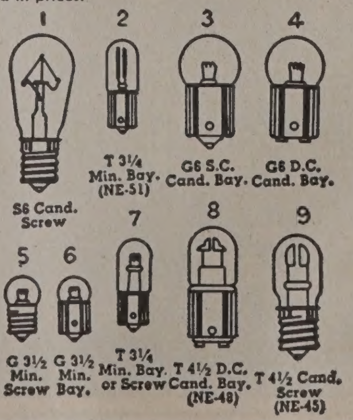
Cat. No.	Net Price	Length Behind Panel	Bulb Shape	Jewel
147-1110	$.75	1⁹⁄₁₆"	T 3¼	Faceted
147-1111	.75	1⁹⁄₁₆"	T 3¼	Smooth
147-1112	.75	1⅜"	G 3½	Faceted
147-1113	.75	1⅜"	G 3½	Smooth

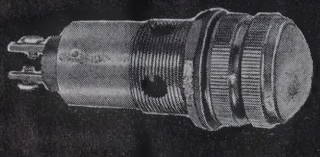
Enclosed lights with ½" friction type jewel holders. Otherwise identical to those above.

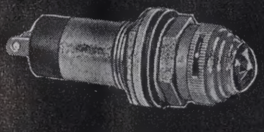
147-1122	.75	1⁹⁄₁₆"	T 3¼	Smooth
147-1124	.75	1⁹⁄₁₆"	T 3¼	Faceted

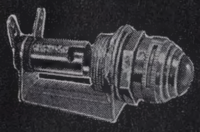
BULB SPECIFICATIONS

Bulbs used on all pilot lights may be identified from these illustrations, but are not included in prices.




1" Jewel (Illus. A)

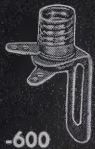

½" Jewel (Illus. B)

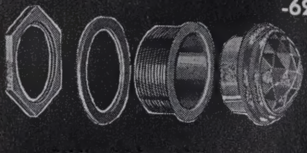

½" Jewel (Illus. C)

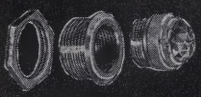
-610
-611

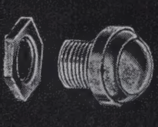
-640
-641

-630
-631


-600
-620
-601
-621


-110, -111, -112


-410, -411


-210, -211
-310, -311
-510, -511

VARIABLE INTENSITY LIGHTS

CAMERA SHUTTER TYPE. Rotation of jewel head thru a small angle will open shutter disc completely illuminating lens uniformly or will close shutter and cut off all light. A pin hole can be placed in one shutter making the jewel faintly visible in the off position. Polished chrome plated jewel holder. See similar catalog number for further data.

Cat. No.	Net Price	Illus.	Bulb Shape	Lamp Base	Jewel Dia.	Type	Similar Cat. No.
147-430	$.97	C	G3½, T3¼	Min. Bay.	½"	Faceted	147-403
147-431	.97	C	G3½, T3¼	Min. Bay.	½"	Smooth	147-404
147-1114	1.25	B	T 3¼	Min. Bay.	½"	Faceted	147-1110
147-1115	1.25	B	T 3¼	Min. Bay.	½"	Smooth	147-1111
147-1116	1.20	B	G 3½	Min. Bay.	½"	Faceted	147-1112
147-1117	1.20	B	G 3½	Min. Bay.	½"	Smooth	147-1113
147-1504	1.85	A	S-6	Cand. Screw	1"	Faceted	147-1209
147-1505	1.85	A	S-6	Cand. Screw	1"	Smooth	147-1210
147-1506	1.90	A	S-6	Cand. Screw	1"	Colored Disc	147-1211
147-1508	1.35	A	G3½, T3¼	Min. Screw	1"	Faceted	147-800*
147-1509	1.35	A	D3½, T3¼	Min. Screw	1"	Smooth	147-801*
147-1510	1.40	A	G3½, T3¼	Min. Screw	1"	Colored Disc	....
147-1511	1.35	A	G3½, T3¼	Min. Bay.	1"	Faceted	147-804*
147-1512	1.35	A	G3½, T3¼	Min. Bay.	1"	Smooth	147-805*
147-1513	1.40	A	G3½, T3¼	Min. Bay.	1"	Colored Disc	....
147-1514	1.35	A	S-6	Cand. Screw	1"	Faceted	147-802*
147-1515	1.35	A	S-6	Cand. Screw	1"	Smooth	147-803*
147-1516	1.40	A	S-6	Cand. Screw	1"	Colored Disc	....
147-1518	1.85	A	G-6	D. C. Bay.	1"	Faceted	147-1053*
147-1519	1.85	A	G-6	D. C. Bay.	1"	Smooth	147-1054*
147-1520	1.90	A	G-6	D. C. Bay.	1"	Colored Disc	147-1055*

***Shutter types have threaded jewels instead of friction holders.**

POLARIZED TYPE VARIABLE INTENSITY LIGHTS

Light passes thru two polarized discs. Rotation of jewel holder thru 90 degrees varies light from full intensity to near cut-off. Various graduations of light intensity may be obtained by varying the angle of rotation. Jewels all ½". See similar catalog numbers for further data.

Cat. No.	Net Price	Illus.	Bulb Shape	Base	Jewel Dia.	Type	Similar Cat. No.
147-420	$1.15	C	T3¼, G3½	Min. Bay.	½"	Faceted	147-403
147-421	1.15	C	T3¼, G3½	Min. Bay.	½"	Smooth	147-404
147-1118	1.40	B	T3¼	Min. Bay.	½"	Faceted	147-1110
147-1119	1.40	B	T3¼	Min. Bay.	½"	Smooth	147-1111
147-1120	1.35	B	G3½	Min. Bay.	½"	Faceted	147-1112
147-1121	1.35	B	G3½	Min. Bay.	½"	Smooth	147-1113

JEWEL ASSEMBLIES

Colors, all types: Red, Green, Amber, Blue, Opal, Clear.

1" JEWEL

Polished chrome bezel with panel bushing to fit 1" hole, fiber washer and nut.

Cat. No.		Net Price
147-110	Faceted Jewel	$.46
147-111	Smooth Jewel	.46
147-112	Colored Disc	.52

5/8" JEWEL

Polished chrome holder fits 11/16" mounting hole. Furnished with nut.

147-210	Faceted Jewel	$.26
147-211	Smooth Jewel	.26

1/2" JEWEL

Nickel plated holder and nut, fits 7/16" mounting hole.

147-310	Faceted Jewel	$.16
147-311	Smooth Jewel	.16

3/8" JEWEL

Nickel plated holder and nut fits 9/32" mounting hole.

147-510	Faceted Jewel	.13
147-511	Smooth Jewel	.13

1/2" JEWEL

Nickel plated internally threaded panel bushing fits 11/16" hole. Furnished with nut.

147-410	Faceted Jewel	$.26
147-411	Smooth Jewel	.26

DIAL LIGHT BRACKETS

Both terminals insulated on all types. Many other styles and combinations including wire leads, can be furnished from available tools.

Cat. No.	Socket	Net Price
147-600,	Min. Screw (Bracket down)	$.09
147-601,	Min Screw (Bracket up).....	.09
147-610,	Min. Bay. (Bracket down)	.10
147-611,	Min. Bay. (Bracket up)	.10
147-620,	Cand. Screw (Bracket down)	.10
147-621,	Cand. Screw (Bracket up)	.10
147-630,	Min. Bayonet (Bracket down)	.11
147-631,	Min. Bayonet (Bracket up)	.11
147-640,	Min. Screw (Bracket down)	.09
147-641,	Min. Screw (Bracket up)	.09

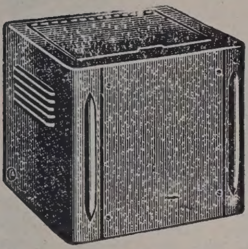
In view of the existing material situation, certain changes in materials may be made from time to time. These changes will not affect the suitability of parts or equipment.

SINCE 1921

insuline *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ICA DE LUXE HINGED STEEL CABINETS



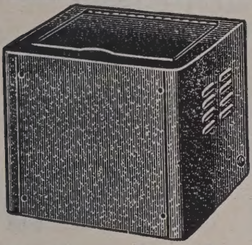
The cabinets have rounded corners with specially designed Chrome plated "Air-Gate" ventilators on sides; and vertical Chrome Plated Trim moulding on front. Modern grille type ventilators are provided on the back panels which also have an opening on the bottom to allow for leads, cable connections, etc.

Bottoms have 4 embossed feet.

Finished in a beautiful Marine Gray Ripple Enamel.

No.	H.	W.	D.	Panel Size	Dealer Cost
3860	8″ x	10″ x	8″	8″ x 8″	$ 4.15
3861	8″ x	12″ x	8″	8″ x 10′	4.67
3862	8″ x	14″ x	8″	8″ x 12‸	4.95
3863	12″ x	20″ x	12″	12″ x 18″	10.66

ICA STANDARD HINGED STEEL CABINETS



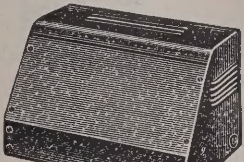
Designed in the same style and appearance as the De Luxe cabinets shown above except that the Chrome Trim is eliminated. Sides and backs have ventilating louvres. Backs have opening for cable connections, etc. Top panel hangs on full sized piano type hinge. Bottoms have 4 embossed feet. Finished in Marine Gray Ripple Enamel.

No.	H.	W.	D.	Panel Size	Dealer Cost
3925	8″ x	10″ x	8″	8″ x 8″	$3.60
3926	8″ x	12″ x	8″	8″ x 10″	3.90
3927	8″ x	14″ x	8″	8″ x 12″	4.58
3928	12″ x	20″ x	12″	12″ x 18″	9.96

CHASSIS FOR ICA CABINETS

No.	Size	For Cabinet Numbers	Dlr. Cost
4024	7″ x 7″ x 2″	3860 and 3925	$ .90
4004	7″ x 9″ x 2″	3861 and 3926	1.08
4005	7″ x 11″ x 2″	3862 and 3927	1.12
4033	10″ x 17″ x 3″	3863 and 3928	1.63

ICA DE LUXE SLOPING PANEL CABINETS



The top corners are rounded and trimmed with an attractive striped chrome trim. The sides of the cabinets have the beautiful "Air-Gate" Chrome ventilators.

The front panel is removable so that the chassis can be attached to it and used as one unit.

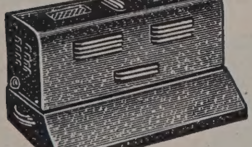
Beautifully finished in Marine Gray Ripple Enamel.

No.	H.	W.	D.	Dealer Cost
3990	8″ x	8″ x	8″	$4.88
3991	8″ x	10″ x	8″	5.75
3992	8″ x	14″ x	8″	7.00
3993	12″ x	18″ x	12″	9.41

CHASSIS FOR ICA CABINETS

No.	Size	For Cabinet Number	Dlr. Cost
4024	7″ x 7″ x 2″	3990	$ .90
4004	7″ x 9″ x 2″	3991	1.08
4007	7″ x 13″ x 2″	3992	1.20
4033	10″ x 17″ x 3″	3993	1.63

ICA DE LUXE SLOPING CHASSIS AMPLIFIER UNITS

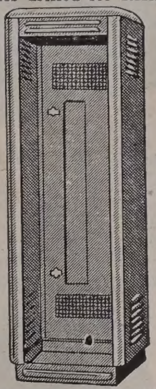


Chassis are sloped and are equipped with beautiful chrome trimmed handles. Slope provides ample space for mounting instruments. The top covers have beautiful Chrome Plated "Air-Gate" Ventilators with striped chrome trim. Supplied with ventilating louvres on sides and back. Have raised rectangular screen opening on the tops, embellished with chrome moulding. Marine Gray Ripple finish. Chassis Ht. 3½″: Slope 4″.

No.	Over-all Size	Chassis Bottom	Dealer Cost	Bottom Plate No.	Dealer Cost
3962	7″ x 17″ x 9½″	10″ x 17″	$7.55	1681	$ .85
3963	10″ x 14″ x 9½″	13″ x 14″	8.00	1683	.92
3964	10″ x 17″ x 9½″	13″ x 17″	8.30	1685	1.07

ICA DE LUXE TRANSMITTER RACKS

New modern design, streamlined transmitter and public address racks. Removable vertical corner mouldings are rounded and completely cover panel edges and mounting screws. Chrome trim. Rack is made of 1/16″ cold rolled steel. Panel mounting angles drilled for RMA, Amateur or Western Electric type panels. Screen ventilators on rear door and louvres afford ample ventilation. Easily assembled. Supplied in Marine gray ripple finish. Black ripple finish furnished only on specification.



No. 3865 Dealer Cost $48.20
- Overall Size ....43¼″x22″x18″
- Panel Space ....36¾″x19″
- Interior Width ....17⅝″
- Interior Depth ....16¾″

Shipping Weight 110 Lbs.

No. 3866 Dealer Cost $59.94
- Overall Size ....67¾″x22″x18″
- Panel Space ....61¼″x19″
- Interior Width ....17⅝″
- Interior Depth ....16¾″

Shipping Weight 162 Lbs.

No. 3867 Dealer Cost $71.49
- Overall Size ....83½″x22″x18″
- Panel Space ....77″x19″
- Interior Width ....17⅝″
- Interior Depth ....16¾″

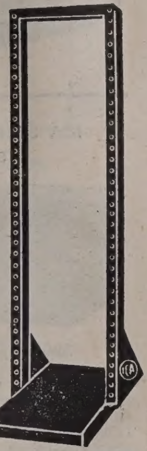
Shipping Weight 190 Lbs.

TABLE MOUNT RELAY RACKS

Sturdily constructed heavy duty table rack with one piece base. Accurately drilled mounting holes universally spaced for RMA, Western Electric or Amateur panels. Finished in black ripple. Supplied "KNOCKED DOWN" with all necessary hardware.

No.	W.	H.	D.	Panel Space	Dlr. Cost
3910	21″ x	25″ x	12″	21″ x 19″	$6.60
3911	21″ x	32″ x	12″	28″ x 19″	8.25

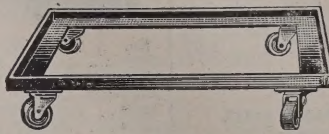
OPEN FACE RELAY RACK



For standard 19″ Rack Panels. Black Ripple Finish. Rigidity assured with top cross-brace and vertical sections strongly welded. Designed for P.A. units, various types of transmitters, etc. Sturdily made of ⅛″ thick steel. Base depth: 22″. Accurately drilled mounting holes.

No.	Size Overall	Panel Space	Dlr. Cost
3912	73½″ x 20″ x 20⅞″	71¾″	$22.36
3913	38¼″ x 20″ x 18⅜″	36¾″	19.14

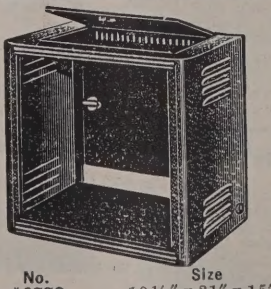
ICA RACK DOLLY



Especially designed to simplify the moving of heavy or large racks or cabinets of any type. Constructed of heavy gauge steel, all-welded with reinforcing corner gussets. The Insuline rack dolly measures 21″ x 22″. Accommodates a wide range of cabinet sizes. Has sturdy heavy duty casters. Supplied in black wrinkle finish.

No. 4086 .... Dealer Cost $9.60

MULTI-USE METAL CABINETS



An ideal unit for public address systems, transmitters, receivers, test equipment, etc. Has rounded corners on front of Cabinet. Trimmed with handsome chrome trim moulding. Equipped with hinge doors, and nickel-plated snap locks. Completely assembled, ready for use. Finished in Black or Marine Gray Ripple Enamel. Black will be supplied unless Gray is specified. Accommodates RMA, W.E., or Amateur panels.

No.	Size	Panel Space	Dealer Cost
*3880	10½″ x 21″ x 15″	8¾″ x 19″	$12.00
*3881	14″ x 21″ x 15″	12¼″ ″19″	14.58
†3882	19¼″ x 21″ x 15″	17½″ x 19″	19.16
†*3883	28″ x 21″ x 15″	26¼″ x 19″	22.49
†*3884	36¾″ x 21″ x 15″	35″ x 19″	25.00

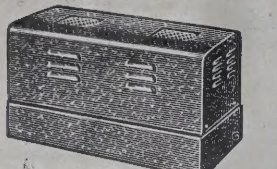
*Door on top. †Doors on top and rear. †*Door on rear panel.

SINCE
1921

insuline *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ICA STANDARD AMPLIFIER FOUNDATION UNITS



Top covers have rounded corners. The front, sides and back are equipped with louvre ventilators. The tops have raised screen openings for additional ventilation.

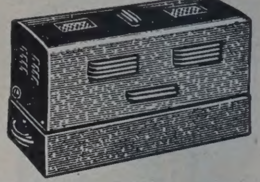
Finished in beautiful Marine Gray Ripple Enamel. Height of Chassis 3″.

No.	Over-all Size	Dealer Cost	Bottom Plate No.	Dealer Cost
3980	5½″ x 10″ x 9″	$2.70	1677	$ .50
3981	8″ x 12″ x 9″	4.00	1679	.85
3982	7″ x 17″ x 9″	4.33	1681	.85
3983	10″ x 14″ x 9″	4.66	1683	.92
3984	10″ x 17″ x 9″	5.00	1685	1.07

ICA DE LUXE AMPLIFIER FOUNDATION CHASSIS

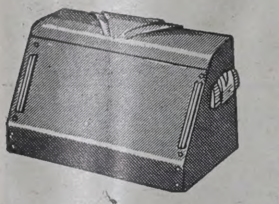
Top covers have rounded corners and fronts are embellished with the newly created Chrome plated "Air-Gate" Ventilators. Additional ventilation is obtained through the raised screen openings on the top as well as louvres on both sides and back.

Have beautiful Chrome mouldings and Chrome handles. Finished in Marine Gray Ripple Enamel. Height of Chassis 3″.



No.	Over-all Size	Dealer Cost	Bottom Plate No.	Dealer Cost
3971	5½″ x 10″ x 9″	$3.90	1677	$ .50
3972	8″ x 12″ x 9″	5.00	1679	.85
3973	7″ x 17″ x 9″	5.50	1681	.85
3974	10″ x 14″ x 9″	5.67	1683	.92
3975	10″ x 17″ x 9″	6.33	1685	1.07

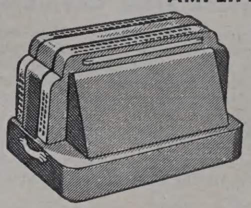
FUTURA STREAMLINED SLOPING PANEL CABINETS



Can be used as instrument cases in studios, laboratories, etc. Raised "Futura" design — streamlined corners. Ventilator openings for cable connectors. Removable front panel. Finished in Marine Gray Ripple enamel with chrome moulding.

No.	H.	W.	D.	Dlr. Cost
3840	8″	x 8″	x 8″	$6.16
3841	8″	x 10″	x 8″	7.00
3842	8″	x 14″	x 8″	8.50
3843	8″	x 18″	x 8″	10.43
3844	12″	x 18″	x 12″	11.63

"SUPER" STREAMLINED SLOPING-FRONT AMPLIFIER CHASSIS

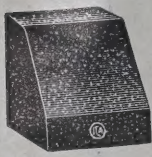


New, modern design amplifier chassis. Front panel sloped with streamlined top cover. Removable front panel Marine Gray Ripple finish with Chrome trim. Bottom plates supplied. Top cover 6½″ high.

No.	Chassis Size	Dlr. Cost
3930	10″ x 12″ x 3″	$7.25
3931	10″ x 17″ x 3″	8.33
3932	13″ x 17″ x 3″	9.58

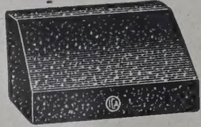
ICA SLOPING PANEL CABINETS

Small—Compact



3905

New streamlined cabinets, rugged, small and compact, have various uses such as speaker cabinets, oscillator cases, input stages, small receivers, teletalk systems, monitors, etc.



3906

Beautifully designed, with rounded corners and finished in marine gray ripple.

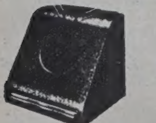
No.	W.	H.	D.	Dlr. Cost
3905	4 3/16″	x 4½″	x 4¼″	$1.00
3906	7½″	x 4½″	x 4¼″	1.67

ICA PORTABLE STEEL CABINETS

Ideal for housing oscillators, transceivers, test equipment, etc. Both front and back panels are removable and are held with self-tapping screws which are supplied. Equipped with leather handle. Finished in black ripple.

No.	Size	Dlr. Cost
No. 3850	Size 12″ x 7¾″ x 7″	$2.90
No. 3851	Size 15″ x 7¾″ x 7″	3.63

STREAMLINED METER CASES

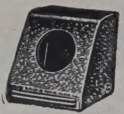


Modern streamlined cases, with raised "futura" design on top of cabinet. Finished in Marine Gray Ripple Enamel and trimmed with chrome band.

No.	D.	W.	H.	Meter Hole	Dealer Cost
3997	4¼″	x 4 3/16″	x 4½″	2 3/16″	$1.98
3998	4¼″	x 4 3/16″	x 4½″	2 13/16″	1.98

ICA DE LUXE METER CASES

Finished in Marine Gray Ripple Enamel with rounded tops and trimmed with beautiful Chrome band. Available for 2″ or 3″ meters.



No.	D.	W.	H.	Meter Hole	Dealer Cost
3995	4¼″	x 4 3/16″	x 4½″	2 3/16″	$ .95
3996	4¼″	x 4 3/16″	x 4½″	2 13/16″	.95

ICA HINGED COVER CABINETS

Supplied in knocked-down form for easy handling. Easily assembled.

Finished in Black Ripple Enamel.

No.	W.	D.	H.	Dlr. Cost
3825	9″	x 5″	x 6″	$3.30
3826	10″	x 8″	x 7″	3.92
3828	12″	x 8″	x 7″	4.46
3829	12″	x 11″	x 8″	5.30
3830	14″	x 8″	x 7″	5.30
3831	18″	x 12″	x 9″	6.63

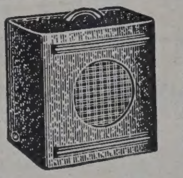
CHASSIS FOR ICA CABINETS

No.	W.	D.	H.	For Cabinet No.	Dlr. Cost
4000	8″	x 4¾″	x 1½″	3825	$.77
4004	9″	x 7″	x 2″	3826	1.08
4005	11″	x 7″	x 2″	3828	1.12
4007	13″	x 7″	x 2″	3830	1.20
4023	17″	x 11″	x 3″	3831	2.20

ICA STANDARD SPEAKER CABINETS

Finished in Black Ripple Enamel with plain black steel handles to match.

No.	Size	Hole Size	Speaker Size	Dlr. Cost
3942	10″ x 10″ x 6″	4¾″	6″	$3.42
3943	12″ x 12″ x 7″	6½″	8″	4.33
3944	14″ x 14″ x 8″	9″	10″	5.58
3945	16″ x 16″ x 8″	11″	12″	7.33



ICA DE LUXE SPEAKER CABINETS

Features rounded corners; neatly chrome trimmed front; equipped with chrome handle. Steel grille. Marine Gray Ripple finish.

No.	Size	Hole Size	Speaker Size	Dlr. Cost
3935	10″ x 10″ x 6″	4¾″	6″	$3.92
3936	12″ x 12″ x 7″	6½″	8″	5.00
3937	14″ x 14″ x 8″	9″	10″	6.13
3938	16″ x 16″ x 8″	11″	12″	7.50

MIDGET SPEAKER CASES

Especially designed for the smaller type speakers. Beautifully finished in gray ripple with attractively embossed grille. Speaker mounts on special removable internal chassis, punched for proper speaker opening. This unit fastens to side of cabinet with no visible screws to mar cabinet front. Facilitates ease of assembly. Measures 4¼″ d. x 4 3/16″ w. x 4½″ l.

No.	Description	Hole Dia.	Dlr. Cost
3986	For 2″ speakers	2 3/16″	$1.60
3987	For 3″ speakers	2 13/16″	1.60

COMPOSITE SPEAKER CABINET

A neatly designed composite unit to house either a 4″ or 5″ speaker. Measures 7″ w. x 4″ d. x 7″ h. Gray ripple finished steel with embossed grille. Removable back plate has key 'ways for easy hanging.

No. 3988 .... Dealer Cost $3.33

ICA SLOPING FRONT CHASSIS

Has a sloping front for mounting instruments. Has the effect of a beautiful open cabinet receiver, or amplifier unit, when used without top covers. Heavy Duty Steel, finished in Black Ripple Enamel.

No.	Top of Base	Bottom of Base	Hgt.	Size of Slope	Dlr. Cost
3320	7x17″	10x17″	3½″	4″	$2.53
3321	10x14″	13x14″	3½″	4″	2.83
3322	10x17″	13x17″	3½″	4″	3.27

Net

SINCE 1921

insuline *Corporation of America*

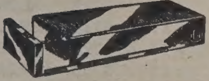
OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ALUMINUM . . . STEEL CABINETS

Popular utility cabinets now available in aluminum in gray hammertone and natural finish. Excellent for amplifiers, monitors, input stages, meters, transceivers, etc. Removable front and back covers may be fastened to cabinet with self-tapping screws provided. Also supplied in steel with black ripple finish.

Aluminum Natural	Dealer Cost	Aluminum Gray Hammertone	Dealer Cost	Size W.	L.	H.	STEEL Black Ripple	Dealer Cost
29840	$1.00	29810	$1.13	4″ x	4″ x	2″	3810	$ .85
29841	1.13	29811	1.30	4″ x	5″ x	3″	3811	.95
29842	1.47	29812	1.63	4″ x	6″ x	5″	3812	1.20
29843	1.53	29800	1.72	6″ x	6″ x	6″	3800	1.30
29844	2.20	29801	2.50	9″ x	6″ x	5″	3801	1.87
				10″ x	7″ x	8″	3802	2.30
				10″ x	10″ x	8″	3803	2.90
				12″ x	8″ x	11″	3804	3.60

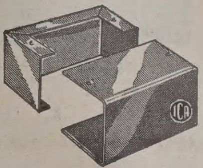
SLIP COVER ALUMINUM BOXES



Suitable for a variety of electronic device housing needs. Slide cover permits easy accessibility to mounted parts; offers shielding and dust-proof protection. May be used for television strips; terminal barriers, special equipment, amplifier units, etc. Heavy aluminum in natural finish or gray hammertone.

Gray Hammertone No.	Dealer Cost	Natural Finish No.	Dealer Cost	Size W.	L.	H.
29130	$3.62	29100	$3.45	3⅛″ x	13″ x	2⅝″
29135	3.92	29105	3.75	5⅛″ x	13″ x	2⅝″
29140	3.75	29110	3.58	3″ x	17″ x	2⅝″

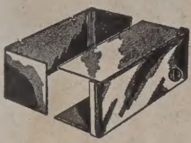
"FLEXI-MOUNT" ALUMINUM CASES



A two-piece case designed for maximum accessibility. Solves many problems demanding installation of numerous elements in limited space while assuring necessary shielding. Has wide application. Made of heavy aluminum—finished in gray hammertone or natural aluminum.

Cat. No. Gray H.	Dealer Cost	Cat. No. Natural	Dealer Cost	Dimensions W.	L.	H.
29435	$ .70	29335	$ .63	2⅛ x	2¾ x	1⅝
29436	.70	29336	.63	2⅛ x	3¼ x	1⅝
29437	.73	29337	.67	2⅛ x	4 x	1⅝
29438	.97	29338	.87	2¼ x	4 x	2¼
29439	1.00	29339	.93	2¼ x	5 x	2¼
29441	1.07	29341	1.00	3 x	5¼ x	2⅛
29440	1.10	29340	1.03	4 x	5 x	3
29442	1.37	29342	1.27	5 x	6 x	4
29443	1.53	29343	1.40	5 x	7 x	3
29447	3.83	29347	3.40	5 x	17 x	4
29444	2.23	29344	2.10	6 x	8 x	3½
29445	2.75	29345	2.30	6 x	10 x	3½
29446	3.27	29346	2.93	7 x	12 x	4

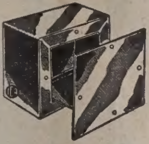
CHANNEL-LOCK ALUMINUM BOXES



Latest two-piece box with special "channel-lock" feature for snug and firm fit. Makes all mounting space easily accessible. Ideal for oscillators, amplifiers, etc. Easily assembled: merely tighten the two set screws provided. These sturdy boxes made of heavy aluminum in black wrinkle, gray hammertone and natural aluminum finish.

Natural Aluminum No.	Dealer Cost	Black Wrinkle No.	Gray Ham. No.	Dealer Cost	Size, Inches W.	L.	H.
29200	$ .72	29300	29400	$ .83	4	x 2⅛	x 1⅝
29205	1.00	29305	29405	1.12	5	x 2¼	x 2¼
29210	1.10	29310	29410	1.23	5¼	x 3	x 2⅛
29215	.93	29315	29415	1.05	3	x 4	x 5
29220	1.03	29320	29420	1.20	6	x 4	x 5
29225	2.00	29325	29425	2.17	10	x 4	x 2½

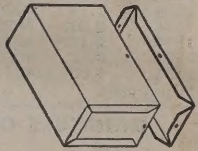
UTILITY CABINETS with built-in chassis



A multi-use small cabinet. Ideal for minor radio-television assemblies. The chassis is welded to front panel, making it a time-saving, convenient unit. Front and rear panels easily removable. Of sturdy steel in black ripple finish.

No.	Cabinet Size W. D. H.	Chassis Size W. D. H.	Dealer Cost
3816	4″ x 2″ x 4″	2⅞″ x 1⅞″ x 1″	$1.05
3817	4″ x 3″ x 5″	2⅞″ x 2⅞″ x 1″	1.15
3818	5″ x 3″ x 4″	3⅞″ x 2⅞″ x 1¼″	1.15
3819	4″ x 5″ x 6″	2⅞″ x 4⅞″ x 1¾″	1.43
3821	6″ x 5″ x 4″	4⅞″ x 4⅞″ x 1¼″	1.43
3823	6″ x 6″ x 6″	4⅞″ x 5⅞″ x 1¾″	1.50

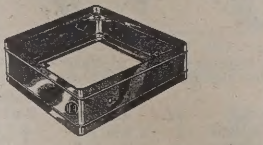
CONTROL . . . SWITCH CASE



Strongly welded steel case; removable cover. Suitable for control or switch box; enclosing small assemblies, etc. Includes cover screws. Gray hammertone finish. Outside dimensions: 3¼″x5¼″x2⅛″.

No. 3797......................**Dealer Cost $1.00**

WEBSTER RECORD CHANGER BASES



Sturdy steel base in beautiful brown hammertone finish with protective, non-marring cork rubber cushion. Especially designed for the better known record changers. Grommeted holes provided for AC lead on rear apron; also punched for easy addition of Insuline No. 2885 phono plug-socket.

No.	Description	Dealer Cost
3308	—For WEBSTER No. 100 Series changer models and similar sizes	$4.17
3308-BP	—Steel bottom plate in matching finish; rubber bumpers and mounting screws complete, for above base	1.25
3309	—For WEBSTER No. 103 Series changer models and similar sizes	4.17
3309-BP	—Steel Bottom Plate in matching finish; rubber bumpers and mounting screws complete, for above base	1.25

GARRARD CHANGER BASE

Made for the new Garrard Model RC-80 3-way record changer. This steel base is finished in brown hammertone with protective cushions. Includes grommeted holes for AC lead. Complete with bottom plate.

No. 3315......................**Dealer Cost $6.33**

CHASSIS MOUNTING BRACKETS

Designed for rack panels and chassis where additional strength is required for heavier units such as power supplies, etc. Heavy gauge steel, black ripple finish.

No.	Front	Back	Dealer Cost
4077	6½″ Ht. x 10″ D. x 3″ Ht.		$1.13
4079	8½″ Ht. x 10″ D. x 4″ Ht.		1.80
4081	6½″ Ht. x 12″ D. x 3″ Ht.		1.50
4083	8½″ Ht. x 13″ D. x 4″ Ht.		1.92

ICA CHASSIS MOUNTING BRACKETS

Made to fit on 17″ relay rack chassis. Panels must be at least 7″ high.

Black ripple finish.

No.		Dlr. Cost
3955	—For 8″ base..................Per Pair	$ .85
3958	—For 10″ base..................Per Pair	1.02
3956	—For 11″ base..................Per Pair	1.20
3957	—For 13″ base..................Per Pair	1.70

ICA RELAY RACK BRACKETS

Black Ripple Finish.
Used to reinforce racks and for mounting of panels, shelves, chassis, etc.

No.		Dlr. Cost
3950	— 5″ Base Brackets........Per Pair	$ .80
3951	— 8″ Base Brackets........Per Pair	.92
3952	—11″ Base Brackets........Per Pair	1.10

SINCE 1921

insuline Corporation of America

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

STEEL OR ALUMINUM CHASSIS BASES

For receivers, transmitters, etc. Bases are folded over on bottom for additional strength and drilled to permit attaching of bottom plates. Solidly constructed. STEEL BASES—one piece; heavy duty; zinc plated or black ripple finish. ALUMINUM BASES—First grade aluminum, electronically welded. Thickness: 16 gauge (.050).

Steel—Zinc Plated Finish No.	Dlr. Cost	Steel—Black Ripple Finish No.	Dlr. Cost	Gauge	Size W. L. H.	Aluminum No.	Dealer Cost
1560*	$ .77	4000*	$ .77	20	4½ x 8 x1½		
1586	.88	4037	.88	20	5 x 7 x 2	29030	$ .93
					5 x 7 x 3	29047	1.17
1530	.78	4001	.78	20	5 x 9½ x 1½		
1587	.93	4038	.93	20	5 x 9½ x 2	29033	1.10
1565	1.08	4002	1.08	20	5 x 9½ x 3	29002	1.30
1564	1.08	4042	1.08	20	5 x 10 x 3	29048	1.33
1566	1.33	4003	1.33	20	5 x 13 x 3	29003	1.40
1582	1.17	4032	1.17	20	5½ x 10 x 3	29004	1.58
					6 x 17 x 3	29050	2.10
1526	.90	4024	.90	20	7 x 7 x 2	29005	1.10
1569	1.08	4004	1.08	20	7 x 9 x 2	29006	1.20
1570	1.12	4005	1.12	20	7 x 11 x 2	29007	1.33
1527	1.27	4006	1.27	20	7 x 12 x 3	29008	1.57
1571	1.20	4007	1.20	20	7 x 13 x 2	29009	1.40
1572	1.43	4008	1.45	20	7 x 15 x 3	29010	2.27
1528	1.57	4009	1.57	20	7 x 17 x 3	29011	2.20
1567	1.62	4013	1.43	20	8 x 12 x 3	29012	1.90
1573	1.45	4014	1.45	20	8 x 17 x 2	29013	2.10
1575	1.58	4035	1.58	20	8 x 17 x 3	29014	2.47
1588	1.65	4039	1.65	20	8½ x 15 x 3	29037	2.30
1520	1.50	4016	1.50	20	10 x 12 x 3	29015	2.10
1568	1.58	4017	1.58	20	10 x 14 x 3	29016	2.67
1589	1.60	4040	1.60	20	10 x 17 x 2	29039	2.53
1583	1.63	4033	1.63	20	10 x 17 x 3	29017	2.87
1521	1.87	4018	1.95	18	10 x 17 x 3		
1580	2.03	4030	2.03	18	10 x 17 x 4	29025	3.30
1522	2.43	4019	2.33	18	10 x 23 x 3	29018	3.32
1577	2.17	4027	2.00	18	11 x 17 x 2	29019	2.63
1519	2.20	4023	2.20	18	11 x 17 x 3	29020	3.33
1574	1.77	4020	1.77	18	12 x 17 x 2	29021	3.00
1578	2.03	4028	2.03	18	12 x 17 x 3	29022	3.53
1579	2.35	4029	2.47	18	13 x 17 x 2	29023	3.13
1524	2.55	4021	2.55	18	13 x 17 x 3	29024	3.73
1581	3.00	4031	3.00	18	13 x 17 x 4	29026	4.27

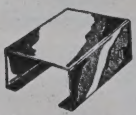
*Open ends.

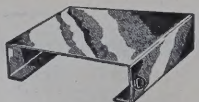
ICA CHASSIS BOTTOM PLATES

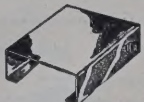
Designed to fit all ICA Chassis Bases and amplifier units listed to the left. Four raised bosses prevent marring or scratching. Supplied in steel or aluminum.

Steel Zinc Plated	Steel Black Ripple	Dealer Cost	Size	Aluminum No.	Dealer Cost
1636	4076	$ .40	5 x 7	8729	$ .70
1601	4051	.40	5 x 9½		
1602	4052	.57	5 x 13	8702	.80
1625	4075	.50	5½ x 10	8725	.73
1623	4073	.60	7 x 7	8723	.73
1603	4053	.57	7 x 9	8703	.77
1604	4054	.65	7 x 11	8704	.87
1605	4055	.68	7 x 12	8705	.92
1606	4056	.68	7 x 13	8706	1.08
1607	4057	.75	7 x 15	8707	1.08
1608	4058	.78	7 x 17	8708	1.13
1612	4062	.78	8 x 12	8712	1.08
1613	4063	.82	8 x 17	8713	1.25
1629	4064	.85	8½ x 15	8721	1.12
1615	4065	.82	10 x 12	8715	1.22
1616	4066	.85	10 x 14	8716	1.12
1617	4067	1.00	10 x 17	8717	1.47
1618	4068	1.40	10 x 23	8718	1.75
1622	4072	1.10	11 x 17	8727	1.75
1619	4069	1.08	12 x 17	8719	1.87
1620	4070	1.42	13 x 17	8720	1.97
1624	4074	1.17	13 x 14		

MINIATURE OPEN END ALUMINUM CHASSIS







Of first grade aluminum for less weight but long service. Base flange permits attaching of bottom plate or fastening down of chassis. Ideal where limited space is factor. Suitable for all small unit assemblies.

No.	W.	L.	H.	Dealer Cost	No.	W.	L.	H.	Dealer Cost
29076	1¾	x 3⅛	x 1	$.37	29084	4	x 5⅛	x 1	$.47
29075	2⅝	x 2¾	x 1¼	.33	29043*	4	x 6	x 2	1.13
29078	2¾	x 4⅛	x 1½	.40	29044*	4	x 6	x 3	1.13
29080	3	x 6⅛	x 1¼	.47	29085	4	x 6⅛	x 1	.50
29077	3¼	x 4½	x 2	.40	29027*	4	x 17	x 3	2.03
29079	3¾	x 4⅛	x 1½	.40	29000	4½	x 8	x 1½	1.00
29082	4	x 3⅛	x 1	.40	29001	5	x 9½	x 1½	1.10
29083	4	x 4⅛	x 1	.43	29081	5¾	x 4⅞	x 1½	.50

*Closed ends.

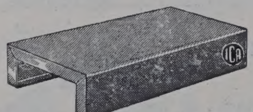
STANDARD RELAY RACK PANELS

ICA standard relay rack panels are slotted to fit any standard 19″ relay rack. ICA relay rack panels are supplied in ⅛″ thickness. Notched according to RMA specifications. If Western Electric notching is desired, add "WE" to catalog numbers. Made of steel (in black ripple or gray finish) or aluminum (in black ripple or gray wrinkle; also in gray hammertone on request).

STEEL Black	Gray	Dlr. Cost	Size	ALUMINUM Black	Dlr. Cost	Gray Wrinkle	Dlr. Cost
*3600RS	*3612RS	$.67	1¾″	*8600RS	$.83	*8620RS	$.83
*3601RS	*3613RS	.75	3½″	*8601RS	1.20	*8621RS	1.20
*3602RS	*3614RS	.93	5¼″	*8602RS	1.37	*8622RS	1.37
*3603RS	*3615RS	1.08	7″	*8603RS	2.00	*8623RS	2.00
3604RS	3616RS	1.32	8¾″	8604RS	2.33	8624RS	2.33
*3605RS	*3617RS	1.58	10½′	*8605RS	2.77	*8625RS	2.77
3606RS	3618RS	1.88	12¼″	8606RS	3.17	8626RS	3.17
3607RS	3619RS	2.17	14″	8607RS	3.53	8627RS	3.53
3608RS	3620RS	2.40	15¾″	8608RS	4.00	8628RS	4.00
3609RS	3621RS	2.70	17½″	8609RS	4.43	8629RS	4.43
*3610RS	*3622RS	3.00	19¼″	*8610RS	4.83	*8630RS	4.83
3611RS	3623RS	3.30	21″	8611RS	5.17	8631RS	5.17

*RMA and "WE" notching specifications are identical.

OPEN END STEEL CHASSIS



Permits easier wiring of the smaller assemblies. Has wide variety of applications. Made of sturdy steel with zinc plated finish.

No.	W.	L.	H.	Dealer Cost	No.	W.	L.	H.	Dealer Cost
1547	5	x 7	x 1½	$.60	1596	7	x 10	x 2	$.90
1559	5½	x 9	x 1½	.70	1597	7	x 11	x 1½	1.00
1546	7	x 6	x 2	.68	1595	7½	x 9	x 1½	.95
1548	7	x 7	x 1½	.78	1599	7¾	x 15	x 2	1.38
1556	7	x 8	x 2	.85	1598	10¾	x 14	x 2	1.43

ICA MASONITE RELAY RACK PANELS

Made of Tempered Masonite—a non-magnetic material, sturdy and tough yet easily drilled and worked with ordinary wood-working tools and punches. Finished in Black or Gray. Supplied in Black Ripple finish unless Gray is specified. RMA notching. If Western Electric notching is desired, add "WE" to catalog No.

No.	Size	Dlr. Cost	No.	Size	Dlr. Cost
*3662RS	1¾″ x 19″	$ .67	3668RS	12¼″ x 19″	$1.67
*3663RS	3½″ x 19″	.83	3669RS	14″ x 19″	1.83
*3664RS	5¼″ x 19″	.97	3670RS	15¾″ x 19″	2.03
*3665RS	7″ x 19″	1.10	3671RS	17½″ x 19″	2.37
3666RS	8¾″ x 19″	1.33	*3672RS	19¼″ x 19″	2.57
*3667RS	10½″ x 19″	1.50	3673RS	21″ x 19″	2.87

*RMA and "WE" notching specifications are identical.

SPECIAL SIZES OF RACK PANELS AVAILABLE ON ORDER

Insuline Corporation of America is geared to supply rack panels in various sizes, thicknesses and finishes. Materials include Steel, Aluminum, or Masonite in any thickness from ⅛″ to ¼″. Any finish according to specifications.

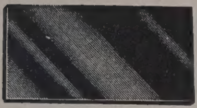
SINCE 1921

insuline Corporation of America

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ICA BAKELITE RADIO PANELS

Black, Polished Mirror Finish



Black, Mirror Finish. Laminated Indestructible Material. For Panels and general use where low moisture absoption, good electrical properties and fine surface finish are required. Tensile strength 8,000 lbs. per square inch.

⅛″ Thickness			3/16″ Thickness		
No.	Size	Dealer Cost	No.	Size	Dealer Cost
832	7″ x 10″	$1.17	842	7″ x 10″	$1.73
833	7″ x 12″	1.42	843	7″ x 12″	2.10
834	7″ x 14″	1.53	844	7″ x 14″	2.50
835	7″ x 18″	2.30	845	7″ x 18″	2.97
836	7″ x 21″	2.40	846	7″ x 21″	3.33
837	7″ x 24″	2.70	847	7″ x 24″	4.17
840	7″ x 30″	3.67	850	7″ x 30″	5.16
860	10″ x 12″	2.10	863	10″ x 12″	3.17
861	10″ x 18″	2.90	864	10″ x 18″	4.35

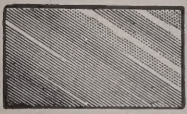
ICA FULL SIZE BAKELITE SHEETS

Black Glossy Finish

No.	Size	Thickness	Apprx. Wt.	Dealer Cost
852	38″ x 49″	1/16″	6 lbs.	$16.35
853	38″ x 49″	3/32″	9 lbs.	20.56
854	38″ x 49″	⅛″	12 lbs.	33.49
857	38″ x 49″	3/16″	18 lbs.	41.73
858	38″ x 49″	¼″	24 lbs.	50.11

Prices on other sizes or thicknesses quoted on request.

ICA STEEL . . . MASONITE . . . ALUMINUM PANELS



Steel panels are made in 1/16″ thickness, black ripple finish. Masonite panels are 3/16″ thick, black ripple finish. Aluminum panels have bright silver finish, 1/16″ thick.

Steel No.	Dealer Cost	Size	Masonite No.	Dealer Cost	Alum. No.	Dealer Cost
3175	$ .72	7″ x 10″	810	$ .77	1194	$1.00
3176	.80	7″ x 12″	811	.85	1195	1.17
3177	.93	7″ x 14″	812	.97	1196	1.27
3178	1.20	7″ x 18″	813	1.17	1198	1.53
		7″ x 21″	814	1.27	1199	2.17
		7″ x 24″			1200	2.70
3183	1.03	8″ x 12″	815	1.00		
3184	1.10	8″ x 14″	816	1.10		
		8″ x 16″	817	1.28		
3186	1.23	8″ x 18″	818	1.37		
		10″ x 12″			3157	2.00
3191	1.60	10″ x 14″				
3192	1.87	10″ x 18″			3158	2.27
3194	2.17	10″ x 24″			3159	4.00

ICA METER PANELS

Notched to RMA specifications ("WE" notching identical). Will fit all standard racks. Finished in Baked Black or Gray Ripple. Size 5¼″ x 19″.

Black will be shipped unless Gray is specified.

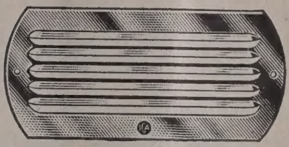
STEEL PANELS

No.	No. Holes	Meter Size	Hole	Dealer Cost
3651	5	2″	2 3/16″	$1.85
3652	3	2″	2 3/16″	1.30
3653	5	3″	2 13/16″	1.85
3654	3	3″	2 13/16″	1.30

MASONITE PANELS

No.	No. Holes	Meter Size	Hole	Dealer Cost
3641	3	2¼″	2¼″	$1.32
3642	4	2¼″	2¼″	1.45
3643	3	2 3/16″	2 13/16″	1.32
3644	4	2 3/16″	2 13/16″	1.45

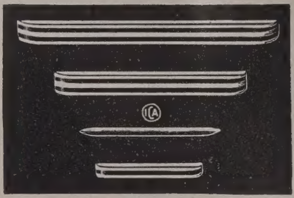
CHROME VENTILATING LOUVRES



Adds the attractive touch to any receiver, amplifier, transmitter, etc. A polished chrome finished steel "Air-Gate," consisting of 5 ventilating louvres. Over-all size: 5 7/16″ long—3″ wide. Distance between mounting hole centers: 4 27/32″. Diameter of holes: 5/32″. Length of louvres: 4¼″. Air space between louvre plates: 5/16″.

No. 3525..............................Dealer Cost $ .67

ICA CHROME TRIM MOULDING



Beautiful chrome trim mouldings to dress up any cabinet, chassis, receiver, speaker cabinet, transmitter, etc. All moulding furnished with mounting tracks or clips.

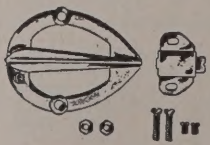
No.	Dealer Cost
3510—Chrome Moulding, with single Stripe. Size: ½″ wide by 4″ long	$ .67
3513—Chrome Moulding, with double Stripe. Size: ¾″ wide by 8″ long	1.07
3514—Chrome Moulding, with double Stripe. Size: ¾″ wide by 12″ long	1.23
3515—Chrome Moulding, with double Stripe. Size: ¾″ wide by 17″ long	1.50
3505—Bullet Shape all Chrome Moulding. Size ¼″ wide by 6″ long	.67

CHROME HANDLES . . . PLASTIC HANDLES

A neatly styled adornment for any cabinet, amplifier chassis transmitter, etc. Furnished with mounting screws. Supplied in gleaming chrome or attractive plastic.

No.	Dealer Cost
3500—Chrome. 4″ l.; 11/16″ w. Mounting centers: 2¾″ apart	$ .58
3502—Plastic. 4″ l.; ⅝″ w. Mounting centers: 2¾″ apart	.48
3501—Chrome. 6¼″ l.; ⅝″ w. Mounting centers: 4 13/16″	.77

HANDLE . . . LOCK SET



A complete, attractive handle and lock set that will dress up a variety of cabinets. Streamlined handle of zinc with nickel-plated finish; spring snap lock of durable steel for long service. Includes screws and nuts.

No. 3532..............................Dealer Cost $ .60

PAR-METAL RACKS · CHASSIS · CABINETS *for* ELECTRONIC APPARATUS

TYPE "C" CABINET RACKS—for 19" Rack Panels

These are professional type racks that have been used on many commercial installations, and make a DeLuxe job of any amateur or broadcast transmitter. The racks are of all-steel construction, welded into an integral unit, to give a lifetime of service.

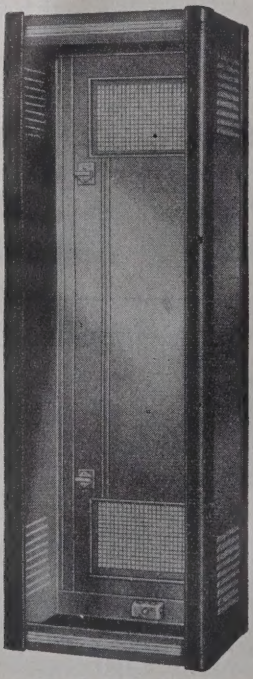
All panel mounting screws are concealed by means of a full length corner trim on each side at the front. In keeping with modern design, this front trim is rounded on the vertical corners. The rear corners are finished with regular angle trim. The front of the rack is trimmed with chrome moulding top and bottom. The door has a grille at top and bottom, and is hung on sturdy loose-joint hinges; it is held closed by two flush snap-action catches. Additional ventilation is provided by louvres at the side. The panel mounting angle irons are 3/16" thick, with mounting holes accurately drilled and tapped 12/24 thread on multiple 1¼"—½" spacings. The rack is made from 1/16" thick cold rolled steel, rigidly braced and reinforced throughout; the bottom is 7/64" thick steel. A rectangular opening is provided in the bottom for conduits, leads, etc. A duplex receptacle and outlet box are provided in the back under the door.

FINISHES: Black ripple with corner trims finished in dull black. Slate grey ripple with corner trims finished in slate grey. Prime coat only is optional in place of ripple enamel finish at no extra cost.

QUICK DETACHABLE CORNER TRIMS: All racks have new, improved corner trims which are fastened to front of rack with two "captive screws."

RACKS WITHOUT LOUVRES: To permit racks to be set up in gangs or rows of two or more, the louvres at sides are omitted. Racks may be joined by a flat trim fastened to front of adjacent racks, overlapping both racks. Where specified, front joining trim will be substituted in place of adjacent corner trim at same price. Front joining Trims cannot be used on racks with front doors. Roller Truck No. RT-415 may be used for all 15¼" deep racks. Use No. RT-418 for all 18" deep racks. Standard shelves are available for all racks listed.

WITH LOUVRES



Model R-6625

*BLACK RIPPLE ENAMEL

15¼" Deep Racks

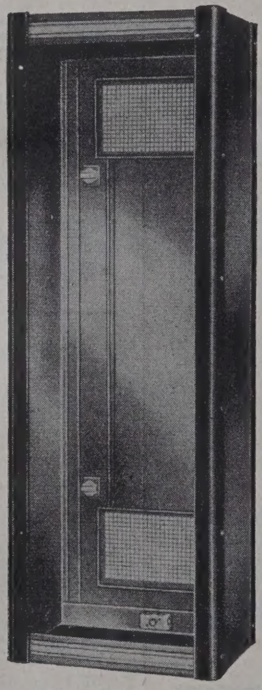
Cat. No.	Overall Size	Panel Space	Wt. lbs.	Net Price
R-3675	42⅞x22x15¼"	36¾"	150	$54.00
R-6625	67⅜x22x15¼"	61¼"	210	72.00
R-8325	83⅛x22x15¼"	77"	240	93.00

18" Deep Racks

Cat. No.	Overall Size	Panel Space	Wt. lbs.	Net Price
R-3618	42⅞x22x18"	36¾"	160	60.00
R-6618	67⅜x22x18"	61¼"	230	78.00
R-8318	83⅛x22x18"	77"	280	99.00

*If slate grey ripple enamel is required substitute letters "RG" instead of "R" when ordering.

WITHOUT LOUVRES



Model P-6625

*BLACK RIPPLE ENAMEL

15¼" Deep Racks

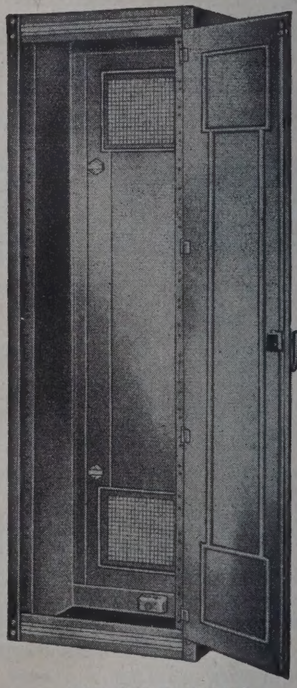
Cat. No.	Overall Size	Panel Space	Wt. lbs.	Net Price
P-3675	42⅞x22x15¼"	36¾"	150	$54.00
P-6625	67⅜x22x15¼"	61¼"	210	72.00
P-8325	83⅛x22x15¼"	77"	240	93.00

18" Deep Racks

Cat. No.	Overall Size	Panel Space	Wt. lbs.	Net Price
P-3618	42⅞x22x18"	36¾"	160	60.00
P-6618	67⅜x22x18"	61¼"	230	78.00
P-8318	83⅛x22x18"	77"	270	99.00

*If slate grey ripple enamel is required, substitute letters "PG" instead of "P" when ordering.

WITH FRONT DOORS



Model F-6618

*BLACK RIPPLE ENAMEL

Racks are 22" wide, 18" deep. Panels mount 2" from front allowing 14" clear inside depth behind panels to rear door.

The 2" dimension may be modified without charge.

	Catalog F-6618	Number F-8318
Overall Height	67⅜	83⅛
Available panel space	61¼	77
Clear inside width (front)	19⅛	19⅛
Clear inside width (rear)	17¾	17¾
Net Price	$105.00	$129.00

*If slate grey ripple enamel is required, substitute letters "FG" instead of "F" when ordering.

ALL PRICES F.O.B. LONG ISLAND CITY, N. Y.

PAR-METAL RACKS · CHASSIS · CABINETS *for* ELECTRONIC APPARATUS

TYPE "C" TRANSMITTER RACKS

STANDARD TYPE—for 19" & 30" Rack Panels

18" and 24" Deep

Model G-2218

Similar to standard type "C" racks listed on page J-88 except that they have been reinforced at rear corners for use with heavier apparatus. At the rear, knockouts are provided for conduit and 4" square duct, as well as a double convenience outlet with receptacle. Knockouts are also supplied at sides for conduit, suitable for entry of cables when units are ganged. The rear door, which is removable, has ample louvres for ventilation, which are covered on the inside with mesh screening. Front trim rounded on vertical corners. Racks are regularly supplied with corner trim for use as a single unit, but will be furnished with suitable front connecting strips for ganging in rows of two or more without additional charge.

SHELVES: Shelf No. R-2219 is designed to fit racks G-2218 and G-2219.

ROLLER TRUCKS: Roller truck No. RT-412 is designed to fit racks G-2218 and G-2219.

PANELS: Type "C" panels to fit the G-2218 and G-2219 racks are listed on page J-91. For cost of 30" blank panels to fit the G-3024 rack, add 100% to prices of 19" panels on page J-91.

FINISHES: Black ripple with corner trims finished in dull black. Slate grey ripple with corner trims finished in slate grey. Prime coat only is optional in place of ripple enamel finish at no extra cost.

QUICK DETACHABLE CORNER TRIMS: All racks have new, improved corner trims which are fastened to front of rack with two "captive screws."

Catalog No.	Overall Size	Panel Space	Clear Depth	Ship. Wt. Lbs.	Net Price
G-2218	76⅛ x 22 x 18"	70 x 19"	16⅞"	270	$104.52
G-2219	83⅛ x 22 x 18"	77 x 19"	16⅞"	290	115.44
G-3024	76⅛ x 33 x 24"	70 x 30"	22⅞"	450	171.60

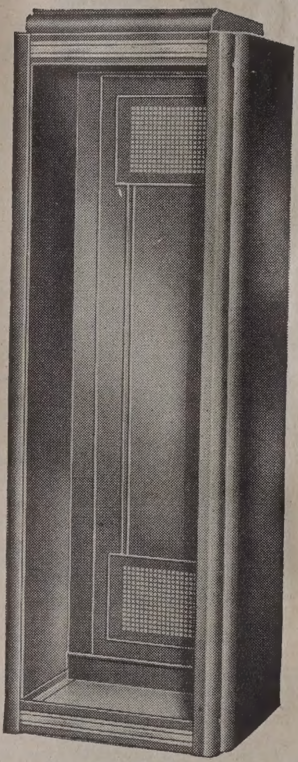
DELUXE TYPE—for 19" Rack Panels

18½" and 24" Deep

These new enclosed type racks combine rugged construction with modern styling and improved design. Made from 1/64" steel, rigidly braced and reinforced throughout. Bottom is 7/64" thick. Panel mounting angles are 3/16" steel, drilled and tapped 12/24 thread on standard 1¼-½" spacings. Front vertical trims to cover panel screws are quick detachable type. Racks may be grouped without front joining trims. Rear door is hung on slip-joint hinges; door held closed with locking type chrome plated handle; keys supplied. Large opening in bottom for conduits, etc.

SHELVES: Shelf No. R-2218 is designed for 18½" racks and R-2224 for 24" racks.

ROLLER TRUCKS: Use RT-418 for all 18½" deep racks. Use RT-424 for all 24" deep racks.



Model P-6918

FINISHES: Black ripple with corner trims finished in dull black. Slate grey ripple with corner trims finished in slate grey. Prime coat only is optional in place of ripple enamel finish at no extra cost.

QUICK DETACHABLE CORNER TRIMS: All racks have new, improved corner trims which are fastened to front of rack with two "captive screws".

NOTE: Clear inside width at front and rear of all racks is 17¾". Clear inside depth of 18½" racks is 16½"; clear inside depth of 24" racks is 22".

18½" Deep Racks

Catalog No.	Finish	Overall Size	Panel Space	Shpg. Wt. Lbs.	Net Price
P-6918	Black Ripple	69⅝ x 23⅝ x 18½"	61¼ x 19"	230	$ 94.50
PG-6918	Slate Grey Ripple	69⅝ x 23⅝ x 18½"	61¼ x 19"	230	94.50
P-7818	Black Ripple	78⅜ x 23⅝ x 18½"	70 x 19"	255	103.50
PG-7818	Slate Grey Ripple	78⅜ x 23⅝ x 18½"	70 x 19"	255	103.50
P-8518	Black Ripple	85⅜ x 23⅝ x 18½"	77 x 19"	280	117.00
PG-8518	Slate Grey Ripple	85⅜ x 23⅝ x 18½"	77 x 19"	280	117.00

24" Deep Racks

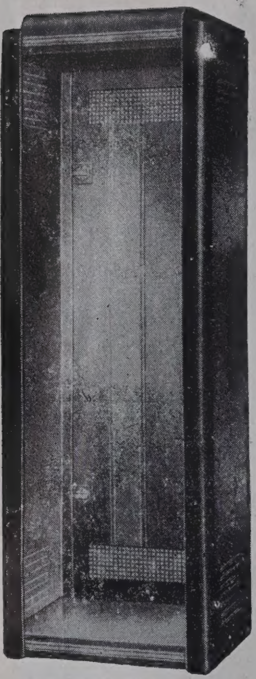
Catalog No.	Finish	Overall Size	Panel Space	Shpg. Wt. Lbs.	Net Price
P-6924	Black Ripple	69⅝ x 23⅝ x 24"	61¼ x 19"	260	$111.00
PG-6924	Slate Grey Ripple	69⅝ x 23⅝ x 24"	61¼ x 19"	260	111.00
P-7824	Black Ripple	78⅜ x 23⅝ x 24"	70 x 19"	290	120.00
PG-7824	Slate Grey Ripple	78⅜ x 23⅝ x 24"	70 x 19"	290	120.00
P-8524	Black Ripple	85⅜ x 23⅝ x 24"	77 x 19"	320	135.00
PG-8524	Slate Grey Ripple	85⅜ x 23⅝ x 24"	77 x 19"	320	135.00

Export Dept.: Rocke International Corp., 13 E. 40th St., New York 16, N. Y.

ALL PRICES F.O.B. LONG ISLAND CITY, N. Y.

PAR-METAL RACKS · CHASSIS · CABINETS *for* ELECTRONIC APPARATUS

TYPE "A" ENCLOSED RELAY RACKS
DELUXE TYPE—18" DEEP RACK PANELS



SINGLE TYPE ER-225 RACK

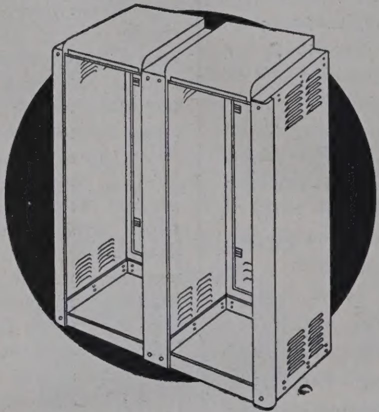
Quick Detachable Corner Trims. All Type "A" racks have new improved corner trims which are fastened to front of rack with two "stud clips."

Model ER-225

The removable vertical corner trims are rounded and cover the panel mounting screws, the same as is used on our Type "C" commercial racks. The top, which has also been "streamlined," is perforated at the back to provide additional ventilation. The top and bottom are trimmed with chrome finished mouldings.

Models **ER-223, ER-225** and **ER-227** as illustrated above may now be "ganged" together in a row in **double** or **multi units.** When so ordered, racks are supplied with common intermediate sides which are joined to adjacent tops and bottom. These intermediate sides are supplied with **solid walls** or **open type walls,** to facilitate wiring between racks where needed.

Where racks are set up on "multiple" units center joining trims are supplied. If trim strips are not required, stud clips may be removed and replaced with regular screws. Panels are recessed and edges of panels are not visible with or without trim strips.



Optional "Multirack" Assembly

When ordering specify number of racks per gang, such as **"double units"** for a gang of 2 racks, **"triple units"** for a gang of 3 racks, etc. Solid wall intermediate sides will be supplied unless otherwise specified. Pieces for each rack remain unchanged; double racks being twice the size of a single rack, triple racks being three times the size of a single rack, etc.

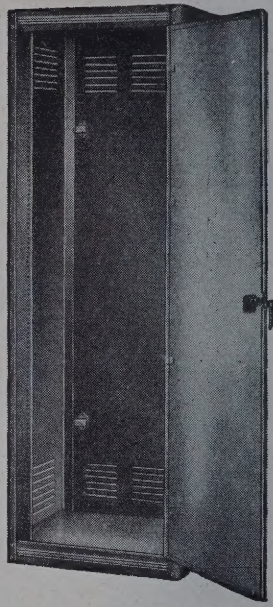
*SLATE GREY RIPPLE ENAMEL

Cat. No.	Overall Size	Panel Space	Shpg. Wt. lbs.	Net Price
ER223	43¼x22x18"	36¾"	90	$42.12
ER225	67¾x22x18"	61¼"	135	54.60
ER227	83½x22x18"	77"	165	69.52

*Black ripple is optional.

May be mounted on Roller Truck No. RT-412. Shelf available is No. ER-2212.

ROUNDED CORNER TYPE WITH FRONT DOORS



Model FD-215
For 19" Wide Panels

Equipped with hinged front and rear doors, with chrome plated handles and locks. Front panel mounting angles are recessed 2" to allow clearance for dials, knobs, etc. May be mounted on Roller Truck No. RT-411. Shelf available is R-2215.

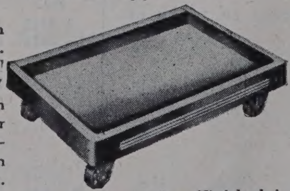
Cat. No.	Overall Size	Panel Space	Shpg. Wt. Lbs.	Net Price
FD-215	66½x22x16½"	61¼"	160	$62.40
FD-217	82¼x22x16½"	77"	165	74.88

TABLE TYPE RELAY RACKS

Useful where floor type heavy duty rack is not required. Mounting holes accurately drilled on universal centers. Tapped for 10/32 screws. Finished in black ripple enamel and shipped "knocked-down" with all necessary screws. Shipping weight of rack is 20 pounds.

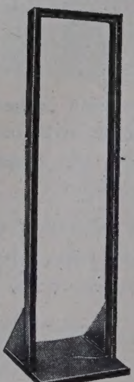
Cat. No.	Overall Size	Panel Space	Net Price
TR-2520	25x21x12"	21x19"	$6.09
TR-3220	32x21x12"	28x19	7.62

ROLLER TRUCKS FOR RACKS
DeLuxe Type



Designed for use on our racks. Overall size 3" wider than racks for better distribution of weight. Has rubber composition wheels. Finished in slate grey ripple, with chrome trim.

Cat. No.	Will Fit Rack No.	Net Price
RT-401	ER-203, ER-205, ER-207	$7.80
RT-410	DL-2613, DL-3513	8.58
RT-411	ER-213, ER-215, ER-217	9.66
RT-412	All 18" deep racks	10.98
RT-415	All 15¼" deep racks	11.07



CHANNEL RELAY RACKS
FOR STANDARD 19" RACK PANELS

Black Ripple Finish

Constructed of ⁷⁄₆₄" pressed steel. Vertical members and top securely welded together. Base 22" deep on RR-195 rack; it is 19" deep on RR-193 rack. Panel mounting holes drilled on universal centers for "Amateur" or type "C" panels, tapped 10/32 machine screws.

Cat. No.	Overall Size	Panel Space	Shpg. Wt. lbs.	Net Price
RR-195	73¼x20x20⅞"	71¾"	85	$19.02
RR-193	38¼x20x18⅜"	36¾"	57	15.90

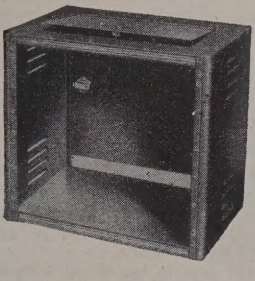
ALL PRICES F.O.B. LONG ISLAND CITY, N. Y.

PAR-METAL RACKS · CHASSIS · CABINETS *for* ELECTRONIC APPARATUS

DESK PANEL CABINET RACKS

For Standard 19″ Rack Panels

Black Ripple Finish



Streamlined styling. The vertical front corners are rounded and top and bottom trimmed with mouldings. Panels fit into a recess, so that the edges are not exposed. Panel mounting holes drilled on universal centers, for "Amateur" or type "C" panels; holes are tapped 10/32. May be used with any chassis up to 13″ x 17″ in size. Louvres provide ample ventilation. Panel mounting screws and washers furnished. Black ripple enamel is standard. Slate grey is optional at same price.

Cat. No.	Overall Size	Panel Space	Net Price
	With door in top only		
DL128	10½ x 21½ x 15″ deep	8¾″	$10.38
DL1210	12¼ x 21½ x 15″ deep	10½″	12.24
DL1225	14 x 21½ x 15″ deep	12¼″	12.66
DL1413	15¾ x 21½ x 15″ deep	14″	14.28
	With door in top and door on rear panel		
DL1713	19¼ x 21½ x 15″ deep	17½″	17.61
DL2613	28 x 21½ x 15 deep	26¼″	19.95
DL3513	36¾ x 21½ x 15″ deep	35″	22.47

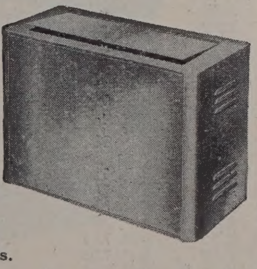
HINGED STEEL CABINETS

De Luxe Type

Has rounded front corners. New type formed top door, hinged at back for full access to interior. Chrome finished mouldings, modern handle at top and bottom opening at rear for leads. Gray ripple enamel. Prices do not include chassis.

Cat. No.	H. L. D.	Panel Size	For Chassis	Net Price
CA-300	8½x12¾x 8″	8½x10″	7x 9x2″	$4.95
CA-301	8½x16¾x 8″	8½x14″	7x13x2″	5.70
CA-302	9½x17¾x11″	9½x15″	10x14x3″	8.19
CA-303	9½x20¾x 9″	9½x18″	8x17x3″	8.19
CA-304	12½x20¾x12″	12½x18″	10x17x3″	8.94

HINGED STEEL CABINETS



Front vertical corners are streamlined, and a panel type door is provided. Rear opening allows for necessary leads, etc. Slate grey ripple finish. Prices do not include chassis.

Cat. No.	H. L. D.	Panel Size	For Chassis	Net Price
CA-200	8 x 10 x 8″	8 x 8″	7 x 7 x 2″	$3.39
CA-201	8 x 12 x 8″	8 x 10″	7 x 9 x 2″	3.62
CA-202	8 x 16 x 8″	8 x 14″	7 x 13 x 2″	4.77
CA-203	9 x 17 x 11″	9 x 15″	10 x 14 x 3″	7.41
CA-204	12 x 20 x 12″	12 x 18″	10 x 17 x 3″	8.64

STANDARD TYPE BLANK STEEL CHASSIS BASES

Stamped from one piece of cold rolled steel and have four solid sides with welded corners. Bottom edges flanged in to provide additional reinforcement, and they are drilled for bottom plates. The chassis are made from No. 20 gauge steel, except those marked (*) which are stamped from 1/16″ steel.

Zinc Plated Cat. No.	Size	Net Price
C-4500	5½x9½x1½″	$ .68
C-4507	5x 7x2″	.65
C-4508	5x10x3″	1.00
C-4509	6x14x3″	1.11
C-4510	7x 7x2″	.74
C-4511	7x 9x2″	.90
C-4512	7x11x2″	.96
C-4513	7x13x2″	1.05
C-4514	7x15x3″	1.37
C-4518	4x17x3″	1.17
C-4515	7x17x3″	1.31
C-4502	8x12x3″	1.31
C-4531	8x17x2″	1.43
C-4532	8x17x3″	1.49
C-4525	10x12x3″	1.43
C-4524	10x14x3″	1.49
C-4528	10x17x2″	1.49
C-4529	10x17x4″	1.95
C-4526	10x17x3″	1.49
C-4533*	11x17x2″	2.01
C-4534*	11x17x3″	2.37
C-4516	12x17x2″	1.68
C-4517	12x17x3″	1.80
C-4530	12x17x4″	2.10
C-4535*	13x17x2″	2.30
C-4536*	13x17x3″	2.58
C-4537*	13x17x4″	3.15

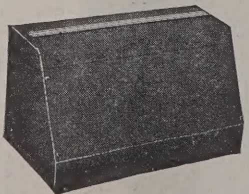
Bottom plates available for all above chassis.

CHASSIS MOUNTING BRACKETS

These brackets will fit any of the chassis listed above, as the mounting holes are drilled to match. Panels must be at least 7″ high. Finished in black enamel.

Cat. No.	Dimensions	Shpg. Wt.	Net Price
SB- 78	For 8″ Base	2 lbs.	$ .78
SB-711	For 11″ Base	3 lbs.	1.12
SB-713	For 13″ Base	3 lbs.	1.31
SB-717	For 17″ Base & larger	5 lbs.	1.92

SLOPING FRONT CABINETS



Adaptable as instrument cases for studios, laboratories, etc. Top corner rounded and trimmed with chrome moulding. Slate grey ripple finish. A chassis may be mounted to front panel and removed as a unit. Rear of case ventilated, with opening for connections. Prices do not include chassis.

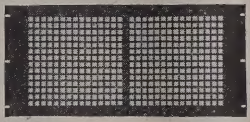
Cat. No.	H. W. D.	Size of Chassis	Net Price
SF-500	8 x 8 x 8″	7 x 7 x 2″	$3.59
SF-501	8 x 10 x 8	7 x 9 x 2	3.90
SF-502	8 x 14 x 8″	7 x 13 x 2	4.35
SF-503	9 x 18 x 8″	7 x 17 x 3″	6.39
SF-504	12 x 18 x 12″	10 x 17 x 3″	8.19

BLANK PANELS

⅛″ ALUMINUM

Cat. No. Black	Cat. No. Grey	Height	Net Price
6675	G-6675	1¾″	$ .71
6676	G-6676	3½″	1.02
6677	G-6677	5¼″	1.49
6678	G-6678	7″	1.80
6679	G-6679	8¾″	2.18
6680	G-6680	10½″	2.73
6681	G-6681	12¼″	3.18
6682	G-6682	14″	3.57
6683	G-6683	15¾″	4.05
6684	G-6684	17½″	4.50
6685	G-6685	19¼″	4.92
6686	G-6686	21″	5.25

GRILLE PANELS ⅛″ STEEL



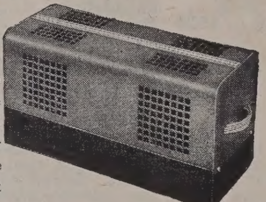
This modern type ventilating grille is stamped into the panel itself; it is not a pieced assembly.

Cat. No. Black	Cat. No. Grey	Panel Size	Grille Size	Net Price
P-661	G-661	5¼″	3⅜ x 14⅜″	$2.40
P-662	G-662	7	4⅞ x 14⅜″	2.55
P-663	G-663	8¾″	6⅞ x 14⅜″	3.12
P-664	G-664	8¾″	*3⅞ x 14⅜″	2.79
P-665	G-665	10½″	8⅜ x 14⅜″	3.42
P-666	G-666	10½″	*5⅞ x 14⅜″	3.12
P-667	G-667	12¼″	*7⅜ x 14⅜″	3.57

*Allows 3½″ space at bottom for chassis mounting.

ROUNDED CORNER TYPE

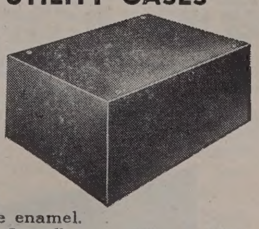
Amplifier Foundation Chassis



Modern professional type. Rounded corners on screen cover. Chrome mouldings and handles. Cover finished in slate gray, with black ripple chassis.

Cat. No.	Chassis Size	Depth of Cover	Shpg. Wt.	Net Price
DF510	5x10x3″	6″	9 lbs.	$3.66
DF615	6x14x3″	6″	10 lbs.	4.20
DF717	7x17x3″	6″	11 lbs.	4.83
DF1012	10x12x3″	6″	11 lbs.	4.83
DF1017	10x17x3″	6″	13 lbs.	5.76
DF1317	13x17x3″	6″	15 lbs.	6.87

STEEL UTILITY CASES



These cases have flat tops and bottoms, which are removable. Made from 20 gauge sheet steel, with flanged edges and spot-welded corners. Finished in black ripple enamel.

Cat. No.	Overall Size	Ship. Wt. Lbs.	Net Price
MC- 442	4 x 4 x 2″	2	$ .74
MC- 453	4 x 5 x 3″	3	.84
MC- 654	6 x 5 x 4″	3	.99
MC- 596	5 x 9 x 6″	5	1.65
MC- 666	6 x 6 x 6″	3	1.11
MC-8101	8 x 10 x 10″	7	2.58
MC-1128	11 x 12 x 8″	9	2.79
MC-8107	8 x 10 x 7″	6	2.16

ALL PRICES F.O.B. LONG ISLAND CITY, N. Y.

CABINETS
CHASSIS

MIDDLETOWN MANUFACTURING CO.

CASES
PANELS

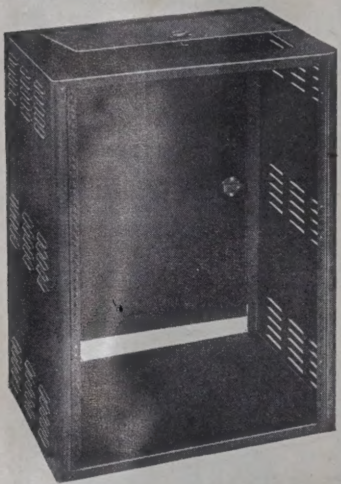
MIDDLETOWN IN CONNECTICUT

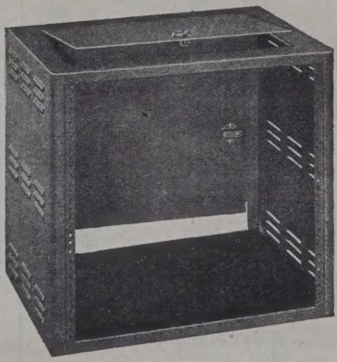
D.C. DELUXE CABINET RACKS—USE 19" RACK PANELS

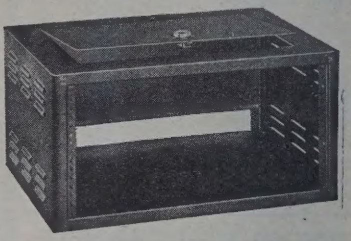
Middletown D. C. Cabinets conform to the conventional design of streamlined cabinets used by builders of amateur and commercial equipment.

FEATURES

- ★ Constructed of heay gauge 1/16" steel, electrically welded.
- ★ Adequate ventilation is provided by sufficient louvres in sides, and ventilation in back.
- ★ Front Vertical posts rounded.
- ★ Flush panel mounting (recessed).
- ★ Drilled and tapped for 10/32" screws on universal centers.
- ★ Flush door in top fitted with flush snap-lock and piano hinges.
- ★ Black Wrinkle finish. *Grey Wrinkle if desired.*







Cat. No.		Dealer Cost
D.C. 108	Panel Size 8¾" x 19". Size of Cabinet 10½" x 21½" x 15". Single Unit	$13.20
D.C. 1412	Panel Size 12¼" x 19". Size of Cabinet 14" x 21½" x 15". Single Unit	16.02
D.C. 1514	Panel Size 14" x 19". Size of Cabinet 15¾" x 21½" x 15". Single Unit	17.82

Cat. No.		Dealer Cost
D.C. 1917	Panel Size 17½" x 19". Size of Cabinet 19¼" x 21½" x 15". Double Unit—Door Top and Back	$22.08
D.C. 2826	Panel Size 26¼" x 19". Size of Cabinet 28" x 21½" x 15". Triple Unit—Door Top and Back	25.89
D.C. 3635	Panel Size 35" x 19". Size of Cabinet 36¾" x 21½" x 15". Quad. Unit—Door Top and Back	28.65

BLANK STEEL CHASSIS
Heavy Duty

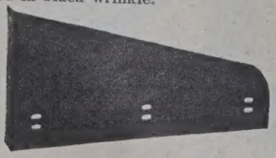
Middletown heavy duty Chassis are made from one piece of 1/16" sheet steel—Spot Welded at all four corners. Bottom edges are folded over on all four sides for additional rigidity and rilled to match bottom plates. Ends are drilled to fit standard Middletown brackets Bottom plates are supplied with these Chassis.

Stock Sizes
Black Wrinkle

Cat. No.		Dealer Cost
H.D. 8172	8 x 17 x 2"	$3.03
H.D. 8173	8 x 17 x 3"	3.30
H.D. 11172	11 x 17 x 2"	3.45
H.D. 11173	11 x 17 x 3"	3.69
H.D. 13172	13 x 17 x 2"	3.84
H.D. 13173	13 x 17 x 3"	4.26
H.D. 13174	13 x 17 x 4"	4.68

CHASSIS BRACKETS
Mounting

These brackets are for chassis listed above. Front end of the bracket is seven inches high. Finished in black wrinkle.



Cat. No.	Size	Shipping Weight	Dealer Cost
C.B. 8	For 8" Base	2 lbs.	$0.87
C.B. 11	For 11" Base	3 lbs.	1.26
C.B. 13	For 13" Base	3 lbs.	1.47

BLANK CHASSIS
Standard Type

Middletown Chassis are made from one piece of No. 20 gauge steel spot-welded at all 4 corners—bottom edges are folded over on four sides for additional rigidity and drilled to match bottom plates.

Bottom plates are drilled to match holes on flange of chassis and have pressed bumpers at corners. Material No. 20 gauge steel.

Standard Chassis
Steel Black Wrinkle

Cat. No.	Size	Dealer Cost
B.S. 442	4x 4x2"	$0.81
B.S. 591	5½x9½x1½	.87
B.S. 5103	5x10x3"	1.20
B.S. 4173	4x17x3"	1.44
B.S. 6143	6x14x3"	1.41
B.S. 772	7x 7x2"	.99
B.S. 792	7x 9x2"	1.20
B.S. 7112	7x11x2"	1.23
B.S. 7132	7x13x2"	1.32
B.S. 7153	7x15x3"	1.59
B.S. 7173	7x17x3"	1.44
B.S. 8172	8x17x2"	1.59
B.S. 8173	8x17x3"	1.74
B.S. 10123	10x12x3"	1.65
B.S. 10143	10x14x3"	1.77
B.S. 10172	10x17x2"	1.77
B.S. 10173	10x17x3"	1.83
*B.S. 11172	11x17x2"	2.49
*B.S. 11173	11x17x3"	2.55
B.S. 12172	12x17x2"	1.89
B.S. 12173	12x17x3"	2.25
B.S. 12174	12x17x4"	2.49
*B.S. 13172	13x17x2"	2.73
*B.S. 13173	13x17x3"	3.15
*B.S. 13174	13x17x4"	3.57

*16 ga.

Aluminum Chassis

Cat. No.	Dealer Cost
†ABC 591	$1.05
†ABC 5103	1.26
†ABC 4173	1.92
†ABC 6143	1.98
†ABC 772	1.05
†ABC 792	1.15
†ABC 7112	1.26
†ABC 7132	1.32
†ABC 7153	2.16
†ABC 7173	1.92
†ABC 8172	1.98
†ABC 8173	2.34
†ABC 10123	1.98
†ABC 10143	2.52
†ABC 10172	2.40
†ABC 10173	2.73
‡ABC 11172	2.49
‡ABC 11173	3.15
‡ABC 12173	3.36
‡ABC 13172	2.97
‡ABC 13173	3.54
‡ABC 13174	4.05

†18 ga.
‡16 ga.

Bottom Plates
Black Wrinkle

Cat. No.	Size	Dealer Cost
B.P. 59	5½x9½"	$0.39
B.P. 510	5x10"	.45
B.P. 417	4x17"	.57
B.P. 614	6x14"	.60
B.P. 77	7x 7"	.42
B.P. 79	7x 9"	.45
B.P. 711	7x11"	.57
B.P. 713	7x13"	.63
B.P. 715	7x15"	.69
B.P. 717	7x17"	.72
B.P. 817	8x17"	.72
B.P. 1012	10x12"	.72
B.P. 1014	10x14"	.78
B.P. 1017	10x17"	.96
B.P. 1117	11x17"	.99
B.P. 1217	12x17"	1.05
B.P. 1317	13x17"	1.14

Net

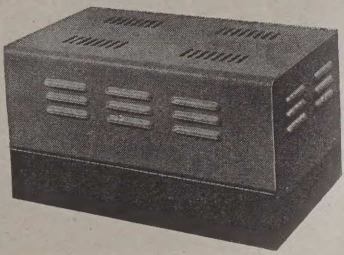
CABINETS CHASSIS

MIDDLETOWN MANUFACTURING CO.

CASES PANELS

MIDDLETOWN IN CONNECTICUT

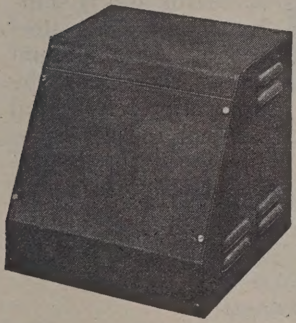
AMPLIFIER FOUNDATIONS—DeLuxe Models



This unit is designed to meet the most critical requirements. It has rounded corners, special Middletown designed louvres on all 4 sides and elongated holes on top to give maximum ventilation. Chassis are finished in Black wrinkle. Covers are finished in Grey wrinkle. Chassis are drilled for bottom plates which are listed separately. Covers all have a depth of 6″.

Cat. No.	Size	Dealer Cost
A.F.-5103	5 x 10 x 3″	$2.97
A.F.-6143	6 x 14 x 3″	3.30
A.F.-7173	7 x 17 x 3″	4.20
A.F.-10123	10 x 12 x 3″	4.14
A.F.-10173	10 x 17 x 3″	4.95
A.F.-13173	13 x 17 x 3″	5.94

SLOPING FRONT PANEL CABINETS



Sloping front panel cabinets have a wide application in the electronic field since they are adaptable for various uses. They are constructed of heavy gauge steel electrically spot-welded. Top corner is rounded, front panel is removable, and louvres on sides provide ventilation.

Back panel is ventilated on top and an opening is provided on the bottom so that connections can be made directly to the rear of the chassis. Finished in Grey wrinkle.

Cat. No.	H.W.D.	Chassis Size	Dealer Cost
S.F.-888	8 x 8 x 8″	7 x 7 x 2″	$4.23
S.F.-8108	8 x 10 x 8″	7 x 9 x 2″	4.71
S.F.-8128	8 x 10 x 8″	7 x 9 x 2″	4.89
S.F.-8148	8 x 14 x 8″	7 x 13 x 2″	5.07
S.F.-121812	12 x 18 x 12″	10 x 17 x 3″	9.24

STEEL UTILITY CANS

These Utility Cans are substantially made from sheet steel with spot welded reinforced corners. Tops and bottoms are removable and are flanged on all four sides. Held in place with self-tapping screws.

Cat. No.	Size	Weight	Dealer Cost
U.C. 565	5½ x 6 x 5½″	3 lbs.	$1.38
U.C. 596	5 x 9 x 6″	5 lbs.	1.86
U.C. 8107	8 x 10 x 7″	6 lbs.	2.70
U.C. 81010	8 x 10 x 10″	7 lbs.	3.45
U.C. 11128	11 x 12 x 8″	9 lbs.	4.35

STEEL RACK PANELS — 19" LONG

These panels are made from ⅛″ steel and are slotted for standard W.E. mounting. Twelve standard sizes. Furnished in black or grey wrinkle finish. These panels are also supplied with commercial standard slotting. When ordering commercial type indicate by adding S to our catalog number below.

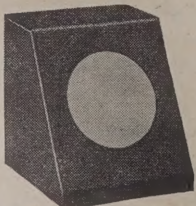
Cat. No.	Width	Weight	Dealer Cost
R.P. 1	1¾″	2 lbs.	$0.99
R.P. 3	3½″	5 lbs.	1.11
R.P. 5	5¼″	7 lbs.	1.38
R.P. 7	7 ″	8 lbs.	1.62
R.P. 8	8¾″	9 lbs.	1.98
R.P. 10	10½″	10 lbs.	2.37
R.P. 12	12¼″	12 lbs.	2.85
R.P. 14	14 ″	13 lbs.	3.24
R.P. 15	15¾″	14 lbs.	3.69
R.P. 17	17½″	15 lbs.	4.05
R.P. 19	19¼″	16 lbs.	4.50
R.P. 21	21 ″	17 lbs.	4.95

When Ordering Specify Black or Grey.

METER PANELS

Middletown Meter Panels are made 5¼″ high and are made to the same specifications as our Rack Panels — are available to fit 3″ meters.

Cat. No.	Holes	Hole Size	Dealer Cost
R.P.M. 33	3	2 3/16″	$1.95
R.P.M. 35	5	2 3/16″	2.70

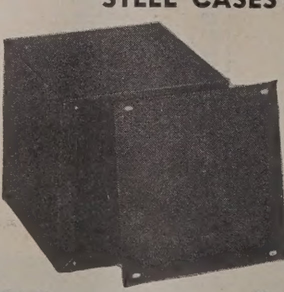


METER CASES

These cases have sloping front panel with rounded top corner which blends with streamline equipment. They are sturdily constructed from sheet steel with welded joints.

Cat. No.	Meter	Hole Size	H.W.D.	Dealer Cost
M.C. 13	Single 3″	2 13/16″	4½ x 4 x 4	$1.26
M.C. 33	3-3″ Meters	2 13/16″	4½ x 11¼ x 4	3.06

STEEL CASES — STANDARD



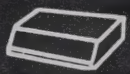
These cases are similar to our standard steel utility cans except they have flat tops and bottoms which are held in place with self tapping screws and are removable. These cases are of sturdy construction and have spot welded corners. Case has flanges on all edges. Furnished in black wrinkle.

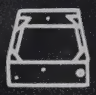
Cat. No.	Size	Weight	Dealer Cost
S.C. 442	4 x 4 x 2 ″	2 lbs.	$0.84
S.C. 453	4 x 5 x 3 ″	3 lbs.	.96
S.C. 666	6 x 6 x 6 ″	3 lbs.	1.32
S.C. 1276	12 x 7 x 6 ″	5 lbs.	2.49
S. C. 1597	15 x 9 x 7 ″	9 lbs.	3.39
S.C. 1287	12 x 7¾ x 6½″	9 lbs.	2.88
S.C. 1576	15 x 7¾ x 6½″	11 lbs.	2.97

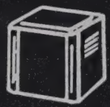
Net

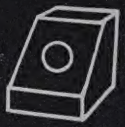
MINUTE MAN *Chassis*

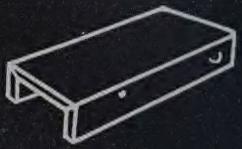
SPECIALISTS IN METAL PARTS FOR ELECTRONICS





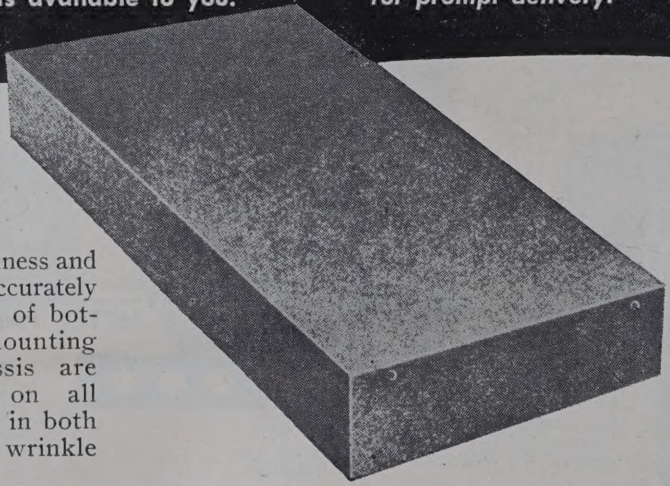






Noted nationally as a fabricator of metal parts to the top-flight manufacturers of Radio, Television and Electronic Equipment, MINUTE MAN now makes its high-quality, precision products available to you.

Nothing has been stinted to make this expanding line of metal parts the finest you could want. All parts are interchangeable, all parts are adaptable, *all parts are ready for prompt delivery.*



MMS chassis are made from one piece, heavy gauge, prime steel; folded at the bottom for sturdiness and rigidity. Holes are accurately drilled for attaching of bottom plates and mounting brackets. The chassis are electro-spot-welded on all four sides. Available in both plated and black wrinkle finishes.

MMA chassis are designed for use where aluminum chassis are required. Construction meets government standards and is similar to that of our steel chassis. All aluminum chassis are fused by specially designed welders and are caustic-dipped for brightness and finish.

CHASSIS

STEEL				ALUMINUM	
Catalogue No.	Dealer's Cost			Catalogue No.	Dealer's Cost
	Plated	Black Wrinkle			
MMS-5072	$ .90	$ .95	5 x 7 x 2	MMA-5072-2	$1.00
MMS-5103	1.10	1.15	5 x 10 x 3	MMA-5103-2	1.50
MMS-5133	1.30	1.35	5 x 13 x 3	MMA-5133-2	1.60
MMS-7072	.95	1.00	7 x 7 x 2	MMA-7072-2	1.20
MMS-7092	1.10	1.15	7 x 9 x 2	MMA-7092-2	1.30
MMS-7112	1.15	1.20	7 x 11 x 2	MMA-7112-2	1.40
MMS-7132	1.25	1.30	7 x 13 x 2	MMA-7132-2	1.50
MMS-7153	1.50	1.55	7 x 15 x 3	MMA-7153-2	2.30
MMS-7173	1.55	1.60	7 x 17 x 3	MMA-7173-2	2.35
MMS-8172	1.50	1.55	8 x 17 x 2	MMA-8172-2	2.35
MMS-8173	1.55	1.60	8 x 17 x 3	MMA-8173-2	2.50
MMS-8153	1.55	1.60	8½ x 15 x 3	MMA-8153-2	2.30
MMS-10123	1.50	1.60	10 x 12 x 3	MMA-10123-2	2.20
MMS-10143	1.60	1.70	10 x 14 x 3	MMA-10143-2	2.70
MMS-10172	1.65	1.75	10 x 17 x 2	MMA-10172-2	2.60
MMS-10173	1.75	1.85	10 x 17 x 3	MMA-10173-2	2.90
MMS-10233	2.55	2.65	10 x 23 x 3	MMA-10233-2	3.40
MMS-11172	2.00	2.10	11 x 17 x 2	MMA-11172-2	2.75
MMS-11173	2.25	2.35	11 x 17 x 3	MMA-11173-2	3.35
MMS-12172	1.90	2.00	12 x 17 x 2	MMA-12172-2	3.10
MMS-12173	2.10	2.20	12 x 17 x 3	MMA-12173-2	3.55
MMS-13172	2.35	2.45	13 x 17 x 2	MMA-13172-2	3.15
MMS-13173	2.45	2.55	13 x 17 x 3	MMA-13173-2	3.75

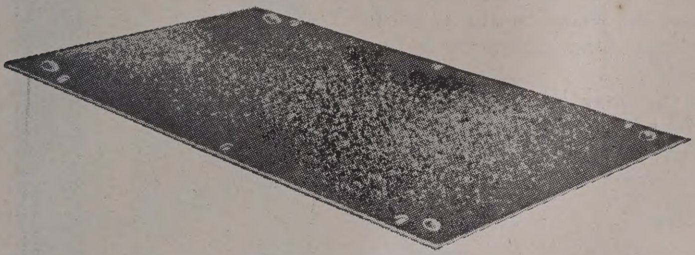
MINUTE MAN PRODUCTS, INC.

430 EAST 102nd ST., NEW YORK, N. Y. EN 9-5150

MINUTE MAN ACCESSORIES

CHASSIS BOTTOM PLATES

Engineers and designers recommend these bottom plates for protection of wiring and components under the chassis. Four spherical domes are formed on each plate to prevent marring of surfaces. Available in black.



STEEL

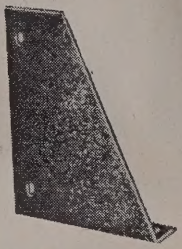
Catalogue No.	Size	Dealer's Cost
MMBPS-0507	5 x 7	$ .46
MMBPS-0510	5 x 10	.46
MMBPS-0513	5 x 13	.48
MMBPS-0707	7 x 7	.54
MMBPS-0709	7 x 9	.56
MMBPS-0711	7 x 11	.64
MMBPS-0713	7 x 13	.68
MMBPS-0715	7 x 15	.75
MMBPS-0717	7 x 17	.78
MMBPS-0817	8 x 17	.82
MMBPS-8515	8½ x 15	.80
MMBPS-1012	10 x 12	.82
MMBPS-1014	10 x 14	.85
MMBPS-1017	10 x 17	1.00
MMBPS-1023	10 x 23	1.40
MMBPS-1117	11 x 17	1.00
MMBPS-1217	12 x 17	1.08
MMBPS-1317	13 x 17	1.28

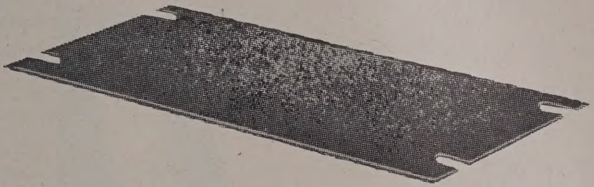
CHASSIS MOUNTING BRACKETS

Recommended for panel and chassis assemblies where weight is involved. Panels to be minimum of 8″. Will fit any chassis. Mounting holes are drilled to match. Finished in black wrinkle.

STEEL

Catalogue No.	Size	Dealer's Cost
MMMB-8	8″	$ .85 pr.
MMMB-10	10″	1.05 pr.
MMMB-11	11″	1.25 pr.
MMMB-13	13″	1.70 pr.





RELAY RACK PANEL

Minute Man Rack Panels are 19″ wide and are available in double thick steel or aluminum. Slotted for easy mounting per "W. E. spacing", these panels are finished in lustrous black or gray wrinkle.

STEEL

Catalogue No.	Size	Dealer's Cost
MMRPS-525	5¼″	$ .95
MMRPS-7	7″	1.10
MMRPS-875	8¾″	1.35
MMRPS-105	10½″	1.60
MMRPS-1225	12¼″	1.90
MMRPS-14	14″	2.20
MMRPS-1575	15¾″	2.45
MMRPS-175	17½″	2.70
MMRPS-1925	19¼″	3.00
MMRPS-21	21″	3.30

ALUMINUM

Catalogue No.	Size	Dealer's Cost
MMRPA-525-2	5¼″	$1.35
MMRPA-7-2	7″	2.00
MMRPA-875-2	8¾″	2.25
MMRPA-105-2	10½″	2.70
MMRPA-1225-2	12¼″	3.15
MMRPA-14-2	14″	3.50
MMRPA-1575-2	15¾″	3.90
MMRPA-175-2	17½″	4.35
MMRPA-1925-2	19¼″	4.75
MMRPA-21-2	21″	5.05

In addition to our standard line, the complete MINUTE MAN facilities are available to you for the manufacture to your particular specifications of long short and medium runs of any metal bases, chassis, panels, housings and brackets.

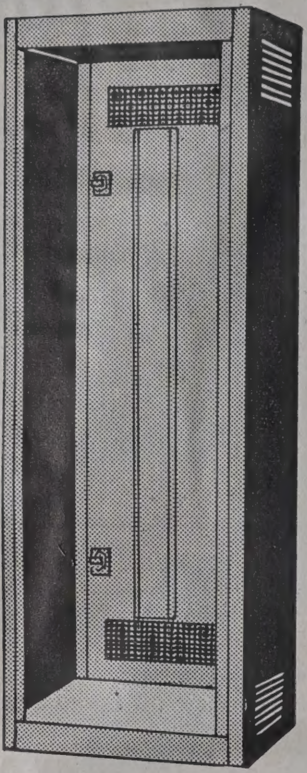
Our wide experience is geared for the most exacting specifications in both government and civilian work.

MINUTE MAN PRODUCTS, INC.

430 EAST 102nd ST., NEW YORK, N. Y. EN 9-5150

PREMIER PRECISION BUILT METAL HOUSINGS

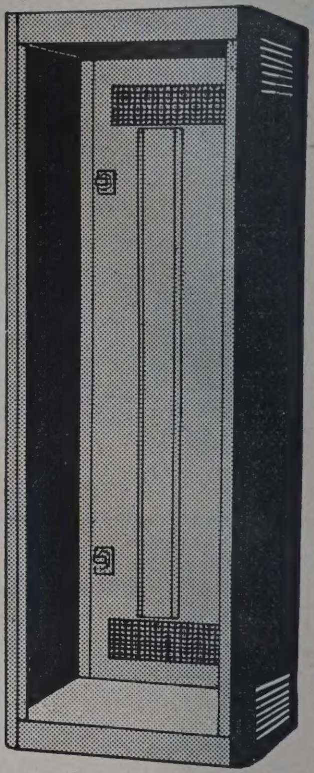
ENCLOSED RELAY RACKS



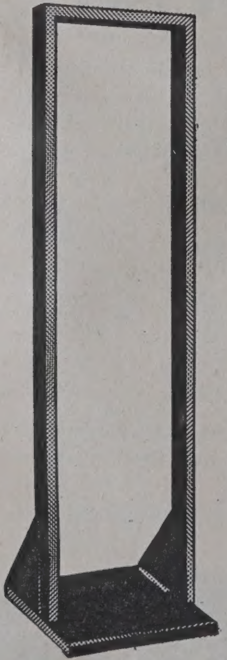
STANDARD TYPE

- Rigidly constructed of #16 gauge cold rolled sheet steel.
- The panel mounting angles are of #12 gauge steel and are tapped for 10/32 machine screws on Western Electric spacings.
- Panels fit into a recess so that the edges are not exposed.
- Racks are shipped knocked down with all necessary bolts for easy assembly.
- Rear doors are hung on sturdy loose-jointed hinges, and closed by a flush snap catch.
- Cabinets finished in either Black or Grey wrinkle.
- ROUNDED TYPE have front vertical rounded corners.

STANDARD TYPE		**ROUNDED TYPE**
Catalog No. **RS-3619**	Overall Dimensions: 41⅞ x 22 x 18"	**Catalog No.** **R-3619**
List Price **$54.50**	Panel Space: 36¾ x 19"	**List Price** **$54.50**
RS-6119 **$81.00**	Overall Dimensions: 66⅜ x 22 x 18" Panel Space: 61¼ x 19"	**R-6119** **$81.00**
RS-7719 **$97.50**	Overall Dimensions 82⅛ x 22 x 18" Panel Space: 77 x 19"	**R-7719** **$97.50**



ROUNDED TYPE



CHANNEL RELAY RACKS

- Rigidly constructed of #12 gauge cold rolled sheet steel and finished in Black Wrinkle.
- Vertical members and top cross-brace are welded together.
- Panel mounting holes are tapped for 10/32 machine screws on Western Electric Spacings.
- Racks are shipped knocked down with all necessary bolts for easy assembly.

Cat No.	Overall Dimensions	Available Panel Space	List Price
RR-80C	38¼" x 20" x 18⅜"	36¾"	$29.00
RR-801	73¼" x 20" x 20⅞"	71¾"	34.50

All prices F.O.B., Bronx, N. Y.

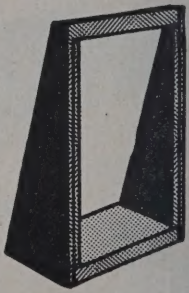


TABLE TYPE RELAY RACKS

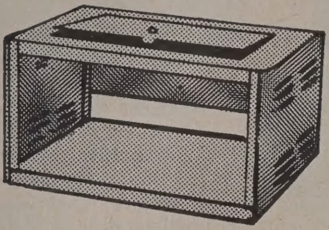
- Rigidly constructed of #16 gauge cold rolled sheet steel and finished in Black Wrinkle.
- Base constructed of one piece, similar to a chassis.
- Panel mounting holes are tapped for 10/32 machine screws on Western Electric Spacings.
- Racks are shipped knocked down with all necessary bolts for easy assembly.

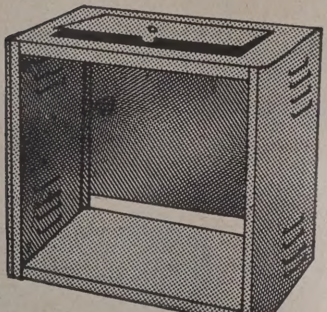
Cat. No.	H.	W.	D.	Space Panel	List Price
TR-2119	25"	21"	12"	21 x 19"	$11.00
TR-2819	32"	21"	12"	28 x 19"	13.75

PREMIER METAL PRODUCTS COMPANY

PREMIER PRECISION BUILT METAL HOUSINGS

DELUXE DESK PANEL CABINET RACKS
FOR STANDARD 19" RACK PANELS





- Front vertical corners are rounded and the top and bottom are trimmed with red striped chrome finished moulding.
- Rigidly constructed of #16 gauge cold rolled sheet steel.
- Panels fit into a recess so that the edges are not exposed.
- Panel mounting holes are tapped for 10/32 machine screws on Western Electric Spacings.
- Piano type hinges are used on the top doors, which are provided with flush snap catches.
- Cabinets finished in either Black or Grey Wrinkle.

SINGLE UNIT
(with door in top only)

Cat. No.	Cabinet Size	Available Panel Space	List Price
DCR-80	10½ x 21¾ x 15¼" deep	8¾" x 19"	$20.00
DCR-100	12¼ x 21¾ x 15¼" deep	10½" x 19"	22.50
DCR-120	14 x 21¾ x 15¼" deep	12¼" x 19"	24.25
DCR-140	15¾" x 21¾ x 15¼" deep	14 " x 19"	27.00

DOUBLE UNIT
(with door in top and door on rear panel)

DCR-170	19¼ x 21¾ x 15¼" deep	17½" x 19"	32.00
DCR-190	21 x 21¾ x 15¼" deep	19¼" x 19"	33.50
DCR-210	22¾ x 21¾ x 15¼" deep	21 " x 19"	34.75

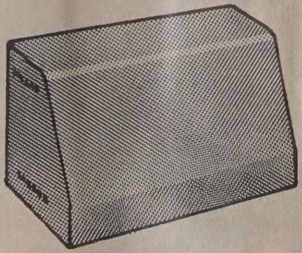
TRIPLE UNIT
(with door in top and door on rear panel)

DCR-260	28 x 21¾ x 15¼"deep	26¼" x 19"	37.50
DCR-310	33¼ x 21¾ x 15¼" deep	31½" x 19"	39.50

QUAD UNIT
(with door in top and door on rear panel)

DCR-350	36¾ x 21¾ x 15¼" deep	35 " x 19"	41.50

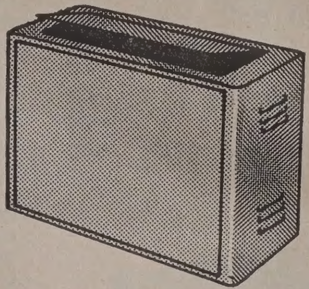
CABINETS



SLOPING FRONT

Cabinet has rounded top corners and a removable front panel. Back of cabinet is perforated and has opening for leads. Finished in Grey Wrinkle.

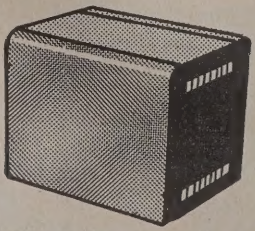
Cat. No.	H. W. D.	For Chassis	List Price
SFC-500	8 x 8 x 8"	7 x 7 x 2"	$6.40
SFC-501	8 x 10 x 8"	7 x 9 x 2"	7.10
SFC-502	8 x 14 x 8"	7 x 13 x 2"	7.65
SFC-503	9 x 18 x 8"	7 x 17 x 3"	11.00
SFC-504	12 x 18 x 12"	10 x 17 x 3"	14.00



HINGED TOP ROUNDED CORNER TYPE

Cabinet has front vertical rounded corners and a removable front panel. Back of cabinet is perforated and has opening for leads. Finished in Grey Wrinkle.

Cat. No.	H. W. D.	Panel Size	For Chassis	List Price
HTC-200	8 x 10 x 8"	8 x 8"	7 x 7 x 2"	$6.00
HTC-201	8 x 12 x 8"	8 x 10"	7 x 9 x 2"	6.50
HTC-202	8 x 16 x 8"	8 x 14"	7 x 13 x 2"	8.45
HTC-203	9 x 17 x 11"	9 x 15"	10 x 14 x 3"	13.15
HTC-204	12 x 20 x 12"	12 x 18"	10 x 17 x 3"	15.50



HINGED TOP STANDARD TYPE

Front Panel has a rounded corner on top and is removable. Top door has a piano hinge. Finished in Black Wrinkle.

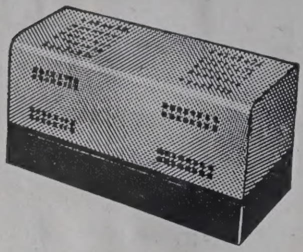
Cat. No.	H. W. D.	For Chassis	List Price
HTC-100	7¼ x 10½ x 6"	5½ x 9½ x 1½"	$4.80
HTC-101	7¼ x 8 x 8"	7 x 7 x 2"	4.80
HTC-102	7¼ x 10 x 8"	7 x 9 x 2"	5.50
HTC-103	7¼ x 14 x 8"	7 x 13 x 2"	6.25
HTC-104	9 x 15 x 10¾"	10 x 14 x 3"	10.25
HTC-105	12 x 18 x 12"	10 x 17 x 3"	12.00

All prices F.O.B., Bronx, N. Y.

PREMIER METAL PRODUCTS COMPANY

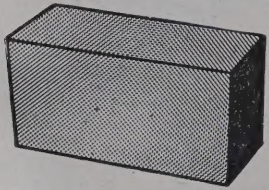
PREMIER PRECISION BUILT METAL HOUSINGS

AMPLIFIER FOUNDATION CHASSIS



Top cover has grille perforations and rounded corners. Finished in Grey Wrinkle. Chassis are constructed of one piece with corners spot-welded. Finished in Black Wrinkle.

Cat. No.	Size	Depth of Cover	List Price
AF-510	5 x 10 x 3"	6"	$6.25
AF-615	6 x 14 x 3"	6"	7.25
AF-717	7 x 17 x 3"	6"	8.25
AF-1012	10 x 12 x 3"	6"	8.25
AF-1017	10 x 17 x 3"	6"	9.75
AF-1317	13 x 17 x 3"	6"	11.75

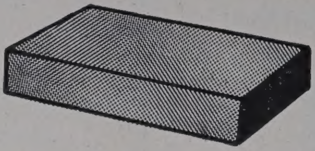


STEEL UTILITY CASES

Constructed of #20 gauge sheet steel with flanged edges, spot-welded corners, and two removable flat covers. Finished in Black Wrinkle.

Cat. No.	Size	List Price
C-442	4 x 4 x 2"	$1.25
C-453	4 x 5 x 3"	1.45
C-596	5 x 9 x 6"	2.75
C-666	6 x 6 x 6"	2.00
C-8101	8 x 10 x 10"	4.50
C-8107	8 x 10 x 7"	3.70
C-1128	11 x 12 x 8"	5.00
C-1576	15 x 7¾ x 6½"	4.50
C-1597	15 x 9 x 7"	5.15
C-1276	12 x 7 x 6"	3.75

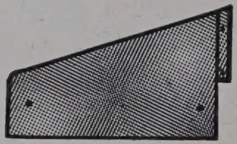
BLANK CHASSIS



Constructed from one piece of #20 gauge cold rolled steel, except those marked * which are of #16 gauge. Corners are spot-welded. Bottom edges are flanged in on four sides and punched for bottom plates. Finished in either Black Wrinkle or Zinc Plated.

Cat. No.	Size	List Price
CH-400	5½ x 9½ x 1½"	$1.30
CH-401	5 x 10 x 3"	1.80
CH-402	6 x 14 x 3"	2.10
CH-403	7 x 7 x 2"	1.50
CH-404	7 x 9 x 2"	1.80
CH-405	7 x 11 x 2"	1.85
CH-406	7 x 13 x 2"	2.00
CH-407	7 x 15 x 3"	2.40
CH-408	4 x 17 x 3"	2.15
CH-409	7 x 17 x 3"	2.60
CH-410	8 x 17 x 2"	2.40
CH-411	8 x 17 x 3"	2.60
CH-412	10 x 12 x 3"	2.50
CH-413	10 x 14 x 3"	2.65
CH-414	10 x 17 x 2"	2.65
CH-415	10 x 17 x 3"	2.75
CH-416	10 x 17 x 4"	3.40
CH-417*	11 x 17 x 2"	3.75
CH-418*	11 x 17 x 3"	4.10
CH-419	12 x 17 x 2"	2.85
CH-420	12 x 17 x 3"	3.40
CH-421	12 x 17 x 4"	3.75
CH-422*	13 x 17 x 2"	4.10
CH-423*	13 x 17 x 3"	4.75
CH-424*	13 x 17 x 4"	5.40

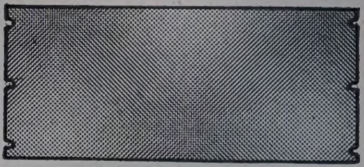
* Made from #16 gauge steel.



CHASSIS MOUNTING BRACKETS

These brackets will fit any of the above chassis because the mounting holes are drilled to match. Panels must be at least 7" high. Notched for 3" chassis. Finished in black enamel.

Cat No.	Dimensions	List Price
CB- 78	For 8" Base	$1.30
CB-710	For 10" Base	1.75
CB-711	For 11" Base	1.90
CB-713	For 13" Base	2.20
CB-717	For 17" Base and larger	3.40



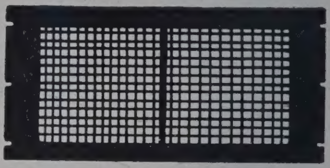
BLANK RACK PANELS—19" WIDE

For Racks with Multiple 1¼"—½" Spacings

Made of #12 Gauge Steel

Finished in either Black or Grey Wrinkle

Cat No.	Width	List Price
RP-119	1¾"	$1.10
RP-319	3½"	1.25
RP-519	5¼"	1.55
RP-719	7"	1.80
RP-819	8¾"	2.20
RP-1019	10½"	2.65
RP-1219	12¼"	3.15
RP-1419	14"	3.60
RP-1519	15¾"	4.10
RP-1719	17½"	4.50
RP-1919	19¼"	5.00
RP-2119	21"	5.50



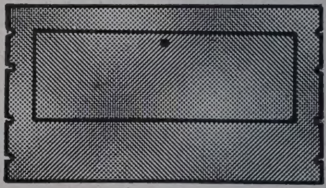
GRILLE PANELS—19" WIDE

Made of #12 Gauge Steel

Finished in either Black or Grey Wrinkle

Cat. No.	Panel Size	Grille Size	List Price
GRP-601	5¼"	3⅞ x 13⅜"	$4.40
GRP-602	7"	3⅞ x 13⅜"	4.75
GRP-603	8¾"	5⅞ x 13⅜"	5.75
GRP-604	8¾"	*3⅞ x 13⅜"	5.25
GRP-605	10½"	7⅞ x 13⅜"	6.25
GRP-606	10½"	*5⅞ x 13⅜"	5.75
GRP-607	12¼"	*7⅞ x 13⅜"	6.50

* Allows 3½" space at bottom for chassis mounting.



DOOR PANELS—19" WIDE

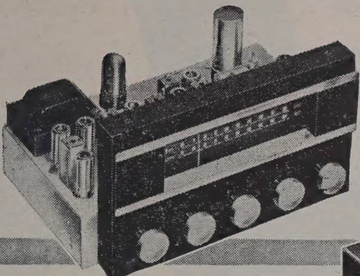
Made of #12 Gauge Steel

Finished in either Black or Grey Wrinkle Panels have flush hinged doors with piano hinges, and are equipped with a chrome knob and concealed snap catch. All doors are located 1" from top to allow space for chassis at bottom.

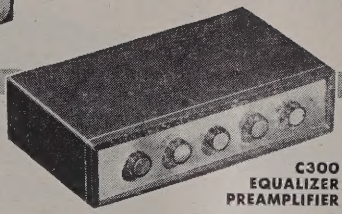
Cat. No. Black	Panel Size	Door Size	List Price
DRP-700	8¾"	4½ x 15⅜"	$7.00
DRP-701	10½"	6 x 15⅜"	7.50
DRP-702	12¼"	7½ x 15⅜"	8.25

All prices F.O.B., Bronx, N. Y.

PREMIER METAL PRODUCTS COMPANY



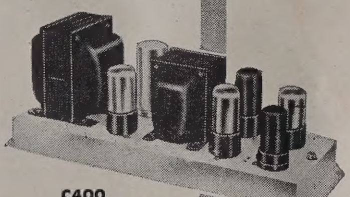
C10
FM-AM
TUNER



C300
EQUALIZER
PREAMPLIFIER

C500
ULTRA-FIDELITY
AMPLIFIER

HERE ARE craftsmen HIGH-FIDELITY COMPONENTS FOR EVERY CUSTOM INSTALLATION...



C400
HIGH-FIDELITY
AMPLIFIER

C10 FM-AM tuner, rated highest by several independent testing organizations has become famous for its non-drifting FM circuits. Fly-wheel tuning and automatic-frequency control FM tuning enables quick and accurate station selection. Compensated pre-amplifier for variable-reluctance phono cartridge, cathode-follower output, bass and treble controls (provide either boost or cut) all use low-distortion triode tubes. Includes AM whistle filter, FM-AM antenna, 11 tubes plus rectifier. Size 13½ x 9½ x 7-ins. high. Shipping weight, 16 lbs. Net.................................... **$131.50**

C300 Equalizer-Preamplifier for remote control of all tone compensation, phono equalization, and audio channel switching. Self-powered unit can be used up to 50 ft. from other chassis. Features continuously variable *loudness control*, multi-position record equalization, four-position noise reducing filter, five separate inputs each with level adjustment. Easily adapted to custom panel installation. 4 dual-triode tubes plus rectifiers. Net.................. **$89.50**

C500 Ultra-Fidelity Amplifier—finest made at any price. Based on famous Williamson all-triode circuit with 20db. inverse feedback. 10 watts output at less than 1/10% har. or ½% I.M. distortion; 1 watt at 1/100% har. or 1/20% I.M. distortion. Freq. response: 5 to 100,000 cps. ±2 db. Hum: −90 db. Damping factor: 32:1. Matched push-pull KT66 output tubes provide lowest possible distortion. Size: 13½ x 8 x 7½-ins. Shipping weight, 25 lbs. Net. **$99.50**

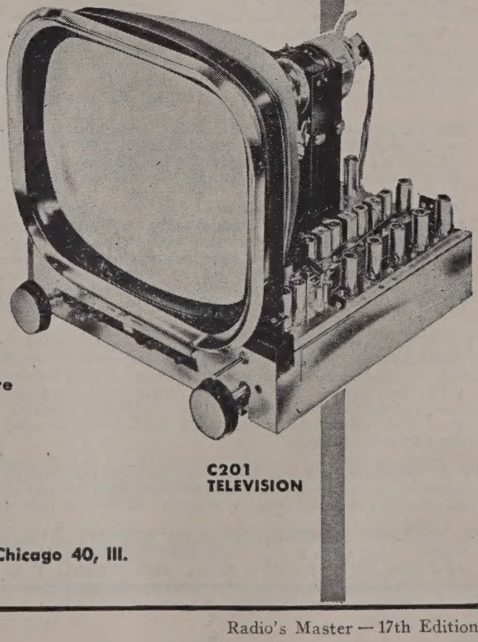
C400 High-Fidelity Amplifier—for less-costly applications. New convenient size fits many mounting arrangements. 10 watts output at less than 1% har. or 5% I.M. distortion. Freq. response: 10 to 30,000 cps. ±1 db. Hum: −70 db. Damping factor: 4:1. Tubes: 6J5, 6SN7GTA, push-pull 6V6GT's, 5Y3GT rect. Size: 14 x 4½ x 5¼-inches high. Shipping weight, 12 lbs. Net. **$42.90**

C201 High-Fidelity Television includes 5 watt (at less than 2% distortion) push-pull audio amplifier (response: 20-20,000 cps. ±1 db.) Standard-Coil turret tuner adaptable to UHF. Features keyed AGC, 16 kv. anode supply, 4 mc. video response, separate sound IF including cascade limiters and Foster-Seeley discriminator. Output connection for use with any of above units. 27 tubes plus 5 rect. Overall size including escutcheon and knobs with 20CP4, 21 x 23 x 21-ins. high; with 24AP4 26 x 26 x 29-ins. high. Shipping weight, 60 lbs. Net.... **$252.50**

Accessory kits include escutcheon, mask, safety glass, and mounting accessories.

217R for 17BP4 picture tube. Net..............	**$15.40**
220R for 20CP4 picture tube. Net..............	**$21.40**
224M for 24AP4 picture tube (incl. polyethylene ring and sleeve). Net.........................	**$42.50**

C10, C300, C201 are designed to work equally well with either of above amplifiers or in any combination.



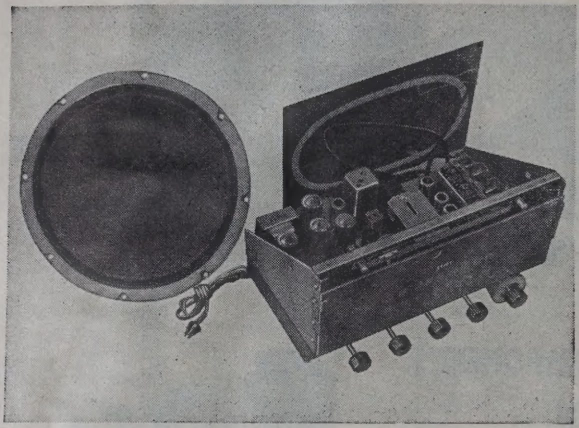
C201
TELEVISION

All chassis finished in polished chromium and shipped complete with all hardware and instructions necessary to complete a professional custom installation.

THE RADIO craftsmen INC.

Chicago 40, Ill.

ESPEY MANUFACTURING CO. INC.
NEW YORK 21, NEW YORK
ESTABLISHED 1928



Model 511C—AM-FM RADIO CHASSIS

ALL MODELS CONTAIN NEW PRE-AMP PICKUP TUBE 6SC7

DEALER - SERVICEMAN.....**Net $118.50**
(With Speaker)

I. Model 511-C is a Superheterodyne AM-FM Radio Receiver chassis designed to operate on: 105/125 volts AC; 50/60 cycles. Power consumption: 105 watts.

II. FEATURES: 1. AC Superheterodyne AM-FM receiver. — 2. Improved Frequency Modulation Circuit. **Drift Compensated.** — 3. 12 Tubes plus Rectifier and Pre-amp Tube. — 4. 4 Dual Purpose Tubes give added performance. — 5. Treble Tone Control. — 6. 6-Gang Tuning Condenser. — 7. Full-range Bass Tone Control. — 8. High-Fidelity AM-FM Reception. — 9. Automatic Volume Control. — 10. 10-watt (maximum) Push-Pull Beam Power Audio Output. — 11. 12-inch PM Speaker with Alnico V Magnet. — 12. Indirectly Illuminated "Slide-Rule" Dial. — 13. Antenna for AM and Folded Dipole Antenna for FM reception. — 14. Provisions for external antennas. — 15. Wired for Phonograph Operation, high and low impedance pick-ups. — 16. Licensed under RCA and Hazeltine patents. — 17. RTMA listed. — 18. Multi-tap Output Transformer, 3.2, 8 and 500 ohms.

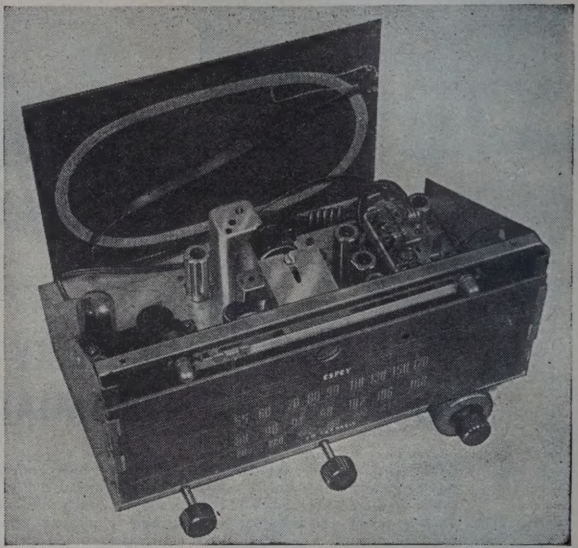
III. DESCRIPTION: Model 511-C receiver features the latest in postwar engineering design. The FM circuit includes a tuned RF Amplifier stage, 2 stages of high gain Intermediate Frequency Amplification and an advanced design Ratio Detector circuit which provides low noise level between stations, freedom from AM interference, ease of tuning and ample gain for satisfactory operation with an indoor antenna in most urban locations. The AM circuit includes a Tuned RF Amplifier for improved selectivity and freedom from spurious responses. High Fidelity reproduction on FM and AM is insured through well-engineered circuits and the use of high quality parts. The tuning ranges are: Standard Broadcast — 535 to 1720 Kc. FM Band — 88 to 108 Mc.

The large easy-to-read "slide-rule" type dial is illuminated by two pilot lights which also provide illumination for the red plastic dial pointer. A high ratio flywheel drive on the tuning condenser provides smooth tuning throughout the range of the receiver.
The receiver has two antennas; a Loop antenna for Standard Broadcast and a Folded Dipole antenna for the FM band.
Provision is made for connecting an external Phonograph Pickup to the high-fidelity audio amplifier system of the receiver.
The Multi-tap output transformer will permit the use of Most Popular Type Hi-Fidelity Speakers and dividing networks, or to match a standard 500-ohm line for Remote installations.

IV. TUBE COMPLEMENT: 1 AM-RF Amplifier tube. — 1 FM-RF Amplifier tube. —1 AM Oscillator, Mixer tube. — 1 IF Amplifier tube. — 1 FM Detector Driver tube. — 1 FM Detector tube. — 1 FM Oscillator tube. — 1 FM Mixer tube. — 1 AM Detector, Audio Amplifier tube. — 1 Audio Amplifier-Inverter tube. — 2 Push-Pull Power Amplifier tubes. — 1 Rectifier tube. — 1 Pre-amp Pickup tube.

V. ACCESSORIES: The Model 511-C chassis is supplied ready to operate, complete with tubes, antennas, speaker and all necessary hardware for mounting in a table cabinet or console.

VI. CHASSIS DIMENSIONS AND WEIGHT: Chassis Dimensions: 13½" wide x 8½" high x 10" deep. Carton Dimensions: (2 units) 20" x 14¼" x 10¾". Net Weight: 17½ lbs. each.



Model 512C—AM-FM TUNER

Outstanding AM-FM TUNER, self-powered for use with all types of Audio Amplifiers.

DEALER - SERVICEMAN......**Net $99.95**

I. Model 512-C Superheterodyne AM-FM Radio Tuner chassis is designed to operate on: 105/125 volts AC; 50/60 cycles. Power consumption: 75 watts.

II. FEATURES: 1. AC Superheterodyne AM-FM tuning circuit — 2. Improved Frequency Modulation Circuit, **drift compensated.** — 3. 9 Tubes plus Rectifier and Pre-amp Tube and Electronic Tuning Eye. — 4. 3 Dual Purpose Tubes give added performance. — 5. Automatic Volume Control. — 6. 6-Gang Tuning Condenser. — 7. High-Fidelity AM-FM Reception. — 8. Indirectly Illuminated "Slide-Rule" Dial. — 9. Antenna for AM and Folded Dipole Antenna for FM Reception. — 10. Provisions for external antennas. — 11. Wired for Phonograph Operations. — 12. Licensed under RCA and Hazeltine patents. — 13. RTMA listed. — 14. High and Low Level Audio Output.

III. DESCRIPTION: Model 512-C Tuner features the latest in post-war engineering design. The FM circuit includes the tuned RF Amplifier stage, 2 stages of high-gain Intermediate Frequency Amplification, and an advanced design Ratio Detector circuit which provides low noise level between stations, freedom from AM interference, ease of tuning and ample gain for satisfactory operation with an indoor antenna. The AM circuit includes a Tuned RF Amplifier for improved selectivity and freedom from spurious responses. High-Fidelity reproduction on FM and AM is insured through well-engineered circuits and high-quality parts.
Line Voltage is made available at two outlets at the rear of the tuner; these are actuated by the tuner on-off switch to facilitate custom installations, B+ and Heater Voltages are made available at a utility socket mounted in the tuner. This is suitable for powering auxiliary pre-amplifiers as used with variable reluctance type pickups. Holes for 2 additional controls are available for the convenience of the user. The tuning ranges are: Standard Broadcast — 535 to 1720 Kc. FM Band — 88 to 108 Mc.
The receiver has two antennas: a Loop antenna for Standard Broadcast and a Folded Dipole antenna for the FM Band.
Provision is made for connecting an external phonograph pick-up to the tuner audio system, for use with all types of amplifier installations. Two audio output channels are provided, one at high level, the other at low level; both are controlled by the tuner volume control.

IV. TUBE COMPLEMENT: 1 AM-RF Amplifier tube. — 1 FM-RF Amplifier tube. — 1 AM Oscillator, Mixer tube. — 1 FM Detector Driver tube. — 1 IF Amplifier tube. — 1 FM Detector tube. — 1 FM Oscillator tube. — 1 FM Mixer tube. — 1 AM Detector, Audio Amplifier tube. — 1 Rectifier tube. — 1 Pre-amp Pickup tube. — 1 Electronic tuning eye.

V. ACCESSORIES: Model 512-C chassis is supplied ready to operate, complete with tubes, antennas, and all necessary hardware for mounting in a table cabinet or console.

VI. CHASSIS DIMENSIONS AND WEIGHT: Chassis Dimensions: 13½" wide x 8½" high x 9" deep. Carton Dimensions: (2 units) 20" x 14¼" x 10¾". Net Weight: 14 lbs.

ESPEY MANUFACTURING CO. INC.
NEW YORK 21, NEW YORK
ESTABLISHED 1928

Lowest Priced on the Market DeLuxe AM - FM UNIT

Model 513C—AM-FM DeLuxe TUNER Dealer-Serviceman	**Net $ 96.50**
Model 514C—DeLuxe Audio Amplifier, 20 Watts Dealer-Serviceman	**Net $ 41.95**
Alnico V PM Speaker, 12", 20 Watts Dealer-Serviceman	**Net $ 10.35**
TOTAL—Dealer-Serviceman Net	**$148.80**

Model 513C

I. FEATURES:

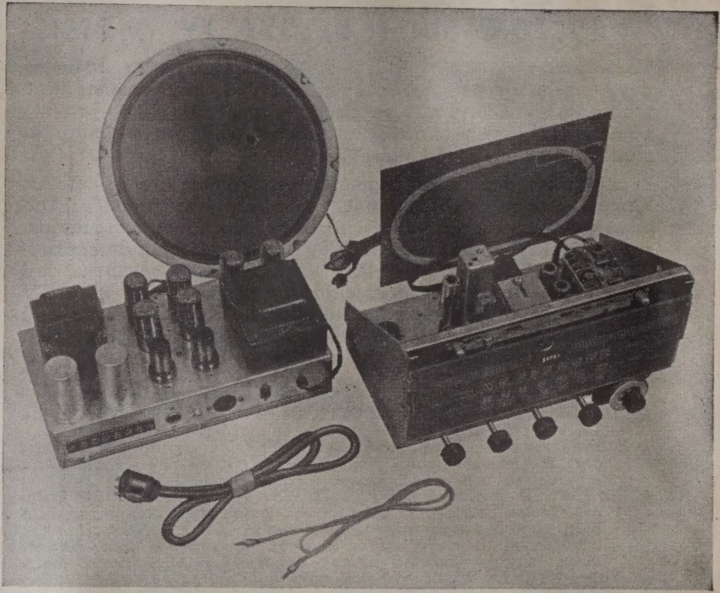
1. Superheterodyne AM-FM circuit.
2. Improved Frequency Modulation Circuit, stabilized against drift.
3. 10 Tubes plus Pre-amp Tube and Electronic Tuning Eye.
4. Tuned RF Circuits on AM and FM.
5. 6-Gang Variable Tuning Condenser.
6. Automatic Volume Control.
7. Full Range Bass Boost Control.
8. Full Range Treble Control.
9. Indirectly Illuminated "Slide-Rule" Dial.
10. Fly Wheel Tuning Drive.
11. Antenna for AM and Folded Dipole Antenna for FM.
12. Provision for external antennas.
13. Wired for Phonograph Operation, High and Low Impedance Pick-up.
14. Licensed under RCA and Hazeltine.
15. RTMA listed.

II. Model 513C AM-FM Tuner employs 10 tubes plus a pre-amp tube and electrical tuning eye in a superheterodyne circuit. It is designed to operate from an external power supply and feed into an external audio amplifier. (Model 514C DeLuxe Power Supply-Audio Amplifier is specifically designed to work in conjunction with the Model 513C Tuner). The power requirements for the tuner are 6.3 volts AC or DC at 3.5 amperes, and 200 volts DC at C0 milliamperes.

III. DESCRIPTION: The Model 513C Tuner incorporates the latest development in engineering design. It is intended for the discriminating listener. Separate, Tuned RF stages are employed on both the AM and FM bands to provide extreme sensitivity and minimize spurious responses. The FM circuit also includes two stages of high-gain intermediate frequency amplification to drive a ratio detector circuit of advanced design. AM: 535 Kc. to 1720 Kc. ——— FM: 88 Mc. to 108 Mc.

IV. TUBE COMPLEMENT: 1 6BA6 AM-RF Amplifier tube. — 1 6BA6 FM-RF Amplifier tube. — 1 6BE6 AM Converter tube. — 1 6BE6 FM Mixer tube. — 1 6C4 Oscillator tube. — 1 6SG7 AM-FM IF Amplifier tube. — 1 6SH7 FM-Ratio Detector Driver tube. — 1 6J5 AM-Detector AVC tube. — 1 6SQ7 AM-FM 1st Audio tube. — 1 6AL5 FM Ratio Detector tube. — 1 6SC7 Pre-amp Pickup tube. — 1 Electronic tuning eye 6U5.

V. CHASSIS DIMENSIONS: 13½" wide x 8½" high x 9" deep. Weight: 10 lbs.



Model 514C Amplifier & Power Supply. **Model 513C AM-FM Tuner**

ALL MODELS CONTAIN NEW PRE-AMP PICKUP TUBE 6SC7

Model 514C

I. Model 514C DeLuxe Power Supply and Audio Amplifier contains 6 tubes, plus 2 rectifiers in a high gain push-pull amplifier circuit. It is designed specifically for use in conjunction with the Model 513C Tuner, but may be used wherever a high quality audio amplifier may be required. Power requirements are: 105/125 volts AC; 50/60 cycles; power consumption: approximately 150 watts.

II. FEATURES:

1. Parallel Push-Pull Beam Power Output Circuit.
2. Self-Balanced 3-Phase Inverter System.
3. Extended Range High-Fidelity Response.
4. Inverse Feedback Circuit.
5. 6 Tubes plus 2 Rectifiers.
6. Output Impedance selective for any speaker requirement (4 to 500 ohms).
7. License under RCA.
8. RTMA listed.

III. DESCRIPTION: The Model 514C Power Supply-Audio Amplifier employs the best proven engineering design. Six tubes are incorporated in a balanced phase inverter parallel push-pull amplifier. By the use of an inverse feedback circuit, high-fidelity performance is obtained.

IV. TUBE COMPLEMENT: 2 6J5 Audio Driver tubes. — 4 6V6 Beam Power Audio Output tubes. — 2 5Y3 Rectifier tubes.

V. 13½" wide x 7½" high x 7" deep. Weight 18 lbs.

Net

TECH-MASTER Deluxe TV Chassis and Kits

The World's Most Powerful, Most Dependable TV Receiver

Gold Medal Series

CUSTOM BUILT DELUXE TV CHASSIS

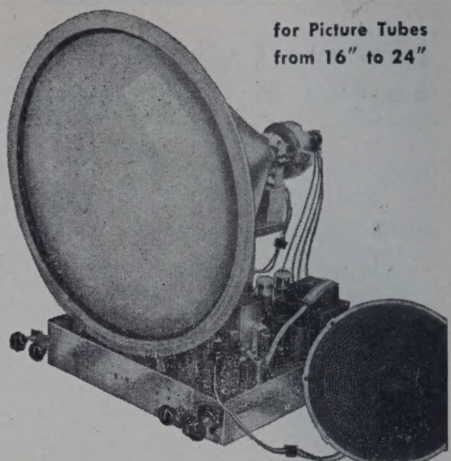
Tech-Master's Gold Medal Series Chassis is no ordinary mass-produced "commercial" set. It is truly custom-built, carefully, precisely, painstakingly — custom-built to provide your most quality-minded customers with the ultimate in sight and sound and value!

Tech-Master design and custom-construction are as fine as human hands and technical know-how can produce. The most advanced engineering methods, the finest components, rigid alignment and test standards and the pledged determination to produce the OPTIMUM in Television . . . these and other Tech-Master features add up to the finest in a TV Chassis that the industry has to offer. In fringe areas as well as normal range areas, the Gold Medal Series brings modern motion picture brilliance and clarity to the TV screen.

Compare These Features

- ★ **TECH-MASTER 630 TYPE CIRCUIT:** Of all the circuits known to the TV industry, the RCA-630 type is still acclaimed the finest. But, even the 630 is only as good as the Engineering, the Components and the Workmanship that go into it. These three factors are inherent in every Tech-Master Custom-Built Chassis.
- ★ **ADVANCED standard TURRET TUNER, Adaptable to UHF Without Tools:** Employs a Cascode RF amplifying stage, affords a high signal-to-noise output resulting in a sharper picture, with a minimum of "snow", even in weak signal areas. **UHF channel strips may be inserted at any time, without the use of tools.**
- ★ **Full 4 Mc Band Width** for better picture definition.
- ★ **Quick-Action Keyed AGC Circuit** assures stabilized control.
- ★ **New Hi-Sweep Auto Transformer System** for outstanding brilliance.
- ★ **5 Microvolt Sensitivity** . . . Excellent for Fringe Areas
- ★ **Full Horizontal and Vertical blanking.**

for Picture Tubes from 16" to 24"



Model 2430:—Designed specifically for all picture tubes requiring 60 to 70 degrees horizontal deflection. Has quality PM speaker, Universal picture tube mounting brackets, Phono-input jack. $189.50

Model 2431P:—Same as Model 2430, but with Push-Pull Audio, True Fidelity Output. $199.95

Dimensions: 21¾" wide, 16¼" deep.

Shipping Weight: 70 lbs.

Chassis is beautifully plated in gleaming nickel finish . . . comes completely wired, aligned and tested . . . with all tubes, (less picture tube).

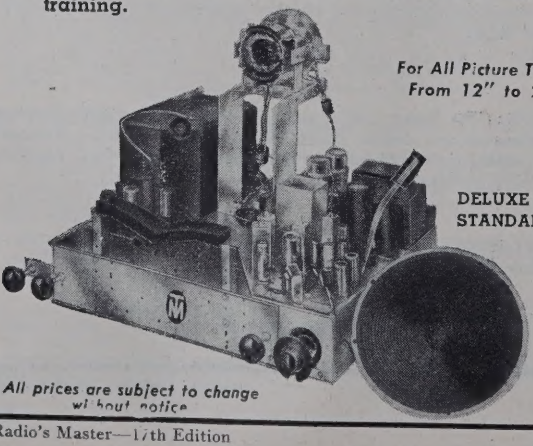
America's Finest TV Kit—Model 630-D

[***Also available factory wired, assembled and aligned. See below.****]

Tech-Master Model 630-D is acknowledged by the entire industry as the finest TV Kit available! Tech-Master engineers have again demonstrated their skill by developing new and better features for the world famous RCA-630 type circuit. All components used are the best available . . . rigid factory test standards are your assurance of years of trouble-free performance.

With a minimum of tools you will have a TV receiver with unsurpassed picture quality . . . at a cost considerably less than a manufactured set. Special Tech-Master schematic and pictorial diagrams guide every move and make assembly utterly simple and enjoyable! MODEL 630-D IS USED BY LEADING SCHOOLS all over the country! Established multiple tube circuits, rather than compromise economy circuits, make this Tech-Master TV Kit ideal for comprehensive television training.

For All Picture Tubes From 12" to 24"



All prices are subject to change without notice

No Other TV Kit Offers All Of These Important Features

- ★ **ADVANCED standard TURRET TUNER, Adaptable to UHF Without Tools:** High signal-to-noise ratio results in a sharper picture, with a minimum of "snow" even in weak signal areas.
- ★ AFC horizontal synchronization employing 6AL5 phase detector, 6AC7 Reactance tube, and Sync. Discriminator Transformer in a Hartley Oscillator circuit assures optimum noise immunity and horizontal stability.
- ★ 3 Stage Sync. Amplifier, Clipper and Separator circuit provides unexcelled interlace characteristics and the finest picture detail.
- ★ Noise saturation circuits utilized throughout minimize effect of external interference.
- ★ 4 Stage stagger tuned Video IF system produces full 4 MC band width and complete picture definition.
- ★ Adjacent Channel Traps.
- ★ 2 Stage Video Amplifier.
- ★ Direct Coupling Used for Keyed AGC Circuit.
- ★ Improved Picture Brilliance — Due to New "Hi-Sweep" Voltage Multiplier System.
- ★ Shielded High Voltage Supply for Maximum Protection.

Chassis Dimensions: 21¾" wide x 15¾" deep.
Shipping Weight: Approximately 70 lbs.

DELUXE KIT, all principal components mounted: **MODEL 630D24........$159.50**
STANDARD KIT, same as above but unassembled: **MODEL 630S24.....$154.50**

Kits supplied complete with all components, picture tube mounting brackets, speaker, and all tubes (less kine, wire and solder).

***MODEL 1930, Deluxe TV CHASSIS:**
Similar to TV Kit 630D24 described above but completely factory wired, tested and aligned, ready for installation........................$179.50

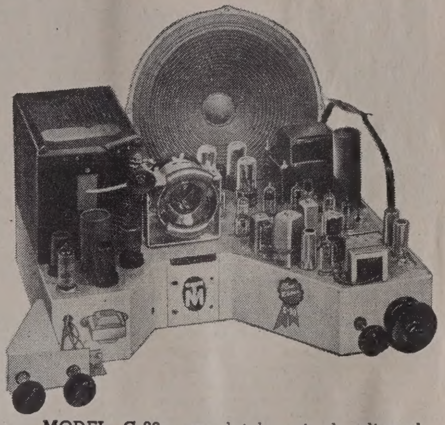
TECH-MASTER *Economy TV Chassis and Kits*

MODEL C-30 TV, WIRED CHASSIS

For Picture Tubes Up To 24"

Here again is Top TV Performance attained through skilled engineering and finest set-tested components embodied in a completely factory-wired chassis, pre-aligned, pre-adjusted and ready for use. MODEL C-30 has been designed for the utmost in value, retaining every important feature necessary for quality of image and sound.

- ★ **Basic 630-Type Circuit Features Include:**
  - Full 4 mc bandwidth reception
  - 4-Stage Video IF
  - 3-Stage Audio IF
  - 2-Stage Video Amplifier
- ★ **30 Tubes,** including picture tube and rectifiers.
- ★ **Advanced, improved 12 channel turret tuner, adaptable to UHF without tools.**
- ★ 4-Stage Synchronizing Amplifier and Separator.
- ★ 9 Microvolt Sensitivity.
- ★ 16 kv 2nd Anode Voltage
- ★ New, Automatic Horizontal Stabilizer.
- ★ Automatic Background Control.
- ★ Retrace Blanking Circuit.
- ★ Permanent Dynamic Focusing System.
- ★ Double-time Constant AGC.



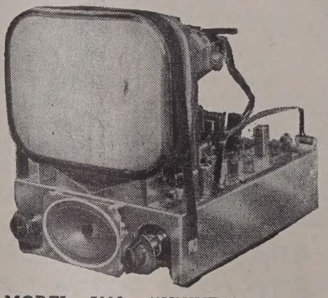
MODEL C-30: completely wired, aligned and tested . . . with quality PM speaker, and all tubes (less picture tube)......**$149.50**

UNIVERSAL TELEVISION KIT

Tech-Master brings high quality television within reach of the most economy-minded customer, with the lowest price ever for a top-performing, precision-engineered, AC/DC kit.

Tech-Master's development of the IF "Synchro-Strip" cuts in half the amount of work required to assemble and wire the kit! It comes mounted in place, on the main chassis, together with the tuner, and is completely wired, aligned and tested. The newest engineering advancements have been utilized in the design of the horizontal and vertical sync circuits to assure excellent stability and noise immunity characteristics. Complete step by step instructions and diagrams (both pictorial and schematic) permit complete wiring and assembly over a week-end!

IDEAL FOR SCHOOLS: Requires minimum bench equipment; affords maximum opportunities for comprehensive TV training.

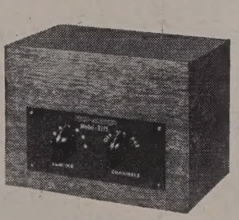


MODEL 5116: "UNIVERSAL" Kit complete with **set of 16 Circuit Tested Tubes,** all hardware, instructions and picture tube mounting brackets, (less kine, wire and solder) **$99.95**

- ★ **Compact, light-weight** easily portable unit, operates on both AC and DC, for use with picture tubes up to 17" rectangular.
- ★ **Advanced and improved 12 channel turret tuner, adaptable to UHF without tools!**
- ★ **Latest type hi-gain stagger-tuned IF system incorporating bi-filar coils — for excellent picture definition.**
- ★ **New AGC system,** utilizing special delay network — for steady pictures regardless of varying transmission conditions.
- ★ **High efficiency beam power amplifier and ceramic core horizontal output transformer** provide clear, bright pictures and full horizontal deflection.
- ★ **Two-knob control** on front panel provides automatically synchronized picture and sound.

BOOSTER KIT

Precision-designed and tested to reduce noise from 3 to 5 db. Signals are boosted to such proportions that you receive outdoor antenna results with an indoor antenna. Amplifies signals in weak or fringe areas!

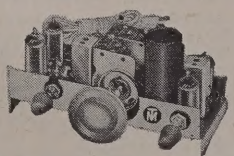


SPECIFICATIONS: Fixed grid, variable plate tuning. Separate coils for low and high channels. Matches 300 or 72 ohm line. High channel input coil may be tuned for any desired channel. Complete with 6AK5 tube, cabinet, and pre-aligned coils.

MODEL 3375 ....**$9.95**

MIGHTY VERSATILE MIDGET

3 Instruments in One!



(1)—**A Complete AM Superhet Receiver** which connects to any speaker system.

(2)—**A Sensitive AM Tuner** with output connections for any external amplifier and speaker system.

(3)—**A Complete Audio Amplifier** with input connections for high-impedance microphone or phono-pickup and output connection for any speaker system.

This compact, versatile 3-in-one chassis affords the most economical method of adding radio, phono or P.A. operation to any TV receiver, speaker system or record player.

SPECIFICATIONS: Quadruple-tuned IF circuit ★ Ferrite-core, omni-directional antenna ★ 2 Watts audio output ★ AVC for both RF and IF circuits ★ Simple, 2-point suspension mounting ★ Electrically isolated chassis, safe to handle ★ Fits into 630-type chassis front opening ★ AC (105-125V., 50-60 cycles) and DC operation ★ Supplied complete with tubes: 12BE6, 12BA6, 12AV6, 50C5, 35W4 ★ Weighs only $1\frac{1}{4}$ lbs. ★ Dimensions: Length $7\frac{1}{8}$", Height: $3\frac{5}{8}$", Depth: $3\frac{1}{8}$".

MODEL B-15 ....**$19.95**

Complete Line of Quality 630 Replacement Parts and Conversion Kits

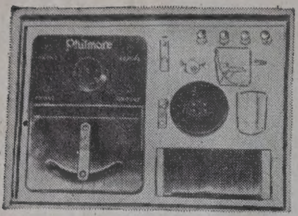
TRANSFORMERS
I.F. TRANSFORMERS
VIDEO PEAKING COILS
HORIZONTAL OUTPUT and H.V. TRANSFORMERS
WIDTH and LINEARITY COILS
FOCUS COILS
CONTROLS
ELECTROLYTIC CONDENSERS
BLEEDER RESISTORS
DEFLECTION YOKES
KNOBS and ESCUTCHEON PLATES
PLASTIC SLEEVE and RING SETS
KEYED A.G.C. KITS for 630-TYPE CHASSIS
HI-SWEEP VOLTAGE MULTIPLIER KITS
UNIVERSAL PICTURE TUBE MOUNTING BRACKETS

Detailed, illustrated literature and listing available upon request.

Philmore GUARANTEED RADIO PRODUCTS

RADIO KITS

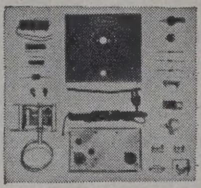
"SUPERTONE" RADIO CRYSTAL SET KIT



These kits are a great hit with youngsters and adults the world over. Complete in every detail for quick and simple assembly. Consists of moulded bakelite base with contact slider, crystal holder; crystal detector and cover, cats-whisker support, spring cats-whisker, ready wound tuning coil, binding posts, plus all necessary wire, hardware, and "easy-to-follow" instructions.

Cat. No. 7001-A........**List Price $4.90***
*Plus Federal Excise Tax

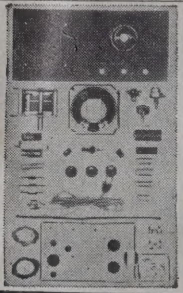
ONE TUBE (Plus Rectifier Tube) AC-DC RADIO KIT



Purposely designed for easy construction, using most efficient circuits. Anyone, without previous knowledge or skill, can obtain excellent results by following simple instructions and diagrams. Attractively packaged, parts fitted inside, making presentable display. Complete less tubes and headset.

No. 7001B........**List Price $12.50**
Uses 1 each 35Z5GT and 12SJ7 Tube.

TWO TUBE (Plus Rectifier Tube) AC-DC RADIO KIT



More elaborate than one-tube kit, greater signal strength, permitting use of 4" PM speaker. Speedily assembled, following simple instructions with pictorial and schematic diagrams. Completed you have a Two-Band set, covering standard broadcast (550-1700 Kc) and Short-Wave (6-18 Mc).

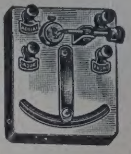
Cat. No. 7001C—Complete with speaker, less tubes......**List Price $20.00**
Uses 1 each 35Z5GT, 50L6GT and 12SJ7 Tube.
(NOTE: Wire and solder not included with 7001B and 7001C.)

RADIO SETS

"Little Wonder" and *"Supertone"* RADIO SETS Have These Outstanding Features!

- Glass enclosed dust-proof detector, which is adjustable (Supertone).
- Specially designed hook-up assuring reception within a radius of twenty-five (25) miles from a broadcasting station.
- Under favorable climatic conditions reception may be received as far as one hundred (100) miles from broadcasting station.
- Costs nothing for upkeep.
- No batteries, tubes or expensive accessories required.
- Manufactured in Genuine BAKELITE in various colors. The advantages of bakelite are well-known for its beauty and cleanliness. It will retain its color and can be kept clean for the life of the set which is practically infinite.

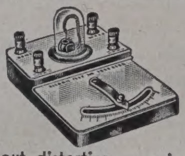
"Little Wonder" RADIO RECEIVING SET



Compact in size but big in results. The open type detector permits adjustments to be made to the finest degree. This set includes the Philmore Super-sensitive Crystal which assures quick results when "looking" for a station, because the entire surface of the crystal is sensitive.

Cat. No. 7000........**List Price $1.75**
Plus Federal Excise Tax

"Supertone" RADIO RECEIVING SET

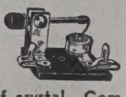


A remarkable Radio Receiving Set built to give everlasting service. This set will bring in broadcasting loud and clear without distortion or noise. The Supertone Crystal Set is equipped with a Philmore Supersensitive Crystal which will give excellent results over an indefinite period of time.

Cat. No. 7001........**List Price $2.25**
Plus Federal Excise Tax

CRYSTAL DETECTORS and ACCESSORIES

Open Type CRYSTAL DETECTOR



Universal joint on swivel arm provides quick, accurate adjustment on any point of crystal. Completely assembled.

Cat. No. 7003........**List Price $0.45**

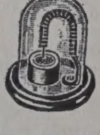
Fixed CRYSTAL DETECTOR

Philmore
FIXED CRYSTAL
DETECTOR

Will give renewed action to reflex or crystal sets. Sensitivity is determined by laboratory methods and fixed permanently. Enclosed in a bakelite case.

Cat. No. 7002........**List Price $0.90**

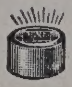
Glass Enclosed CRYSTAL DETECTOR



Ideal for Crystal Reflex circuits. Dust-proof. Fixed at factory but delicately adjustable at all times. Includes Supersensitive Crystal.

Cat. No. 7008..**List Price $0.65**

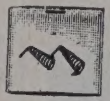
METER TESTED CRYSTAL



Laboratory tested. Mounted Galena Crystal.

Cat. No.		List Price
7004	**Galena Crystal Indiv. box**	$0.20
7005	**Galena Crystal Display Card**	$0.20

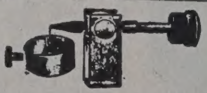
CAT WHISKERS



Set of two on a display card.

Cat. No.	List Price
7006—Set of 2	$0.20

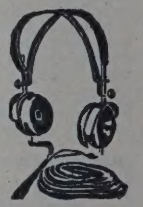
Unmounted DETECTOR



Includes stand, crystal cup, arm with cats-whisker and screws and nuts necessary for mounting.

Cat. No. 7010........**List Price $0.25**

PHILMORE HEADPHONES

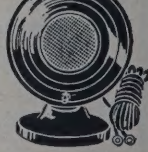


Accurately matched headphone set. Each unit consists of "double high flux" magnets. Ruggedly constructed of lightweight metal — with highly polished bakelite ear caps. Concealed terminal type. Equipped with braid covered adjustable headband and cord 4½ feet long.

Cat. No.	List Price
2260—Philmore Double Phone 2000 ohm Impedance	**$4.40**
2261—Philmore Single Phone 1000 ohm Impedance	**$2.50**

NOTE: The Single Phone is the same construction as the Double with exception that the headband is of spring steel.

Junior MICROPHONE



For home broadcasting; will operate efficiently from any radio set. It will help turn any dull house party into hilarious, enjoyable entertainment.

Equipped with push button switch for cutting off radio programs and bringing in the home broadcaster's voice very clearly. Sensitive, with excellent volume, and is shock-proof. Easily attached to any set without rewiring and can remain attached without interfering with regular broadcasting.

Cat. No. 500........**List Price $1.90**

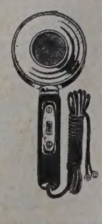
AERIAL KIT

A complete kit of parts for assembly of a professional antenna. Attractively packaged in a multi-colored display box.

1 coil 7-26-50 ft. stranded copper aerial wire.
1 coil 25 ft. rubber covered lead-in wire.
1 Ground Clamp.
1 Lead-in Strip. 2 Porcelain insulators.
2 Nail-it Knobs. 1 Instruction sheet.

Cat. No. 2103........**List Price $1.50**

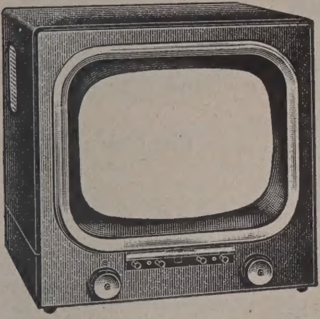
HAND MICROPHONE



Ideal novelty for home parties. Cut in on broadcasts and permits person to talk or sing through the radio speaker. Button switch cuts mike in and out of broadcast. Simple to install. Equipped with 9 ft. of cord.

Cat. No.	List Price
500H	$2.90

ARGOS PRODUCTS



NEW CABINETS FOR TV CHASSIS

Takes All Popular TV Chassis, Tube Sizes 16 to 27 inch

Mahogany or Blonde

Convert your TV chassis into a complete set with a minimum of cost. Exceptionally well built Argos Products cabinets look better than similar cabinets used in complete sets. Richly grained pyroxylin coated leatherette in Mahogany or blonde finish—no extra charge for blonde. Smart plastic beading around front panel and along sides.

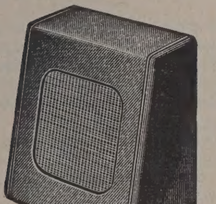
Rugged construction with ⅜-in. 3-ply sides and ½-in. 5-ply bottom. Two wire mesh panels in bottom provide extra ventilation. Speaker grilles (on both sides of cabinet) are woven plastic.

Cabinets for Radio Crafstman and 630-type chassis have all holes cut, ready for chassis to slide right in. Cabinets TV-24RC and TV-24PT have picture opening to accommodate either 24″ round or 27″ rectangular tube; tuning knob holes are cut in position. Cabinets TV-3PT and TV-24PTU have completely blank (uncut) front panels.

ARGOS #	Tube Size	Type Chassis	Ship. wt.	Dir. Net*
TV-1RC	16 - 17″	Radio Crafstman	25 lbs.	$25.50
TV-3PT	16 - 20″	630 Uncut Panel	28 lbs.	27.00
TV-2RC	20 - 21″	Radio Crafstman	28 lbs.	28.50
TV-4PT	20 - 21″	630 Type	28 lbs.	28.50
TV-24RC	24 - 27″	Radio Crafstman	40 lbs.	39.00
TV-24PT	24 - 27″	630 Type	40 lbs.	39.00
TV-24PTU	24 - 27″	630 Uncut Panel	40 lbs.	37.50

*Plus Fed. Excise Tax

WALL BAFFLES



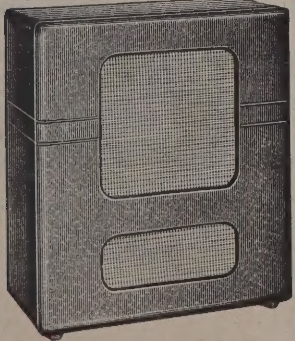
Heavy wood construction gives deep, rich tone. Reinforced for extra strength at speaker mounting and at corners. Smart plastic beading along edges. Attractive two-tone woven plastic grille cloth, harmonizing with cabinet.

Richly grained, pyroxylin coated leatherette gives long, durable service. Made by Argos Products Co. Mailable.

Mahogany or Blonde
No Extra Charge for Blonde

ARGOS #	Speaker	Width, Height, Depth	List Price	Dlr. Net
WB-4/5	4-5 in.	6x6⅛x3¾ in.	$3.90	$2.34
WB-6	6 in.	7¼x8½x5 in.	4.40	2.64
WB-8	8 in.	9½x10¼x6⅜ in.	4.90	2.94
WB-10	10 in.	11⅝x12½x6⅞ in.	5.80	3.46
WB-12	12 in.	13½x14¼x9 in.	7.75	4.65

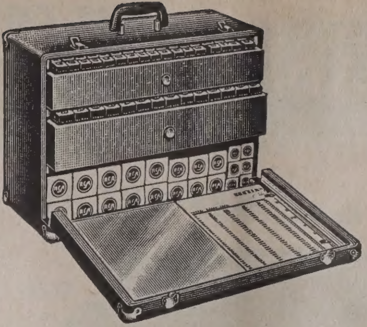
BASS REFLEX CABINETS



Scientifically designed and engineered for high fidelity reproduction in studios, schools, homes and offices. Vibrationless construction of ½-in. plywood, plus reinforcing blocks to insure ruggedness. Beautiful scuff-proof brown mahogany leatherette with gold beading. One piece, no-sag woven plastic grille. Lined with heavy sound-absorbing padding.

ARGOS BR-12. 20 x 30 x 12½ in. Ship. wt. 31 lbs. List $44.50. **Net $26.70**

ARGOS BR-15. 25 x 30 x 12½ in. Ship. wt. 35 lbs. List $49.50. **Net $29.70**



THE ORIGINAL
Television
tube caddy
TRADE MARK

$13⁵⁰ NET

COUNTS and CARRIES your TUBES

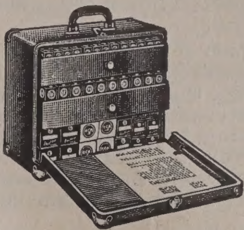
Specially designed for the television serviceman. Makes work easier and quicker—and YOU more efficient. Holds up to 249 receiving-type tubes—without a single inch of wasted space!

You take INVENTORY AT A GLANCE because each space is designed for a certain number of tubes, and missing cartons are easily spotted. You carry a complete assortment of tubes as easily as you could carry just a few. And since most calls involve some receiving tube replacements, this professional-looking case lets you render maximum service in the home quickly and efficiently.

Shop owners say the Tube Caddy PAYS FOR ITSELF in 3 WEEKS time. They check their men in and out faster—and they always arrive on the job with the tubes they need. They make more calls per day with lower cost per call. Customers recognize that their service is up-to-the-minute, with every aid available for better, faster, more efficient repair.

Brown leatherette-wood cabinet with brass finish hardware. Sturdily built for long service. Thin, easy-to-carry size—20″ long, 13½″ high, by 9″ deep. Carrying weight 12 lbs. 9 oz. Two trays at top have removable partitions to adjust space if desired to accommodate small TOOLS and METER. Cover has slip-out hinges with clips inside for holding price sheets and/or 9″ x 12″ mirror (not furnished) to use in adjusting TV picture.

ARGOS PRODUCTS TC-1B. Ship. wt. 16 lbs. Mailable ....**$13.50 Net**



TUBE CADDY "JUNIOR"

$8.95 Net

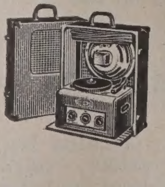
Made by the originators of the "Tube Caddy" and similar to it in all respects except size. Holds up to 143 receiving-type tubes.

An excellent companion-piece to the larger "Tube Caddy." "Offers the same famous work-saving features in roughly 2/3rds the size and weight. Same construction with removable partitions in drawers, and same slip-out hinges on cover with clips inside for price list or mirror. Although drawers are considerably shorter in width, they are almost the same depth, so that TOOLS or METER may still be easily carried.

Brown leatherette-wood cabinet with brass finished hardware. Professional-like appearance lets you render maximum service in the home. Easy-to-carry size only 15½″ long, 13″ high and 8″ deep. Carrying weight only 8 lbs. 2 oz.

ARGOS PRODUCTS TC-2. Ship. wt. 11 lbs. Mailable ....**$8.95 Net**

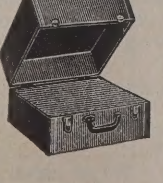
SOUND CADDY



New, highly serviceable portable case. Accommodates two 12-in. speakers with ample space at bottom for most popular amplifiers up to 30 watts. Amplifier bolts to mounting board, slips out when case is opened. Brackets for hook up wire. Heavy plywood construction, with steel corner angles. Size 22″ wide by 23″ high by 13″ deep.

ARGOS PRODUCTS SC-1 ....**$19.50 Net**

RECORD CHANGER CASE



Designed for long dependable service. Heavier and more sturdily built than other carrying cases selling for the same price. Handsome brown leatherette-wood with brass-finish hardware. Clearance above mounting board 6½ in. Takes any standard record changer. Size 16½″ square by 11½″ high. Inside dimensions ¾″ less. Ship. wt. 16 lbs. Mailable.

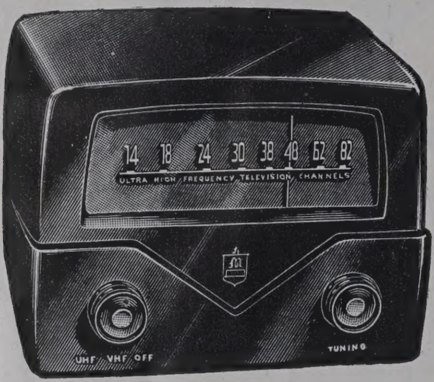
ARGOS PRODUCTS PC-1A ....**$12.95 Net**

ALL ARGOS PRODUCTS equipment is sold only through Parts Jobbers. The name Argos stands for craftsmanship in cabinetry. Prices slightly higher West of Rockies.

UHF CONVERTER AND CONVERTER KIT

P.R. MALLORY & CO., INC. · INDIANAPOLIS

MALLORY TV-101 UHF CONVERTER*



The Mallory TV-101 UHF Converter expands the receiving capability of any conventional VHF television set to include reception of all UHF stations located within the signal range.

Designed for continuous tuning, this UHF converter insures a compatible balance of inductance and capacitance over the entire, tuning spectrum from 470 to 890 megacycles with a single control.

The smooth and easy operation of the TV-101 Converter is the result of many years of Mallory research in the field of variable inductance tuning devices. This program has resulted in the successful combination of modern circuit techniques required for converting conventional UHF signals to intermediate channels. The TV-101 will result in added television entertainment, through wider program selection, from the conventional television receiver.

The TV-101 Converter is equipped with a built-in UHF antenna which permits installation without the need for special tools or technical skills.

To simplify the operation of this unit even further, a 3-position, "master control" switch is located on the panel to assure rapid selection of:

(a) UHF station tuning.
(b) Normal operation of the VHF set.
(c) Switching VHF set and converter off and on.

Complete installation and operating instructions and warranty are included with each unit.

*Pat. Pending

Catalog No. **TV-101** List Price **$42.50**

DETAILED SPECIFICATIONS

Tuning Range: The tuning range of the TV-101 extends from 470 to 890 megacycles in a continuous, unbroken sweep of the tuning dial. This permits accurate tuning of all UHF TV channels without the addition of strips, coils, or band switches. The Mallory Converter is constantly tuned for operation in all areas of television reception.

Tube Complement: 6AF4 Oscillator; 6BQ7 I.F. Amplifier; 6X4 Power Rectifier; and a 1N72 UHF Diode Detector.

Circuitry: Three tuned circuits are employed in the UHF range to provide antenna pre-selection as well as the oscillator-mixer tuning function. These circuits are controlled manually by means of a single shaft actuated from the front panel of the converter. A 6BQ7 dual triode, connected as a low noise cascode amplifier operating at a mean of 82 megacycles, is part of the TV-101. It provides additional amplification at the converter I.F. (either VHF channel 5 or 6). A combination change-over and AC on-off switch is provided to permit quick selection of either VHF or UHF stations from the front panel of the instrument.

Antenna Input Impedance: 300 ohms nominal. Either balanced or unbalanced line may be used.

Output Impedance: 300 ohms.

Stability: Oscillator drift and instability in the TV-101 are reduced to a negligible factor by the omission of all mechanically unstable parts, such as; air-tuned condensers, long leads, switches, and coil strips. Thermal sensitive parts are mounted away from heat producing components such as the I.F. and power supply tubes. The TV-101 stabilizes after approximately 1 minute when used with inter-carrier VHF TV sets, and after 3 to 5 minutes when employed with split-circuit sets.

Dial Mechanism: The dial is a slide-rule type, calibrated linearly in TV channels 14 through 82. Full coverage of the entire tuning range is accomplished with approximately 9.75 turns of the tuning knob. Dial lighting is indirect. Numerals indicating calibration are in gold on glass, and extend approximately 4¾" across the face of the instrument.

Power Supply: The TV-101 is designed for 117 volt, 60 cycle operation. The power supply consists of a transformer, a 6X4 rectifier, and a 3-section resistance-capacitance filter. Approximately 25 watts of power are required for operation.

Cabinet: Cabinet is attractive molded plastic in modern design. Measures 9" wide, 6⅞" deep, and 6¾" high. Bottom of cabinet has felt pads to prevent marring of furniture.

Weight: Approximately 6½ lbs.

THE MALLORY UHF CONVERTER KIT

The Mallory UHF Converter Kit, Catalog No. TVK-101, is ideal for the engineer, amateur, experimenter or advanced student who wishes to learn the fundamentals of UHF circuitry. The professional serviceman will find this kit entirely satisfactory for the construction of a deluxe converter for use in a custom installation or for conversion of a set presently capable of receiving VHF only.

Model TVK-101 Converter Kit is similar in circuit detail to the complete Mallory TV-101 UHF Converter described above. It is constructed with many of the same components used in the TV-101, including the special Mallory UHF Inductuner.* When assembled according to instructions, operating results comparable to the factory-made TV-101 may be expected.

Construction by means of ordinary radio tools is quick, simple and trouble-free. All critical components, such as difficult-to-obtain capacitors, are supplied.

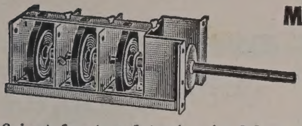
The RF sub-chassis, consisting of a 3-gang, UHF Inductuner, a 6AF4 oscillator, a UHF crystal mixer and miscellaneous resistors and choke coils, is supplied completely assembled, wired, aligned and fastened to the main chassis. Input and output transformers are furnished, but not installed. Dial mechanism parts are provided as a part of the kit, and are partially assembled. A 3-section electrolytic filter capacitor and an antenna changeover switch are included.

The main chassis is supplied completely punched for I.F. and rectifier tubes, as well as for the I.F. and power transformers.

* Reg. U.S. Pat. Off.

Catalog No. **TVK-101**

SPIRAL TUNERS • GRID BIAS CELLS



Mallory Spiral Inductuner*

The two, three and four gang Spiral Inductuners* are variable inductance tuning devices designed to provide efficient front-end tuning in deluxe television and FM receivers and boosters. When used in conjunction with suitable tubes and a minimum of circuit wiring, these Inductuners assure accurate, noise-free and continuous tuning of the entire frequency spectrum from 52 through 216 megacycles. The Inductuner eliminates the need for band switches, plug-in coils, turret coil assemblies or complicated circuit wiring when used for this purpose.

Tuning is accomplished in all models by means of a single ¼″ shaft to vary the inductance of each of the inductors simultaneously from the front of the equipment using the Inductuner. Automatic stops at the maximum and minimum inductance positions are provided to prevent damage to the inductors.

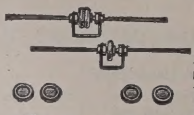
The individual coils have a maximum inductance of .985 uh and a minimum inductance of .025 uh. Total shaft turns are 5.925+.060-.000. Each Inductuner has a 2½″ shaft—¼″ diameter.

Model 8302 is ideal for use in a TV booster (see schematic diagram below). Models 8303 or 8304 are suitable for TV front-end service.

Catalog No.	No. of Gangs	Dimensions†	List Price
8302	2	3⁹⁄₁₆ x 2 x 2⅛	$12.00
8303	3	4¹¹⁄₁₆ x 2 x 2⅛	15.00
8304	4	5⅞ x 2 x 2⅛	18.00

† Excluding lugs and shaft.

* Inductuner—Registered trade mark for Mallory variable inductance tuning devices. Manufactured and sold under one or more of the following Paul Ware and Mallory patents: 2,163644, 2,163645, 2,163646, 2,163647, 2,260877, 2,377789, 2,377790, 2,399060, 2,405890, 2,443020, 2,443822, Other patents applied for.



Grid Bias Cells

Mallory Grid Bias Cells are small acorn-shaped, self-contained devices. The metal container or cup is the negative electrode. The black disc is the positive electrode.

The principal use of Mallory Grid Bias Cells is in the biasing of the first audio amplifier tube in modern high-gain receivers. The bias cell does not need to be by-passed to ground.

The no-current potential of the cells is within plus or minus 10% of their rated voltage. The cells are strictly potential or voltage cells for biasing class "A" amplifier tubes and should not be used for biasing power tubes or oscillators, or for any circuit where direct current may flow through, or be drawn from, the cells.

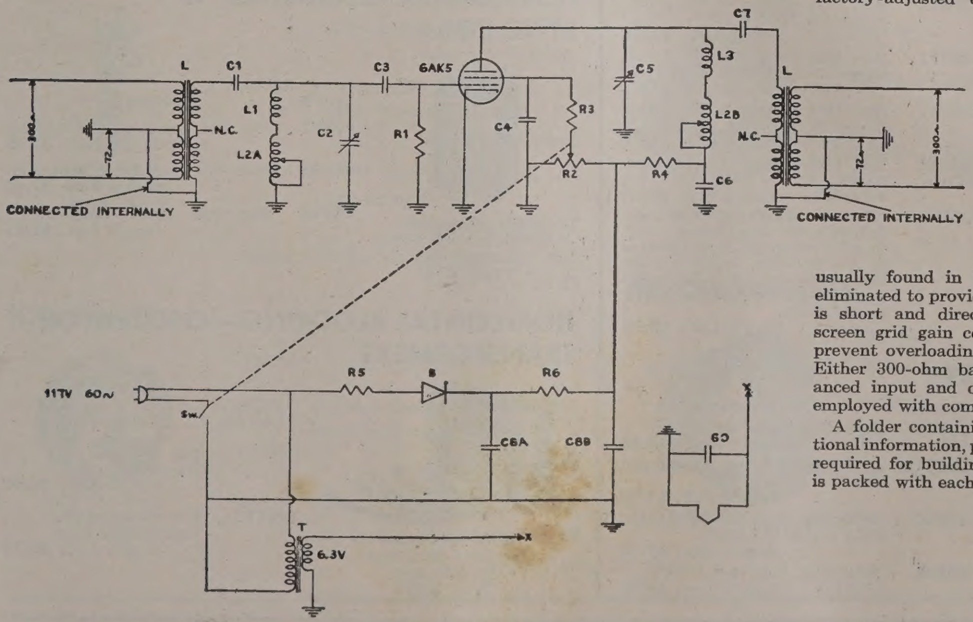
The cells may be used at temperatures from 0°F to 140°F. The voltage of the cells remains reasonably constant throughout this wide temperature range. Whenever possible, place the bias cells in the coolest location. The cells exhibit no change in characteristics when exposed to a relative humidity of 90% at 120°F.

Mallory Grid Bias Cells are non-reactive at audio frequencies. The DC resistance of the cell ranges between 10,000 and 40,000 ohms. The cells do not cause noise.

Cat. No.	Description	List Price
BC-3	1½-volt Grid Bias Cell (packed 10 to box)	**$0.45**
BC-4	1½-volt Grid Bias Cell (packed 10 to box) With mounting stud	.70
BC-5	1¾-volt Grid Bias Cell (packed 10 to box)	.45
BC-6	1¾-volt Grid Bias Cell (packed 10 to box) With mounting stud	.70
BC-7	1¼-volt Grid Bias Cell (packed 10 to box)	.45
BC-8	1¼-volt Grid Bias Cell (packed 10 to box) With mounting stud	.70
GB15	Cell Clip, 1-cell capacity for BC-2 or 2-cell holding capacity for BC-3 or BC-5	.15
GB16	Cell Clip, 2-cell capacity for BC-2 or 4-cell holding capacity for BC-3 or BC-5	.15
GB17	Cell Clip, 1-cell capacity for BC-3	.15

Two-Gang Spiral Inductuner Booster for TV, FM and General Purpose Tuning

Continuous Range: 54 to 216 Mc.



At the left is a schematic diagram of a full-coverage, TV booster employing the Mallory No. 8302 2-gang Spiral Inductuner. This TV booster is entirely practical and suitable for home-shop construction by the average technician. The Inductuner supplies all the essentials required for tuning in one, compact, factory-adjusted unit, thus providing simplified construction. No tuning condensers, band switches or plug-in coils are needed. Possible errors usually attendant with hand-wound coils and unknown tolerances of tuning condensers are completely avoided.

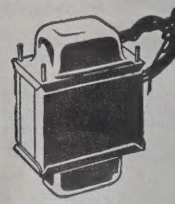
The proven efficiency and high gain of a 6AK5 tube has been utilized to the fullest extent. The antenna changeover switch usually found in booster circuits has been eliminated to provide vital R.F. wiring, which is short and direct. An infinitely variable screen grid gain control has been added to prevent overloading by strong, local signals. Either 300-ohm balanced or 72-ohm unbalanced input and output feed lines may be employed with comparable results.

A folder containing detailed and constructional information, plus a listing of components required for building an Inductuner booster, is packed with each No. 8302 Inductuner.

RCA ELECTRONIC COMPONENTS

TELEVISION PARTS

TV POWER TRANSFORMERS



RCA Power Transformer Type 201T6

Type No.	Description
201T6	Power Transformer (30 tube) 385 volts 295 ma Sugg'd List: **$26.00**
201T7	Power Transformer (24 tube) 385 volts 230 ma Sugg'd List: **$21.00**
201T8	Power Transformer (21 tube) 360 volts 250 ma Sugg'd List: **$19.00**
201T9	Power Transformer (27 tube) 390 volts 260 ma Sugg'd List: **$21.00**
201T10	Power Transformer (27 tube) 390 volts 260 ma Sugg'd List: **$21.00**

HORIZONTAL OUTPUT & HIGH VOLTAGE TRANSFORMERS

RCA "Universal-Type" Horizontal Deflection Output and High Voltage Transformer Type 231T1

Type No.	Description
204T1	Hor. Defl. Output Transformer for 5TP4, 5820, 5WP15. Sugg'd List: **$20.00**
204T3	Hor. Defl. Output Transformer for 7GP4 and 10BP4. Sugg'd List: **$12.00**
211T1	Hor. Defl. Output & HV Transformer for 10BP4 (50°-57°) Sugg'd List: **$6.10**
211T2	Hor. Defl. Output & HV Transformer for 5TP4 proj. Sugg'd List: **$19.00**
211T3	Hor. Defl. Output & HV Transformer for 10BP4 (50°-57°) Sugg'd List: **$6.10**
211T5	Hor. Defl. Output & HV Transformer for 16AP4 (13KV, Doubler) Sugg'd List: **$9.50**
217T1	Hor. Defl. Output & HV Transformer for 10BP4 & 12LP4 (50°-57°) Sugg'd List: **$6.10**
218T1	Hor. Defl. Output & HV Trans- for 16GP4 (70°) Sugg'd List: **$6.10**
223T1	Hor. Defl. Output & HV Transformer for 16GP4 (70°) Sugg'd List: **$7.65**
224T1	Hor. Defl. Output & HV Transformer for 14EP4 & 17CP4 (66°-70°) Sugg'd List: **$7.65**
225T1	Hor. Defl. Output & HV Transformer for 17CP4 & 20CP4 (66°-70°) Sugg'd List: **$7.65**
230T1	Hor. Defl. Output & HV Transformer for 21AP4 (66°-70°, 16-18KV) Sugg'd List: **$8.00**
231T1	"UNIVERSAL-TYPE" Hor. Defl. Output & HV Transformer. (50° to 66°) Supplies high voltages to 15 kilovolts, matches yoke inductances from 8 to 30 millihenries, for "B" supplies of 250 to 350 volts. Sugg'd List: **$9.95**

DEFLECTING YOKES

RCA 211D2 "Anastigmatic" Deflecting Yoke

Type No.	Description
201D2	Deflecting Yoke for 5TP4 Sugg'd List: **$14.00**
201D12	Deflecting Yoke for 10BP4 and 16AP4 (50°-57°) Sugg'd List: **$7.50**
205D1	Deflecting Yoke for 10BP4 and 12LP4 (60°) Sugg'd List: **$7.50**
206D1	Deflecting Yoke for 16GP4 (70°) Sugg'd List: **$9.00**

DEFLECTING YOKES (Cont'd)

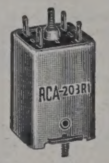
Type No.	Description
207D1	Deflecting Yoke for 10BP4, 12LP4, and 16AP4 (60°) Sugg'd List: **$7.50**
209D1	Deflecting Yoke for 16GP4 (Ferrite Core 70°) Sugg'd List: **$9.00**
211D1	Deflecting Yoke "Anastigmatic" (66°-70°) Sugg'd List: **$9.00**
211D2	"ANASTIGMATIC" Deflecting Yoke. (66°-70°) Includes 12 inch leads, damping and neutralizing elements. Sugg'd List: **$9.75**

WIDTH & LINEARITY COILS

RCA Width Control Type 201R4

Type No.	Description
201R1	Width Control (54-245 mh) Sugg'd List: **$0.75**
201R2	Width Control (85-240 mh) Sugg'd List: **$2.30**
201R3	Hor. Linearity Control (5.5-20 mh) Sugg'd List: **$0.85**
201R4	Width Control (0.17-0.61 mh) Sugg'd List: **$1.05**
201R5	Hor. Linearity Control (0.55-2.30 mh) Sugg'd List: **$1.25**
206R1	Width Control (0.47-1.7 mh) Sugg'd List: **$1.05**
207R1	Hor. Linearity Control 1.3-4.3 mh) Sugg'd List: **$1.25**
208R1	Width Control (.51-1.7 mh) Sugg'd List: **$1.05**
209R1	Hor. Linearity Control (1.3-4.1 mh) Sugg'd List: **$1.25**
211R1	Width Control (1.65-9.2 mh) Sugg'd List: **$1.30**
212R1	Width Control (2.9-16 mh) Sugg'd List: **$1.33**
213R1	Hor. Linearity Control (1.5-8.3 mh) Sugg'd List: **$1.25**

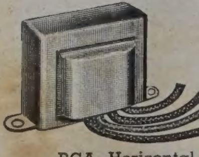
HORIZONTAL OSCILLATOR & SYNC COILS



RCA Horizontal Oscillator and Sync Control Coil Type 203R1

Type No.	Description
203R1	Hor. Osc. and Sync. Control Coil Sugg'd List: **$1.90**
205R1	Hor. Osc. and Sync. Stab. Coil Sugg'd List: **$2.40**
208T8	Hor. Sync. Discr. Transformer Sugg'd List: **$2.45**

HORIZONTAL BLOCKING—OSCILLATOR TRANSFORMERS



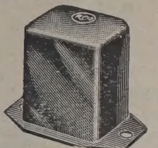
RCA Horizontal Blocking-Oscillator Transformer Type 208T3

Type No.	Description
208T1	Hor. Blocking Osc. Transformer Sugg'd List: **$3.90**
208T3	Hor. Blocking Osc. Transformer Sugg'd List: **$2.75**

RCA ELECTRONIC COMPONENTS

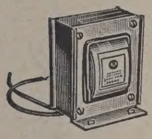
TELEVISION PARTS

VERTICAL BLOCKING—OSCILLATOR TRANSFORMERS


RCA Vertical Blocking-Oscillator Transformer Type 208T2

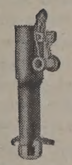
Type No.	Description
208T2	Vert. Blocking Osc. Transformer Sugg'd List **$2.75**
208T9	Vert. Blocking Osc. Transformer Sugg'd List: **$2.50**

VERTICAL OUTPUT TRANSFORMERS


RCA Vertical Deflection Output Transformer Type 204T2

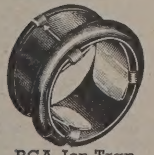
Type No.	Description
204T2	Vert. Output Transformer for 10BP4 and 16AP4 10:1 Sugg'd List: $5.00
204T9	Vert. Output Transformer for 10BP4 and 16AP4 10:1 Sugg'd List: $4.50
222T1	Vert. Output Transformer for 16GP4 (use with 206D1) 11.4:1 Sugg'd List: $3.00
226T1	Vert. Output Transformer (use with 209D1, 211D1) 18:1 Sugg'd List: $5.65

VIDEO PEAKING COILS & TRAPS


RCA Video Circuit Trap Type 203L5

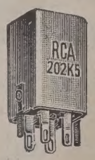
Type No.	Description
*203L1	Video Series Peaking Coil (180 Microhenries) Sugg'd List: **$0.45**
*203L2	Video Shunt Peaking Coil (250 Microhenries) Sugg'd List: **$0.45**
*203L3	Video Series Peaking Coil (120 Microhenries) Sugg'd List: **$0.45**
*203L4	Video Shunt Peaking Coil (93 Microhenries) Sugg'd List: **$0.45**
203L5	Video Circuit Trap (4.5 MC) Sugg'd List: **$0.95**

ION TRAPS


RCA Ion-Trap Magnet Type 203D3

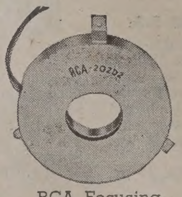
Type No.	Description
203D1	Ion-Trap Magnet (Double Pole, Field Coil Type) Sugg'd List: **$6.50**
203D3	Ion-Trap Magnet (Double Pole, PM Type) Sugg'd List: **$2.10**

IF TRANSFORMERS


RCA Convertor Transformer Type 202K5

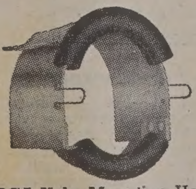
Type No.	Description
*201K1	1st and 2nd Sound IF Transformer (21.25 MC) Sugg'd List: **$2.30**
*202K1	Converter Transformer (21.8 MC) Sugg'd List: **$2.30**
*202K2	1st Picture IF Transformer (25.3 MC) Sugg'd List: **$2.50**
*202K3	2nd Picture IF Transformer (22.3 MC) Sugg'd List: **$1.90**
*202K4	Cathode Circuit Trap (21.5 MC) Sugg'd List: **$2.30**
202K5	Converter Transformer (24 MC) Sugg'd List: **$1.40**
202K6	1st Picture IF Transformer (24.6 MC) Sugg'd List: **$2.25**
202K7	2nd Picture IF Transformer (25.5 MC) Sugg'd List: **$1.75**
202K8	3rd Picture IF Transformer (22.0 MC) Sugg'd List: **$1.90**
202K9	4th Picture IF Transformer (24.6 MC) Sugg'd List: **$1.65**
202K10	5th Picture IF Transformer (22.7 MC) Sugg'd List: **$2.05**
202K11	Cathode Circuit Trap (21.25 MC) Sugg'd List: **$1.50**
*202L1	3rd (25.2 MC) or 4th (23.4 MC) Picture IF Transformer Sugg'd List: **$0.70**
*203K1	Sound Discriminator Transformer (21.25 MC) Sugg'd List: **$2.95**
204X1	Picture and Sound IF & Video Coil Kit Sugg'd List: **$20.65**
206K1	Sound IF Transformer (21.25 MC) Sugg'd List: **$2.05**
207K1	Sound Discriminator Transformer (21.25 MC) Sugg'd List: **$2.15**

FOCUSING COILS


RCA Focusing Coil Type 202D2

Type No.	Description
202D1	Focusing Coil for 10BP4 Sugg'd List: **$7.50**
202D2	Focusing Coil for 16AP4, 16GP4, and 17CP4 (14KV) Sugg'd List: **$11.00**

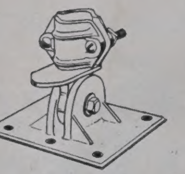
MISCELLANEOUS


RCA Yoke Mounting Hood Type 201X1

Type No.	Description
201X1	Yoke Mounting Hood Sugg'd List: **$1.40**
202P1	Projection Screen (20″ x 15″) Sugg'd List: **$40.00**
204L1	Filament Choke (Standard Package 5) Sugg'd List: **$0.20 ea.**

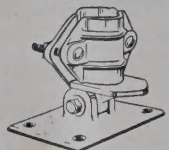
*Included in Kit 204X1.

PENN TELEVISION PRODUCTS
ARE ENGINEERED FOR BETTER, LONGER LASTING
ANTENNA INSTALLATIONS



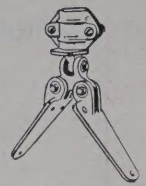
BMA-138

Sturdy Universal Base Mount, made of "PENNALLOY," strong, weather-resistant. Patented bearing locks in any position with turn of Hex Head Bolt. Patented tongue supports masts from 1" to 2" O.D. Individually boxed 12 to master carton. Shipping Wt. 22 lbs. **List Price $4.25 ea.** Set of 1½" wood screws $.25 additional



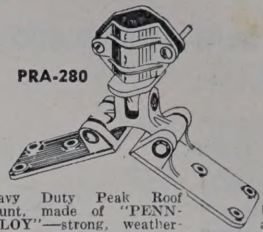
BMA-136

Universal Base Mount, made of "PENNALLOY"—strong, weather-resistance. Patented bearing locks in any position with turn of Hex Head Bolt. Patented tongue supports masts from 1" to 1½" O.D. Individually Boxed 20 to master carton. Shipping Weight 22 lbs. **List Price $3.55 ea.** Set of 1½" wood screws $.17 additional



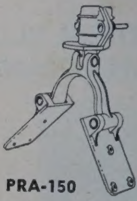
PRA-148

Universal Peak Roof Mount, made of "PENNALLOY"—strong, weather-resistant. Patented bearings lock at any angle pitch with turn of Hex Head Bolts. Patented tongue supports masts from 1" to 2" O.D. Individually boxed 12 to master carton. Shipping Weight 21 lbs. **List Price $5.25 ea.** Set of 1½" wood screws $.25 additional



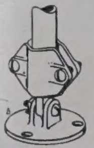
PRA-280

Heavy Duty Peak Roof Mount, made of "PENNALLOY"—strong, weather-resistant. Patented bearings lock at any angle to pitch of peak or flat roof, with turn of Hex Head bolts. Patented tongue supports masts from 1" to 2" O.D. Ideal for telescopic masts. Individually boxed 12 to master carton. Shipping Wt. 28 lbs. **List Price $6.95 ea.** Set of 1½" wood screws $.25 additional



PRA-150

Universal Peak Roof Mount, arches over crown tile. Made of "PENNALLOY"—strong, weather-resistant. Patented bearings lock at any angle and pitch of roof with turn of Hex Head bolts. Patented tongue supports masts from 1" to 2" O.D. Individually boxed 12 to master carton. Shipping Weight 35 lbs. **List Price $6.95 ea.** Set of 1½" wood screws $.25 additional

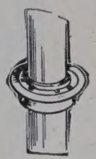


BMA-192

Economy cast aluminum Base Mount. Takes up to 1¼" O.D. Masts. Packed in bulk—24 to master carton. Shipping Wt. 20½ lbs. **List Price $1.90 ea.**

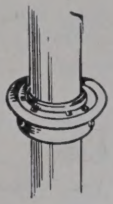
BMA-192-B

Economy cast aluminum Base Mount. Has patented bearing. Takes up to 1¼" O.D. masts. Packed in bulk—24 to master carton. Shipping Wt. 19½ lbs. **List Price $2.70 ea.**



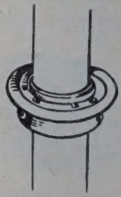
GRA-140

Patented Floating Guy Wire Ring and Collar, made of "PENNALLOY"—strong, weather-resistant. Permits orientation of masts while permanently guyed. Lubricated. Fits masts up to 1⅜" O.D. Individually boxed—24 to master carton. Shipping Weight 8½ lbs. **List Price $1.80 ea.**



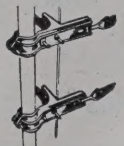
GRA-141

Same as GRA-140, except that GRA-141 takes up to 1¾" O.D. mast. Individually boxed—24 to master carton. Shipping Weight 11 lbs. **List Price $1.90 ea.**



GRA-142

Same as GRA-140, except that GRA-142 takes up to 2" O.D. masts. Individually boxed—24 to master carton. Shipping Weight 15 lbs. **List Price $2.50 ea.**

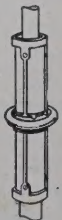


CMA-500

Pair of Chimney Mounts, made of "PENNALLOY" — strong, weather-resistant. Two 12 ft. lengths of galvanized strapping. 6 corner brackets. Eyebolts permanently sealed at one end of strapping. Seals for opposite end of straps easily fastened. Mounts hold masts up to 2" O.D. Complete with heavy plated hardware. Individually boxed—12 to master carton. Shipping Weight 49 lbs. **List Price $6.95 pair**

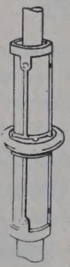
CMA-500 S.S.

Same as CMA-500, except CMA-500S.S. has stainless steel strapping and seals. Individually boxed 12 to master carton. Shipping Wt. 49 lbs. **List Price $8.95 pr.**



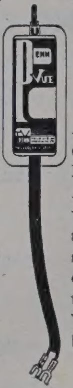
MCA-743

Universal Mast Coupler, made of "PENNALLOY" — strong, weather-resistant. Couples mast sections up to 1⅜" O.D. Set screws fasten coupler securely. Patented floating guy wire ring permits orientation while mast is permanently guyed. Individually boxed 12 to master carton. Shipping Wt. 11½ lbs. **List Price $3.50 ea.**



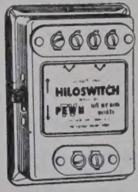
MCA-744

Same as MCA-743, except MCA-744 is larger to accommodate up to 1¾" O.D. masts. Ind. boxed 12 to master carton. Shipping Weight 16 lbs. **List Price $4.25 ea.**



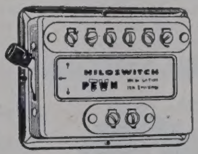
"PENNVUE" MODEL WT-39

An FM-TV Interference Eliminator for FM band interference. Adjusts to give clear vision, uncluttered sound. Easily installed. Packed 12 on display card. 1 card to carton. Shipping Weight 8 lbs. **List Price $1.98 ea.**



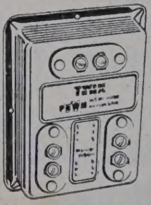
TS-551 "HILOSWITCH"

2 Channel TV-FM Antenna Transfer Switch. Permits easy changing from high frequency bands to low frequency bands. No soldering, positive contacts, minimum leakage. Individually boxed 12 to master carton. Shipping Weight 4 lbs. **List Price $2.75 ea.**



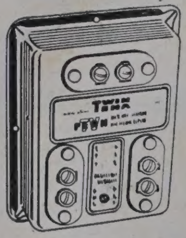
TS-587 "HILOSWITCH"

3 Channel TV-FM Antenna Transfer Switch. Permits easy changing from high frequency bands to intermediate frequency bands to low frequency bands. Easy to install. No soldering, positive contacts, minimum leakage. Individually boxed 12 to master carton. Shipping Weight 4 lbs. **List Price $3.75**



TC-313 TWINTENA

Two set Antenna Coupler permits 2 TV sets with 300 ohm input to be connected to one antenna. Allows simultaneous reception on both sets with on interference from either, on or off. Easy to install, no soldering, positive contacts, minimum leakage. Individually boxed 12 to master carton. Shipping Weight 4 lbs. **List Price $3.95**

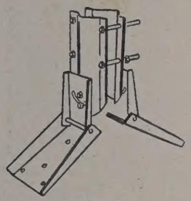


TC-374 TWINTENA

Deluxe two set Antenna Coupler —permits 2 TV sets with 300 ohm input to be connected to one antenna. Allows simultaneous reception on both sets with no interference from either, on or off. Easy to install, no soldering, positive contacts. Minimum leakage. Has ground connection. Individually boxed 12 to master carton. Shipping Weight 4 lbs. **List Price $4.95 ea.**

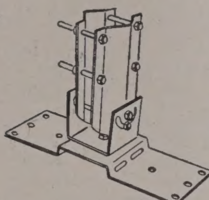
PENN TELEVISION PRODUCTS CO.

PHILADELPHIA 34, PENNA.



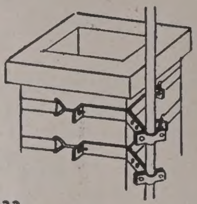
PRS-111

Heavy gauge steel Peak Roof Mount. Heavy zinc plated. Accommodates up to 2″ masts. Easily rotated. Makes "walking up" easy. Packed in bulk 24 to master carton. Shipping Weight 60 lbs. **List Price $2.50 ea.**



BMS-115

Heavy gauge steel Base Mount, heavily zinc plated. Accommodates up to 2″ mast. Permits easy "walking up." Packed in bulk 24 to master carton. Shipping Weight 60 lbs.
List Price $2.75 ea.

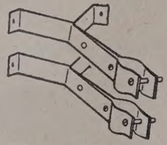


CMS-333

"Y" Type Chimney Mount made of ⅛″ steel, 1⅛″ wide. Hot dipped galvanized. Two 12 ft. lengths heavy galvanized steel strapping with complete hardware. Individually boxed 12 to master carton. Shipping Weight 45 lbs.
List Price $3.00 ea.

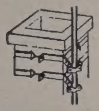
CMS-333 S.S.

Same as CMS-333, except CMS-333 S.S. has stainless steel strapping and seals. Individually boxed 12 to master carton. Shipping Wt. 45 lbs.
List Price $4.50 ea.



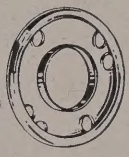
CMS-333 SNAP-IN

Chimney Mount made of ⅛″ hot dipped galvanized steel, 1⅛″ wide. Mast snaps easily into bracket. Complete with hardware and two 12 ft. lengths of heavy galvanized steel strapping. Ind. boxed 12 to master carton. Shipping Weight 45 lbs.
List Price $3.00 ea.



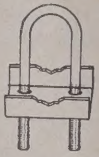
CMA-684 S.S.

"Y" Type Chimney Mount made of ⅛″ tough bar stock aluminum, 1¼″ wide. 2 12 ft. lengths stainless steel strapping and seals. Individually boxed 12 to master carton. Shipping Weight 32 lbs.
List Price $4.50 ea.



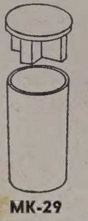
GW-135

Heavy gauge steel Guy Wire Ring with plated rolled edge. Fits 1¼″ mast. Packed in bulk, 100 to master carton. Shipping Weight 13¾ lbs. **List Price $.42 ea.**



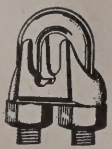
UC-22

"U" bolt with clamp, heavy plated gauge steel. Packed in bulk — 100 to master carton. Shipping Wt. 19 lbs.
List Price $.33 ea.



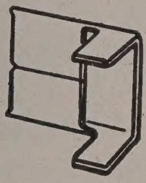
MK-29

"PENNALLOY" tube cap fits 1¼″ tubing; prevents wind howls, rain and snow accumulation in mast tubing. Packed in bulk—100 to carton. Shipping Weight 7 lbs. **List Price $.20 ea.**



GT-30

Guy Wire Thimble made of aluminum with plated U bolt and hex nuts. Swift, vise-like tightening and joining of guy wires insures permanent grip. Packed in bulk — 100 to carton. Shipping Weight 7 lbs.
List Price $.25 ea.



GS-24

EZ Seals. Galvanized. Fits ¾″ strapping. Easy to use. Packed in bulk — 100 to carton. Shipping Weight 2 lbs.
List Price $.06 ea.

SS-25

EZ seals. Stainless steel. Fits ¾″ strapping. Easy to use. Packed in bulk — 100 to carton. Shipping Wt. 2 lbs.
List Price $.18 ea.

CSG-27

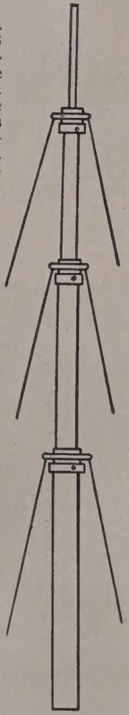
¾″ Heavy galvanized strapping. Strong, durable. 100 ft. rolls, 6 per carton. Shipping Weight 35 lbs.
List $4.60 per roll

CSS-28

¾″ Heavy stainless steel strapping. Weather resistant. 100 ft. rolls, 6 per carton. Shipping Weight 35 lbs.
List $11.80 per roll

"PENNTEL"

Telescopic Mast, in 10 ft. sections. Each section 16 gauge steel, welded, seamless tubing. Heavy zinc plate prevents corrosion. Has patented guy wire rings and collars. Erects straight up, section by section — easy one-man job. Swaged ends of each section make rigid joints. Withstands high winds. Shipped collapsed, complete with hardware.



TM-432 30 Ft.
List Price $22.00

1-10 ft. sec. 1¾″
1-10 ft. sec. 1½″
1-10 ft. sec. 1¼″

Shipping Weight 25 lbs.

TM-543 30 Ft.
List Price $29.00

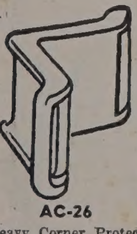
1-10 ft. sec. 2″
1-10 ft. sec. 1¾″
1-10 ft. sec. 1½″

Shipping Weight 32 lbs.

TM-5432 40 Ft.
List Price $34.95

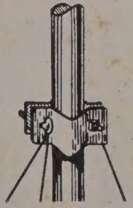
1-10 ft. sec. 2″
1-10 ft. sec. 1¾″
1-10 ft. sec. 1½″
1-10 ft. sec. 1¼″

Shipping Weight 37 lbs.



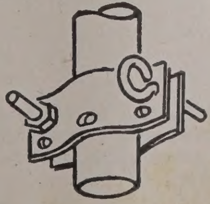
AC-26

Heavy Corner Protector made of "PENNALLOY" — holds strapping in proper place, protects and prevents breaking chimney corners. Packed in bulk 100 to master carton. Shipping Weight 11½ lbs.
List Price $.17 ea.



GW-134-A

Guy Wire Clamp, ⅛″ tough bar stock, 1¼″ wide. Accommodates antenna masts up to 1⅝″ O.D. Packed in bulk 100 to master carton. Shipping Weight 13½ lbs.
List $.40 ea.

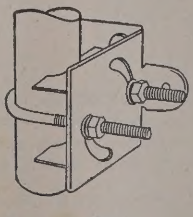


GW-134

Same as GW-134-A, except GW-134 is heavy plated steel. Packed in bulk, 100 to master carton. Shipping Weight 22 lbs.
List $.35 ea.

GW-137

Guy Wire Clamp, ⅛″ heavy plated steel, 1¼″ wide. Zinc plated eye bolt. Packed in bulk, 100 to master carton. Shipping Weight 24 lbs.
List Price $.45 ea.



BM-133

Adjustable Base Mount. Rotates easily to fit flat, slope roofs and side walls. Made of heavy plated gauge steel. Packed in bulk, 25 to master carton. Shipping Weight 14½ lbs. **List Price $.45 ea.**

BRACH MFG. CORP. MULTIPLE ANTENNA
INSTALLATION EQUIPMENT

UP TO 16 SETS MAY BE OPERATED
FROM ONE ANTENNA

BRACH
EST.1906

No. 72-72 4-SET COUPLER designed to provide 4-72 ohm coaxial outputs from one 72 ohm coaxial antenna input.

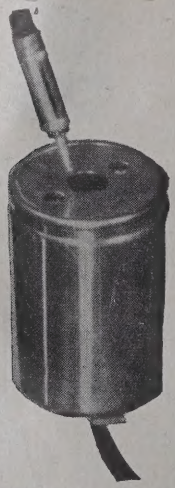
BRACH MUL-TEL MASTER TV-FM ANTENNA SYSTEM

The Mul-Tel System is designed to operate 2 to 16 Television Sets from one common TV Antenna . . . The system discriminates against I.F. interference as it will pass only those frequencies in the TV band from 50-230 megacycles . . . The range of application for the Brach Mul-Tel System is virtually limitless . . . It is ideal for garden type apartment houses or other multiple dwellings, and for extra television outlets in the home . . . It is eminently suitable for multi-room restaurants, taverns and clubs which operate several TV sets on the premises . . . In suburban areas, it supplies the simplest and most satisfactory method of TV distribution for smaller dwellings and two-family houses.

Brach Mul-Tel provides the dealer with the outstanding advantage of being able to demonstrate up to sixteen TV sets simultaneously from one roof antenna, with uniform signal to each receiver.

No. 300-72 4-SET COUPLER designed to provide 4-72 ohm coaxial outputs from one 300 ohm antenna input.

No. 72-72 4-Set Coupler—List Price	**$19.75**
No. 300-72 4-Set Coupler—List Price	**19.75**



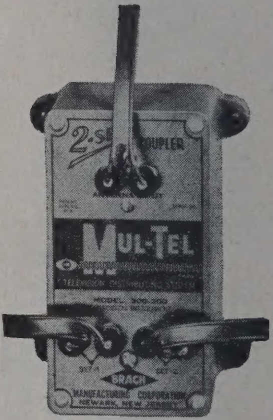
No. 72-300A 72 to 300 OHM MATCHING TRANSFORMER for use with Part No. 72-72 and 300-72.

TRANSFORMER (No. 72-300A) is designed to be a perfect termination at Channels 2-13. It also has a high pass filter action and may be used in interference areas to reduce diathermy and other I.F. interference. A coaxial fitting is provided with transformer #72-300A to make a low loss connection to RG59/U. It has negligible loss over the complete TV band and a voltage gain of 2:1. Recommended for all coaxial line installations with individual antennas in noisy and heavy interference areas and as a TV Set Matching Transformer in conjunction with the Brach Mul-Tel System.

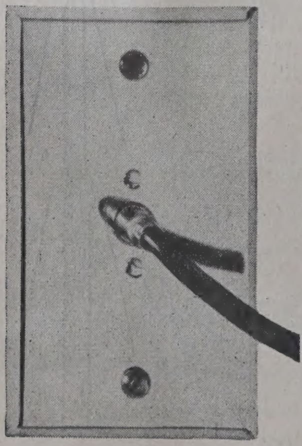
List Price	**$3.45**

2-SET COUPLER INPUT (No. 300-300) receives its signals from one antenna which may use 75 or 300 Ohm Down-lead. The signals are filtered of I.F. interference and divided into two outputs which may, by proper connection, be circuited to either 75 or 300 Ohm TV receivers. More than 20 d.b. of isolation to local oscillator radiation is realized between receivers with the 2-Set Coupler. The 2-Set Coupler has complete isolation in regard to loading effects. A defective connection to either receiver will not affect the operation of the other receiver connected to the 2-Set Coupler. This unit functions on the "Berger Effect" principle as do all other Mul-Tel Units.

List Price	**$14.95**



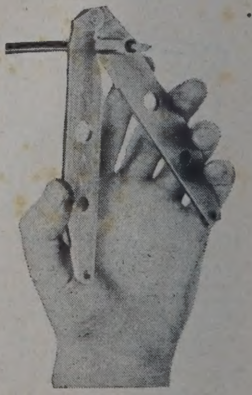
No. 300-300 2-SET COUPLER used to operate 2 sets from one antenna.



433

WALL PLATE (No. 433) for permanent installations with concealed or surface wiring. Provides a professional finish to installations when used with single gang surface wire mold box or flush wall box. List Price $1.00

CRIMPING TOOL (No. 424) used to crimp the Jiffy high Q #431 plugs to the coaxial cable. List Price $0.75



424

Also A Complete Line of Antennas and Accessories

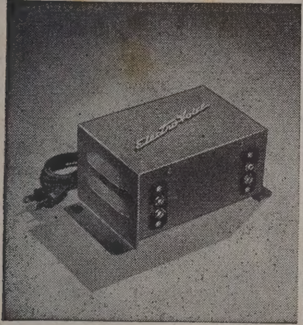
NO FINER CHOICE THAN

Electro-Voice

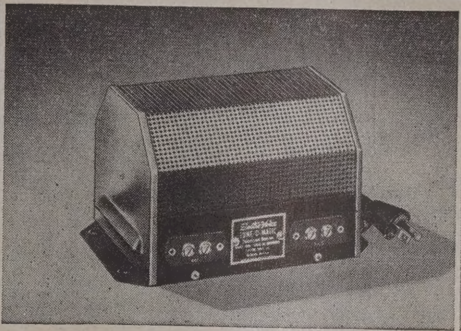
AUTOMATIC SELF-TUNING

TV BOOSTERS

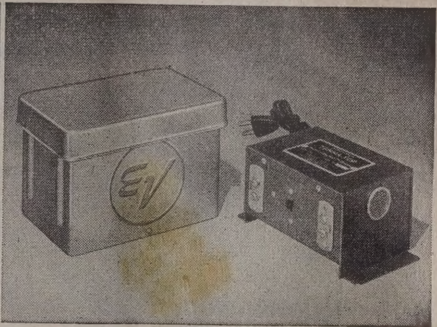
AND DISTRIBUTION SYSTEMS



MODEL 3002 TUNE-O-MATIC



MODEL 3000 SUPER TUNE-O-MATIC



MODEL 3012 TENNA-TOP

TUNE-O-MATIC SELF-TUNING TV BOOSTERS

All-Channel • Broadband • Low Noise • High Gain • All Electronic

TV pleasure is automatic when you plug in the TUNE-O-MATIC. Turns "on" or "off" with your TV receiver switch. Needs no separate manual tuning. The TUNE-O-MATIC is fully electronic —boosts signals instantly, automatically on any channel. New Hi-Lo gain switch for proper gain in all areas. Exclusive E-V broadband circuit provides uniform gain across entire band width. No signal drift—no limiting peaks. Extremely low internal noise factor minimizes "snow". Pictures are sharper, brighter . . . sound is clearer, cleaner. Easily concealed in or behind TV set or elsewhere. Plugs in between receiver and AC electric outlet. Improves reception even in difficult fringe areas. Permits satisfactory use of indoor antennas in primary areas. Highly-stable, trouble-free, proved-in-use.

Model 3002 TUNE-O-MATIC. Uses two new type 6BK7 tubes in two-stage broadband circuit—one for high bands, one for low. Input and output, 150-300 ohm. For 105-125 volts, 50-60 cycles AC. Sturdy metal case, in copper-tone baked lacquer finish. Rubber grommet feet. 6¾" x 3⅛" x 4½". Complete with tubes and plug-in cord. Shpg. wt. 4 lbs.

List Price........................$39.50

Model 3000 SUPER TUNE-O-MATIC. Uses 4 tubes for two separate high and low band 2-stage amplifiers. Input and output for 150-300 ohm twin lead. Maroon and gray hammertone metal case, with rubber feet. 7¾" x 5½" x 4½". Complete with four 6J6 RF tubes, selenium rectifier, and plug-in cord. For 105-125 volt 50-60 cycles AC. Shpg. wt. 5 lbs.

List Price..............$57.50

TENNA-TOP ANTENNA-MOUNTED TV BOOSTERS

Low-Noise • All-Channel • Self-Tuning • Permit Long Lead-ins

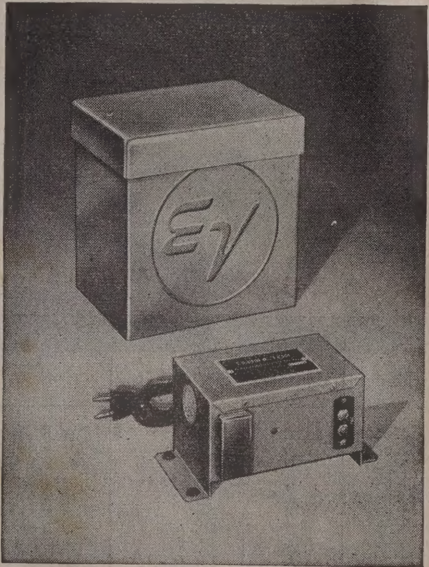
Mounts at antenna ahead of lead-in. Amplifies only the wanted TV signals, not any local external noise interference picked up by the lead-in. Extremely low internal noise insures higher signal-to-overall-noise ratio. Turns "on" or "off" with TV receiver switch. Automatic self-tuning on all channels eliminates separate booster tuning. New built-in tapped transformer makes it possible to use as much as 3000 feet of best-quality lead-ins. Exclusive broadband circuit amplifies signal uniformly across entire band width. No signal drift—no limiting peaks. Hi-Lo gain switch for proper gain in all areas. Impedances closely matched at all frequencies. Single twin-lead line carries the power up and brings the signal down. Junction control box easily concealed in or behind TV set or anywhere. Easy to install. Highly stable. Trouble-free. Can be used with antenna rotator. Assures best results in any location.

Model 3012 TENNA-TOP. Uses two 6BK7 dual triode tubes in two-stage broadband circuit—one for high bands, one for low, 150-300 ohm input and output. Booster unit 7⅛" x 4¾" x 5", in sturdy, moisture-proofed housing. Junction control box 6¾" x 3⅛" x 4½" in gray hammertone finish. For 105-125 volts, 50-60 cycles AC. Complete with tubes, mounting brackets, and plug-in cord. Shpg. wt. 7 lbs.

List Price...........$59.50

Model 3010 SUPER TENNA-TOP. Uses four tubes for two separate high and low band 2-stage amplifiers. Input and output 150-300 ohms. Booster unit 7¼" x 7⅛" x 6" in rugged, moisture-proofed housing. Junction control box 6¾" x 3⅛" x 4½" finished in gray hammertone. For 105-125 volts, 50-60 cycles AC. Complete with four 6J6 tubes, mounting brackets, and plug-in cord. Shpg. wt. 12 lbs.

List Price.........................$88.00



MODEL 3010 SUPER TENNA-TOP

TELEVIDER-4 DISTRIBUTION SYSTEM FOR MULTIPLE TV INSTALLATIONS

Insures Complete Isolation of Each TV Receiver in a Master Antenna System For Stores, Apartment Buildings, Hotels, and Homes

Utilizes Efficiency of Coaxial Cable

Superior shielding of coaxial cable retains high degree of isolation built into *TeleVider-4*.

Complete Isolation Between Receivers

Prevents interference from local oscillation of poorly-shielded TV sets in the system. Isolation as much as 200 to 1 is built-in.

Easy Expansion of TeleVider System

One unit can be used for 2, 3 or 4 receivers. More units easily added for larger installations. No individual engineering required.

All Channel Operation on Each Line

Each TV set in the system can be operated individually at the same time on any channel.

Uses Cinch-Jones Sockets

Assures low insertion loss and greater strain relief.

Here is your answer to inter-antenna interference and unsightly rooftops in multiple TV installations. Every feature of the E-V *Tele-Vider-4* is designed for most effective isolation, flexible installation, minimum servicing, and dependable performance. Matches antenna impedance to each receiver input. Provides a coordinated system that works every time, in fringe or primary areas, at moderate cost. E-V all-channel boosters can be inserted as line amplifiers where needed.

Uses four 6AK5 tubes. Power consumption 25 watts. Power source 105-125 volts 60 cycle AC. Input 72 ohms, output 72 ohms. Can be easily connected directly to 300 ohm TV receivers. "On-off" switch. Six Cinch-Jones coaxial sockets (four for receiver outlets and one each for signal input and output). Housed in ventilated gray hammertone metal case, with rubber grommet feet. May be mounted horizontally or vertically. Size: 7¾" x 5½" x 4½". Complete with tubes, plug-in cord, and terminating resistor. Shpg. wt. 5½ lbs.

Model 3100 TeleVider-4.

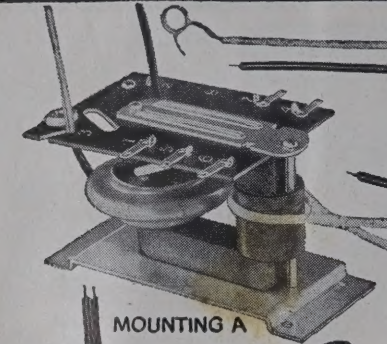
List Price........................$69.50

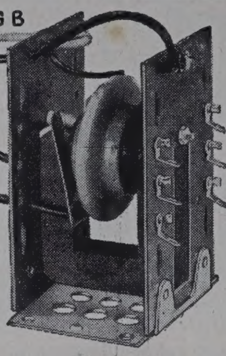
MODEL 3100 TELEVIDER-4

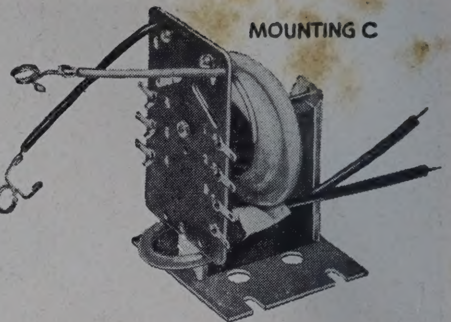
EASILY CONNECTED DIRECTLY TO 300 OHM TV RECEIVERS

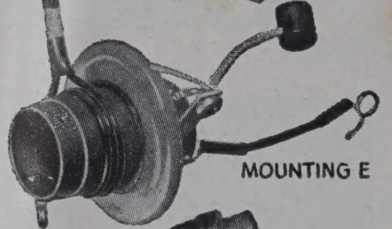
Ram ELECTRONICS SALES CO.

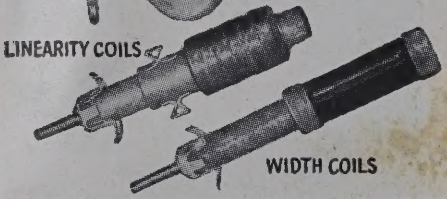
TEST-PATTERN TESTED Components for Television











High Efficiency • Performance-Proved • Lowest Priced

Carefully designed and precision manufactured to high critical standards, Ram television components have received nationwide recognition for high efficiency. Ram makes transformers, yokes and coils for such leading TV set manufacturers as DuMont, CBS-Columbia, Emerson, Olympic, Majestic, Fada, Silvertone, Regal, DeWald, Stromberg-Carlson, etc. — surpassing all laboratory production and field tests. And — Ram parts are the lowest-priced in the industry — for highest profits for you.

RAM TRANSFORMERS

Model	Mounting	KV Output	Description	List
X032	A	13.0	For RCA 630 circuits	$10.00
X036	A	14.5	For RCA 630 circuits	10.00
X045	B	14.0	For all G.E. Circuits	10.00
X049	C	13.5-15.0	For Admiral, Fada, Crosley sets. Separate width coil or AGC wind	10.00
X050	A	14.0	For Brunswick, Philharmonic sets. Transformer with separate AGC wind	10.50
X051	B	14.0	For Majestic, Garod, Wilcox-Gay sets. Similar to X045, operates on lower B voltage	10.50
X053	A	15.-16.	For Regal sets. High Efficiency flyback for larger size tubes	10.00
X054	A	12.-14.	For CBS and auto transformer sets. Continuous winding with feedback wind	10.00
X066	A	14.-16.	For modified 630 circuits using late horizontal output tubes; low retrace time	10.00
X068	E	11.-13.	For RCA, Emerson, Capehart sets using Air-Core type	6.50
X069	B	16.-17.5	For Stromberg-Carlson sets. High efficiency auto-transformer; low retrace time	11.50

RAM MATCHED COMPONENT KITS for Larger Tube Conversions

Unit No.	Largest C.R. Tube	Description	Trans.	Yoke	Lin. Con.	Width Con.	Defl. Tubes	List
32K21	21"	RCA 630 Type Circuits	X032	Y70F08	201R3	201R1	6BG6, 6BQ6	$22.00
45K19	19"	G.E. type circuits	X045	Y70F10	201R10	201R10	6BG6, 6BQ6	22.00
45K24	24"	G.E. type circuits	X045	Y70F08	201R10	201R10	6BG6, 6BQ6	22.00
66K24	24"	RCA 630 Type circuits	X066	Y70F08	201R3	201R1	6BG6, 6BQ6, 6AU5	22.00

NOTE: All Kits supplied with complete conversion data.

RAM LINEARITY & WIDTH COILS

Type	Description	Millihenries	DC Resistance	List
201R1	Width Coil	.050-.250	0.53	$ .75
201R3	Linearity Coil	5-20	32.0	.75
201R4	Width Coil	.170-.610	1.0	.90
201R5	Tapbed Linearity Coil	.505-2.3	8.3	1.00
201R10	Width Coil	3.5-29.5	30.0	1.00
201R10	Linearity Coil	3.5-29.5	30.0	1.00
201R11	Width Coil with keyed AGC winding	Primary .160-.700 Secondary 3.2-9	1.0 28.0	1.60

FULL FOCUS DEFLECTION YOKES with leads & network*

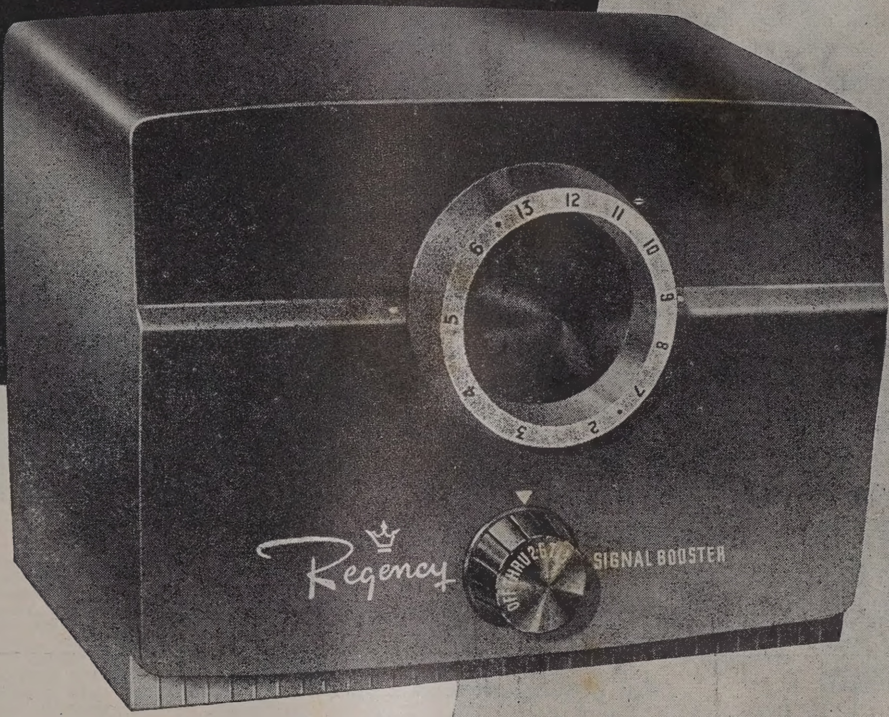
Type	Inductance		List
	Horizontal	Vertical	
Y70I08	8.3 mh	50 mh	$ 9.00
Y70F08	8.3	50	10.00
Y70F10	10.3	50	10.00
Y70F14	14.0	50	10.00
Y70F17	17.0	50	10.00
Y70F20	20.0	50	10.00
Y70F30	30.00	50	10.00
Y70F30/3	30.0	3.3	10.50

*** All Yokes have Ferrite Cores, except Model Y70I08. This is an iron wire type.**

Regency

with the new exclusive circuit stabilizer*

LARGEST
SELLING
BOOSTER
at any price!



THE DB-520, $32.50 LIST

- **Regency alone offers all these features in a TV signal booster!**

- Easy installation. TV set plugs into the booster—booster plugs into wall outlet!
- Off-on switch controls TV set—capacity 3 amps, 120V AC!
- Single tuning knob—large, easy to grip!
- Push-pull triode in balanced circuit!
- Link coupling for optimum impedance matching!
- Exclusive Circuit Stabilizer* provides inductive as well as capacitive neutralization assuring maximum stability on all 12 VHF channels!
- Improved circuit control gives even greater tracking accuracy!
- Underwriters' Approved!
- Compact—cabinet only 4$\frac{17}{32}$" x 6" x 4$\frac{1}{2}$"!
- Broad-band response insures equal enjoyment of both video and audio on all VHF channels.

* Pat. applied for

Regency

Regency Division, I.D.E.A., Inc.
7900 Pendleton Pike
Indianapolis 26, Ind.
Cherry 2466

New OAK BOOSTER for TV-FM $39.95

OAK ELECTRONICS CO. really hits the mark with the OAK TV-FM Booster

Model 100

INCLUDES THESE KEY FEATURES:

Lowest Noise Factor of Any Booster. Without even mentioning comparisons with other boosters, we can confidently state and are prepared to prove that the Oak TV booster has a higher ratio of signal gain and power output to internal noise generated, than the front end tuner of any TV set made today, regardless of whether such front end tuner has pentode, cascode, or driven grounded grid input.

Richly Styled Mahogany Plastic Cabinet.

Installation Time Measured in Seconds.

Continuous Tuning on all FM and TV Channels.

Minimizes or Completely Eliminates Ghosts.

When carefully tuned, the Oak booster acts like a continuously variable tuning stub, providing exactly the correct impedance mis-match to the antenna to induce line reflections in the lead-in equal and opposite in phase to cancel out ghosts that might be picked up.

High Gain, and Uniform Response on all Channels.

Completely Shielded.

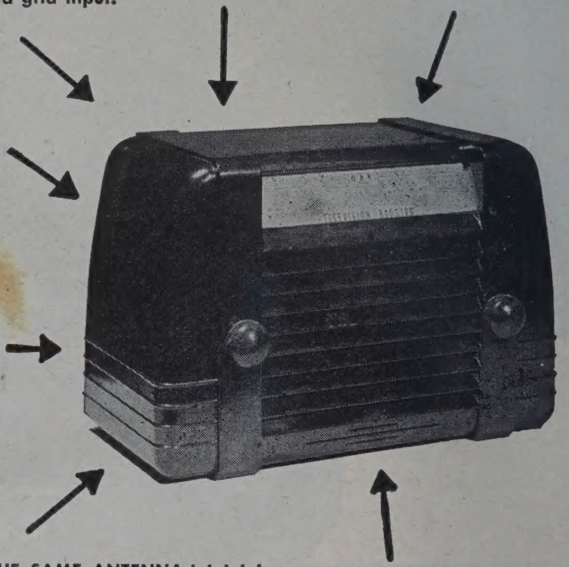
Underwriters' Approved.

External Impedance Matching Devices Unnecessary.

Gain is Controllable from the Front Panel.

And—Last—But Not Least—Only ONE OAK TV booster will simultaneously supply as many as FIFTY TV receivers with adequate signal for perfect reception ! ! ! ! AND ALL FROM THE SAME ANTENNA ! ! ! ! !

America's only 3 stage Booster, With Triode Tubes Used Throughout.



For better performance on U. H. F. Channels

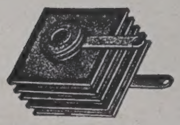
OAK U. H. F. CONVERTER

Exclusive Features

- Installed in seconds
- Use with any T.V. set
- Built-in U.H.F. Antenna
- No sacrifice of V.H.F. channels
- High quality Picture definition
- ONE OAK U.H.F. Converter will supply up to 50 V.H.F. sets with strong signal simultaneously

---

OAK SELENIUM RECTIFIERS



For all rectification problems and applications. Manufactured by the revolutionary **vacuum process** for unsurpassed performance. Oak selenium rectifiers are uniform and conservative in rating.

OAK PHOTOELECTRIC CELLS

Oak photoelectric cells are the self generating type that convert light into electricity directly. Consult the Oak Engineering Dept. for your rectifier and photocell recommendations.

OAK ELECTRONICS CO.

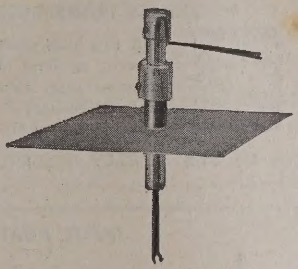
144-164 Oak St., Buffalo 3, N. Y.

MOSLEY *Electronics*

2125 LACKLAND · OVERLAND, MISSOURI

LOW LOSS TV ANTENNA TRANSMISSION LINE ACCESSORIES

ROOF-THRU

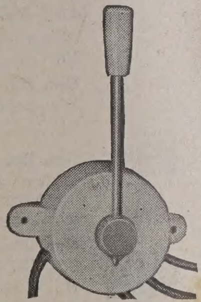


Consisting of a low-loss sturdy plastic feed-through bushing and an 8" x 9" copper flashing, the MOSLEY ROOF-THRU permits direct entrance of TV transmission line and rotator control cable through the roof without allowing weather leaks.

- Permits shorter TV lead-in. This means less loss of signal energy and less pick-up of electrical interference.
- Prolongs life of transmission line by keeping it out of weather.
- Eliminates unsightly rambling lead-in wires.
- No danger of future roof leaks around ROOF-THRU.
- Easy to install in any type roof.
- Long lasting. Weather can't hurt ROOF-THRU.

Cat. No. 624 MOSLEY ROOF-THRU .... **List Price $5.84**
Cat. No. 614 Flashing only $2.84
Cat. No. 604 Bushing only $3.00

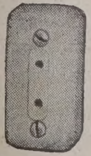
3-WAY TV ANTENNA SWITCH



Constant impedance rotary type switch, making silver-to-silver contact, provides quick, easy selection of any one of three TV antennas. Enclosed in attractive sturdy plastic case for easy mounting in set, on wall, baseboard or window sill. May be supported by its own leads. Four sections of standard 300 ohm transmission line are factory wired to switch and Cat. No. 27-S Solderless Transmission Line Splicers supplied for speedy installation. Knob extension rod may be removed if not needed. In ivory or brown. Packaged one in box with mounting screws and knob extension rod.

Cat. No. F-20 MOSLEY 3-WAY TV ANTENNA SWITCH. **List Price $3.75**

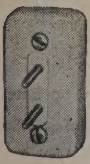
UNIVERSAL TV LEAD-IN SOCKET



A compact, constant impedance socket designed so that standard 300 ohm transmission line may enter from sides or back or may pass straight through. Thus the unit may serve as line tap or terminal socket and wiring may be hidden within wall or brought along baseboard. Ideal for TV antenna lead-in, test bench, ham shack, dealer display, etc. Molded of low-loss polystyrene. In brown or ivory. Mates with Cat. No. 301 MOSLEY Transmission Line Plug. In package of 50 with mounting screws.

Cat. No. 343 MOSLEY UNIVERSAL TV LEAD-IN SOCKET. .... **List Price $.80**

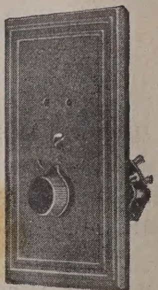
UNIVERSAL TV LEAD-IN RECEPTACLE



Similar to Cat. No. 343, above, but designed to mate with Cat. No. 311 Transmission Line Socket. Eliminates danger of accidental insertion of TV set antenna lead into power socket. In package of 50 with mounting screws.

Cat. No. 344 MOSLEY UNIVERSAL TV LEAD-IN RECEPTACLE. .... **List Price $.80**

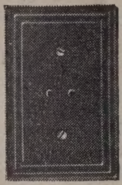
FLUSH MOUNTED SOCKET-SWITCH



Single lead-in socket combined with constant impedance 3 position rotary type switch. Provides easy, instant change-over to any one of three antennas or may be used to switch one antenna to three different TV sets. Molded of low-loss polystyrene. Recesses in standard electrical outlet box. Supplied with attractive face plate and mounting screws. Available in brown or ivory. Packaged one in box.

Cat. No. F-10 MOSLEY FLUSH MOUNTED SOCKET-SWITCH. .... **List Price $3.75**

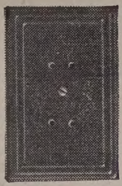
SINGLE FLUSH SOCKET



For terminating single 300 ohm transmission line lead-in concealed in wall. Socket and attractive face plate molded of low-loss polystyrene. Fits standard electrical outlet box. For installations not utilizing rotator. Mates with Cat. No. 301 Plug, below. In brown or ivory. Ten in box.

Cat. No. F-1 MOSLEY SINGLE FLUSH SOCKET. **List Price $1.67**

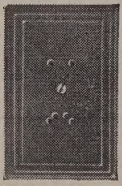
DUAL FLUSH SOCKET



Of same construction as Single Flush Socket, above, but designed to provide two receptacles for installations where two separate lead-in lines must be terminated. In brown or ivory. Ten in box.

Cat. No. F-11 MOSLEY DUAL FLUSH SOCKET. **List Price $2.09**

FLUSH MOUNTED LEAD-IN and ROTATOR CABLE SOCKET



A combination socket for use with rotator installation. One socket provides constant impedance connection for 300 ohm transmission line lead-in, other socket may be used for three or four wire rotator control cable connection. Mates with Cat. No. C-104 4-Conductor Polarized Plug. In brown or ivory. Ten in box.

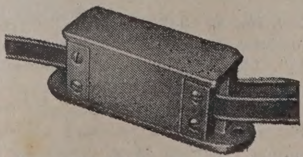
Cat. No. F-14 MOSLEY FLUSH MOUNTED LEAD-IN and ROTATOR CABLE SOCKET. .... **List Price $2.09**

DRY WALL FLUSH SOCKET ADAPTERS

Provides easy method of mounting flush socket on non-plastered walls or wherever use of electrical outlet box is not feasible. Quickly, easily installed.

Cat. No. F-9 DRY WALL FLUSH SOCKET ADAPTERS. **List Price $.35 set.**

DUAL MATCH 2-SET COUPLER



A compact, efficient unit that permits using two TV sets with one antenna. Mounts on baseboard, wall or back of set. Designed for solderless connection with standard 300 ohm transmission line. Packaged one in box.

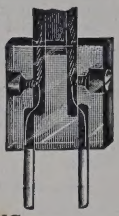
Cat. No. 902 MOSLEY DUAL-MATCH 2-SET COUPLER. **List Price $3.95**

MOSLEY *Electronics*

2125 LACKLAND OVERLAND, MISSOURI

LOW LOSS SOLDERLESS CONNECTORS for STANDARD 300 OHM TRANSMISSION LINE and ROTATOR CONTROL CABLE

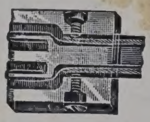
UNIVERSAL TRANSMISSION LINE PLUG



Mates with all MOSLEY Transmission Line Sockets including Flush Sockets. Low loss, constant impedance. Installed without solder. Packaged 100 in box.

Cat. No. 301 MOSLEY TRANSMISSION LINE PLUG. **List Price $.48**

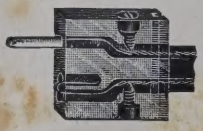
TRANSMISSION LINE SOCKET



Mates with Cat. No. 301 Plug, Cat. No. 344 Universal Transmission Line Receptacle and with Cat. No. 304 Input Adapter. Provides low-loss constant impedance connection. Use where mounted socket not feasible. Solderless. 100 in box.

Cat. No. 311 MOSLEY TRANSMISSION LINE SOCKET. **List Price $.48**

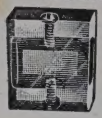
POLARIZED TRANSMISSION LINE CONNECTORS



Maintains impedance and polarity when used to connect sections of standard 300 ohm transmission line. Made of low-loss plastic. Solderless. Use in pairs. In box of 100 pairs.

Cat. No. 321 MOSLEY POLARIZED TRANSMISSION LINE CONNECTORS. .... **List Price, per pair $.60**

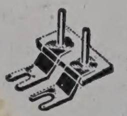
SOLDERLESS TRANSMISSION LINE SPLICER



A low-loss, constant impedance splicer for joining sections of standard 300 ohm transmission line. Easily and quickly installed without solder. Precision molded of polystyrene. In box of 50.

Cat. No. 27-S MOSLEY SOLDERLESS TRANSMISSION LINE SPLICER. .... **List Price $.18**

INPUT ADAPTER



An ideal connector for TV and FM sets, boosters, etc. Attaches to screws on antenna terminal strip. Mates with Cat. No. 311 Line Socket on end of 300 ohm transmission line lead-in to provide greater convenience and efficiency. Solderless. Low loss. In box of 50.

Cat. No. 304 MOSLEY INPUT ADAPTER............ **List Price $.30**

ROTATOR CONTROL CABLE PLUGS and SOCKETS

Sturdy polarized connectors for three or four wire rotator control cable. Many other low voltage applications. Solderless.

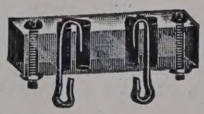
Cat. No. C-104 4-CONDUCTOR PLUG mates also with Cat. No. F-14 Flush Socket. In box of 50. .... **List Price $.84**

Cat. No. C-134 4-CONDUCTOR LINE SOCKET. Mates with Cat. No. C-104 Plug, above. In box of 50. .... **List Price $.84**

Cat. No. C-114 4-CONDUCTOR BASE SOCKET. Mates with Cat. No. C-104 Plug. May be mounted oi wood or metal. In box of 25 with mounting wood screws. .... **List Price $1.16**

Cat. No. C-124 4-CONDUCTOR PLUG and SOCKET COMBINATION consisting of one Cat. No. C-104 Plug and one Cat. No. C-114 Base Socket. In box of 10. .... **List Price $2.00**

MOSLEY CRYSTAL HOLDER SOCKETS and ADAPTERS



Cat. No. 51 SINGLE CRYSTAL HOLDER SOCKET for holders with small pins spaced ½". May be used as connector socket with Cat. No. 301 Plug. Mounts directly to metal chassis with machine screws supplied. Made of acrylic plastic with high dielectric strength.

Packaged 25 in box. ....**List Price $.58**

Cat. No. 53 3-GANG MULTI-SOCKET accommodates three holders with small pins spaced ½". Ideal for use with selector switch to provide rapid frequency change in crystal controlled transmitters. Use with Cat. No. 301 Plugs to provide terminal connector for multi-channel TV antenna lead-in lines. Packaged 10 in box. **List Price $1.08**

Cat. No. 56 6-GANG MULTI-SOCKET. Similar to Cat. No. 53, above, but designed to permit insertion of six crystal holders or plugs. Packaged 10 in box. .... **List Price $2.08**

Cat. No. 5-75 CRYSTAL HOLDER ADAPTER receives small pin ½" spaced crystal holder and plugs into ¾" spaced sockets or in any 5 or 6 prong socket. Packaged 50 in box. .... **List Price $.58**

Cat. No. 75-5 CRYSTAL HOLDER ADAPTER receives pins spaced ¾" and plugs into standard ½" spaced sockets or octal sockets. Packaged 50 in box. .... **List Price $.58**

MOSLEY *Electronics*

2125 LACKLAND OVERLAND, MISSOURI

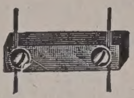
LOW LOSS ACCESSORIES for OPEN WIRE LINE and DIPOLE ANTENNAS

MOSLEY Open-Wire Line Accessories are especially designed to provide Better TV Pictures in areas of weak signal strength.

Open-wire line made with MOSLEY accessories has less than one-sixth the loss of new standard 300 ohm ribbon line. It is easy to make with MOSLEY accessories and its use will often result in good, consistent TV pictures even in fringe areas where TV reception had previously been considered impossible.

Open-wire line made with MOSLEY accessories will not increase in loss with age and will withstand weather and adverse atmospheric conditions indefinitely.

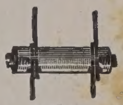
OPEN-WIRE SPACER



Place one of these MOSLEY SPACERS every 12" along open-wire line to maintain constant 1" spacing. Strong, lightweight spacers made of low loss acrylic plastic with non-rusting set screws. Screw heads countersunk to provide firm grip on wire. 100 in box.

Cat. No. 450-3 MOSLEY OPEN-WIRE SPACER.
List Price $.10 each

OPEN-WIRE SPLICER

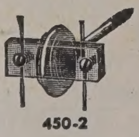


450-1

Low-loss acrylic plastic unit for splicing sections of open-wire transmission line. Maintains correct wire spacing with no impedance change. No soldering required. 25 in box.

Cat. No. 450-1 MOSLEY OPEN-WIRE SPLICER.
List Price $.30 each

OPEN-WIRE ANCHOR BAR

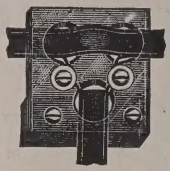


450-2

Designed to be used with TV screw-eye stand-offs of most all popular sizes and shapes. Holds open-wire line secure with proper wire spacing. Made of low-loss acrylic plastic with non-rusting screws. Supplied less screw-eye stand-off. 50 in box.

Cat. No. 450-2 MOSLEY OPEN-WIRE ANCHOR BAR.
List Price $.30

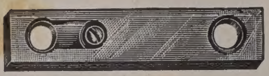
DIPOLE ANTENNA CONNECTOR



For connecting transmission line to dipole antenna without use of solder. Ideal for use with Cat. No. 251 End Insulator, below, to make up efficient FM or other high frequency antenna. No strain on connection. Low-loss, sturdy acrylic plastic. 25 in box.

Cat. No. 261 MOSLEY ANTENNA CONNECTOR. **List Price $.58**

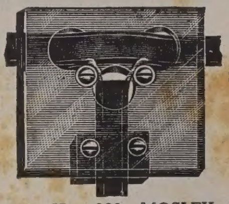
DIPOLE END INSULATOR



Especially designed for use with dipole type antenna made with standard 300 ohm ribbon transmission line. Plated machine screw and washer holds wires securely and connects them together. No solder required. No strain on connection. 25 in box.

Cat. No. 251 MOSLEY END INSULATOR. ....**List Price $.50**

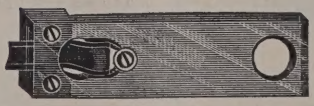
HEAVY DUTY DIPOLE ANTENNA CONNECTOR



Similar to Cat. No. 261 but intended for use with heavier copperweld type 300 ohm transmission line. Ideal for ham transmitting antennas. Packaged 10 in box.

Cat. No. 262 MOSLEY HEAVY DUTY DIPOLE ANTENNA CONNECTOR. ....**List Price $.83**

HEAVY DUTY END INSULATOR



Similar to Cat. No. 251 but designed for use with heavier copperweld type 300 ohm transmission line. An extra clamping member is added to help hold line and take strain off connection. Ideal for ham dipoles. Packaged 10 in box.

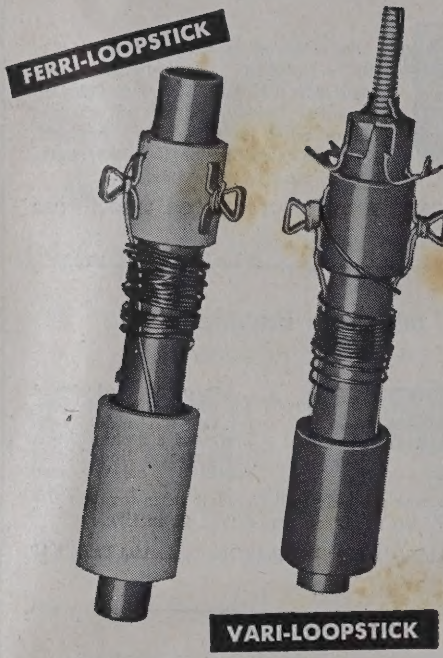
Cat. No. 252 MOSLEY HEAVY DUTY END INSULATOR.
List Price $.67

MOSLEY Products are sold only through Jobbers

MOSLEY ELECTRONICS **A single source of supply for precision made plugs, sockets, connectors and other low loss accessories for standard 300 ohm TV transmission line.**

GRAYBURNE

Electronic Components & Equipment



2 Grayburne Loopsticks

World's most sensitive, compact and efficient SMALL RADIO ANTENNAS
Replaces Spiral Wound Air Loop in Any Radio

FERRITE—The new magnetic core material incorporated into both Grayburne Loopsticks—has revolutionized antenna design. It makes far greater antenna efficiency in more compact form at greater economy.

FERRI-LOOPSTICK

Recommended for fixed, permanent, economical installations, new or replacement, where user desires no further changes once Loopstick has been set. Just set and forget! **List $0.75***

VARI-LOOPSTICK

Equal in efficiency to the Ferri-Loopstick. Has added advantages of Micrometer Adjustment and 1-hole Snap-in Mount. Permits adjustment for maximum efficiency on several stations consecutively. Ideal for station jumpers and DX "hounds." Resonance for any favorite station easily obtained. **List $1.00***

• REVOLUTIONARY LOOPSTICK FEATURES •

Highest Sensitivity: Average effective Q is 250, 2½ times that of ordinary old-fashioned loops.

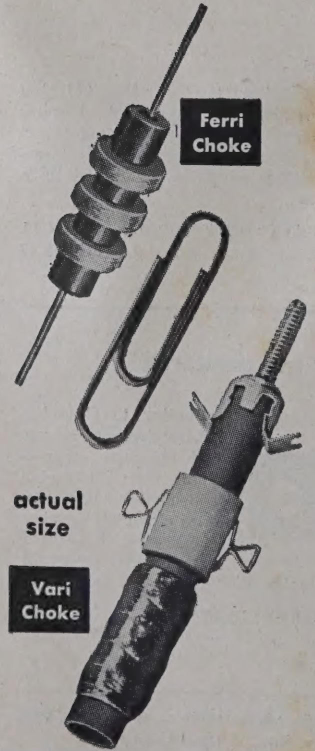
Omni-Directional: Equally sensitive and efficient at every angle—no orientation of set needed.

Greater Receiving Range: Greater, more uniform amplification over a wider range of frequencies—all at higher signal-to-noise ratio. Pulls in hard-to-get stations that can't be heard with ordinary loops.

Stable Performance: Unaffected by temperature changes, humidity, or adjacent metallic or inductive elements.

Extremely Compact: 7/16" x 2¼".

Wide Inductance Range: 180 uh (minimum) to 245 uh (maximum).



Grayburne New Ferri-Chokes

The Newest Advance in RF CHOKE MINIATURIZATION

Research, development and production engineers will at once recognize the vast importance of these new chokes because of their outstanding features:

- Most compact RF chokes in existence.
- Large increase in "Q."
- Important reduction of DC resistance.
- Large savings in copper.
- Significant reduction of distributed capacity.
- Marked reduction of weight.
- Increased ease of handling.

Electrical Comparison between Grayburne Ferri-Chokes and Conventional RF Chokes proves Gray burne superiority. The popular 2.5 mh chokes are used for comparison purposes.

	GRAYBURNE FERRI-CHOKE	CONVENTIONAL RF CHOKE
L	2.5 mh	2.5 mh
Q	110	45
R	10.5 ohms	40.0 ohms
Cd	1.7 μμf	2.8 μμf
Wire	30.0 ft.*	96.0 ft.
Core	Ferrite	Isolantite
Size	1" long x ⅜" diam.	2½" long x ¼" diam.
Wt.	4.5 grams	13.5 grams

*NOTE: Copper Savings over 200%.

GRAYBURNE RF FERRI-CHOKES

Model	Description	Net Price
F-25	2.5 mh @ 125 ma	$0.45
F-50	5.0 mh @ 125 ma	.51
F-100	10.0 mh @ 125 ma	.60
HD-25	2.5 mh @ 125 ma	.48

GRAYBURNE HIGH-RATIO RF VARI-CHOKES

Model	Description	Net Price
V-6	0.65 — 6.0 mh	$0.72
V-25	5.0 — 43.0 mh	.84

To your specifications, Grayburne Ferri-Chokes can be supplied in inductance values from 500 to 250 millihenries, either pie or solenoid-wound, in various types of mountings and windings.

All Grayburne Ferri-Chokes
Use the new
Ferricore Ferrite cores.

Precision variable RF chokes with an inductance variation of as high as 10 to 1! Employing the amazing Ferricore Ferrite cores, Grayburne Vari-Chokes possess all the outstanding features of the Ferri-Chokes described above.

To your specific requirements, Grayburne Vari-Chokes can be supplied in a wide range of inductances up to 150 millihenries, and in a variety of types of windings.

*40 Net

GRAYBURNE
Electronic Components & Equipment

CLEAR-PIX & DUAL TUNABLE TV INTERFERENCE FILTERS

3 Types CLEAR-PIX T.V. Interference Eliminators

Reject 3 most common interference causes.
Have high rejection efficiency.
Are easy to install. **List $1.98 each***

- **Model DT**—Rejects Diathermy interference.
- **Model I**—Rejects Ignition interference.
- **Model FM**—Rejects FM interference.
- **Model H**—Rejects Amateur interference.

4 Types S DUAL TUNABLE Interference Filters

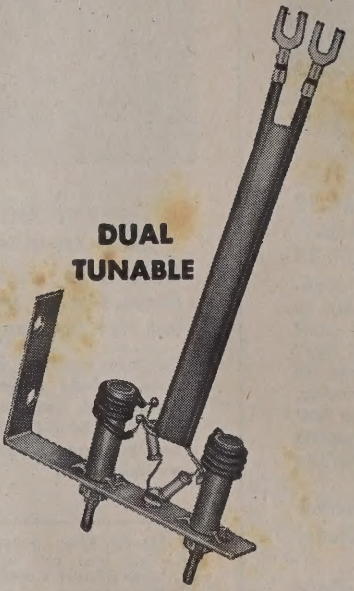
For Professional Installation

- **Model SW10**—Rejects Amateur Harmonic interference (10 meter band).
- **Model SW20**—Rejects Amateur Harmonic interference (20 meter band).
- **Model DT**—Rejects Diathermy interference.
- **Model FM**—Rejects FM Image interference.

Precision-Engineered: 2 iron-core coils and condensers tunable over specific interference band. Dual tunable feature achieves maximum rejection. Mounts at antenna terminals.

Parallel Assembly: Recommended for rejection of more than one type of interference.

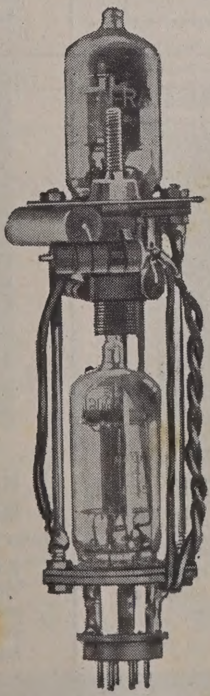
Specifications: Plated L-shaped bracket, 3"x1¾"x⅝". Matching 300-ohm lead. Each individually boxed with complete instructions.
List $2.75 each*



CLEAR
PIX
CLEAR-PIX
TV INTERFERENCE ELIMINATOR
Clears Your TV Pictures

Grayburne TV - IF Signal Booster

Model TSB-1 is added stage of TV-IF wired up in Adaptor form that amplifies signal over 20% on all channels, increases brightness and eliminates or minimizes "snow." Equals performance of many higher-priced boosters.



OVERCOME ROOF ANTENNA RESTRICTIONS . . .

Where landlords don't permit roof antennas, or where they are not desired, the TSB-1 in combination with an indoor antenna provides results comparable with outdoor antennas in the same area—supplying just the extra power needed for good reception at about ⅓ the cost of the usual booster.

Model TSB-1................................**List $9.95***, **plus extra tube required**

Grayburne Tube and Tool Carrier

The Carrier that *OUT-FEATURES* them all!

SUPER MODEL CS

Exclusive Tool Compartment: Holds small test instruments and tools needed on most calls.

Holds 175-200 tubes.

Detachable Mirrored Cover: To observe Pix Tube from back of set.

Rugged: All solid wood and heavy masonite, lock corner construction and extra side clasps.

Handsome: Washable thick basket-weave leatherette. Resists oil and dirt stains.

Compact: 20½" x 14" x 9".

Low Cost $16.95 Net

DELUXE TUBE CARRIER

Model CL—For the "long haul." Holds 200-225 tubes. 2 drawers and storage compartment. All solid wood and masonite, lock-corner construction. 20½" x 14¼" x 8¾". **$13.50 Net**

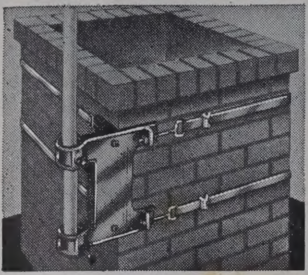
JUNIOR TUBE CARRIER

Model CJ—For the "short haul." Holds 60-70 tubes. 2 drawers and storage compartment. 15¾" x 10½" x 7¼". **$9.95 Net**

*40 Net

The Famous *South River* Quality Line of Antenna Mounting Accessories

CHIMNEY MOUNTS



CHIMNEY MOUNT ANTENNA BASE

(U. S. Patent 2482575*)

Model SR-10A $6.50

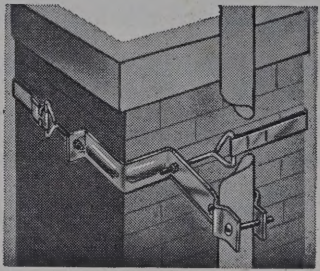
****Model SR-10A SS (with stainless steel banding) ..$9.25**

One-piece chimney mount of aircraft type aluminum. Mounts by means of **galvanized steel strapping. Exclusive "Kwik Klip" provides convenient means of fastening loose end of banding. Will accommodate any size tube from ½"-1½" O.D. Complete with all necessary installation hardware.

Also Available in 2-Section Mount . . . . Model SP-12A

Model SP-12A Two-Piece Mount for High Masts..$6.50

Model SP-12A SS (with stainless steel banding) $9.25



THRIFT MOUNT

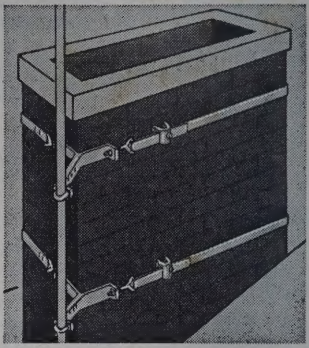
(U. S. Patent 2482575*)

Model T-15 ....$2.50

Model T-15 SS (with stainless steel banding) $5.25

One-piece embossed, heavy gauge steel, hot-dip galvanized. Accommodates masts to 1½" O.D. NOTE: Model T-15 consists of 2 brackets, one of which is shown on illustration.

*South River Metal Products Co., Inc., are the inventors and original manufacturers of the chimney mount antenna base. All other chimney mounts using a pliable band are infringements of Patent No. 2482575.



DUO-MOUNT ANTENNA BASE

(U. S. Patent 2482575*)

Model DM-36 ....$3.95

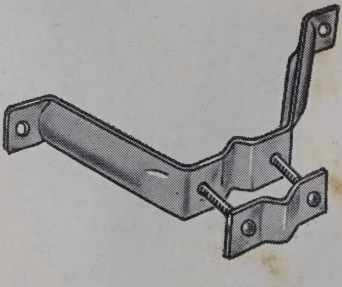
Model DM-36 SS (with stainless steel banding) $6.70

Model DM-LKK (same as DM-36 but without "Kwik-Klip") $3.50

Model DM-LKK SS (with stainless steel banding) $6.25

Two-piece mount of alloy steel rivet construction, finished in a hot-dip, everlasting, galvanized finish. Specially designed "U" bolts accommodate masts from ⅝-1½" O.D. Exclusive "Kwik Klip" feature provides convenient means of fastening loose end of banding.

WALL BRACKETS

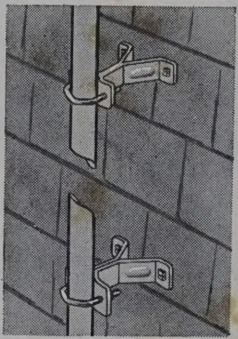


NEW THRIFT WALL BRACKET

Model NT-3 ....$1.00

Model NT-4 ....$1.25

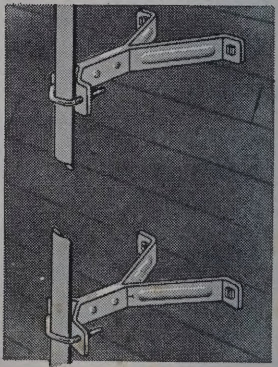
Available in 3" Model NT-3, or 4" Model NT-4. Of embossed heavy gauge steel, hot-dip galvanized. Will accommodate masts to 1½" O.D. Complete installation hardware included. Two to a set.



3" WALL BRACKET

Model WB-3 ....$2.00

Made of aluminum, embossed for extra strength. Accommodate masts up to 1½" O.D. Complete with installation hardware.



6" WALL BRACKET

Model WB-6 ....$2.50

Model WB-6 Special....$3.25

(with extra support leg for heavy masts)

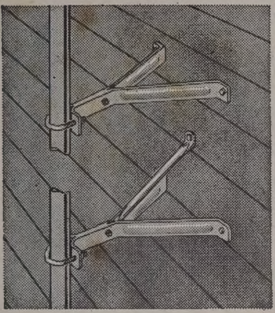
Made of heavy gauge steel, riveted for extra strength. Hot-dip, galvanized. Fits all size masts up to 1½" O.D. Complete with installation hardware.

SOUTH RIVER METAL PRODUCTS CO., INC., South River, New Jersey

PIONEER MANUFACTURER AND OUTSTANDING PRODUCER OF THE FINEST LINE OF ANTENNA MOUNTING ACCESSORIES IN THE TELEVISION INDUSTRY

The Famous South River Quality Line of Antenna Mounting Accessories

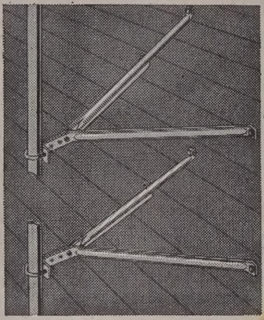
WALL BRACKETS (Cont'd)



12" WALL BRACKET

Model WB-12 ....$4.20
Model WB-15 (15") $4.50
Model WB-18 (18") $4.85

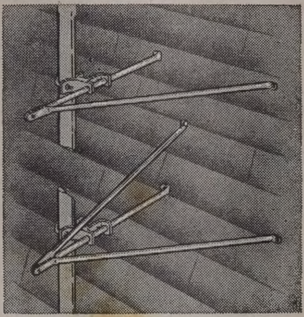
Constructed of heavy gauge, embossed steel, hot-dipped in an everlasting, rust-proof, galvanized finish. Complete with installation hardware.



24" WALL BRACKET

Model WB-24 ....$6.50

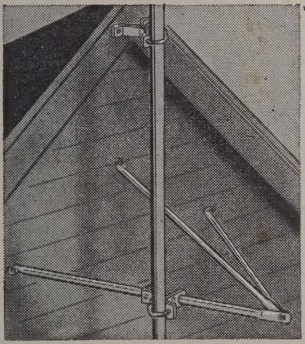
Made of heavy gauge steel with two aluminum tripod legs. Steel sections are hot-dip galvanized. Complete with installation hardware.



ADJUSTABLE WALL BRACKET

Model WB-18A $6.50

All aluminum tubular construction. Adjusting slides are made of one-piece aluminum extrusions. Fits all size masts up to 1½" O.D. Complete with installation nardware.



COMBINATION ADJUSTABLE WALL BRACKET

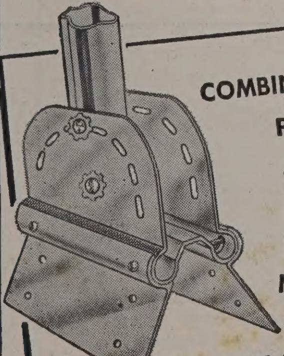
Model WB3-18A $4.50

All aluminum construction. Eave bracket is of extruded aluminum as is the slide of the tubular adjusting wall bracket. Accommodates masts up to 1½" O.D. Furnished complete with all necessary hardware.

EXTRA SUPPORT LEGS ARE AVAILABLE FOR USE WITH UNUSUALLY HIGH & HEAVY MASTS

Model L-12 (with Model WB-12)	$ .65
Model L-15 (with Model WB-15)	$ .75
Model L-18 (with Model WB-18)	$ .88
Model A-18L (with Model WB-18A)	$1.03

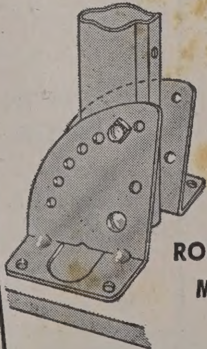
ROOF MOUNTS



COMBINATION PEAK AND FLAT ROOF MOUNT

Model PFM-2....$6.25

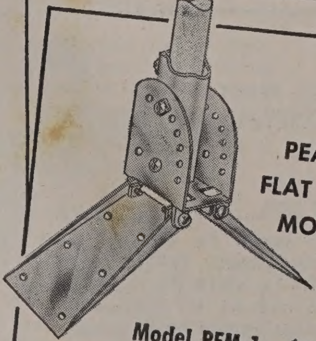
Extruded aluminum construction. Provisions are made for adjustment of the flaps to conform to the slope of the peak of the roof. Mast socket can be used as a means to "walk-up" the mast. Accommodates masts to 1½" O.D. Complete with installation hardware.



ROOF MOUNT

Model RM-1
$2.10

Of heavy-gauge steel, embossed at all critical points, and hot-dip galvanized. Will accommodate masts to 1⅝" O.D. Complete with installation hardware.



PEAK & FLAT ROOF MOUNT

Model PFM-1....$2.95

Made of heavy gauge steel, embossed at all critical points. Hot dip galvanized. Adjustable flaps provide ready means for mounting on any peak. Permits antenna mast to be "walked-up". Will accommodate masts to 1½" O.D. Complete with installation hardware.

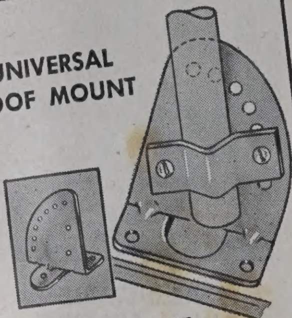
SOUTH RIVER METAL PRODUCTS CO., INC., South River, New Jersey

PIONEER MANUFACTURER AND OUTSTANDING PRODUCER OF THE FINEST LINE OF ANTENNA MOUNTING ACCESSORIES IN THE TELEVISION INDUSTRY

The Famous *South River* Quality Line of Antenna Mounting Accessories

ROOF MOUNTS (Cont'd)

UNIVERSAL ROOF MOUNT

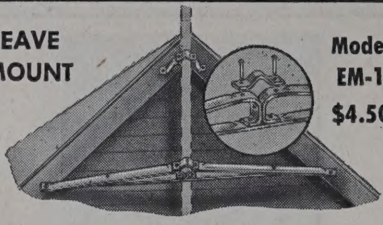


Model UR-1....$.55

Constructed of heavy gauge steel. Furnished in an everlasting hot-dip galvanized finish. Will accommodate masts up to 1½" O.D.

EAVE MOUNT

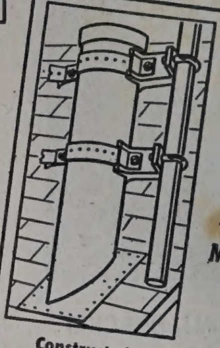
Model EM-1 $4.50



Constructed of heavy gauge steel, embossed for extra strength and hot-dip galvanized for an everlasting rust-proof finish. Unique bridge-type truss construction of lower bracket provides extra strength and rigidity. Generous 48" spread of lower bracket provides proper spacing between brackets insuring good mechanical support. Complete with installation hardware.

DUO-PIPE MOUNT

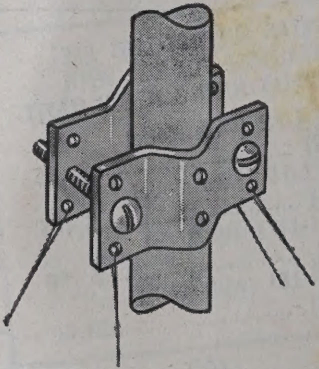
Model P-1 $2.50



Constructed of an aluminum extrusion. Fits all size masts up to 1½" O.D. Positive adjustment for all size pipes up to 6" in diameter. Complete installation hardware included.

ACCESSORIES

GUY WIRE CLAMP



Model GC1 ....$.25

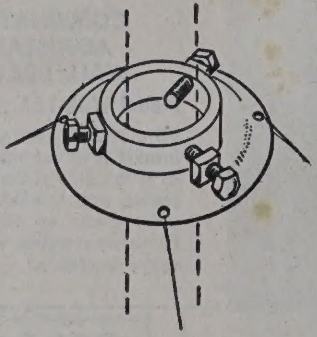
Model GC-2 (similar to Model GC-1 with 2 eyebolts for guy wire attachment) ....**$.40**

Model GC-3 (accommodates masts to 2" O.D. Features 3 eyebolts for guy wire attachment) **$.65**

Clamps on mast. Will accommodate masts to 1½" O.D.

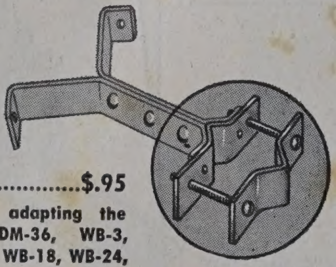
GUY RING

Model GR-1 $1.25



Of heavy gauge, galvanized steel, embossed for extra strength. Set screws provide positive fit for all masts ranging from 1" O.D. to 2" O.D. Complete with installation hardware.

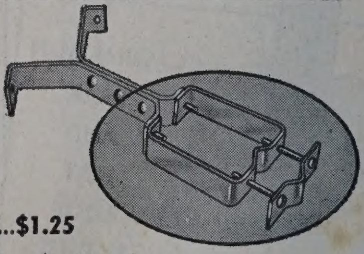
LARGE MAST ADAPTER



Model LMA........................$.95

Provides means for adapting the Duo-Mount Model DM-36, WB-3, WB-6, WB-12, WB-15, WB-18, WB-24, WB-18A and P-1 to accommodate large masts up to 2" O.D. Features steel construction, hot-dip galvanized. Complete with installation hardware. Two to a set.

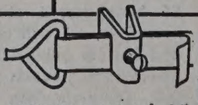
EXTENSION ADAPTER



Model EXT-A......$1.25

Extends Duo-Mount DM-36 far enough to allow mast to clear chimneys with unusually large crowns. Can be used to extend any of the wall brackets 3". Will accommodate masts to 1½" O.D. Steel construction, hot-dip galvanized. Complete with installation hardware. Two to a set.

GROUND ROD ....$1.10 & $1.35
4' and 6' lengths of ⅜" steel, hot-dip galvanized with extruded aluminum wire clamp.



"KWIK KLIP" $.25

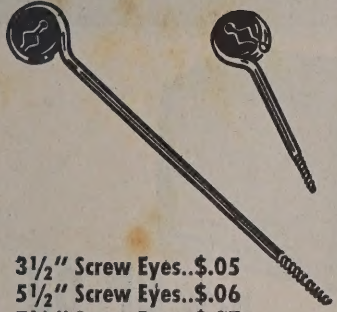
MAST (Hot Dip Galv.) 20 Ga. 1¼"x10' $3.50

THRIFT CLAMP $.06

SOUTH RIVER METAL PRODUCTS CO., INC., South River, New Jersey

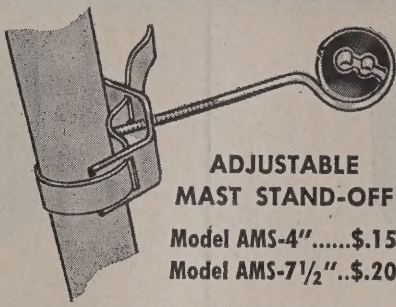
PIONEER MANUFACTURER AND OUTSTANDING PRODUCER OF THE FINEST LINE OF ANTENNA MOUNTING ACCESSORIES IN THE TELEVISION INDUSTRY

The Famous *South River* Quality Line of Antenna Mounting Accessories



3½" Screw Eyes..$.05
5½" Screw Eyes..$.06
7½" Screw Eyes..$.07
4" Mach. Screw..$.06

STAND-OFFS

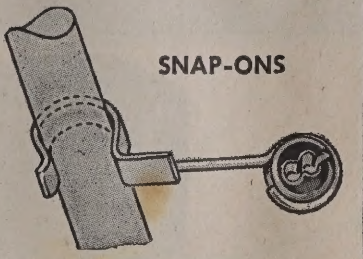


ADJUSTABLE MAST STAND-OFF

Model AMS-4"......$.15
Model AMS-7½"..$.20

Duplex stand-offs also available.
Write for complete catalog.

SNAP-ONS



Model SO-1¼"..........$.10
Model SO-1⅜"..........$.12
Model SO-1½"..........$.12

STRAPPING

A-1 (GALV.)
Perforated 17/64" holes on ¾" centers
¾" width x .028 gauge
25' Roll.................. 1.25
50' Roll.................. 2.33
100' Roll.................. 4.63

A-2 (GALV.)
Perforated ⅛" holes on ½" centers
¾" width x .028 gauge
25' Roll.................. 1.25
50' Roll.................. 2.33
100' Roll.................. 4.63

A-3 (GALV.)
Unperforated ¾" width x .018 gauge
25' Roll.................. 1.00
50' Roll.................. 1.85
100' Roll.................. 3.75

(STAINLESS)
¾" width x .020 gauge
25' 2.98
50' 5.95
100' 11.87

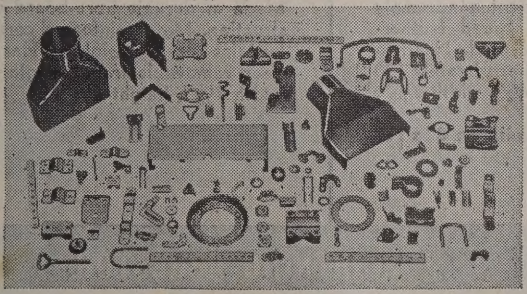
CHIMNEY MOUNT
(Banding Repl. Kit)
Kit A consists of ¾" galv. steel strapping & hardware 1.38
Kit B consists of ½" stainless steel strapping & hardware 2.48
Kit C consists of ¾" stainless steel strapping & hardware 3.38

ACCESSORY HARDWARE

Zinc plated in a rust-resistant finish.

B. ¼" Welded Eyebolt 7.00 C
C. ¼-20 Sq. or Hex Nut ....2.00 C
D. 5/16-18 Sq. Nut 3.00 C
E. 10-32 Sq. Nut..1.00 C
F. 6-32 Sq. Nut....1.00 C
G. ¼" Washer .... .30 C
H. 10-32x3" R.H. Mach. Screw ....3.00 C
I. 6-32x½" R.H. Mach. Screw .... .65 C
J. 5/16-18x2" Hex Head Set Screw ....8.00 C
K. #10x1½ R.H. Wood Screw ....2.50 C
L. Special "U" Bolt to accommodate 1½" mast ....7.00 C
M. Special Bent Washer for use with ¾" Perf. Strap ....4.00 C
N. ¼-20 R.H. Mach. Screws
  ½" Length....2.00 C
  ¾" Length....2.00 C
  1½" Length....2.25 C
  1¾" Length....2.25 C
  2" Length....2.50 C
  2½" Length....2.50 C
O. Screw Hook....10.00 C

NOTE: Many other accessories available. Write for current SOUTH RIVER catalog for full information.



SOUTH RIVER also manufactures electronic hardware on special order for many manufacturers in the radio and television industry. Please write for complete information.

◀ Typical Stampings tooled up and produced in SOUTH RIVER'S modern shops.

In its new, magnificently equipped plant, staffed with specialists in the production of its line, SOUTH RIVER is ready to supply you with the finest of antenna mounting materials.

SOUTH RIVER

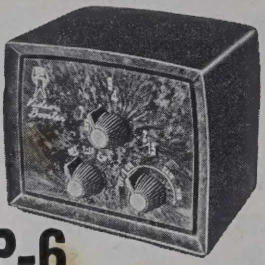
SOUTH RIVER METAL PRODUCTS CO., INC., South River, New Jersey

PIONEER MANUFACTURER AND OUTSTANDING PRODUCER OF THE FINEST LINE OF ANTENNA MOUNTING ACCESSORIES IN THE TELEVISION INDUSTRY

RMS INC.

NEW YORK 59, N. Y.

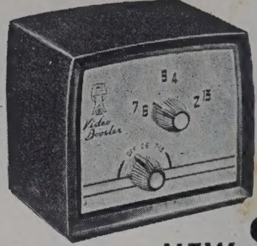
BOOSTERS



NEW SP-6

PENTODE TUBE BOOSTER FOR TELEVISION

Featuring external gain control, outperforms all conventional boosters in extreme fringe installations. Now, the best TV booster on the market is also the most beautifully styled. UL approved.



NEW SP-6J

DUO-TRIODE BOOSTER FOR TELEVISION

Features extremely low noise level with high gain. Has full six megacycle band width per channel. UL approved; beautifully styled.

TUBE CARRIERS AND TOOL KIT

MODEL TC-1

MASTER TUBE CARRIER

Durable plywood construction. Handsomely finished in tough grade leatherette. Metal shielded corners. Holds over 200 tubes; accommodates every commonly used size. Removable drawers. Length 20¾", width 10", height 14¼".
Model TC-2—with an 8" x 11" glass mirror.

MODEL JRC-1

JUNIOR TUBE CARRIER

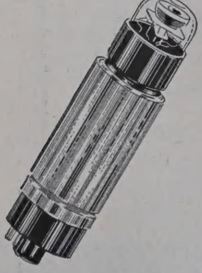
Plywood construction; handsomely finished in smart tweed leatherette; no cardboard used. Has two drawers. Holds approximately 100 tubes. Length 16½", width 7¾", height 11½".
Model JRC-2—with an 8" x 11" glass mirror.

MODEL TK-1

TOOL KIT

Made of durable fibre-board construction. Metal reinforced corners. Sustains great weight. Has 2" deep removable tray. Length 17", width 7½", height 8½".

PIX-EYE

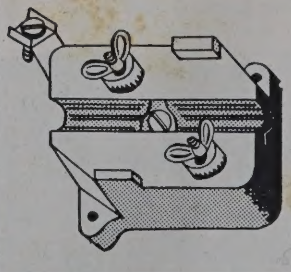


MODEL TE-5

PIX-EYE

Most sensational servicing aid of the year! Plugs into the CRT socket to check presence of video signal, plate voltage and filament voltage. Avoid the time, trouble and danger of removing picture tubes . . . use RMS Pix-Eye.

LIGHTNING ARRESTOR



MODEL LA-3

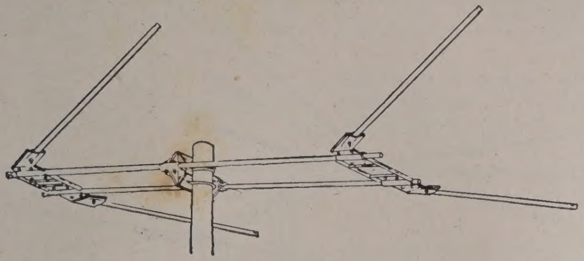
LIGHTNING ARRESTOR

The only lightning arrestor that gives positive protection against static discharges — usable with twin lead and the new open transmission line; mounts flat or to the mast! UL approved.

Manufacturers of the only complete line of major television accessories

RMS INC. NEW YORK 59, N. Y.

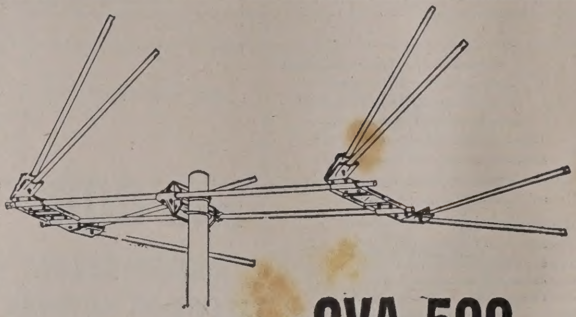
FRINGEMASTER ANTENNAS



MODEL VA-100

CONICAL "V" FRINGEMASTER JR.

This end-fired array is ideal for urban and semi-fringe reception. 3/8" elements, quick-rig, all-aluminum. High gain on all channels due to extra long dipoles. Stacked model: VA-200. For four-bay operation specify Model VA-400.



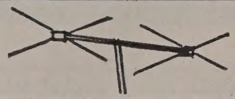
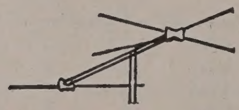
MODEL CVA-500

CONICAL "V" FRINGEMASTER SENIOR

A broad-band, end-fired array featuring high gain and furnished with extra long dipoles. Elements are 3/8" aluminum. Completely preassembled for greater ease of installation. Unique double-U-bolt assembly powerfully secures the antenna to the mast. Q-matching section is 1/2" aluminum tubing. Stacked model: CVA2-500. For four-bay operation specify Model CVA4-500.

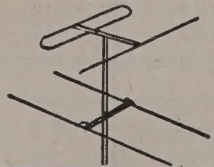
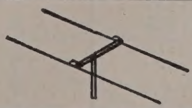
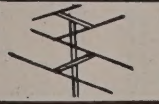
VERSACONE CONICALS

3/8" elements; broad-band characteristics, all-aluminum, dowel-reinforced crossarm at the U-bolt. All elements doweled

MODEL No.	CHAN. No.	DESCRIPTION	
VL-1	ALL CHAN.	This is an 8 dipole-single bay antenna. Brackets permit insertion of additional elements up to 6 front and 6 back. WL-2 - Stacked.	
VL-61	ALL CHAN.	A 6 dipole single bay antenna with a 4 element front. Additional elements can be added. The reflector comes pre-assembled for fast set up. A broad band all aluminum antenna 3/8" elements; dowel reinforced cross arm at U-bolt. Cross arm 1" drawn aluminum tubing. WL-2 - Stacked model.	

"BEE" LINE ANTENNAS

3/8" elements; quick-rig, all-aluminum; flexible combinations for impedance-matching. Dowel-reinforced crossarm at the U-bolt.

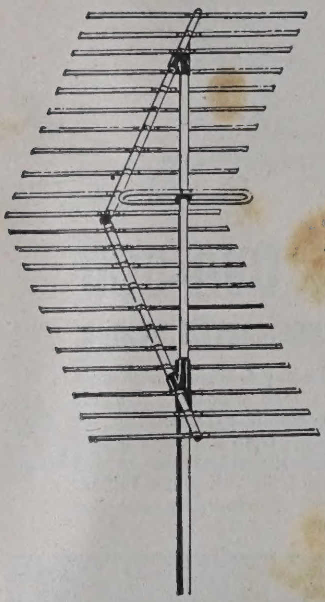
B-25	ALL CHAN.	For receiving high and low stations from different directions. Can be used with the RMS DN-6 loading coil for single down lead operation. Crossarm constructed of 1" seamless aluminum.	
B-30	1-6	Construction identical to B-25 except that it is a single antenna for low frequency operation.	
B-35	ALL CHAN.	Construction identical to B-25 except high band antenna is straight dipole for lower impedance.	

Manufacturers of the only complete line of major television accessories

RMS INC.

NEW YORK 59, N. Y.

CORNER ARRAY

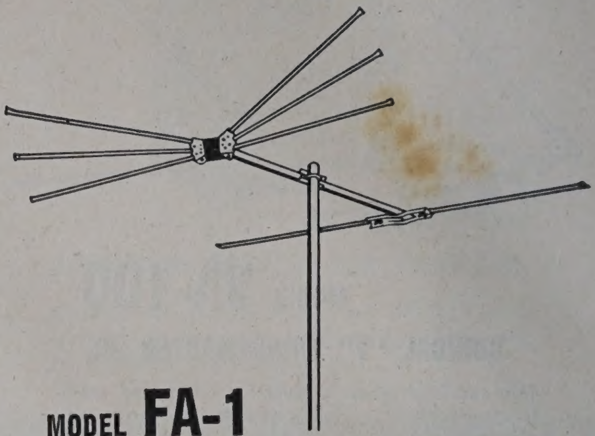


MODEL COR-

CORNER ARRAY TELEVISION ANTENNA

This is the country's highest gain antenna, featuring the characteristic curve and gain of a Parabolic Reflector Antenna. Quick rig assembly. Corner Arrays are cut to specific channel.

FANTENNA



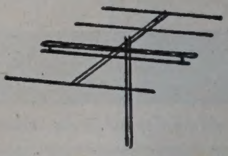
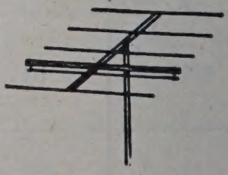
MODEL FA-1

FANTENNA SUPER-FAN ANTENNA

A rugged super-fan array featuring high gain coupled with excellent broad-band characteristics. All elements are doweled and are $\frac{3}{8}$" aluminum tubing. Dowel-reinforced at the U-bolt. Stacked model: FA-2. For four-bay operation, specify FA-4.

YAGI ANTENNAS

Quick-rig, all aluminum, dowel-reinforced crossarm at the U-bolt.

MODEL No.	CHAN. No.	DESCRIPTION	
			$\frac{3}{8}$" — 4 ELEMENT
SY-2	2	**SY SERIES**—is a 4 element completely pre-assembled yagi $\frac{3}{8}$" butt seamed aluminum tubing, crimped ends. The receiving element consists of 1" and $\frac{3}{8}$" tubing. Crossarm is 1" seamless aluminum, dowel-reinforced at U-bolt. **Y SERIES**—same as above, except receiving element is not pre-assembled at crossarm.	
SY-3	3		
SY-4	4		
SY-5	5		
SY-6	6		
Y-7	7		
Y-8	8		
Y-9	9		
Y-10	10		
Y-11	11		
Y-12	12		
Y-13	13		
			$\frac{3}{8}$" — 5 ELEMENT
STY-2	2	**STY SERIES**—construction exactly as SY described above. This is a 5 element antenna. **TY SERIES**—same as Y Series described above, but 5 element. Not pre-assembled at crossarm.	
STY-3	3		
STY-4	4		
STY-5	5		
STY-6	6		
TY-7	7		
TY-8	8		
TY-9	9		
TY-10	10		
TY-11	11		
TY-12	12		
TY-13	13		

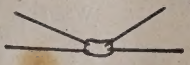
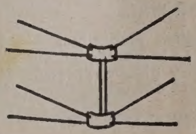
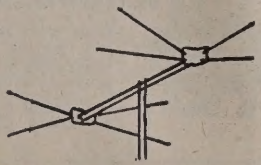
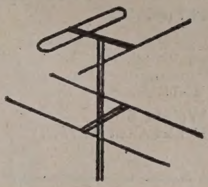
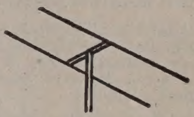
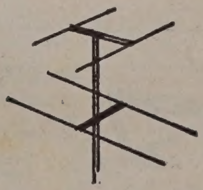
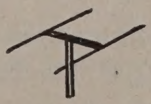
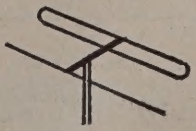
Manufacturers of the only complete line of major television accessories

RMS INC.

NEW YORK 59, N. Y.

JACKNIFE ANTENNA LINE

Quick-rig, all-aluminum; ½" elements.

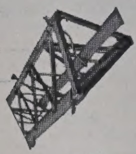
MODEL No.	CHAN. No.	DESCRIPTION	
HSL-2	ALL CHAN.	This is a 4 element antenna for bi-directional use. Insulator head of SL-10 antenna. All elements doweled.	
HSL-4	ALL CHAN.	Same as HSL-2 antenna listed above except that it is stacked for extra gain. Connecting bars supplied for signal take-off. All elements doweled.	
SL-10	ALL CHAN.	Single bay conical antenna, completely pre-assembled. Crossarm is made of 1" seamless aluminum tubing, doweled at the U-bolts. All elements doweled.	
SL-25	ALL CHAN.	Straight dipole low frequency antenna and a folded dipole high frequency antenna. May be oriented separately to receive signals from different directions. Elements are ½" aluminum, crossarm 1" seamless aluminum tubing doweled at U-bolts. Completely pre-assembled.	
SL-30	1-6	Straight dipole low band antenna. Elements are ½" aluminum crossarm 1" seamless aluminum tubing doweled at U-bolts. Completely pre-assembled.	
SL-35	ALL CHAN.	Consists of 2 straight dipole antennas to cover the high and low frequencies. Each antenna may be oriented separately. Completely pre-assembled. Tubing and construction identical to antenna listed above.	
SL-38	7-13	A straight dipole high band antenna. Tubing and construction identical to antennas listed above. Completely pre-assembled.	
SL-40	1-6	A low band folded dipole. Completely pre-assembled ½" aluminum elements, 1" seamless tubing aluminum cross bar doweled at U-bolt.	

Manufacturers of the only complete line of major television accessories

TV · FM · AM
Broadcasting and Receiving

Alprodco ALUMINUM TOWERS

KEMPTON, INDIANA • MINERAL WELLS, TEXAS • DUBLIN, GEORGIA



No. MK-1W MAST KIT

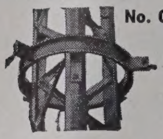
Consists of 3 top trim angles and 2 sets of adjustable mast clamps.

Weight 2 lbs.
Dealer Cost $1.55

No. P-1W ROTATOR ADAPTER PLATE

Pre-drilled plate, incl. accessories to mount most popular in-line or off-set type rotators inside of tower.

Wt. 1 lb. Dealer Cost $1.70



No. GB-1RW ROTATING GUY RING

Used with B-1RW. Gives full guying support for tower, allows manual rotation to orientate antena.

Weight 5 lbs.
Dealer Cost $2.30

No. S-3RW (3") ROTATING STANDOFF SUPPORT BRACKET

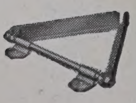
Used as wall mount tie-in. Allows tower to be rotated manually when used with B-1RW.

Weight 6 lbs.
Dealer Cost $2.75

No. B-1RW ROTATING UNIVERSAL BASE

Heavy duty quality base which can be mounted on sloping, horizontal or vertical surface as well as roof peak. Permits tower to be rotated manually.

Weight 4 lbs. Dealer Cost $4.80

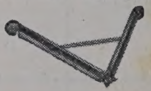


No. B-1W HINGED BASE

A low cost base that can be used on vertical, horizontal or sloping surface.

Weight 3 lbs.
Dealer Cost $1.70

No. S-3W (3") STANDOFF SUPPORT BRACKET



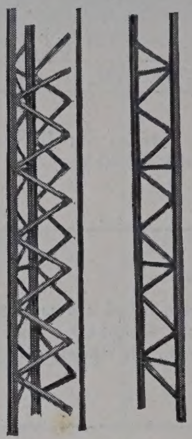
Use for wall mount stationary tie-in.

Weight 2½ lbs.
Dealer Cost $1.60

No. GB-1 GUY BRACKET

For attaching guy wires to tower . . . 3 needed per guy station.

Weight, each 2 oz.
Dealer Cost $0.09

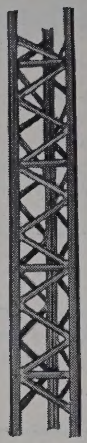


No. T-6W STANDARD TOWER SECTION

(Ship. 2/3rds assembled)

Six-ft. tower section, left, is ready to complete assembly in 5 minutes. Special impact rivets supplied. Tower section, right, folded flat ready for shipment. Minimum storage space, lowest possible freight rates.

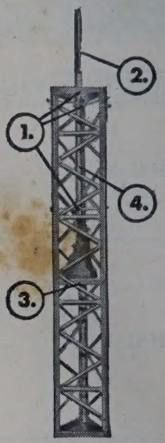
Weight 6 lbs.
Dealer Cost $7.74



No. AT-6W STANDARD TOWER SECTION

Standard 6-ft. triangular tower section, factory assembled. Each side 11¼", steps built in. Bolt additional sections together to make any tower height to 120 ft. Made of spring-tempered aircraft aluminum alloys.

Weight 6 lbs.
Dealer Cost $8.52



No. RK-1W ROTATOR ADAPTER KIT

Consists of:
1. MK-1W Mast Kit
2. 10 ft. Mast Pole
3. P-1W Rotator Adapter Plate
4. 24" Mast Pole Bearing

This kit permits rotator to be placed down inside tower, placing wind thrust load on tower instead of rotator.

Weight 10 lbs.
Dealer Cost $7.10

NEW "RED TOP" SLIP-UP STEEL MAST

The first practical telescoping antenna mast, economical, easy to raise, and completely trouble-free. Fully weatherized for every climate with K89 Perma-Kote. Complete with all mounting and guying accessories; can be erected by one man. Exclusive Alprodco joining features.

Available as 10', 20', 30' or 40' mast.

M-10 (10' mast) Wt. 7½ lbs. Deal. Cost $3.65
M-20 (20' mast) Wt. 15 lbs. Deal. Cost 7.95
M-30 (30' mast) Wt. 23 lbs. Deal. Cost 13.95
M-40 (40' mast) Wt. 33 lbs. Deal. Cost 19.95

HEAVY DUTY COMMERCIAL TOWER & ACCESSORIES

Designed for most exacting commercial installations, this tower can be erected to 150 ft. heights with 400 lbs. vertical static load. Weighs 1½ lbs. per ft. Tower measures 11¼" each side. (Same design as standard tower but constructed of heavier metal.)

		Weight	Dealer Cost
AT-6C	Assembled Section	9 lbs.	$11.76
MK-1C	Mast Kit	2 lbs.	1.55
B-1C	Base Cap	1 lb.	1.70
GB-1	Guy Brackets, ea.	2 oz.	.09
B-1W	Hinged Base	3 lbs.	1.70

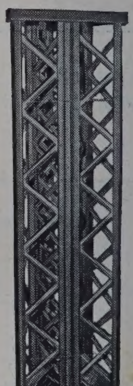
ECONOMY TOWER AND ACCESSORIES

Six-ft. tower sections, pre-assembled, recommended to heights of 48 ft. Must be guyed every 24 ft. Each side 8½".

		Weight	Dealer Cost
AT-6E	Assembled Section	5 lbs.	$6.42
B-1	Hinged Base	3 lbs.	1.40
MK-1	Mast Kit	2 lbs.	1.55
B-1R	Rotating Univ. Base	4 lbs.	4.60
GB-1	Guy Brackets, ea.	2 oz.	.09
GB-1R	Rotating Guy Ring	4 lbs.	1.95
S-5	Standoff Support	2½ lbs.	1.60

AVAILABILITY AND PRICES SUBJECT TO CHANGE WITHOUT NOTICE

A COMPLETE 35-FOOT TOWER IN ONE PACKAGE



Alprodco's Economy Aluminum "Tower-Pac" gives you everything needed to install an economical 35-ft. antenna tower. Easy to put up . . . no maintenance. Available in two styles.

TP-36 Stationary "Tower-Pac". Wt. 34 lbs. Dealer Cost $33.53

TP-36R Rotating "Tower-Pac" Wt. 40 lbs. Dealer Cost $38.43

T.V. DEVELOPMENT for Profit-Making TV Accessories!

TVD 3-SPEED RECORD PLAYER ATTACHMENT

- 3-speed table model attachment, including universal long playing needle.
- Will convert television, radio or old phonograph into a combination 3-speed player.
- Can also be played through public address system.
- Equipped with phono jack.
- Equipped with 45 RPM Adaptor (Disk).
- Attractive pyroxlin coated, jumbo alligator grain, brown leatherette.
- Regular standard 90 day RMA guarantee.
- Packed in individual cartons—4 to a master carton Wt. 7 lbs. per packaged unit.

Suggested List **$22.50**

Terrific NEW POWER to Car Radios

TENNA-DOUBLER
AUTO AERIAL BOOSTER

Remarkably increases reception for car radios. Brings in distant stations and maintains signal while driving under El structures or bridges and near tall buildings. Made of Admiralty triple chrome plated brass, it is rustproof, non-corrosive and long lasting. Telescopic, opens to 66″, closed 25″ (approx.). Added listening pleasure with 360° rotation principle, stylize and customize any car, individually boxed with easy instructions simply explained. Less than a minute to install.

Standard carton: 12
Suggested List................ **$3.95**

TVD *Super-Gain* OPEN WIRE TRANSMISSION LINE

Perfect for fringe areas or that "impossible to receive" picture. Lasts a lifetime with 1/10th the loss, greater signal distance potential than 300 ohm, copper-weld construction, made to withstand corrosion of salt air and dampness.

Packaging: Spool — **Wire size:** #18 bare COPPER-WELD wire — **Insulators:** Spaced 6″ apart — **Tensile Strength:** 400 lbs. breaking point — **Loss in DB per 100 ft:** .03 at 200 MC — **Width:** 1″ center to center.

Packaged in 100, 250 and 500 ft. paper layer, insulated reels.

No. CWL.............**List: $102.60 per 1,000 ft.**

WIRE STRIPPER and CUTTER COMBINATION

For all commonly used stranded wires, 5″ long blade cuts wire cleanly and neatly. Stripping jaws handle stranded wire perfectly—perfect time saver—does a perfect job. Adjusting stop on gripping handles permits adjustment for wire size. Individually boxed.

Suggested List **$3.95**
Model S-100

FM INDOOR TV ANTENNA

All Channels — Tops in Reception

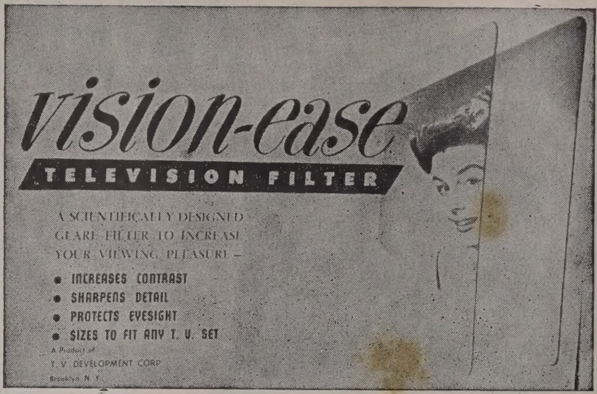
Model TV-33

Concealed wiring, glistening bakelite faceplate, triple section telescopic dipoles, brass tubing for permanent clean contact, rustproof and tilt-proof.

Terrific Value
Terrific Profit!

Packed 2 to box, 50 to master carton. **List** **$5.95**

VISION-EASE TV FILTERS



TVD TELEVISION GUY WIRE

- Top quality galvanized steel twisted TV GUY WIRE for anchoring TV masts, towers, etc.
- 6 stands No. 20 AWG.
- Packed 4 ways for easy resale to dealers and servicemen.

Order No.	Spool or Coil & Case Size	List
#GW 10	1,000 ft. spool; 10 spools to a case; 10,000 ft.	$125.00
#GW 14	10-100 ft. interconnected coils; 14 bundles to a case; 14,000 ft.	175.00
#GW 144A	6-50 ft. interconnected coils; 48 bundles to a case; 14,400 ft.	180.00
#GW 144B	12-50 ft. interconnected coils; 24 bundles to a case; 14,400 ft.	180.00

Sold in case lots only in amounts designated above.

TV GLARE FILTER *Intensifies Contrast — Relieves Eye Strain — Sharpens Image*

Optically correct, eliminates eye fatigue, improves picture contrast under any lighting condition. Easily attached to any TV receiver (supplied with double face adhesive).

Attractively packaged in individual boxes suitable for display.

Specify color, blue or smoke.

Tube Size	Dimensions	Sugg. List
10″	8″x11″	$1.15
12½″ & 14″	10″x13″	1.95
16″ & 17″	12″x16″	3.65
19″, 20″, 21″	15″x20″	4.65

TUBULAR SELENIUM RECTIFIERS

Completely enclosed, no shorts, no shocks, no overheating, long life, saves time and labor. Easily soldered into set (like a condenser) with pig-tail leads. Characteristics same as equivalent open-plate rectifiers. New-Type selenium plates. Higher forward current — higher reverse resistance for cool operation.

Unconditionally Guaranteed for 1000 Hours at Rated Voltage

		List			List
RS	25 ma.	$1.00	RS	75 ma.	$1.60
RS	40 ma.	1.15	RS	100 ma.	1.95
RS	65 ma.	1.38	RS	150 ma.	2.40

RADIO AND TV KNOB SETS

In Promotion-Wise Packages

RADIO KNOBS, Set Screw Type

Model	Diam.	List	Model	Diam.	List
Ivory			Walnut		
W420-A	15/16″	$8.00	M420-B	15/16″	$8.00
W120-A	1 3/16″	9.50	M120-B	1 3/16″	9.50
W320-A	1 3/16″	9.50	M320-B	1 3/16″	9.50

Per box of 50 of 1 model number.

TV KNOBS—Mahogany and Gold For 630-type Chassis

	List
TN-22W—Wing knob for tuner	$0.53
TN-22—Complete set of 4	2.75

TV KNOBS—All Gold For 630-type Chassis

	List
TN-50W—Wing knob for tuner	$0.70
TN-50—Complete set of 4	5.20

TV KNOBS for Standard Tuner Mahogany and Gold

Model TN-75 ....$2.80 List
Model TN-100 .... 2.80 List

Complete set boxed for standard tuner.

All Radio and TV Knob Sets are attractively boxed

PLASTIC MASKS

For Conversions, Replacements and Custom Builders

One-piece clear lucite moulded to shape and attractively framed in gold paint (sealed on for durability), individually boxed.

Model LM—Rosette bolts, instructions for care and installation included.

Size	List	Size	List
12½″ round	$ 9.50	19″ round	$17.00
14″ rect.	8.75	20″ rect.	17.00
16″ rect.	11.30	21″ rect.	19.00
16″ round	12.15	24″ round	34.85
17″ rect.	12.30		

DELUXE PLASTIC MASKS

Model DLM—Same as Model LM except for curved flange for outside mounting.

Size	List	Size	List
14″ rect.	$11.55	20″ rect.	$17.60
16″ round	14.25	21″ rect.	18.95
16″ rect.	14.25	24″ round	36.50
17″ rect.	14.25		

CONVERSION MASK ESCUTCHEONS and KITS

Polystyrene escutcheon frame (tube green), with rubber dust seal ring attached; lucite window; 4 rosette bolts.

Model MEK Complete Mask Kit		Model ME Escutcheon only	
Size	List	Size	List
16″ rect.	$13.86	16″ rect.	$ 5.32
17″ rect.	14.28	17″ rect.	5.46
19″ round	20.44	19″ round	8.12
20″ rect.	20.44	20″ rect.	8.12
21″ rect. Glass	20.44	21″ rect. Glass	8.12
21″ rect. Metal	20.44	21″ rect. Metal	8.12

MULTI-SWITCH

For Multiple TV or FM Set Demonstrations. Superior Hi-Lo antenna switch. Maximum signal transmission.

No soldering, fast, easy installation, low standing wave ratio, positive contact, matches all set finishes, serves as a handy multi-purpose switch.

Model No. MS-3 **Suggested List, ea.** **$3.95**

T. V. Development Corp.

2024 McDONALD AVENUE
BROOKLYN 23, N. Y.
ESplanade 5-9100

MORE TV OUTLETS PER DOLLAR!

AMPLIFIED, ALL-CHANNEL
MASTER ANTENNA SYSTEMS
FOR 2 TO 2000 TV SETS

NO Special connectors
NO Matching transformers
NO Engineers
NO Individual channel equipment

BLONDER-TONGUE systems are based on the use of "no loss" Distribution Amplifiers which split the signal from the antenna into the desired number of outlets . . . all having the same signal level and picture quality as though each TV set used the antenna alone.

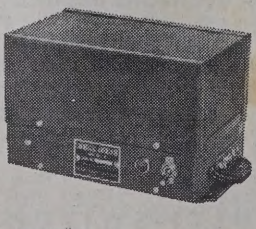
The B-T Automatic, All-Channel systems using three basic units in any desired number and combination can be easily installed by any TV service man.

INSTALLED WITH THE TURN OF A SCREW

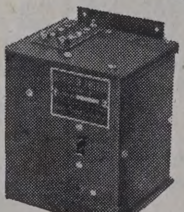
DISTRIBUTION AMPLIFIER, MODEL DA8-1-M
8 TV Outlets
Amplified and Isolated
List Price $87.50

BLONDER TONGUE *laboratories Inc*

Combine these B-T units to serve up to **2,000** sets from 1 antenna.



Model #CA-1-M
Commercial Antensifier
(30 Times Gain)
Use As Pre-Amplifier, Line Amplifier or de-luxe Booster
List Price $77.50



MODEL #DA2-1-M
Distribution Amplifier
2 TV Set Outlets
electronically isolated
List Price $39.50

B-T HOME ANTENSIFIER MODEL HA-2-M

B-T
the Blonder-Tongue Antensifier

Finest All-Channel TV Booster. Fully Automatic, 16 Times Gain. In Metal Cabinet
List Price $57.50

FREE INSTRUCTION BROCHURE ON MASTER ANTENNA SYSTEMS..Write Today! Dept. L-1

Blonder-Tongue Labs., Inc., Mt. Vernon, N. Y.

Standard Wood Products Corporation

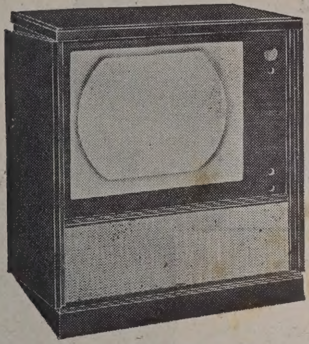
BEAUTIFUL TV CABINETS FOR CUSTOM-BUILT SETS OR CONVERSIONS

Series 503 — Chinese Pagoda Top

All the TV cabinets of the unusually complete Standard Wood Products line are carefully constructed of the choicest select-grain woods and finest hardware to give you lifetime service. Each cabinet is creatively *fidelity-styled* to richly deserve the center of attraction in any living room or den.

Series 503 TV Cabinets are especially designed for all 630-type chassis and all others of similar dimensions. Front panels are standardized and removable, permitting quick interchangeability for all sizes round and rectangular tubes. Complete with all necessary mountings for Picture Tube & Yoke. In Mahogany, Walnut, Ebony or Blonde, each model is hand-rubbed to a custom high-lustre finish. Can be provided with record changer pull-out drawer at the bottom, for a nominal additional cost. Size: 40" h, 24" w, 24" d.

Series 503 — Open Face


Series 507 — Open View

Series 507 TV Cabinets possess all the identical features of the Series 503 Cabinets — but, in addition, are expressly designed for housing the new 24" Picture Tubes and Chassis. Size: 40" h, 35" w, 24" d.

Series 505 TV Combination Console Cabinets have all the outstanding features of the Series 503 Cabinets *plus* the separate compartments for housing FM-AM radio chassis, all Webster-type record changers, and for record storage. Record changer drawers are on sturdy wheel slides for easy pull-out. Size: 40" h, 40" w, 24" d.

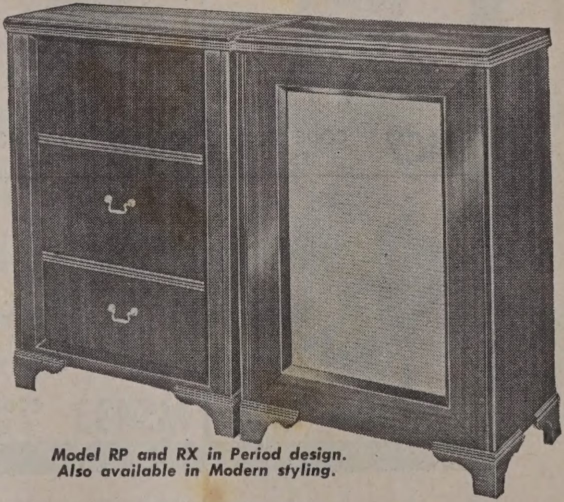
Series 505 — Oval Beaded Leather Inlaid

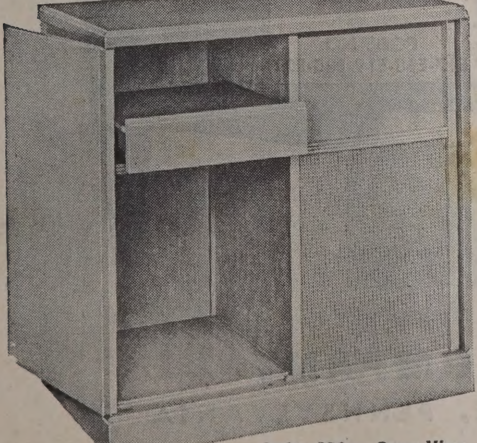
CUSTOM AUDIO FURNITURE

Model RX Bass Reflex Speaker Cabinets, for 15" or 12" speakers, are scientifically engineered for life-like sound reproduction and fidelity-styled to enhance the beauty of any interior. Vibration-free construction, ¾" stock, interior acoustic padding, 10,000 cubic inch capacity — all these combine to provide greater frequency response, angle distribution and power-handling capacity. Size: 36" h, 24" w, 16" d.

Model RP Radio-Phonograph Cabinets are perfect companions to the Model RX. Top panel for all FM-AM tuners. Middle pull-out drawer for all changers. Bottom compartment for all accessories. Same size as Model RX.

Both Models are available in Mahogany, Cordovan Mahogany, Walnut, Ebony, Blonde, or Unfinished — in Period or Modern designs.


Model RP and RX in Period design.
Also available in Modern styling.

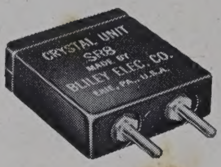

Series RP3 — Open View

RADIO-PHONOGRAPH COMBINATION CABINETS

For those who desire to house a fine radio and phonograph system in one piece of beautiful furniture, the Series RP3 Radio-Phonograph Cabinets are ideal. Ample compartments for record changer, radio chassis, record storage, and 15" or 12" speaker assure compactness with no sacrifice in excellent sound reproduction. And — there's a wide variety of fidelity-styled designs and finishes to choose from — to harmonize with the decor of any home. Size: 36" h, 34" w, 19" d.

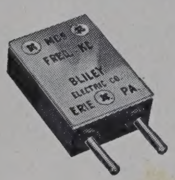
ASK YOUR FAVORITE DISTRIBUTOR FOR FULL LITERATURE AND PRICES ON ALL STANDARD WOOD MODELS.

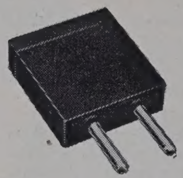
Here all similarity ends...
from this point on, it's craftsmanship!


SR8 CODE NO. E7

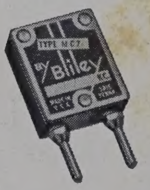
KV3 CODE NO. E10

CF3 CODE NO. E14

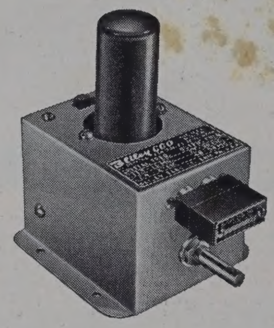

MC9 CODE NO. E3-E8-E9-E13-E22


SR5 CODE NO. E6

CF6 CODE NO. E15


MC7 CODE NO. E5

SR10 CODE NO. E2-E4


CCO-2A CODE NO. E16

SMC100 CODE NO. E12

MS433 CODE NO. E11

AX2
AX3 CODE NO. E17-E18-E19-E20-E21

Bliley CRYSTALS

BLILEY ELECTRIC COMPANY
UNION STATION BUILDING • ERIE, PENNSYLVANIA

TV SERVICE CRYSTALS

SOUND CHANNEL MARKER UNITS (Sub-Multiple Frequencies ± .05%)

CODE	TYPE	CHANNEL #	CHAN. FREQ. (mc)	SOUND CHAN. (mc)	CRYS. FREQ. (kc)	PRICE
E2	SR10	2	54-60	59.75	19916.666	$6.95
E2	SR10	3	60-66	65.75	16437.500	$6.95
E2	SR10	4	66-72	71.75	17937.500	$6.95
E2	SR10	5	76-82	81.75	16350.000	$6.95
E2	SR10	6	82-88	87.75	17550.000	$6.95
E2	SR10	7	174-180	179.75	17975.000	$6.96
E2	SR10	8	180-186	185.75	18575.000	$6.95
E2	SR10	9	186-192	191.75	19175.000	$6.95
E2	SR10	10	192-198	197.75	19775.000	$6.95
E2	SR10	11	198-204	203.75	18522.727	$6.95
E2	SR10	12	204-210	209.75	19068.181	$6.95
E2	SR10	13	210-216	215.75	19613.636	$6.95

i–f ALIGNMENT CRYSTALS

CODE	TYPE	FREQUENCIES	TOLERANCE	APPLICATION	PRICE
E4	SR10	18-22 mc	±.05%	video channel markers	$8.50
E4	SR10	19-27.5 mc	±.05%	video i-f alignment	$8.50
E4	SR10	21-22 mc	±.05%	sound i-f alignment	$8.50
E4	SR10	19-27.5 mc	±.05%	trap frequencies	$8.50
E3	MC9	4.5 mc	±.02%	intercarrier	$3.95

SHIP-TO-SHORE

CODE	TYPE	APPLICATION	TOLERANCE	PRICE
E5	MC7	radiotelephone 2-3.5 mc	±.02%	$6.00
E6	SR5	radiotelephone 2-3.5 mc	±.02%	$6.00
E7	SR8	radiotelephone 2-3.5 mc	±.02%	$6.00

STANDARD FREQUENCIES

CODE	TYPE	APPLICATION	TOLERANCE	PRICE
E8	MC9	signal generator—5.0 mc	±.02%	$ 2.80
E9	MC9	FM i-f alignment—10.7 mc	±.05%	$ 3.95
E10	KV3	reference frequency 100 kc	±.005%	$ 6.95
E11	MS433	reference frequency 1000 kc	±.005%	$17.00
E12	SMC100	100 kc (exact by ckt. adjust.) 1000 kc	±.05%	$ 8.75

SPECIAL PURPOSE

CODE	TYPE	APPLICATION	TOLERANCE	PRICE
E13	MC9	13.560 mc—multiplier to 27.12 mc	±.05%	$5.50
E14	CF3	455 kc—456 kc—465 kc	± 5 kc	$5.00
E15	CF6	455 kc—456 kc—465 kc	± 5 kc	$4.50
E22	MC9	3.0 mc—10 mc experimental frequencies	±.05%	$6.95

AMATEUR

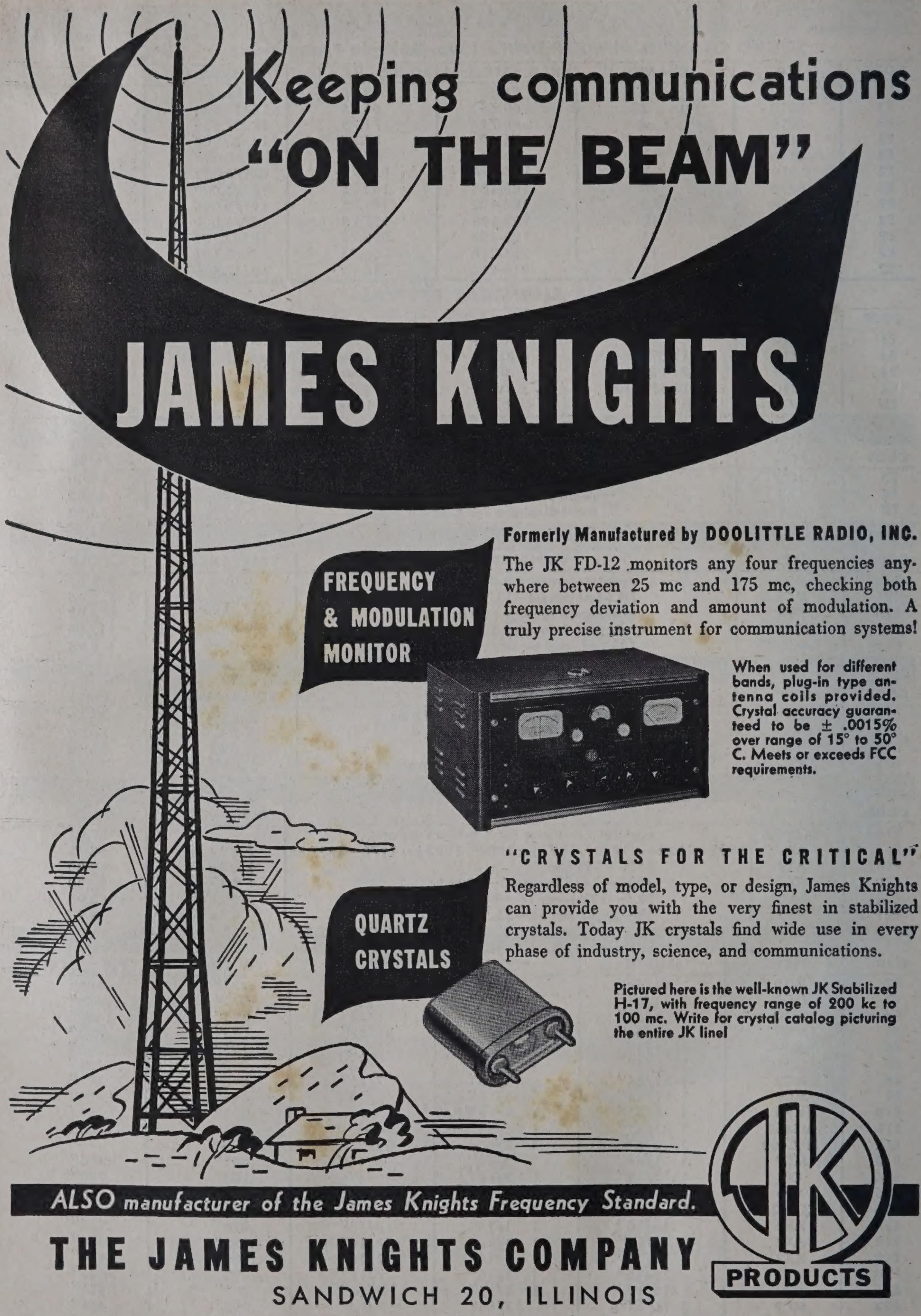
CODE	TYPE	APPLICATION	TOLERANCE	PRICE
E16	CCO-2A	packaged oscillator for 2-6-10-11 meters		$9.95
E17	AX2	1803—1822 kc; 1878—1897 kc; 1903—1922 kc; 1978—1997 kc	± 1 kc	$3.75
E18	AX2	3500—3997 kc	± 2 kc	$2.80
E19	AX2	7000—7425 kc; 8000—8222 kc	± 2 kc	$2.80
E20	AX2	12.5—13.61 mc; 14—14.85 mc	± 30 kc	$3.95
E21	AX3	24—24.33 mc; 25—25.5 mc	± 5 kc	$3.95

DIMENSIONS

CODE	TYPE	LENGTH	WIDTH	THICKNESS	PIN SIZE	PIN SPACE
E2	SR10	51/64″	3/4″	11/32″	.093″	.486″
E3	MC9	1 11/64″	13/16″	7/16″	.093″	.486″
E4	SR10	51/64″	3/4″	11/32″	.093″	.486″
E5	MC7	1 39/64″	1 1/8″	21/32″	.125″	.750″
E6	SR5	1 1/4″	1 9/64″	7/16″	.125″	.500″
E7	SR8	1 1/4″	1 1/8″	7/16″	.093″	.486″
E8	MC9	1 11/64″	13/16″	7/16″	.093″	.486″
E9	MC9	1 11/64″	13/16″	7/16	.093″	.486″
E10	KV3	1 9/32″	1 3/16″(dia.)	—	.093″	.486″
E11	MS433	1 31/32″	1 25/64″(dia.)	—	.093″	OCTAL
E12	SMC100	1 3/8″	1 3/8″	1.039″	—	—
E13	MC9	1 11/64″	13/16″	7/16″	.093″	.486″
E14	CF3	1 13/32″	1 3/16″	3/4″	.125″	.750″
E15	CF6	17/32″	15/16″	.695″	—	—
E16	CCO-2A	2 1/4″	3 1/8″	3″	—	—
E17	AX2	15/16″	1 1/16″	7/16″	.093″	.486″
E18	AX2	15/16″	1 1/16″	7/16″	.093″	.486″
E19	AX2	15/16″	1 1/16″	7/16″	.093″	.486″
E20	AX2	15/16″	1 1/16″	7/16″	.093″	.486″
E21	AX3	15/16″	1 1/16″	7/16″	.093″	.486″
E22	MC9	1 11/64″	13/16″	7/16″	.093″	.486″

BLILEY CRYSTALS • BLILEY ELECTRIC CO. UNION STATION BLDG. ERIE, PA.

Net



Keeping communications "ON THE BEAM"

JAMES KNIGHTS

Formerly Manufactured by DOOLITTLE RADIO, INC.

FREQUENCY & MODULATION MONITOR

The JK FD-12 monitors any four frequencies anywhere between 25 mc and 175 mc, checking both frequency deviation and amount of modulation. A truly precise instrument for communication systems!

When used for different bands, plug-in type antenna coils provided. Crystal accuracy guaranteed to be ± .0015% over range of 15° to 50° C. Meets or exceeds FCC requirements.

QUARTZ CRYSTALS

"CRYSTALS FOR THE CRITICAL"

Regardless of model, type, or design, James Knights can provide you with the very finest in stabilized crystals. Today JK crystals find wide use in every phase of industry, science, and communications.

Pictured here is the well-known JK Stabilized H-17, with frequency range of 200 kc to 100 mc. Write for crystal catalog picturing the entire JK line!

ALSO manufacturer of the James Knights Frequency Standard.

THE JAMES KNIGHTS COMPANY
SANDWICH 20, ILLINOIS

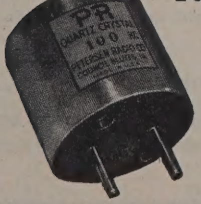
PR Precision CRYSTALS

COMMERCIAL TYPES—SPECIFICATIONS

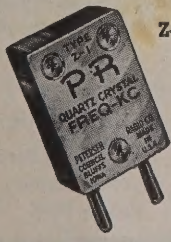
Type		Frequency Range	Pin Spacing	Pin Diameter	Height Above Pins	Width	Depth
Z-1	Fundamental	900 Kc. to 12000 Kc.	.486"	.093"	1-3/16"	13/16"	7/16"
Z-1	Harmonic	12000 Kc. to 30000 Kc.	.486"	.093"	1-3/16"	13/16"	7/16"
*Z-1A	Fundamental	425 Kc. to 12000 Kc.	¾"	.125"	1⅜"	1⅜"	½"
*Z-1A	Harmonic	12000 Kc. to 30000 Kc.	¾"	.125"	1⅜"	1⅜"	½"
Z-1B	Fundamental	1000 Kc. to 12000 Kc.	¾"	.125"	1⅜"	1-3/16"	½"
Z-1B	Harmonic	12000 Kc. to 30000 Kc.	¾"	.125"	1⅜"	1-3/16"	½"
Z-1D	Same as Z-1	Same as Z-1	½"	.125"	1-3/16"	13/16"	7/16"
Z-1E	Same as Z-1	Same as Z-1	½"	.125"	1¼"	1⅛"	7/16"
Z-1H	Single or dual unit Fundamental	100 Kc. to 5000 Kc.	3-Pin W.E.	.157"	2-1/16"	1-19/32"	1-3/16"
Z-1K	Same as Z-1A except has .157" dia. pins	Same as Z-1A					
Z-1M	Fundamental	1000 Kc. to 5000 Kc.	⅞"	Std. Banana	2-3/32"	1-19/32"	¾"
†Z-1R	Fundamental	175 Kc. to 475 Kc.	½"	.093"	1¼"	1-3/32"	7/16"
Z-4	Fundamental	1500 Kc. to 12000 Kc.	¾"	.125"	.650"	Diameter	.995"
Z-4	Harmonic	12000 Kc. to 30000 Kc.	¾"	.125"	.650"	Diameter	.995"
Z-7	Fundamental	1000 Kc. to 12000 Kc.	¾"	Std. Banana	1.660"	1.192"	.518"
Z-8	Fundamental	400 Kc. to 5000 Kc.	¾"	⅛"	1¾"	1-9/16"	1-11/16"
Z-6	Fundamental	100 Kc. to 325 Kc.	¾"	⅛"	1½"	Diameter	1-25/32"
E-1	Fundamental	100 Kc. to 7000 Kc.	Interchangeable with FT-164 and AC-95				
FT-171-B	Fundamental	1000 Kc. to 8000 Kc.	¾"	Std. Banana	2¼"	1½"	13/16"

* Can be Supplied with Standard Banana Pins.
† For Signal Generator Use. Not recommended for Transmitter Freq. Control.

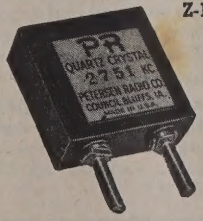
Z-6


PR
QUARTZ CRYSTAL
100 KC
PETERSEN RADIO CO
COUNCIL BLUFFS, IA

Z-1


TYPE Z-1
PR
QUARTZ CRYSTAL
FREQ-KC
PETERSEN
COUNCIL BLUFFS
IOWA
MADE IN U.S.A.

Z-1A


PR
QUARTZ CRYSTAL
2751 KC
PETERSEN RADIO CO
COUNCIL BLUFFS, IA
MADE IN U.S.A.

Z-1B

PR
QUARTZ CRYSTAL
PETERSEN RADIO C
MADE IN U.S.A.

PETERSEN RADIO Company, Inc., 2800 W. Broadway, Council Bluffs, Iowa

PR Precision CRYSTALS

AMATEUR—Specifications and Frequencies

TYPE
Z-2
PR
QUARTZ CRYSTAL
FREQ-KC
7083
RADIO CO.
MADE
IN
U.S.A.
PETERSEN
COUNCIL
BLUFFS
IOWA

Z-2

TYPE Z-2

- 160 meter band for VFX-680 Narrow Band FM in Sonar Exciter.
- 1699.2 to 1710 Kc. for 11 meter band.
- 1750 to 1812 Kc. for 10 meter band.
- 1828 and 1844 Kc. These 2 frequencies cover entire 10 meter FM band in Sonar VFX-680.
- 1562.5 to 1687.5 Kc. for 6 meter band.
- 1778 to 1827 Kc. for 2 meter band.
- 3370 to 3403 Kc. for 11 meters.
- 3500 to 4000 Kc. for 80, 40, 20 and 10 meters.
- 6250 to 6750 Kc. for 2 meters.
- 6740 to 6807 Kc. for 11 meters.
- 7000 to 7425 Kc. for 40, 20 and 10 meters.
- 8000 to 8222 Kc. for 2 meters.
- 8334 to 9000 Kc. for 6 meters.
- 9000 to 9250 Kc. for 2 meters.

TYPE
Z-3
PR
QUARTZ CRYSTAL
FREQ-KC
14283
RADIO CO.
MADE
IN
U.S.A.
PETERSEN
COUNCIL
BLUFFS
IOWA

Z-3

TYPE Z-3

- 12000 to 12333 Kc. for 2 meters.
- 12500 to 13500 Kc. for 6 meters.
- 13480 to 13615 Kc. for 11 meters.
- 14000 to 14850 Kc. for 20 and 10 meters.

CHECK SUPERIORITY OF PR Crystals

Stability . . .

Drift characteristics of PR Crystals limited to less than 2 cycles per MC per degree. You get low drift, combined with high output, dependable frequency control. X-Ray orientation guarantees uniform cut for maximum low-drift performance.

Accuracy . . .

Guaranteed accurate within .01 per cent of specified frequency or better. When doubling and quadrupling accuracy is absolutely essential. You KNOW where you are with PRs.

Power Output . . .

PRs are designed to give maximum power output from the exciter stage when operating at the highest permissible voltages. PR Crystals can "take it."

Activity . . .

PRs give you high activity. They "come in" instantly on phone . . . key without chirps, even at high bug speeds, without excessive "backing off."

Unconditional Guarantee . . .

Every PR Precision CRYSTAL is guaranteed unconditionally, by the makers of fine crystals since 1934.

PETERSEN RADIO Company, Inc., 2800 W. Broadway, Council Bluffs, Iowa

PR Precision CRYSTALS

PR CRYSTALS

PRICE LIST SUBJECT TO CHANGE WITHOUT NOTICE

COMMERCIAL

Type		Frequency Range	Tolerance .005%	Tolerance .01%	Tolerance .02%	Schedule
Z-1	Fundamental	900 to 12000 Kc.	$12.50	$11.00	$10.00	A
Z-1	Harmonic	12000 to 20000 Kc.	15.00	12.50	11.00	A
Z-1	Harmonic	20000 to 30000 Kc.	18.00	15.00	13.00	A
Z-1A	Fundamental	425 to 900 Kc.	15.00	12.50	11.00	A
Z-1A	Fundamental	900 to 12000 Kc.	12.50	11.00	10.00	A
Z-1A	Harmonic	12000 to 20000 Kc.	15.00	12.50	11.00	A
Z-1A	Harmonic	20000 to 30000 Kc.	18.00	15.00	13.00	A
Z-1B	Fundamental	1000 to 12000 Kc.	12.50	11.00	10.00	A
Z-1B	Harmonic	12000 to 20000 Kc.	15.00	12.50	11.00	A
Z-1B	Harmonic	20000 to 30000 Kc.	18.00	15.00	13.00	A
Z-1D	Same as Z-1	Same as Z-1				A
Z-1E	Same as Z-1	Same as Z-1				A
Z-1H	Fundamental	100 Kc. Standard		(Exact Frequency)	12.00	B
Z-1H	Fundamental	101 to 900 Kc.	18.00	15.00	13.00	A
Z-1H	Fundamental	901 to 5000 Kc.	15.00	12.50	11.00	A
Z-1H	Dual Unit	901 to 5000 Kc.	30.00	27.50	25.00	A
Z-1K	Same as Z-1A	Same as Z-1A				A
Z-1M	Fundamental	1000 to 5000 Kc.	15.00	12.50	11.00	A
Z-1R	Fundamental	175 to 475 Kc.	18.00	15.00	13.00	A
Z-1R	Fundamental for Signal Generators	{175, 200, 262, 370, 455, 456, 465 Kc.}		6.00		B
Z-1R	Fundamental	475 to 1000 Kc.	15.00	12.50	11.00	A
Z-4	Fundamental	Same as Z-1				A
Z-4	Harmonic	Same as Z-1				A
Z-7	Fundamental	Same as Z-1				A
Z-8	Fundamental	400 to 900 Kc.	18.00	15.00	13.00	A
Z-6	Fundamental	100 Kc. Standard		(Exact Frequency)	9.00	B
Z-6	Fundamental	101 to 175 Kc.	18.00	15.00	13.00	A
E-1	Fundamental	100 to 900 Kc.	20.00	19.00	18.00	B
E-1	Fundamental	900 to 7000 Kc.	19.00	18.00	17.00	B
FT-171-B	Fundamental	1000 to 8000 Kc.	12.50	11.00	10.00	A

AIRCRAFT

Type	Frequency	Price	Schedule
Z-1, Z-1A, Z-1B	3105 and 6210 Kc.	$5.00	C

MARINE

Type	Transmitter	Receiver	Schedule
Z-1	$10.00	$10.00	A
Z-1A	10.00	10.00	A
Z-1B	10.00	10.00	A
Z-1D	10.00	10.00	A
Z-1H	12.50	12.50	A
Z-1H Dual	25.00	25.00	A
Z-1K	12.50	12.50	A
Z-1M	12.50	12.50	A

AMATEUR

Note: Crystals Within Amateur Bands Supplied INTEGRAL KILOCYCLES Only.

Type	Tolerance	Price	Schedule
Z-2	.01%	$2.75	B
Z-3	.01%	3.75	B

Crystals for amateur service other than frequencies listed on Catalog Sheet can be supplied as follows:

Type	Range	Tolerances Plus or Minus 1%		Tolerances Plus or Minus .02%	
		Price	Sched.	Price	Sched.
Z-2, Fundamental	1500 to 10000 Kc.	$2.75	B	$10.00	A
Z-3, 3rd Harmonic	10000 to 20000 Kc.	3.75	B	11.00	A

NOTICE

Prices on Commercial Crystals are based on quantities of 1 to 10 of the same frequency. For larger quantities write for prices.

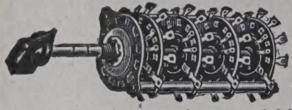
Price on crystals below 100 Kc. furnished on request. Tolerance can be guaranteed only when oscillator or circuit diagram is furnished.

To facilitate the handling of your order, please order by type number and indicate permissible tolerance.

PETERSEN RADIO Company, Inc., 2800 W. Broadway, Council Bluffs, Iowa

Rotary, Selector, Lever Action and Non-Shorting Switches

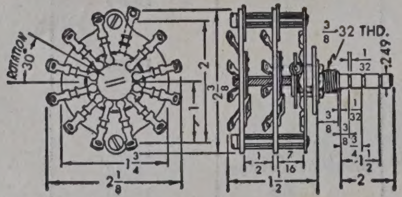
Multi-Section Rotary Switches



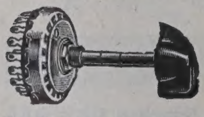
High grade, phenolic-insulated, rotary switches for radio and electronic equipment in circuits not exceeding 500 volts DC. These switches have self-wiping, silver-plated, copper alloy contacts which assure long, useful life. All models feature an adjustable stop. A 2½″ mounting area is required. Mounting depth is dependent on number of sections. Switches have ¼″ round shafts, 2″ long, and ⅜″-32 bushings. Each switch supplied with pointer knob and mounting hardware.

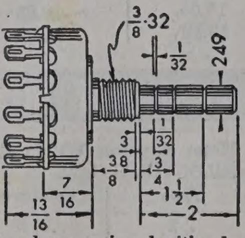
Shorting Type Catalog Number	Non-Shorting Type Cat. No.	No. of Circuits per Section or Gang	Total No. of Circuits per Switch	No. of Positions	List Price
1211L	1311L	1	1	2 to 11	$1.55
1215L*	1315L*	2	2	2 to 5	1.65
1213L*	1313L*	3	3	2 to 3	1.80
1212L*	1312L*	4	4	2 to 2	1.90
1221L	1321L	1	2	2 to 11	2.30
1225L*	1325L*	2	4	2 to 5	2.60
1223L*	1323L*	3	6	2 to 3	2.80
1222L*	1322L*	4	8	2 to 2	2.95
1231L	1331L	1	3	2 to 11	3.10
1235L*	1335L*	2	6	2 to 5	3.30
1241L	1341L	1	4	2 to 11	3.95
1245L*	1345L*	2	8	2 to 5	4.60
1251L	1351L	1	5	2 to 11	4.90
1256L	1356L	2	10	2 to 6	6.05
1261L	1361L	1	6	2 to 11	5.80
1266L	1366L	2	12	2 to 6	7.40

* These switches are provided with an "Off" position which is in addition to the greatest number of positions listed. The "Off" position precedes the other positions.



Single-Section Rotary Switches

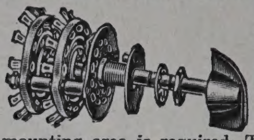




Small, compact, phenolic-insulated switches equipped with ⅜″-32 bushings, and easy-to-cut grooved shafts, ¼″ diameter x 2″ long. The 1¼″ base styles have 30° indexing. The 1¹¹⁄₁₆″ base styles have 20° indexing and are equipped with adjustable stops.

Shorting Type Catalog Number	Non-Shorting Type Cat. No.	Number of Circuits	Number of Positions	Diameter of Base	List Price
3115J	3215J	1	5	1¼	$1.15
31112J	32112J	1	12	1¼	1.15
3122J	3222J	2	2	1¼	1.15
3123J	3223J	2	3	1¼	1.15
3126J	3226J	2	6	1¼	1.15
3134J	3234J	3	4	1¼	1.20
3142J	3242J	4	2	1¼	1.20
3143J	3243J	4	3	1¼	1.20
31117J	32117J	1	2 to 17	1¹¹⁄₁₆	1.80
3129J	3229J	2	2 to 9	1¹¹⁄₁₆	1.80
3136J	3236J	3	2 to 6	1¹¹⁄₁₆	1.95
3163J	3263J	6	2 to 3	1¹¹⁄₁₆	1.95

Ceramic Section Selector Switches



High grade, ceramic-insulated, rotary switches for use in transmitters, test and high frequency radio equipment. Supplied with silicone treated, ceramic sections and double, self-wiping, silver-plated, copper alloy contacts. All models have adjustable stops. A 2″ mounting area is required. Two-section models have ½″ spacing; 3-section models have 1″ spacing. Equipped with ¼″ round shafts, 2″ long, and ⅜″-32 bushings. Pointer knob and mounting hardware included.

Catalog Number	Number of Gangs or Sections	Number of Circuits per Gang or Section	Number of Positions	List Price
172C	1	1	2 to 11	$2.25
173C*	1	2	2 to 5	2.25
174C*	1	3	2 to 3	2.25
176C	2	1	2 to 11	3.50
177C*	2	2	2 to 5	3.50
178C*	2	3	2 to 3	3.50
180C	3	1	2 to 11	5.00
181C*	3	2	2 to 5	5.00

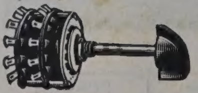
* These switches are provided with an "Off" position which is in addition to the greatest number of positions listed. The "Off" position precedes the other positions.

Lever Action Switches

Bat-handle design. For circuit selection in intercommunication, PA and similar equipment. 2″ mounting depth behind panel required for all models. Switches of the 5000 Series have No. 8 by ¼″ elongated mounting holes with 2¼″ mounting centers. Switches of the 6000 and 7000 Series have No. 6 mounting holes with 1⅝″ mounting centers. Provided with knob and hardware.

Shorting Type Catalog No.	Non-Shorting Type Catalog No.	Number of Poles or Circuits	Number of Positions or Contacts	List Price
Positive Indexing				
5124	5224	2	4	$1.50
6142	6242	4	2	1.25
6143	6243	4	3	1.25
Spring Return				
7122L	7222L	2	2	1.25
7123C	7223C	2	3	1.25
7142L	7242L	4	2	1.25
7143C	7243C	4	3	1.25
7162L	7262L	6	2	1.25

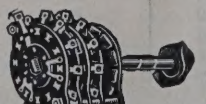
24-Point, Non-Shorting, Tap Switch



For test equipment. Switches have 1 circuit and 24 positions. Phenolic insulation. Furnished with ⅜″-32 brass bushing and ¼″ x 2″ notched shaft. Dial plate 394, knob and mounting hardware supplied.

Catalog No. 13124L List Price $3.50

Circuit-Opening Switch

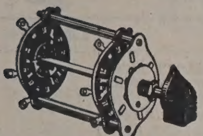


For meter and circuit switching in test equipment and small transmitters. Switches have 4 sections and 2 to 12 positions with adjustable stop. Phenolic-insulated for 500 volt DC operation. Mounting depth behind panel is 2⅛″. Supplied with ¼″ x 2″ notched shaft and ⅜″-32 brass bushing. Pointer knob, dial plate 382, and mounting hardware included.

Catalog No. 1400L List Price $5.90

"HAM," PUSH-BUTTON AND JACK SWITCHES

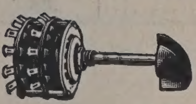
Two-Section, Five-Position "Hamswitch®"



For meter or circuit switching in transmitters. Rated at 1000 volts AC up to 1500 volts DC. Two section, 5 position. 2¼" spacing between sections. 60° indexing between positions. Adjustable stop. Non-shorting type. Supplied with ⅜"-32 bushing, ¼" x 2" notched round shaft. Pointer knob and mounting hardware furnished. Requires 3¼" mounting depth.

Catalog No. **151L** List Price **$2.75**

Two-Section, Two-Circuit, Six-Position "Hamswitch"



Coil and circuit rotary switch with 6 positions, 2 circuits and 2 sections (½" spacing) designed to short out automatically all unused positions. Ideal for test oscillator switching, band-switching or meter-switching uses. Phenolic insulated and equipped with ⅜"-32 bushing, ¼" x 2" notched round shaft and adjustable stop. Supplied with pointer knob and mounting hardware.

Catalog No. **152L** List Price **$3.25**

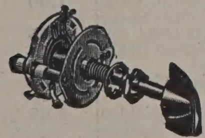
Multiple Push-Button Switches

For making, breaking or transferring multiple circuits. Spacing of ⅝" between plungers. Equipped with brown knobs, escutcheon plate and window inserts.

Catalog Number	Number of Buttons	Operation Per Button	List Price
2164	4	DP Circuit Closing	**$5.25**
2166	6	DP Circuit Closing	**6.55**
2168	8	DP Circuit Closing	**7.90**
2184	4	DPDT, Make Before Break	**5.25**
2186	6	DPDT, Make Before Break	**6.55**
2188	8	DPDT, Make Before Break	**7.90**
2194*	4	DPDT, Break Before Make	**5.25**
2196*	6	DPDT, Break Before Make	**6.55**
2198*	8	DPDT, Break Before Make	**7.90**

* Non-Shorting Types

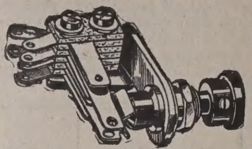
Ceramic Section "Ham Band" Switches



For use in transmitter plate circuits not exceeding 1000 volts DC with power up to 100 watts. Switches have 4 positions in 360° rotation with each section a single circuit. 90° indexing. All models are non-shorting. Ceramic insulation provides low losses at high frequencies. Equipped with double-contact tie points. A 2" mounting area is required. Two-section models have 1⅞" spacing, all others have 1". Switches are supplied with ¼" round shafts, 2" long, and ⅜"-32 bushings. Each switch is furnished with pointer knob and mounting hardware.

Catalog Number	Number of Gangs or Sections	Spacing Between Sections	Circuits Per Switch	List Price
161C	1		1	**$2.25**
162C	2	1⅞"	2	**3.50**
163C	3	1"	3	**5.00**
164C	4	1"	4	**6.00**
165C	5	1"	5	**7.50**

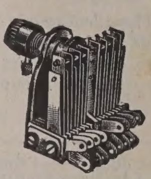
Single Push-Button Switches



Plunger-type switches for panel mounting in radio and electronic circuits. Available in a choice of 8 different circuit combinations for use in laboratories, on test panels, in meter circuits and in a wide variety of other applications. "L" indicates locking-type. Other types have spring return to normal position. Switches require ⁷⁄₁₆" mounting hole, and will fit panels up to ¼" in thickness. Mounting radius is 1⅜"; mounting depth is approximately 1¼". Switch body extends 1⁵⁄₁₆" behind panel. Supplied with polished phenolic button and mounting hardware.

Catalog No.	Circuit Arrangement	List Price
2001	SPST—Make	**$1.30**
2001L	SPST—Make	**1.30**
2002	SPST—Break	**1.30**
2002L	SPST—Break	**1.30**
2003	SPDT	**1.40**
2003L	SPDT	**1.40**
2004	DPST—Make 2	**1.60**
2004L	DPST—Make 2	**1.60**
2005	DPST—Break 2	**1.60**
2005L	DPST—Break 2	**1.60**
2006	DPDT	**1.95**
2006L	DPDT	**1 95**
2007	DP—Make 2, Break 1	**1.75**
2007L	DP—Make 2, Break 1	**1.75**
2008	DPDT—Make before Break	**2.20**
2008L	DPDT—Make before Break	**2.20**

Jack Switches

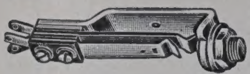


Leaf-type switches actuated by rotary motion. Both types adaptable for use in such applications as laboratories, test panels and meter circuits. Standard models extend perpendicularly to panel; junior style parallel to panel. The ⅜"-32 bushing may be used in panels up to ¼" in thickness. Both types suitable for mounting in a single hole ⁷⁄₁₆" diameter. Shaft is ¼" round with suitable flat. Supplied with mounting hardware, but no knob.

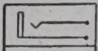
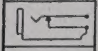
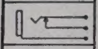
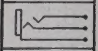
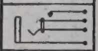
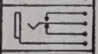
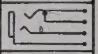
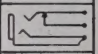
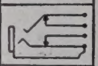
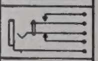
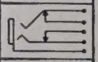
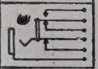
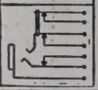
Two Position				Circuit Arrangement
Standard* Cat. No.	List Price	Junior Cat. No.	List Price	
20	**$1.15**	**720**	**$1.10**	Single-Pole, Single-Throw
30	**1.40**	**730**	**1.35**	Single-Pole, Double-Throw
40	**1.55**	**740**	**1.50**	Double-Pole, Single-Throw
45	**1.85**	**745**	**1.75**	Five Springs, two break and one make
		760	**1.95**	Double-Pole, Double-Throw
73	**1.95**	**733**	**1.95**	Three-Pole, Single-Throw
74	**2.55**	**744**	**2.55**	Four-Pole, Single-Throw
Three Position				
		732	**1.35**	Double-Pole, Single-Throw Center "Off" Position
62	**1.95**	**762**	**1.90**	Double-Pole, Double-Throw Center "Off" Position
63	**2.55**	**763**	**2.50**	Three-Pole, Double-Throw Center "Off" Position
		764	**3.10**	Four-Pole, Double-Throw Center "Off" Position

* Standard types will be discontinued when present stocks are exhausted.

Jacks



Metal parts on all jacks have protective plating. Fine contact surfaces provide excellent electrical conductivity. Suitable mounting hardware supplied with all jacks. LA Jacks are economy jacks similar to the SC Series (see listing this page).

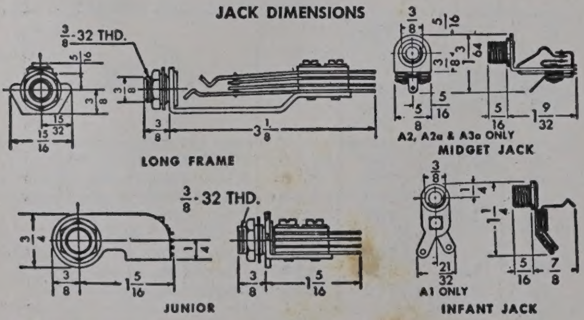
	Long Frame Cat. No.	List Price	Junior Jacks Cat. No.	List Price	Infant and Midget Jacks Cat. No.	List Price
	1	$0.65	701	$0.55	A-1	$0.30
	2	.80	702	.75	A-2	.50
	2A	.80	702A	.75	A-2A	.55
	2B	.80	702B	.75		
	3	.95	703	.85		
	3A	.95	703A	.85	A-3A	.80
	3B	.95	703B	.85		
	3C	.95	703C	.85		
	4	1.10	704	1.00		
	4A	1.10	704A	1.00		
	4B	1.10	704B	1.00		
	5	1.20	705	1.15		
	6	1.30	706	1.25		

LA Series	
LA-1	$0.40
LA-2	.45
LA-2A	.50

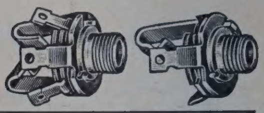
These Jacks equivalent electrically to A-1, A-2 and A-2A listed above

GJ-1 Airplane Grounding Jack—Similar to A-1 Jack except for insulation. List Price $0.50

JACK DIMENSIONS



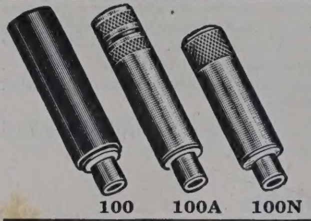
SC Jacks



Both SC Type Jacks have standard brass ⅜"-32 bushings. Mounting depths behind panel 1 1/16".

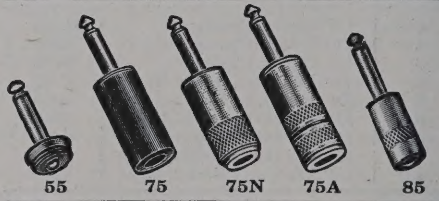
Cat. No.	Description	List Price
SC-1A Phone Jack	Commercial equivalent of military jack No. JJ-034. Same spring arrangement as No. 1 long-frame jack. Designed to receive the following plugs: Mallory No. 75, Western Electric Nos. 47A and 47B. Signal Corps Nos. PL-47, PL-48, PL-55, PL-148, PL-155, PL-125 and JAN plugs PJ-055, PJ-155, PJ-634, PJ-636, PJ-047	$0.55
SCA-2B	Commercial equivalent of military jack No. JJ-033. Same spring arrangement as No. 2B Long frame jack. Designed to receive the following plugs: Western Electric No. 109 and Signal Corps Nos. PL-68, PL-168, and JAN plugs PJ-068, PJ-168, and PJ-309	.65

Extension Jacks



Cat. No.	Description	List Price
100	Two-Way Extension Jack (Fiber Shell) for No. 75 Phone Plug. Overall length 3¼".	$1.30
100N	Two-Way Extension Jack (Shielded One-Piece Nickel Shell) for No. 75N Phone Plug. Overall length 3 5/16".	1.65
100A	Two-Way Extension Jack (Shielded Two-Piece Nickel Shell) for No. 75A Phone Plug (with Built-in Cable Clamp). Overall length 3 1/16".	2.30

Plugs

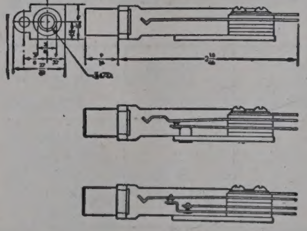


Cat. No.	Description	List Price
55	Adapts standard microphone connector for use with conventional Jack.	$0.45
75	Two-Way Phone Plug with Tie-Cord Anchor (Phenolic Shell)	.65
75N	Two-Way Phone Plug with Tie-Cord Anchor (Shielded One-Piece Nickel Shell)	1.00
75A	Two-Way Phone Plug with Tie-Cord Anchor (Shielded Two-Piece Nickel Shell) (with Built-in Cable Clamp)	1.65
76	Three-Way Microphone Plug (Phenolic Shell)	1.00
76A	Three-Way Microphone Plug (Shielded Two-Piece Nickel Shell) (with Built-in Cable Clamp)	1.95
85	Two way miniature phone plug, shielded.	.50

"X" Type Jacks

Plain bushing type for telephone switchboard service. Furnished with 1 mounting nut and washer.

Cat. No.	Type	List Price
XP1	Open Circuit	$0.90
XP2B	3-Circuit Microphone	1.00
XP3B	Single Circuit—Make before Break	1.30



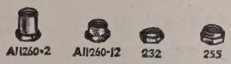
Cat. No.	Type
XP1	—(Open Circuit)
XP2B	—(Three-Circuit Microphone)
XP3B	—(Single Circuit, Make before Break)

SPECIAL COMPONENTS AND MISCELLANEOUS ITEMS

Knobs

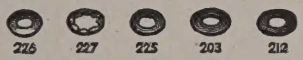
Catalog No.	Description	List Price
364	1¹⁄₁₆″ Dia. Similar to 368, but with pointer at base. Black..............	**$0.15**
365-1	2¼″ Bar Type Knob, Black..........	**.25**
366-1	1¼″ Bar Type Knob, Black..........	**.20**
366-R-1	1¼″ Bar Type Knob, Red............	**.20**
367-1	1½″ Dia. Round Knob, Black.........	**.25**
368-1	1⅛″ Dia. Round Knob, Black.........	**.20**

Mounting Nuts For Switches and Controls



Catalog Number	Description	Thread	Dimension	List Price
232	Flat Hex Mounting Nut...........	⅜-32	½ x ³⁄₃₂	**$0.35***
255	Hex Mounting Nut	⅜-32	½ x ⁷⁄₆₄ x ⁷⁄₆₄ shoulder nut	**.20**
A-11260-2	Hex Mounting Nut	⅜-32	½ x ⁷⁄₆₄ x ¹⁵⁄₃₂ shoulder nut	**.30**
A-11260-12	Hex Mounting Nut	⅜-32	½ x ⁷⁄₆₄ x ⁷⁄₃₂ shoulder nut	**.25**

***** Per 10 pieces.

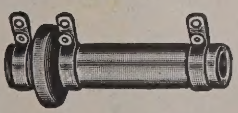


Washers—For Switches and Controls

Catalog Number	Description and Dimensions	List Price
203	Extruded Washer—Fiber—¾″ O.D. x ⅜″ I.D. x ¹⁄₁₆″; Extruded ½″ x ¹⁄₃₂″. For Set See No. 212 Flat Washer..........	**$0.30***
212	Flat Washer—¾″ O.D. x ⅜″ I.D. x ¹⁄₃₂″; Phenolic...........................	**.20***
225	Metal Washer—Nickel Finish—⅝″ O.D. x ⅜″ I.D. .040 Brass.........	**.20***
226	Metal Washer—Nickel Finish—⅝″ O.D. x ⁷⁄₁₆″ I.D. .040 Brass........	**.20***
227	Lock Washer—Cadmium Plated Steel—¹¹⁄₁₆″ O.D. x ²⁵⁄₆₄″ I.D................	**.20***

***** Per 10 pieces.

Type VC-101—Videocoupler

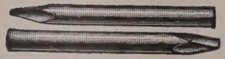


The Mallory VC-101 Videocoupler is a compact inter-stage coupling unit for use in the wide-band amplifiers commonly found in television, radar and oscilloscope equipment. It consists of peaking inductances and a load resistance which provide an essentially flat frequency response to 4 mc. per second. It is designed to work into a terminating capacity of 22.5 mmfd. When used with a 6AC7 tube in a proper circuit, a stage gain of approximately 25 may be realized.

Mounting space required: 1¾″ long x ¾″ in diameter; max. dissipation 2 watts; finish, high-temperature enamel. Use a No. 6 bolt through the core for mounting.

Catalog No. VC-101 List Price **$1.75**

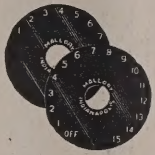
Soldering Iron Tips



No. 311—Replacement tip for soldering irons that are turned on for short periods only. Heats quicker than No. 312, but is not as long wearing. Made of a special Mallory copper alloy long in use as a welding tip material. Nickel plated to resist corrosion. Size—⅜″ diameter, 4″ length. Plunger style with "screw driver" point.
List Price **$0.85**

No. 312—Replacement tip for soldering irons that are used continuously for long periods of time. Made of a special Mallory copper alloy of great hardness and high electrical conductivity. Nickel plated to resist corrosion. Size—⅜″ diameter, 4″ length. Plunger style, with "screw driver" point. List Price **$0.95**

Dial Plates



For Mallory Circuit Selector, Tap and All-Wave Switches.
List Price **$0.20** each (all types)

Neat-appearing Dial plates with easy-to-read aluminum figures clearly etched on solid black background. Dimensions are 1¹³⁄₁₆″ in diameter with ⁷⁄₁₆″ hole, with figures ⁷⁄₆₄″ high. .020″ aluminum stock.

For all types 3100J, 3200J Switches, with 1¹¹⁄₁₆″ base. 20 degree spacing between numerals.	For all Switch types 1200L, 1300L and ¼″ base 3100J, 3200J. 30 degree spacing between numerals.	Marking
Catalog Number	Catalog Number	
	372	**1 to 2**
453	**373**	**1 to 3**
454	**374**	**1 to 4**
455	**375**	**1 to 5**
456	**376**	**1 to 6**
457	**377**	**1 to 7**
458	**378**	**1 to 8**
459	**379**	**1 to 9**
460	**380**	**1 to 10**
461	**381**	**1 to 11**
462	**382**	**1 to 12**
463		**1 to 13**
464		**1 to 14**
465		**1 to 15**
466		**1 to 16**
467		**1 to 17**
468		**1 to 18**
472		**Off 1 to 2**
473	**383**	**Off 1 to 3**
474	**384**	**Off 1 to 4**
475	**385**	**Off 1 to 5**
476	**386**	**Off 1 to 6**
477	**387**	**Off 1 to 7**
478	**388**	**Off 1 to 8**
479	**389**	**Off 1 to 9**
480	**390**	**Off 1 to 10**
481		**Off 1 to 11**
482		**Off 1 to 12**
483		**Off 1 to 13**
484		**Off 1 to 14**
485		**Off 1 to 15**
486		**Off 1 to 16**
	***394 Special**	**1 to 24**
	†487 Special	**1 to 5**
	‡488 Special	**1 to 4**

* 15° Spacing Between Numerals
† 60° Spacing Between Numerals
‡ 90° Spacing Between Numerals

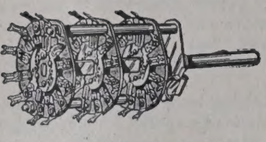
Centralab CRL Centralab

FIRST IN COMPONENTS RESEARCH **SAFEST FOR SERVICING**

SWITCHES

ROTARY SELECTOR SWITCHES

1400 SERIES PHENOLIC INSULATION



Series 1400 offers compact design and quality construction. Laminated phenolic insulation. Mounting Bushings ⅜" x 32 thd. x ⅜" long. Shafts 1⅞" from end of bushing. Positive 30° index with adjustable stop. Revisions or additions can easily be made due to availability of all parts separately (see listings under hardware and sections). Packaged with mtg. nut, lockwasher, 1¼" black bar knob.

Shorting—make before break. **Non-Shorting**—break before make.

Cat. No. Shorting	Cat. No. Non-Short.	Poles per Section	Total Sections	Total Poles	No. of Positions	List Price
1400	1401	1	1	1	2 to 6	$1.25
1402	1403	1	1	1	2 to 11	1.50
1404	1405	2	1	2	2 to 5	1.50
1406	1407	3	1	3	2 to 3	1.75
1408	1409	4	1	4	2 only	1.75
1410	1411	1	2	2	2 to 6	2.00
1412	1413	1	2	2	2 to 11	2.25
1414	1415	2	2	4	2 to 5	2.50
1416	1417	3	2	6	2 to 3	2.75
1418	1419	4	2	8	2 only	2.75
1420	1421	1	3	3	2 to 6	2.75
1422	1423	1	3	3	2 to 11	3.00
1424	1425	2	3	6	2 to 5	3.25
1426	1427	1	4	4	2 to 6	3.50
1428	1429	1	4	4	2 to 11	3.75
1430	1431	2	4	8	2 to 5	4.50

PHENOLIC SECTIONS ONLY—1400 SERIES

.064" Rotor Slot. Use with above switches or P-121, 122, 123 Index.

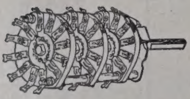
Cat. No. Shorting	Cat. No. Non-Shorting	Poles	Positions	List Price
A	H	1	2 to 6	$0.50
B	J	1	2 to 11	.75
C	K	2	2 to 5	.75
D	L	3	2 to 3	1.00
E	M	4	2 only	1.00
EE	..	4	2 to 3	1.50
F	..	1	2 to 5	.75
(On F section unused contacts on one side of common connected and shorted out.)				
G	..	1	2 to 10	1.00
(On G section all unused contacts connected and shorted out.)				
N and P Special—Combine for resistance decade switch. Each				.75
Q—Special for capacitance decade siwtch				.75

P-1 Special—10 pos. progressively shorting out 9 positions.... **$1.00** List

(See listings of "Deluxe" sections—DD rotor slot—Page L15).

ROTARY SELECTOR SWITCHES

2500 SERIES—STEATITE INSULATION



2500 Series Switches have highest quality (grade L-5) Steatite insulation, meet critical requirements of r.f. circuit applications. Bushing ⅜" x 32 thd. x ⅜" long. Shaft 1⅞". Positive 30° Index with adjustable stop. Separate parts also available. Packaged with Mtg. nut, lockwasher and 1-¼" black bar knob.

Shorting—Make before break. **Non-Shorting**—Break before make.

Cat. No. Shorting	Cat. No. Non-Short.	Poles per Section	Total Sections	Total Poles	No. of Positions	List Price
2500	2501	1	1	1	2 to 6	$2.25
2502	2503	1	1	1	2 to 11	2.25
2504	2505	2	1	2	2 to 5	2.25
2506	2507	3	1	3	2 to 3	2.25
2510	2511	1	2	2	2 to 6	3.50
2512	2513	1	2	2	2 to 11	3.50
2514	2515	2	2	4	2 to 5	3.50
2516	2517	3	2	6	2 to 3	3.50
2520	2521	1	3	3	2 to 6	5.00
2522	2523	1	3	3	2 to 11	5.00
2524	2525	2	3	6	2 to 5	5.00

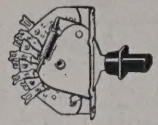
STEATITE SECTIONS ONLY FOR 2500 SERIES

.064" Rotor slot. Use with above switches or P-121, 122, 123 Index.

Cat. No. Shorting	Cat. No. Non-Shorting	Poles	Positions	List Price Each
T	X	1	2 to 6	$1.25
U	Y	1	2 to 11	1.25
R	RR	2	2 to 5	1.25
S	SS	3	2 to 3	1.25
V	Z	4	2 only	1.25
GG Special 10 position, 1 pole, all unused contacts connected and shorted out				1.25
P-1-S Special 10 position, 1 pole, progressively shorting out 9 positions				1.25

(See listings of "Deluxe" sections—DD rotor slot—Page L15).

LEVER ACTION SWITCHES

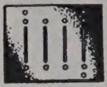


Coil spring and cam index design provide guaranteed minimum life of 150,000 switching cycles. Smooth, "clean" action. Coil type index spring easily replaceable. Mounting plates available. Furnished with black paddle-type knob (same style knob also available in maroon and ivory).

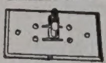
Shorting—Make before break. **Non-Shorting**—Break before make.

Cat. No.	No. Poles	Positions	Type Indexing	List Price	Cat. No.	No. Poles	Positions	Type Indexing	List Price
1452	2	3	Positive	$1.25	1454	2	3	Positive	$1.25
1453	2	3	Spr. Ret.	1.25	1455	2	3	Spr. Ret.	1.25
1456	4	2	Spr. Ret.	1.25	1457	4	2	Spr. Ret.	1.25
1459	4	2	Positive	1.25	1458	4	2	Positive	1.25
1466	2	3	Pos.-Spr. Ret.	1.25	1467	2	3	Pos.-Spr. Ret.	1.25

MOUNTING PLATES FOR LEVER SWITCHES



Type A—Made of .035" die cut steel, black crackle finish. Eliminate alignment problems, provide ¾" spacing between switches. Available for 1 to 5 switch mounting. Height of all plates is 2⅝".



Type B—Specially furnished for mounting lever switches in electrical outlet boxes. Chrome plated wall plates will fit all standard boxes with mounting holes 3$\frac{5}{16}$" between centers. Ideal for P.A. or Intercom installations.

MOUNTING PLATE—Type A

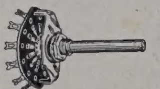
Cat. No.	No. Switches	Length	List Price
P-1755	1	¾"	$ .35
P-1756	2	1½"	.40
P-1757	3	2¼"	.50
P-1758	4	3"	.60
P-1759	5	3¾"	.75

WALL PLATE—Type B

Cat. No.	No. Switches	List Price
P-221	1	$ .60
P-222	2	.75

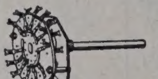
Size: 2¾" x 4½" overall. ¾" spacing between switches.

UNIVERSAL FLAT AND P.A. TYPE SWITCHES



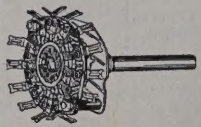
1450 "ECONO-SWITCH"—A 4 pole, 2 position economically designed switch which requires only ⅝" depth behind panel. Can be used as SPST, SPDT, DPDT, 3PST, 4PST, or 4PDT. Positive, non-shorting, leaf type index.
Cat. No. 1450. List.......................... **$1.00**

1451 "PERMA-SWITCH"—The famous Centralab long life coil spring switch with a minimum of 150,000 cycles. Similar in style to the 1450 switch, 4 pole 2 position. Designed for hard life and long use in test equipment and intercom use. Coil spring can be replaced without removing switch. Non shorting, spring return index.
Cat. No. 1451. List.. **$1.75**



1448-1449 "ALL PURPOSE" Intercom switches. Six pole three position, will fit practically every intercom application in use. Both units have replaceable coil spring indexing assuring 50,000 cycles minimum.
Cat. No. 1448 spring ret. one side. List..... **$2.25**
Cat. No. 1449 spring ret. both sides. List... **2.25**

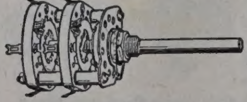
23 POSITION SELECTOR SWITCH



1443—"23 CLIPPER"—Single pole, 23 positions, shorting type contacts. High quality "W" type construction requires only 1" behind the panel. Double wiping silver plated contacts mean low loss. Includes dial plate.

Cat. No. 1443. List................ **$3.25**

STEATITE HAM-TYPE SWITCHES



90° Indexing Ham Switches will handle 15 watts and can be operated with tubes up to 1000 volts and inputs up to 150 watts. Extra heavy steatite sections and spacers assure high breakdown point. Heavily silver plated contacts. Non-shorting type switching.

Cat. No.	Poles Per Sect.	Total Sect.	Positions	List Price
2542	1	1	2 to 4	$2.25
2543	1	2	2 to 4	3.50
2544	1	3	2 to 4	4.75
2545	1	4	2 to 4	6.00
2546	1	5	2 to 4	7.25

SEPARATE SECTIONS

1 pole, 2 to 4 positions, non-shorting type with 4 fibre washers.
Cat. No. XX. List........ **$1.25**

SEPARATE INDEX ASSEMBLIES

Cat. No.	No. Sect.	List Price
P-170	1 or 2	$1.25
P-171	3 or 4	1.75
P-172	5 or 6	2.25

Centralab CRL **Centralab**

FIRST IN COMPONENTS RESEARCH **SAFEST FOR SERVICING**

SWITCHES

SMALL GENERAL PURPOSE SWITCHES

Type 1460—Single pole, 2 position, shorting contacts, positive index. Can be used as SPST or SPDT. For phono-radio, tone or sensitivity control.
Cat. No. 1460. List.......................... **$0.75**

Type 1461—Single pole, 3 position, shorting contacts, positive index. Useful in miniature band change, step type tone or sensitivity control, P. A. channel selector switch.
Cat. No. 1461. List.......................... **$0.75**

Type 1462—Double pole, 2 position, shorting contacts, positive index. Can be used as SPST, SPDT, DPST, DPDT —for meter reversing, P. A. channel, or switching both lines on phono-radio.
Cat. No. 1462. List.......................... **$0.75**

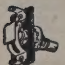
Type 1463—Single pole, 2 position, non-shorting contacts, spring return index. Same size as type 1460. Useful for meter reversing or momentary intercom talk switch. Non-shorting.
Cat. No. 1463. List.......................... **$0.75**

Type 1464—Double pole, 2 position, non-shorting contacts, spring return index. Same physical size as type 1462. Can also be used as SPST, SPDT or DPST. Used as meter switch and momentary line or remote speaker return on intercoms.
Cat. No. 1464. List.......................... **$1.00**

Type 1465—Single pole, 4 position, shorting, positive index, with SPST AC line switch attached. The selector switch has 3 active positions and "off." The line switch operates between "off" and first active selector position. Line switch is Underwriters' approved for 3 amperes at 125 volts, 1 ampere at 250 volts A.C. Type 1465 is a replacement for "on-off" step tone control switches used in many A.M. and F.M. receivers. Shaft is 2½" long from end of ¼" bushing.
Cat. No. 1465. List.......................... **$1.25**

Type 1473—Double pole, 3 position, shorting contacts, positive index. An economical waveband switch for A.M., F.M., phono selector to amplifier in custom installations.
Cat. No. 1473. List.......................... **$1.00**

Type 1483—Single pole, 3 position, shorting contacts, positive index. For use with dual or auxiliary rear seat auto radio speakers. Permits operation of either speaker separately or both simultaneously. Supplied with special bracket and all mounting hardware.
Cat. No. 1483. List.......................... **$0.75**

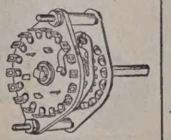


MOMENTARY PUSH switches rated at 1 amp., 110 volts A.C.; available in momentarily open and closed.

Cat. No.	Type	List Price
1470	Mom. open	$0.40
1471	Mom. closed	.40

MEDIUM DUTY ROTARY POWER SWITCHES

STEATITE—750 Watts at 115 Volts A.C.



An accurate, long-life unit for transmitter, power supply, and specialized application. Has positive, non-stall 20° Indexing, double wiping solid silver contacts. Mounting bushing ⅜" x 32" thd. x ⅜" long. 2 7/16" between locating rods. With adjustable stop and dial plate.

SHORTING TYPE

Cat. No.	Poles Per Sect.	Total Sections	Positions	List Price
JV-9000	1	1	2–17	$12.00
JV-9002	3	1	2–5	12.00
JV-9004	1	2	2–17	21.00
JV-9006	3	2	2–5	21.00
JV-9008	1	3	2–17	30.00
JV-9010	3	3	2–5	30.00
JV-9012	1	4	2–17	39.00
JV-9014	3	4	2–5	39.00
JV-9016	1	5	2–17	48.00
JV-9018	3	5	2–5	48.00
JV-9020	1	6	2–17	57.00

Non-Shorting Type

Cat. No.	Poles Per Sect.	Total Sections	Positions	List Price
JV-9001	1	1	2–17	$12.00
JV-9003	3	1	2–5	12.00
JV-9005	1	2	2–17	21.00
JV-9007	3	2	2–5	21.00
JV-9009	1	3	2–17	30.00
JV-9011	3	3	2–5	30.00
JV-9013	1	4	2–17	39.00
JV-9015	3	4	2–5	39.00
JV-9017	1	5	2–17	48.00
JV-9019	3	5	2–5	48.00
JV-9021	1	6	2–17	57.00

SECTIONS ONLY FOR JV-9000 SERIES

SHORTING

Cat. No.	No. Poles	Positions	List Price
KV-8	1	2–17	$9.00
KV-9	3	2–5	9.00

NON-SHORTING

Cat. No.	No. Poles	Positions	List Price
KVN-8	1	2–17	$9.60
KVN-9	3	2–5	9.00

INDEX ASSEMBLY ONLY FOR JV-9000 SERIES

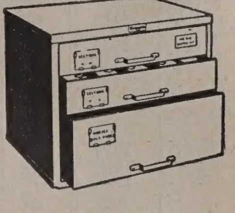
Includes shaft, tie rods, spacers, nuts and lockwashers, adjustable stop pin, 2" black bar knob and dial plate.
Cat. No. KV-7. List.. **$6.00**

Dial Plates—2¾" Diameter—20° Markings

P-230	Marked 1 to 5	List	**$0.30**
P-231	Marked 1 to 17	List	**$0.30**

ROTARY SWITCH KITS

1500 SWITCH KIT—A four drawer cabinet containing an adequate supply of sections and indexes listed on this page to custom build two 4 section switches, two 3 section, four 2 section, six 1 section, one 2 section condenser decade, and one 1 section resistor decade switch. For labs, engineers, hams, and experimenters needing specialized switching arrangements. Cabinet can be replenished with stock parts.
Cat. No. 1500 Kit. List................. **$50.00**



414 DELUXE SWITCH KIT—PHENOLIC—An extra large assortment of switch hardware and sections to make the widest possible assortment of phenolic switches to your needs. Contains 111 sections including 34 of the special "DD" deluxe sections listed below, 31 Index assemblies, 25 doz. spacers, 5 doz. shafts, 8 doz. tie rods, 40 dial plates, and complete hardware. Especially suited to large users of specialized switches. All kit parts may be purchased for refill from stock listings.
Cat. No. 414 Kit. List........ **$175.00**

419 DELUXE SWITCH KIT—STEATITE—Similar to the 414 Kit, but all sections are made of Centralab's high quality grade L-5 steatite ceramic, long regarded as "the best". Contains standard and special deluxe sections below. Has 81 sections, 31 Index Assemblies, 26 doz. spacers, 35 knobs, 30 dial plates and assorted hardware. This is Centralab's finest switch kit.
Cat. No. 419 Kit. List.................................... **$185.00**

"DD" DELUXE SWITCH PARTS

"Double-D" describes CRL's extra heavy (3/16" thick) rotor shaft switch and the corresponding hole in the section rotor. Also, deluxe switches have one-piece shaft, index, and rotor shaft. Choose "DD" for precise indexing and a longer lasting switch.

DELUXE SECTIONS

PHENOLIC

Cat. No. Short.	Cat. No. Non-Short.	No. Poles	Positions	List Price
AD	HD	1	6	$0.50
BD	JD	1	11	.75
CD	KD	2	5	.75
DD	LD	3	3	1.00
ED	MD	4	2	1.00
EED	..	4	3	1.50
FD	..	1	5	.75

Unused contacts shorted out 1 side of common

GD	..	1	10	1.00

All unused contacts shorted out

ND } Combine for resistance
PD } decade .75
QD For capacitance decade .75
P1D .. 1 10# 1.00
#1 off, 9 progressively shorting

STEATITE

Cat. No. Short.	Cat. No. Non-Short.	No. Poles	Positions	List Price
TD	XD	1	6	$1.35
UD	YD	1	11	1.35
RD	RRD	2	5	1.35
SD	SSD	3	3	1.35
VD	ZD	4	2	1.35
GGD	..	1	10	1.35

All unused contacts shorted out

NSD } Combine for resistance
PSD } decade 1.35
QSD For capacitance decade 1.35
P1SD .. 1 10# 1.35
#1 off, 9 progressively shorting

DELUXE INDEX ASSEMBLIES

Includes all hardware to use with separate sections listed above.

Cat. No.	Rotor Shaft Length	List Price
P-270	2"	$1.25
P-271	4"	1.75
P-272	8"	2.25

FOR OTHER SWITCH HARDWARE AND ACCESSORIES, see the latest complete Centralab catalog available at your distributor.

Shorting Contacts Make Before Break: Non-Shorting Contacts Break Before Make.

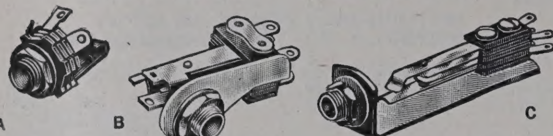
SWITCHCRAFT
INC.

CHICAGO 22, ILLINOIS

PHONE JACKS • PHONE PLUGS
SWITCHES: Push-Button . . .
Rotary and Lever Action . . .

"SWITCHCRAFT" produces many custom made products for the industry. Inquiries invited.

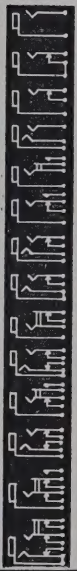
SWITCHCRAFT PHONE JACKS



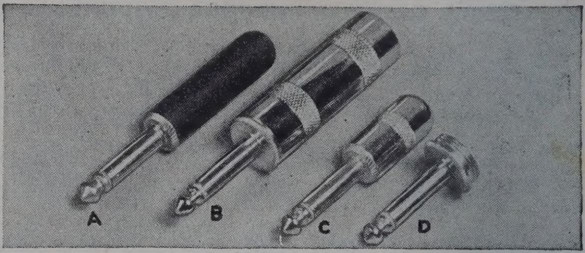
The **"Littel-Jax"** (A) features notched insulating washers mechanically interlocking springs and lugs; "V-bend" in tip spring firmly "holds" mating Plug; minimum space requirements, economical. Mounts in single ⅜" dia. hole. panels up to $\frac{5}{32}$" thick.
Our No. C-11 (JK-34A) mates with Army Plug PL-55; our C-12B (JK-33A) is adjusted to fit Army Plug PL-68; our S-13B is same as 13B except to fit W.E. Plug 109 and Signal Corps Plug PL-68.

The short frame type Jack **"SF-JAX"** (B), requires minimum panel depth, mounts in single ⅜" dia. hole, panels up to $\frac{3}{16}$" thick.

The long frame type Jack **"LF-JAX"** (C), requires minimum panel space, 3" deep, mounts in single ⅜" dia. hole, panels up to ¼" thick.

"LITTEL-JAX"		"SF-JAX"		"LF-JAX"		
Part No.	U.S.A. List Price	Part No.	U.S.A. List Price	Part No.	U.S.A. List Price	Schematic
11	$0.40					
C-11	$0.60	21	$0.55	31	$0.65	
		22	$0.70	32	$0.85	
12A	$0.45	22A	$0.70	32A	$0.85	
12B	$0.55					
C-12B	$0.70	22B	$0.70	32B	$0.85	
		23	$0.85	33	$0.95	
		23A	$0.85	33A	$0.95	
13B	$0.75					
S-13B	$0.95	23B	$0.85	33B	$0.95	
		23C	$0.85	33C	$0.95	
		23E	$0.85	33E	$0.95	
		24	$0.95	34	$1.10	
		24A	$0.95	34A	$1.10	
		24B	$0.95	34B	$1.10	
		25	$1.15	35	$1.25	
		26	$1.25	36	$1.40	

SWITCHCRAFT PHONE PLUGS



The **"Littel-Plug"** (A), radically new, fitting standard Jacks; solder lug type features clamp terminal serving as a cable clamp and terminal—perfect for metal braid cable. Screw type terminals—no clamp. Tenite or Metal handles are 1⅝" L., ½" dia. Exterior metal parts bright nickel Pl.

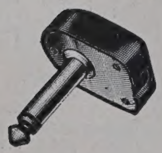
The **Standard Plugs** (B), conventional design, available both black Bakelite or metal handles 2$\frac{1}{16}$" L., $\frac{11}{16}$" O.D., except No. 90 and No. 160 have metal handles 1" long. Exterior metal parts bright Nickel Pl.

The **"Lug-Plug"** (C), low-cost two conductor, solder lug term. Exterior metal parts bright Nickel Pl. Red or Black Tenite Handles are 1⅝" L., ½" O.D. No. 380 has metal handle 1" L., bright Nickel Pl.

Plug Adapter (D) used with MC1F or MC1FA Connectors for use with standard Phone Jacks.

Part No.	U.S.A. List Price	Plug Type	Color or Type of Handle	Description
240	$0.75	"Littel-Plug"	Black	2-conductor. Screw Term.
245	$0.75	" "	Red	" " " "
270	$1.05	" "	Metal	" " "
250	$0.70	"Littel-Plug"	Black	2-conduct. Clamp-lug Term.
255	$0.70	" "	Red	" " " " "
280	$1.00	" "	Metal	" " " " "
260	$1.20	"Littel-Plug"	Black	3-conductor. Screw Term.
290	$1.40	" "	Metal	" " " "
267	$1.05	"Littel-Plug"	Black	3-conduct. Clamp-lug Term.
269	$1.05	" "	Red	" " " " "
297	$1.30	" "	Metal	" " " " "
40	$0.70	Standard	Black	2-conductor. Screw Term.
70	$1.20	"	Metal	" " " "
160	$0.90	"	Metal	" " " "
44	$0.50	Adapter	—	" " " "
60	$1.05	Standard	Black	3-conductor. Lug Terminals
90	$1.30	"	Metal	" " " "
350	$0.55	"Lug-Plug"	Black	2-conductor. Lug Terminals
355	$0.55	" "	Red	" " " "
380	$0.70	" "	Metal	" " " "

SWITCHCRAFT "FLAT PLUG"

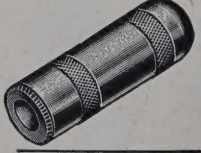


A radically new design, in both 2 and 3-conductor types. Removable Plastic Cap; terminals and body mechanically interlocked; Cover of Black or Red Tenite; one-piece tip rod; high grade insulation; terminal identification.

Ideal for theatre or church hearing-aid installations, office dictation equipment, disc, wire or tape recorders, test equipment, etc.

Part No.	U.S.A. List Price	Color or Type of Handle	Description
220	$0.75	Black	2-conductor Screw Term.
225	$0.75	Red	" " " "
227	$0.70	Black	" " Lug. Term.
229	$0.70	Red	" " " "
230	$1.10	Black	3-conductor Screw Term.
235	$1.10	Red	" " " "
237	$1.05	Black	" " Lug. Term.
239	$1.05	Red	" " " "

SWITCHCRAFT "EXTENSION JAX"



Features a clamp type terminal providing a cable anchor. Spring tempered nickel silver springs, designed to properly "hold" mating plug. Exterior metal parts N.P.; Terminals mechanically interlock. High grade insulation. Available in 2 and 3-conductor types, solder lug or screw type terminals. Bakelite or Brightly Nickel Plated Brass handles. Mates with any standard plug.

Part No.	U.S.A. List Price	Color or Type of Handle	Description
80	$1.15	Black	2-conductor. Screw Term.
88	$1.00	"	" " Lug. Term.
120	$1.55	Shielded	" " Screw Term.
128	$1.40	"	" " Lug. Term.
830	$1.55	Black	3-conductor. Screw Term.
838	$1.40	"	" " Lug. Term.
1230	$1.95	Shielded	" " Screw Term.
1238	$1.80	"	" " Lug. Term.

AVAILABLE AT ALL LEADING RADIO JOBBERS.
PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

Canadian Representative: ATLAS RADIO CORPORATION, Ltd., 560 King Street, W., Toronto 2B, Canada. Phone: Waverly 4761.

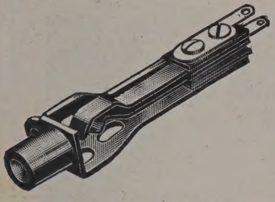
SWITCHCRAFT INC.

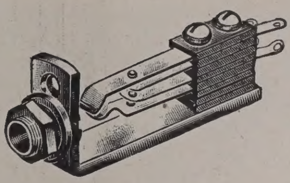
CHICAGO 22, ILLINOIS

PHONE JACKS • PHONE PLUGS
SWITCHES: Push-Button . . .
Rotary and Lever Action . . .

"SWITCHCRAFT" produces many custom made products for the industry. Inquiries invited.

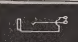
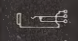
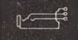
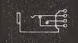
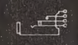
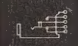
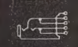
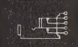
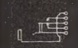
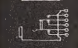
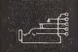
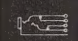
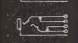
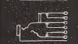
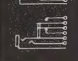
SWITCHCRAFT "T" & "M" JAX





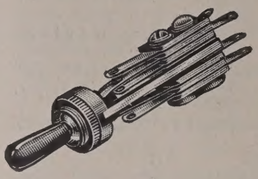
"T" JAX — Long frame, Switchboard type, designed for quality communication and military equipment.

"M" JAX — Heavy, long frame Jack, often referred to as Navy Jack, designed for industrial and military equipment requirements. Circuits listed are standard; more complex circuits available.

Part No.	U.S.A. List Price	Similar Jan Type No.	Schematic
"T-JAX"			
T-331	$1.05	JJ-086	
T-332A	$1.20	JJ-024	
T-332B	$1.20	JJ-022	
T-332C	$1.45		
T-333	$1.35	JJ-084	
T-334A	$1.50		
T-334B	$1.60	JJ-042	
T-334C	$1.50	JJ-072	
T-334F	$1.50	JJ-035	
T-335	$1.60		
T-336	$1.75	JJ-074	
"M-JAX"			
M-444B	$2.20	JJ-082	
*M-444	$2.30	*JJ-083	
M-446	$3.50	JJ-079	
M-446A	$3.90	JJ-081	

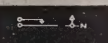
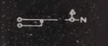
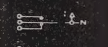
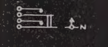
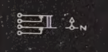
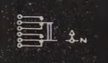
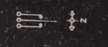
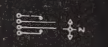
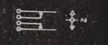
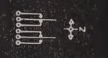
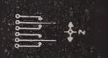
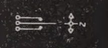
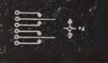
*Bushing .2085" to mate PJ-068, PJ-168 & PJ-309.

SWITCHCRAFT "LEV-R-SWITCHES"

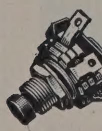


Unusually small, lever action switch, available in numerable circuits, to provide the simplest in switching design. Ideal for inter-comm. equip., test equip., model r.r. switch panels, recording equip., etc.

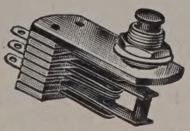
Mounts in single $\frac{15}{32}$" dia. hole, panels up to $\frac{5}{64}$" thick; Long life springs; soft, easy action — real detent action on locking types; Springs assembled into a conventional stack assembly; fine silver contacts rated at 3 amperes, 120 volts A.C., non-inductive load; other contacts available.

Part No. Non-locking	Part No. Locking	U.S.A. List Price	Schematic
TWO-POSITION TYPE			
3001	3001L	$1.95	
3002	3002L	$1.95	
3003	3003L	$2.25	
3004	3004L	$2.50	
3005	3005L	$2.50	
3006	3006L	$2.75	
THREE-POSITION TYPE			
3033	3033L	$2.50	
3034	3034L	$2.60	
3035	3035L	$2.60	
3036	3036L	$2.90	
3037	3037L	$2.95	
INTER-COMM. SWITCHES			
3033T		$2.50	
3037T		$2.95	

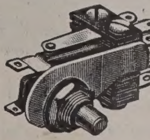
SWITCHCRAFT PUSH-BUTTON & ROTARY SWITCHES



A



B

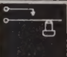
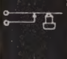
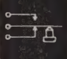
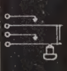
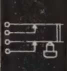
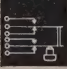


C

The **"Littel-Switch"** (A), available in 3 circuits, either in Red or Black one-piece Plastic Push-Buttons, non-locking only. Mounts in single ⅜" dia. hole, panels up to ¼" thick. Integral contacts are standard, recommended for low current only.

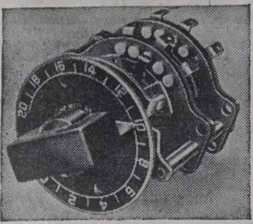
The **"FF-Switch"** (B), all common circuits, one-piece Black Plastic Push-Button, non-locking only. Mounts in single ⅜" dia. hole, panels up to ¼" thick. Fine silver contacts rated 3 amperes, 120 volts A.C., non-inductive.

The **"RS-Switch"** (C), locking and non-locking types, two-position rotary, all common circuits. Mounts in single ⅜" dia. hole, panels up to ¼" thick. Fine silver contacts rated 3 amperes, 120 volts A.C., non-inductive. Ideal for "Talk-Listen" switches in Inter-Communication Systems, Electro-musical equipment, Test equipment, Electro-therapy and X-Ray equipment.

"LITTEL-SWITCH"			"FF-SWITCH"		"RS-SWITCH"			Schematic Circuit
Part No. Red-Button	Part No. Black-Button	U.S.A. List Price	Part No.	U.S.A. List Price	Part NO. Non-Locking	Locking	U.S.A. List Price	
101	201	$0.85	1001	$0.95	2001	2001L	$1.00	
102	202	$0.85	1002	$0.95	2002	2002L	$1.00	
103	203	$0.90	1003	$1.10	2003	2003L	$1.20	
			1004	$1.20	2004	2004L	$1.25	
			1005	$1.20	2005	2005L	$1.25	
			1006	$1.45	2006	2006L	$1.65	

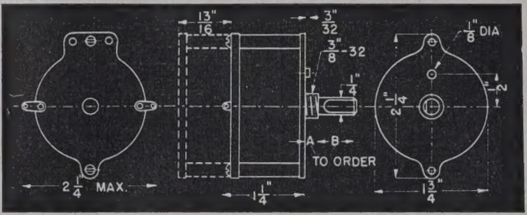
SWITCHES • ATTENUATORS • POTENTIOMETERS

New PRECISION INSTRUMENT SWITCH

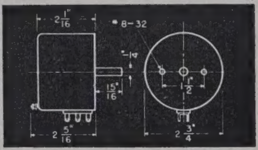


TYPE 2A SPECIFICATIONS:

Contact res.: 1-2 milliohms.
Contact material: Silver Alloy.
Contact design: Wiping, shorting and non-shorting.
No. of contacts: 2-21 per deck single pole, 2-5 four pole.
Spacing: 15° sh., 30° non-sh.
No. of poles per deck: One to four.
No. of decks: As desired. Life: 20,000 cyc. min.
Curr. carr. cap.: 3 Amp.
Max. oper. voltage: 120V (Will stand 2,000V between contacts and to ground.)
Insul. material: Low loss bakelite.
Insul. res.: 10,000 megohms to ground.
Mounting: Single hole ⅜″-32 bushing, std. length for up to ¼″ pnl. Special lengths to order. Size: 1¾″ dia.
Detent: Ball and spring.



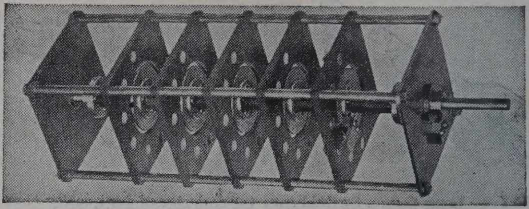
TYPE 700 ATTENUATORS "T"-PADS



Type	Impedance	No. of Steps	Db Per Step
TA-731.5	600/600	30	1.5
TA-731	600/600	30	1
TA-722	600/600	20	2
TB-731.5	500/500	30	1.5
TB-722	500/500	20	2
TC-731.5	250/250	30	1.5
TC-722	250/250	20	2
TD-731.5	200/200	30	1.5
TD-722	200/200	20	2
TE-731.5	50/50	30	1.5
TE-722	50/50	20	2
TF-731.5	30/30	30	1.5
TF-722	30/30	20	2

TYPE 1250 R.F. SWITCHES

This switch represents a new design necessitated by the increasing demands for switches capable of withstanding higher voltages and heavier currents.



SPECIFICATIONS:

Size: Each panel 4½″ x 4½″. For depth, see table.

Insulation: Mykroy insulation good for at least 25,000V to ground, 12,500V between contacts.

Contacts: Phosphor bronze with silver plated collector ring.

Spacing: 36° std. unit has 6 position on 180°, special units to order.

Shaft: Mykroy sections with flanges so decks can be added or taken off to suit. Stainless steel shaft ⅜″ dia. on both ends, can be furnished with 4″ hand wheel.

Current Carrying Capacity: 50 Amps. max. for steady load, no load switching.

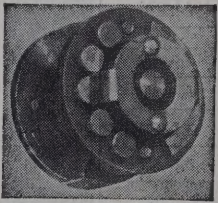
Bearing: Ball bearings at both ends.

Detent: Ball and gear detent for positive location on contacts.

Mounting Holes: For No. 10-32 screws on 3¾″ centers.

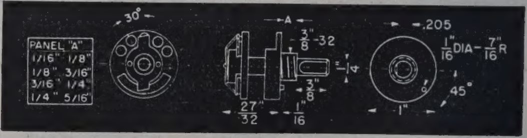
Weight: Single pole unit—4 pounds; add approximately 1 lb. for each additional deck.

New MINIATURE TAP SWITCH (2B)



The Type 2B miniature rotary tap switch is a development widely used in military and other equipment where space is at a premium.

Price Upon Request



SPECIFICATIONS:

Diameter 1″ max., up to 12 pos. shorting, 6 pos. non-shorting. Silver contacts, wiping rotors, 30° spacing single hole mounting, low loss insulation, 3A, 120V. AC.

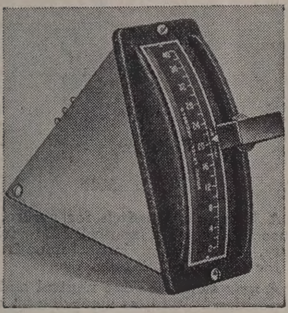
TECH LABORATORIES INC.

PALISADES PARK
NEW JERSEY

WRITE FOR NEW BULLETINS
on Gain Sets • Decade Resistors
Potentiometers • Viscosity Meters
Micro-Volters etc.

SPLICING BLOCKS• PRECISION AND VERTICAL ATTENUATORS

VERTICAL ATTENUATORS



Precision designed and manufactured to perform satisfactorily in every conceivable type of sound equipment, from the most elaborate broadcasting station to the simplest P.A. installation. Easily operated, completely shielded and dustproof. Narrow construction permits as many as seven mixers in one row on a standard 19″ rack.

SPECIFICATIONS:

Noise Level: 130-140 db. below zero level.

Range: Standard units are furnished with 20 steps at 2 db. and inf. loss (off) on last contact........22 contacts.

Circuit: Ladder "T" or potentiometer is standard, other circuits can be furnished to order.

Impedance: Standard values 30, 50, 150, 200, 250, 500 and 600 ohms for ladders, and 250,000 ohms for potentiometers.

Pilot Light Switch: Normally closed, open in off position, S.P.S.T.

Size: 2⅛″* x 5⅛″, depth 4¾″.
*(T-Pads are 2⅝″ wide.)

Insertion Loss: 2 to 5 db. depending on circuit.

Mounting: Two 6-32 screws in center line 4 13/16″ c. to c. Cut hole in panel 2 1/32″ x 4½″.

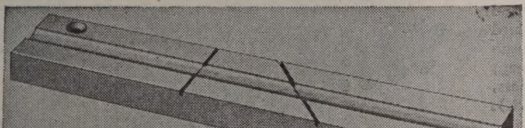
Dial: Linear, etched, easily read.

Contact Arms: Multiple laminated—wiping action.

Shielding: Electrostatic shield, dust proof.

Frequency Response: Flat to 50 kilocycles.

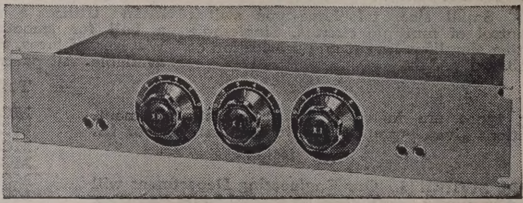
EDITALL TAPE SPLICING BLOCK



A new exclusively designed tape splicing block that can be used in conjunction with any tape recorder using standard tape. Splices can be easily and quickly made with a minimum of time and effort. Made of lifetime Duraluminum with no clips or mechanical parts to go out of order. Can be used as a separate unit or mounted as part of the tape recorder itself. Approximate overall dimensions—6½″ long x 1″ wide x ⅜″ high. Furnished with drilled and countersunk holes for easy mounting.

TYPE 850 PRECISION ATTENUATOR

With the increased demand for precision in laboratory measurement of volume levels, transmission losses, gains of amplifiers, etc., the older methods and standards have become obsolete. The present units are a complete redesign of our older precision attenuators and will serve as laboratory standards. These precision units are now furnished with jack terminals and are completely shielded. They are flat for all frequencies in the audio range and reasonably flat to 200 kc. up to 70 db. They are furnished with either rack or box mounting in gray finish.



SPECIFICATIONS:

Mounting: Type 850-AT and 850-AH, standard rack panels, 3 15/32″ x 19″ x ⅛″. Type 850-B furnished with dust cover.

Switches: Multiple leaf, silver alloy blades with silver contacts. Ball type detent.

Terminals: Telephone type jacks are used for input and output connections. Solder terminals are provided on rear panels for permanent connections. Insertion of plugs into twin-jacks lifts rear terminal connections.

Type of Resistors: All resistors are non-inductively wound. Negligible phase angle.

Accuracy of Resistors: All windings are adjusted to within 0.1% of the calculated value except on very low resistance values which are adjusted to within 0.25%.

Frequency Characteristics: For "T" configuration, the frequency error is negligible up to 80 db. loss, below 50 kilocycles. Balanced "H" configuration should be used where measurements above 50 kilocycles are necessary.

NEW TYPE 850 PRECISION ATTENUATORS

Type	Mounting	Circuit	Range	Db/Step	Size Rack Panel
850-AT	Rack	"T"	111 db.	0.1	3½″x19″ Std.
850-AH	Rack	Bal. "H"	111 db.	0.1	3½″x19″ Std.
850-BT	Box	"T"	93 db.	0.1	9½″x4″x4¾″
850-BH	Box	Bal. "H"	93 db.	0.1	9¾″x4″x4¾″
850-CT	Box	"T"	111 db.	0.1	12¾″x4″x4¾″
850-CH	Box	Bal. "H"	111 db.	0.1	12¾″x4″x4¾″

TECH LABORATORIES INC.

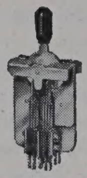
PALISADES PARK • NEW JERSEY

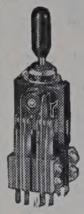
GENERAL CONTROL COMPANY
1203 SOLDIERS FIELD ROAD, BOSTON 34, MASSACHUSETTS

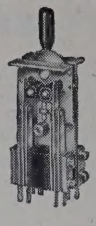
A complete line of Lever Switches by GENERAL CONTROL COMPANY

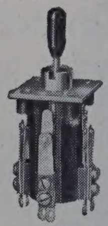
MCS

MCT-1


MCT-4


MCM


MCL


MCF

MCS A *new*, light-weight, miniature switch for instruments and communication systems. Positive lock or non-lock lever operation, various contact forms.

MCT-1 Small size, telephone-type switch for control of multiple circuits. Single-hole mounting simplifies layout and fabrication of switchboard panels.

MCT-4 Similar to MCT-1 but with two sets of four standard mounting holes. Same static shield between contact assemblies for low capacity circuits.

MCM Utilizes a stainless steel detent and a ball for smooth, positive lever action. Waterproof lever, rotary and angle actuators available. All parts non-corrosive.

MCL A heavy-duty switch for severe, constant use in electrical controls. Low-friction assembly, rugged cam, insure smooth lever action for complex buildups.

MCF A *new* switch — one neutral and four switch positions. Stainless steel detent, single hole mounting. Lock or non-lock with any contact combination.

•

Many types are in stock for immediate shipment. Quotations given promptly. **Write for Data Sheet LS.**

•

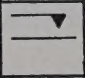
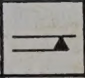
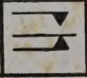
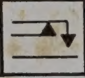
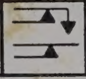
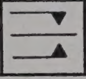
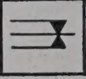
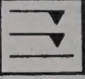
SPECIAL SWITCHES Our Engineering Department will be glad to supply information on *special* Lever Switches, and the use of various contact arrangements for other than manual actuation.

TYPE	AMPS.*	HIGH	WIDE	LONG**
MCS	1	7/8"	7/8"	2-1/16"
MCT-1	1	1¼"	¾"	2-5/16"
MCT-4	1	1½"	¾"	2-17/32"
MCM	5	1¼"	1¼"	2-25/32"
MCL	10	1¾"	1⅜"	3-15/16"
MCF	5	1¾"	1¾"	3"

* *125 volts, 60 cycles, non-inductive.*
** *From back panel to end of terminals.*

To obtain list price:— add contact prices to frame price.

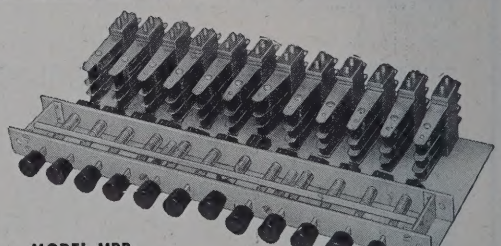
FRAME TYPES AND PRICES
MCS $1.35
MCT-4 $1.60
MCT-1 $2.00
MCM $3.00
MCL $4.00
MCF $13.75

Contact Forms	A	B	C	D	E	F	G	H	O
CIRCUIT									No Contacts
MCS	0.40	0.40	0.50	0.60	0.70	0.50	—	0.50	—
MCT-4	0.40	0.40	0.50	0.60	0.70	0.50	—	0.50	—
MCT-1	0.40	0.40	0.50	0.60	0.70	0.50	—	0.50	—
MCM	.60	.60	.75	.95	1.20	.75	.75	.75	—
MCL	.95	.95	1.05	1.30	2.00	1.05	1.05	1.05	—
MCF	.60	.60	.75	.95	1.20	.75	.75	.75	—

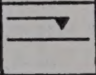
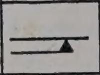
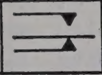
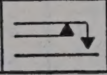
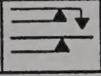
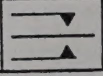
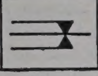
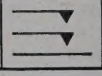
NOTE: Add 20% to MCS and MCT contact prices for contacts of palladium-silver alloy.

MASTER PUSH-BUTTON SWITCHES

A complete heavy duty push-button switch with high current-handling ability. Furnished in from two to a maximum of twelve positions. Standard frame types are: (1) locking, (2) non-locking, (3) release-lock, and (4) accumulative locking with single-button release. Besides standard mounting illustrated, MPB switches can be furnished on right-angle frame for use where back of panel space is limited. Std. mtg. 4-7/16" deep; rt. angle mtg. 1-9/16" plus ht. of contact assembly. Pure silver contacts, phosphor bronze springs. Rating: 5 amps., 125 volts a-c (non-ind.). **Write for data sheet PB.**


MODEL MPB

To obtain list price:— add contact prices to frame price.

CONTACT FORMS	A	B	C	D	E	F	G	H	O
Circuit									No Contacts
Price	$0.60	$0.60	$0.75	$0.95	$1.20	$0.75	$0.75	$0.75	—

FRAME TYPES	MPB-2	MPB-3	MPB-4	MPB-5	MPB-6	MPB-7	MPB-8	MPB-9	MPB-10	MPB-11	MPB-12
CONTACT POSITIONS	2	3	4	5	6	7	8	9	10	11	12
Lock Release	$5.00	$5.20	$6.40	$7.60	$8.80	$10.00	$11.20	$12.40	$13.60	$14.80	$16.60
No Two Interlock	5.50	5.95	7.40	8.85	10.30	11.75	13.20	14.65	16.10	17.55	19.60
*Accumulative Lock	See note	6.70	8.65	10.60	12.55	14.50	16.45	18.40	20.35	22.30	24.85

*Reset button requires one position in addition to standard contact positions. Reset button is on right-hand side unless otherwise specified.
*Reset button normally actuates no contacts but *can* be used to actuate *momentary* contacts if required.

NOTICE: All prices and specifications subject to change without prior notice. **General Control Company**

GENERAL CONTROL COMPANY

1203 SOLDIERS FIELD ROAD, BOSTON 34, MASSACHUSETTS

FOOT SWITCHES

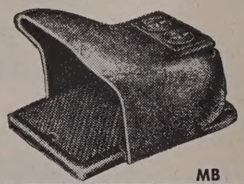
Models to meet every need. Sturdy cast-iron cases with durable finish. Standard rating 20 amp. 125 v. a-c. non-inductive. For heavy duty rating — 20 amp. 125/250/460 v. a-c.; 3/4 HP, 115 v. a-c. 1½ HP 230 v. a-c. — add $1.00 to price shown. Sizes: MX — 4½" x 4" x 2"; MC — 4" dia. x 2⅛" h; MI — 6¾" x 4" x 3"; MB — 8" x 5¼" x 5". **Write for Data Sheet FS.**

TYPES				CONTACT TYPES	CONTACT OPERATION
MX-3 $3.50	MC-13 $6.50	MI-23 $9.80	MB-33 $13.65	C	Double throw Spring return (ONE NORMALLY OPEN, ONE NORMALLY CLOSED)
— —	— —	MI-25 $11.25	MB-35 $16.25	ACO-C	First press transfers switch contacts Second press restores switch contacts (ONE NORMALLY OPEN, ONE NORMALLY CLOSED)
— —	— —	MI-26 $13.65		TS-AA	1st half-throw closes 1st switch 2nd half-throw closes 2nd switch Spring return
— —	— —	MI-27 $15.00	— —	2-C	Double pole Double throw Spring return (TWO NORMALLY OPEN, TWO NORMALLY CLOSED)
Add $1.00 to price shown, for foot switch with heavy duty 20-ampere rating. Add $1.65 to price shown, for foot switch with direct current rating.					

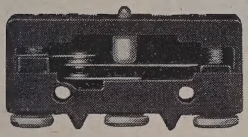
MX

MC

MI


MB

PRECISE MACHINE CONTROL depends upon PRECISE LIMIT SWITCHING



BASIC du•op SWITCH

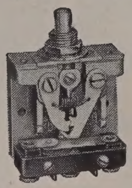
The type DU-S "du•op" is a precise action limit switch. The centrally-located plunger acts *directly* on the wide phosphor-bronze blade to insure instantaneous contact at each point of repetitive plunger travel. Delays of pre-travel blade action are eliminated — an important factor at high switching speeds.

Write for Data Sheet DU

Ratings: 20 amps, 125 volts a-c, non-inductive
Size: 1-15/16" x 29/32" x 11/16"
Price: Type DU-S . . . $1.90 each, list

LIMIT SWITCHES

These two new limit switches . . . the *spring-return* "du•op" and the *maintained alternate contact operation* "A-C-O" . . . are designed to meet the latest requirements for precise limit switching at high speed machine operation. General Control Company limit switches are compact in size, and are provided with a variety of mounting arrangements. Quality manufacturing and materials insure long life and dependable operation.



NEW A-C-O SWITCH (Alternate Contact Operating)

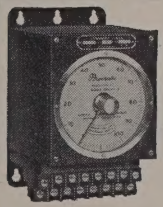
The type "A-C-O" is a maintained position limit switch, particularly well adapted for rugged industrial use. Operation is such that the first press of the plunger transfers the contacts, the second press restores them. Unusually fast and dependable switching is obtained from the unique cam arrangement.

Write for Data Sheet AC.

Ratings: 20 amps, 125 volts a-c, non-inductive
Size: 2-25/32" x 1-1/16" x 1-15/16"
Price: Type A-C-O . . . $10.00 each, list

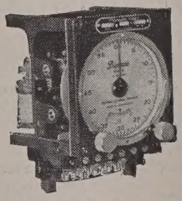
PROMATIC CONTROL EQUIPMENT

Years of experience have provided the basis for the well-rounded line of Promatic Control Equipment. Timing, counting, photo-electric control — are only a part of the design service offered by the General Control Company.



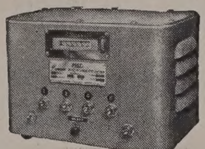
ELECTRONIC TIMERS

Promatic Electronic Timers, type ET, to control short time periods from .060 second to 60 seconds, are available in a variety of frame types, terminal arrangements, and mountings. Double pole double throw auxiliary load contacts are rated at 10 amps, 125 volts a-c, n.i. Selection of control circuits to handle any timing application. Prices from $35.00 each, list. Write for Data Sheet ET.



SYNCHRONOUS-MOTOR TIMERS

Promatic Synchronous-motor Timers, type SY, to control long time ranges up to 24 hours, are available to match cast frame type ET timers. New patented "O"-ring clutch eliminates gears and costly maintenance problems. Time period easily adjusted, and continuously indicated on the large dial. Prices from $55.00 each, list. Write for Data Sheet SY.



POST PROMATIC COUNTERS

A precise instrument for industrial use which will count at rates in excess of 10,000 units per second. Either pre-determined or accumulative types available. Actuation by means of photo-cell, pulse, or magnetic pick-up. Prices from $225.00 each, net. Write for Data Sheet CO.

NOTICE: All prices and specifications subject to change without prior notice. **General Control Company**

SPECIALTIES MANUFACTURING CO.

Spemco Products

4149 CASS AVE. DETROIT 1, MICH., U. S. A.

FOR THE LATEST IN DESIGN AND DEVELOPMENT, BE SURE IT IS

SPEMCO

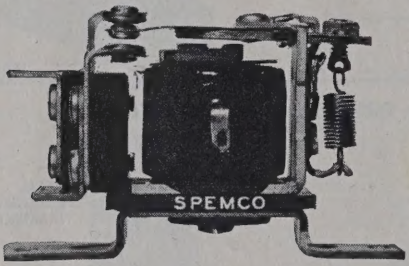
ALL-PURPOSE RELAYS

The Spemco Relays are an entirely new design from both mechanical and electrical standpoint.

These relays are not designed to meet a price but built of the highest quality material and workmanship. A trial of one of these Spemco Relays will convince you.

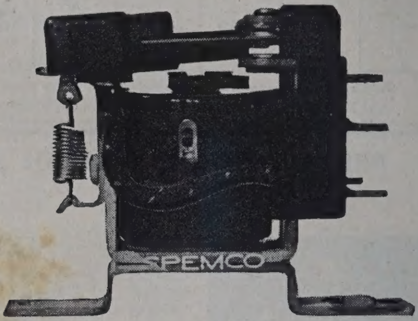
.... "It's Just a Relay to You, But a Reputation to Us"

S. P. D. T. SERIES 1500
S. P. D. T. SERIES 1200



$2\frac{3}{16}$" length 1¾" high 1⅛" width

D. P. D. T. SERIES 1400



$2\frac{3}{16}$" length $2\frac{3}{16}$" high 1¾" width

AC

Description		OHM Subject to Plus or Minus 10%	AC Non-Inductive* Ampere Rating		Maximum Single Phase Horse Power		Coil Terminal Location	Coil Rating Volt Amperes		Approx. Net Weight in Ounces	Type	Catalogue No.	Net Price
			110V	220V	110V	220V		Inrush	Sealed				
S.P.D.T.	110 V	530	10	5	1	1	on Coil	7.4	6	4.8	Q	1200	$4.15 ea.
S.P.D.T.	12 V	9.2	10	5	1	1		7.4	6	4.8	N	1201	4.15 ea.
S.P.D.T.	6 V	1.5	10	5	1	1		7.4	6	4.8	A	1202	4.15 ea.
S.P.D.T.	24 V	33	10	5	1	1		7.4	6	4.8	B	1203	4.15 ea.
S.P.D.T.	220 V	2150	10	5	1	1		7.4	6	4.8	D	1204	4.15 ea.
D.P.D.T.	110 V	500	10	5	1	1		9.8	7.2	6.5	QQ	1400	5.50 ea.
D.P.D.T.	12 V	4	10	5	1	1		9.8	7.2	6.5	NN	1401	5.50 ea.
D.P.D.T.	24 V	16	10	5	1	1		9.8	7.2	6.5	PP	1402	5.50 ea.
D.P.D.T.	220 V	2000	10	5	1	1		9.8	7.2	6.5	RR	1403	5.50 ea.
D.P.D.T.	6 V	1.5	10	5	1	1		9.8	7.2	6.5	TT	1404	5.50 ea.

DC

Description		OHM Subject to Plus or Minus 10%	CONTACT RATING IN AMPERES* (Non-Inductive Load)			Coil Terminal Location	Coil Rating in Watts (20° C)	Approx. Net Weight in Ounces	Type	Catalogue No.	Net Price
			24V D.C.	110V A.C.	220V A.C.						
S.P.D.T.		2500	10	10	5	on Coil	1.8	4.5	SR 2.5	1500	$4.15 ea.
S.P.D.T.		5000	10	10	5		1.8	4.5	SR 5	1501	4.90 ea.
S.P.D.T.		10000	10	10	5		1.8	4.5	SR 10	1502	4.95 ea.
D.P.D.T.	6 V	30	10	10	5		1.8	6.3	SS	1405	5.50 ea.

*Open type rating. Enclosed rating—90% of open rating.

RELAYS DESIGNED IN ACCORDANCE WITH OUR INTERPRETATION OF UNDERWRITERS SPECIFICATIONS.

These Spemco magnetic relays can be used for remote control of electric power and lighting loads, pilot lights and audible signals. It may also be used for controlling small single phase motors, serve as circuit switching relays for machine tools, processing control, electrical interlocking systems, electronic applications, follows a "Bug" F B and many other applications too numerous to mention; however, relays serve as control devices only and do not provide motor overload or short circuit protection.

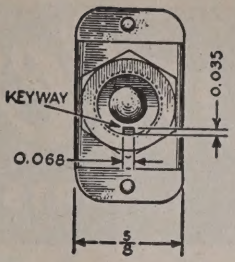
MAGNET COILS for AC Coils only. Relay coils are available for voltages ranging from 1½ to 220 volts with commercial frequencies of 25, 50 and 60 cycles. Coils are designed for continuous service and will operate safely at plus 10% or minus 15% rated voltage.

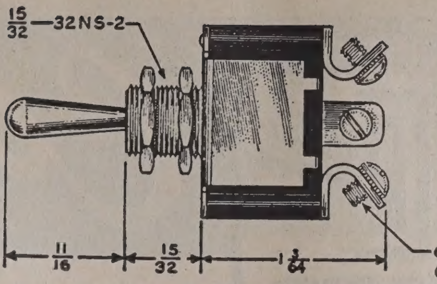
All coils are designed for 50/60 cycle service for any given voltage rating. Coils will pick up readily at 80% of rated voltage. All magnet coils are impregnated and baked.

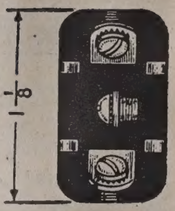
POINTS. Fine silver to silver contacts provide long life and low contact resistance. Silver contacts never require cleaning or dressing and do not corrode, thus reducing maintenance. Substantial contact pressure assures dependable contact action even on light loads or low voltages.

All wiring terminals are accessible from the front of the relays and are so arranged that relays may be mounted on minimum centers without obstructing wiring terminals of adjacent relays. All Steel parts are plated.

Single Pole Switches— Toggle Type

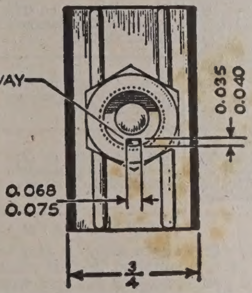


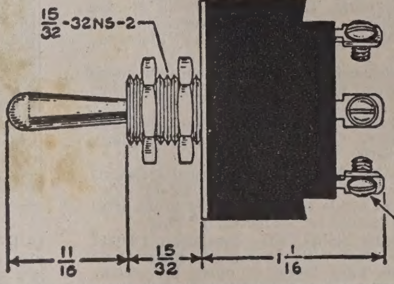


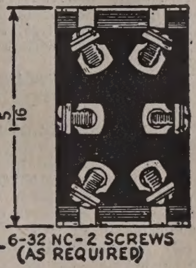


Carling Catalog Numbers							Electrical Circuit Characteristics		
Government Type Conforming to Specs.			Commercial Type—UL						
JAN		Mil	15 Amp.-125 V. AC. 10 Amp.-250 V. AC. ¾ HP-115-230 V. AC.		6 Amp.-125 V. AC. 3 Amp.-250 V. AC. ⅙ HP-115-230 V. AC.				
Screw Terminals	Solder Lugs	Screw Terminals	Solder Lugs	Screw Terminals	Solder Lugs	Screw Terminals	Up Position	Center Position	Down Position
							SINGLE POLE		SINGLE THROW
ST40A	ST42A	AN3021-2	2FA53	2FA54	2FA63	2FA64	On	—	Off
ST40B	ST42B	AN3021-9	6FA57	6FA58	6FA67	6FA68	On	—	Momentarily Off
ST40C	ST42C	AN3021-8	6FA53	6FA54	6FA63	6FA64	Off	—	Momentarily On
							SINGLE POLE		DOUBLE THROW
ST40D	ST42D	AN3021-3	2FB53	2FB54	2FB63	2FB64	On	—	On
ST40E	ST42E	AN3021-1	2FC53	2FC54	2FC63	2FC64	On	Off	On
ST40F	ST42F		6FB53	6FB54	6FB63	6FB64	On	—	Momentarily On
ST40G	ST42G	AN3021-7	6FC53	6FC54	6FC63	6FC64	Momentarily On	Off	Momentarily On
ST40H	ST42H	AN3021-5	6FC57	6FC58	6FC67	6FC68	On	Off	Momentarily On

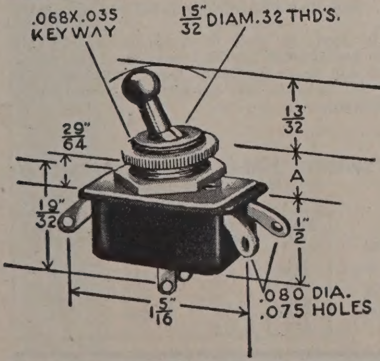
Double Pole Switches— Toggle Type







Carling Catalog Numbers							Electrical Circuit Characteristics		
Government Type Conforming to Specs.			Commercial Type—UL						
JAN		Mil	15 Amp.-125 V. AC. 10 Amp.-250 V. AC. ½ HP-115-230 V. AC.		6 Amp.-125 V. AC. 3 Amp.-250 V. AC. ⅙ HP-115-230 V. AC.				
Screw Terminals	Solder Lugs	Screw Terminals	Solder Lugs	Screw Terminals	Solder Lugs	Screw Terminals	Up Position	Center Position	Down Position
							DOUBLE POLE		SINGLE THROW
ST50K	ST52K	AN3027-2	2GK53	2GK54	2GK63	2GK64	On	—	Off
ST50L	ST52L	AN3027-4	6GK57	6GK58	6GK67	6GK68	On	—	Momentarily Off
ST50M	ST52M	AN3027-5	6GK53	6GK54	6GK63	6GK64	Off	—	Momentarily On
							DOUBLE POLE		DOUBLE THROW
ST50N	ST52N	AN3027-3	2GL53	2GL54	2GL63	2GL64	On	—	On
ST50P	ST52P	AN3027-1	2GM53	2GM54	2GM63	2GM64	On	Off	On
ST50R	ST52R	AN3027-6	6GL53	6GL54	6GL63	6GL64	On	—	Momentarily On
ST50S	ST52S	AN3027-7	6GM53	6GM54	6GM63	6GM64	Momentarily On	Off	Momentarily On
ST50T	ST52T	AN3027-8	6GM57	6GM58	6GM67	6GM68	On	Off	Momentarily On



OTHER TOGGLE SWITCHES—SINGLE AND DOUBLE POLE—UL

Catalog No.	Rating 6 Amp. 125 V.—3 amp. 250 V.
ST10A also **ST11A**	(SPST-Gov't. Type Approved For Airborne Electronics)
110-6	Single Pole Single Throw —End Solder Lugs
110-B6	Single Pole Single Throw —Bottom Solder Lugs
111-6	Single Pole Single Throw —Leads
112-6	Single Pole Double Throw —Lugs
112-6A	Single Pole Double Throw —Leads
216-6	Double Pole Single Throw —Lugs
216-6A	Double Pole Single Throw —Leads
316-6	Double Pole Double Throw —Lugs
516-6	Single Pole —2 Circuit —Lugs
516-6A	Single Pole —2 Circuit —Leads
138 (1 Amp.)	Double Pole—Double Throw —Center Off—Lugs

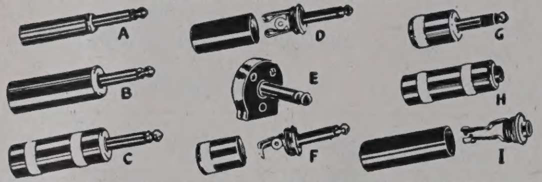
CARLING ELECTRIC, INC.

WEST HARTFORD 10, CONN.

Electrical CPC Controls
CARTER PARTS COMPANY

Carter PARTS COMPANY

CARTER TELEPHONE PLUGS



Tip and sleeve circuits: Fit standard 2-conductor jacks. New types now stocked for wide range of uses. For headphones, microphones, speakers, musical instruments, medical and test equipment, many others.

Molded Bakelite handles. Metal Shield handles: Bright nickel-plated, with internal 2-layer, high-quality tubular insulators, preventing short-circuits in handle.

(A) "imp" PHONE PLUG, 250 SERIES—Trend to miniaturization is reflected in the new "Imp" phone plug. All features same as standard plug but ½ size.

(B and C) CARTER TWO-CONDUCTOR PHONE PLUGS—A general-purpose type popular for years. Terminals flat with grooves for one or two tips, terminals or wires. Broad-headed knurled binding screws with screw driver slots. Handles 1 1/16″ diameter, 2 1/16″ long.

(D) ONE-WAY PLUG. Spring-grip terminals for one pair phone tips. No set screws. Stay-cord anchor. Handles 1 1/16″ diameter, 1½″ long.

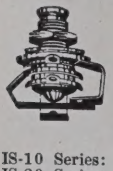
(E) TWO-CONDUCTOR FLAT PLUG—Molded black bakelite body ¼″ thick, 1 1/16″ diameter. Ideal for panel or wall-plate. Phone tips gripped by set-screws. Stay-cord anchor.

(F) TWO-CONDUCTOR PLUG SHIELDED—Designed for cords with center conductor and braided return-conductor shield. Perfect anchoring; sleeve terminal bends to clamp shield braid after soldering in 5/32″ hole. Shield handle 1 1/16″ diameter, 1″ long.

(G) TWO-CONDUCTOR PLUG SHIELDED—Insulation 19/64″ wide between tip and sleeve. Used with 3-conductor plugs short "ring" spring to sleeve; this plug leaves it open, for circuit switching. Also fits 2-conductor jacks. Shield handle 1 1/16″ diameter, 1″ long.

(H and I) TWO-CONDUCTOR PORTABLE JACKS—Used on end of extension cord. Fit 2-conductor plugs. Screw terminals take one pair phone tips, terminals or wires. Shield handles have tubular insulator to prevent short circuits.

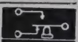
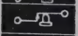
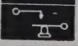
"imp" PUSHBUTTON SWITCHES



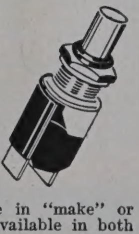
These switches are similar in general construction to the widely popular Carter "Imp" Short Jacks. Finest nickel-silver springs with integral contacts. High grade phenolic insulation. Body, nuts and washers bright nickel-plated. Red or black Kolonite 1-piece shaft and button. Springs fully insulated from the mounting bushing and shaft.

Made in three circuit arrangements:

IS-10 Series:	"Make" contact, single circuit, normally open
IS-20 Series:	"Break" contact, single circuit, normally closed
IS-30 Series:	"Break-Make" contacts, single circuit, double throw

Description	Circuit	Contact Arrangement	Red Pushbutton Stock No.	Black Pushbutton Stock No.
One-piece combined shaft and pushbutton. Mount in ⅜″ hole in panels up to 7/32″ thick. Supplied with one nickel-plated hex. nut and washer.		"Single Make"	IS-11	IS-13
		"Single" Break"	IS-21	IS-23
		One "Break-Make"	IS-31	IS-33

CARTER'S "imp" PLUNGER SWITCH



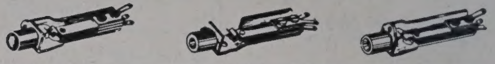
- Wiping-Rotating Action
- Minimum Arcing
- No Impact Load on Plunger
- Longer Life
- No Corroding Carbides or Oxides
- Silver Plated Contactor and Terminals

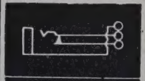
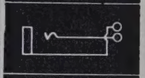
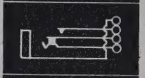
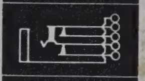
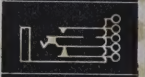
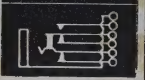
Electrical Specifications and Types Available: Carter's "imp" Plunger switch is available in a variety of styles to meet most demands for this type of a switch.

Electrical Specs: "Imp" plunger switch is designed to handle ¾ Amperes at 100-125 Volts, ¼ Amperes at 250 Volts.

CIRCUITS: "Imp" plunger switch is available in "make" or "break" when plunger is operated. "Imp" is available in both "grounded" or "ungrounded" types.

CARTER TELEPHONE JACKS



Circuit	Function	Part Numbers		
		AJ-Frame	BJ-Frame	CJ-Frame
	Break Contact on Tip Spring	AJ-181	BJ-181	CJ-181
	Open Circuit	AJ-211	BJ-211	CJ-211
	Separate Make	AJ-151	BJ-151	CJ-151
	Break Contact on Tip Spring, and Separate Break Contacts	AJ-161	BJ-161	CJ-161
	Break Contact on Tip Spring, and Separate Make Contacts	AJ-251	BJ-251	CJ-251
	Break Contact on Tip Spring, and Separate Break-Make Contacts	AJ-361	BJ-361	CJ-361

SPECIFICATIONS

CONTACTS: Zinc-silver alloy is standard. Coin silver, fine silver and others can also be supplied in production quantities. For coin slver, the last digit of part number is changed from 1 to 2. Example: AJ-182.

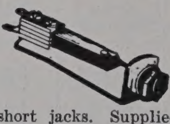
BUSHING: Plain brass is standard. Available with nickel-plate when specified. For nickel plated bushings, last digit of part number is changed from 1 & 2 to 3 & 4 respectively.

SPRINGS: Spring tempered phosphor bronze, nickel plated, with soldering terminals hot tinned.

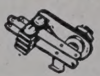
INSULATION: Spacers made of natural, grade XXP laminated phenolic, wax impregnated; screw insulating tubing is polystyrene or hard rubber depending on the required length. Lifters, when used, are made of dark bone fibre, wax impregnated. The leaf insulators, when used, are made of natural fabric base laminated phenolic, wax impregnated.

FRAME: Cold rolled steel, cadmium plated.

LONG AND SHORT FRAME JACKS

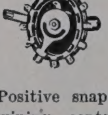


LONG JACKS . . . The original long jacks were adapted from the telephone switchboard jacks. Long rugged, phosphor-bronze springs parallel to the plug axis give precise action. These jacks take minimum panel mounting space, less than the short jacks. Supplied with nickel-plated hex. Shoulder mounting nut and nickel-plated washer.



SHORT JACKS . . . Carter short jacks are small and compact, but do a full-sized job. Depth behind the panel is cut down by placing the tempered nickel-silver springs parallel to the panel. High quality sheet bakelite and tubular ebonite insulators are used throughout—no paper or fibre used in Carter Jacks. Supplied with nickel-plated hex. mounting nut and nickel-plated washer.

Short and long jacks mount in single ⅜″ hole in panels up to 5/16″ thick. Fit of the plug in the jack is not affected by the thickness of the panel. Fit all standard plugs in two and three conductor types. Strong bright cadmium plated steel frame. All contacts between springs are fine silver, giving minimum contact resistance.



"imp" TAP SWITCH

Bushing length ⅜″ Shaft 9/16″ from end of bushing.

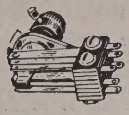
Positive snap action — strong wiping contact grounded to shaft and bushing. In operation, contact breaks between makes — non-shorting.

Stock No.	No. of Positions	Stock No.	No. of Positions
602	2	608	8
603	3	609	9
604	4	610	10
605	5	611	11
606	6	612	12
607	7		

Carter PARTS COMPANY

Electrical EPC Controls
CARTER PARTS COMPANY

CARTER JACK SWITCHES

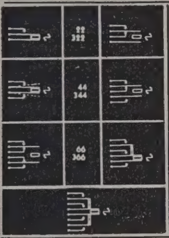


Rotary Two and Three Position Long and Short Types

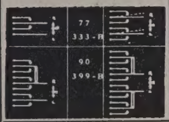
SHORT JACK SWITCHES—Similar in design to Carter short jacks, these switches are small and compact.

LONG JACK SWITCHES—Similar in design to Carter long jacks, these are full-size switches, but take less panel space than the short jack switches.

TWO POSITION SWITCHES

Circuits and Stock Nos.		Contact Arrangement	Stock Nos.	
			Long Jack Switches	Short Jack Switches
	33	Single make (SPST)	22	322
	333	Single break-make (SPDT)	33	333
	55	Two makes (DPST)	44	344
	355	One make-break, one make (1 SPDT-1 SPST) (Nor. Op.)	55	355
	660	Two break-makes (2 SPDT)	66	366
	306	Three makes (3 SPST-Normally Open)	660	306
	880 388	Four makes (4 SPST-Normally Open)	880	388

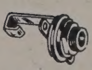
THREE POSITION SWITCHES

	88	Single pole double throw, center off	77	333-B
	366-B	Two pole double throw, center off	88	366-B
	120	Three pole double throw, center off	90	399-B
	312-B	Four pole double throw, center off	120	312-B

"imp" SHORT JACKS

No. 1 Open Circuit "imp" Short Jack—Has tip and sleeve circuits only. Electrical equvalent of Nos. 101 and 501.

No. 2A—Closed Circuit "imp" Short Jack—Similar to No. 1, with an additional spring making contact with tip spring until plug is inserted. Electrical equivalent of Nos. 102-A and 502-A.



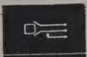
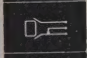
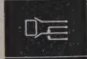
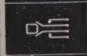
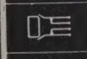
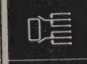
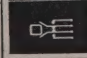
No. 2B Microphone "imp" Short Jack—A new 3-conductor jack, having tip, ring and sleeve circuits. Fits standard 3-circuit microphone plugs. Electrical equivalent of Nos. 102-B and 502-B.

Inquire regarding JAN Specs. Jacks and Plugs

SHORT PUSHBUTTON SWITCHES

Non-Locking and Locking Types

Silver contacts for minimum resistance. High-quality, nickel-silver spring. Bright cadmium-plated steel frame. Highest quality insulation used throughout.
Mount in single ⅜″ hole in panels up to $\frac{9}{32}$″ thick.
Supplied with ½″ polished black bakelite button and set-screw, 1 nickel-plated hex. mounting nut and washer.

	Stock Nos.	Contact Arrangements	Non-Locking Type	Locking Type
	422-M 422-AM	Single Make Contact	422-M	422-AM
	422-B 422-AB	Single Break Contact	422-B	422-AB
	433 433-A	Single Break-Make Contact	433	433-A
	444-M 444-AM	Two Make Contacts	444-M	444-AM
	444-B 444-AB	Two Break Contacts	444-B	444-AB
	666 666-A	Two Break-Make Contacts	666	666-A
	555 555-A	Combination Break One and Make Two Contacts	555	555-A

VARIABLE RESISTORS — Wire Wound Type

Standard Specifications

Most Carter control units are made of standard stock parts. The shaft and housing are constructed of steel, cadmium plated. Bushing and hex. nuts are brass, but can be supplied nickel-plated. Terminals are made of steel, silver-plated over copper plate. Insulating material as described for individual types. Low temperature — coefficient wire used on all units except where physical size of wire will not permit.

Stock Number		Resist. Ohms	Stock Number		Resist. Ohms
Pots.	Rheos.		Pots.	Rheos.	
MP-½	MR-½	½	MP-40	MR-40	40
MP-1	MR-1	1	MP-50	MR-50	50
MP-2	MR-2	2	MP-75	MR-75	75
MP-3	MR-3	3	MP-100	MR-100	100
MP-6	MR-6	6	MP-200	MR-200	200
MP-10	MR-10	10	MP-400	MR-400	400
MP-15	MR-15	15	MP-500	MR-500	500
MP-20	MR-20	20	MP-1000	MR-1000	1000
MP-25	MR-25	25	MP-1500	MR-1500	1500
MP-30	MR-30	30			

Type MP

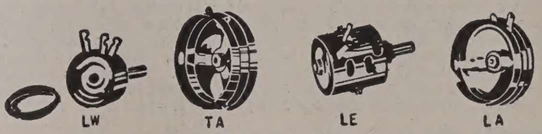
Stock No.	Value in Ohms	Stock No.	Value in Ohms
RCP-10	10	RCP-800	800
RCP-20	20	RCP-1M	1000
RCP-30	30	RCP-2M	2000
RCP-50	50	RCP-3M	3000
RCP-100	100	RCP-4M	4000
RCP-200	200	RCP-5M	5000
RCP-300	300	RCP-6M	6000
RCP-400	400	RCP-10M	10000
RCP-500	500	RCP-15M	15000
RCP-600	600		

Type RCP

Stock No.	Resist. Ohms	Stock No.	Resist. Ohms
PW-100	100	PW-1M	1000
PW-150	150	PW-2M	2000
PW-200	200	PW-3M	3000
PW-250	250	PW-5M	5000
PW-300	300	PW-7500	7500
PW-400	400	PW-10M	10000
PW-500	500	PW-20M	20000
PW-800	800	PW-50M	50000

Type PW

CARTER "T" & "L" PAD WIREWOUND ATTENUATORS



(LW) 4-WATT "L" PADS ENCLOSED SINGLE TYPE. BODY: $1\frac{7}{16}$″ diameter, $\frac{11}{16}$″ deep. BUSHING: ⅜″ diameter, ⅜″ long. SHAFT: ¼″ diameter, 1½″ long from bushing. Mount in single ⅜″ hole.

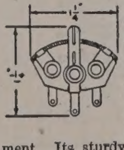
(TA) 10-WATT "T" PADS OPEN FRAME TYPE. BODY: $2\frac{11}{16}$″ diameter, $\frac{27}{32}$″ deep. BUSHING: $\frac{7}{16}$″ diameter, ⅜″ long. SHAFT: ¼″ diameter, $\frac{7}{16}$″ long, from bushing.

(LE) 8-WATT "L" PADS ENCLOSED DUAL TYPE. BODY: $1\frac{7}{16}$″ diameter, 1½″ deep. BUSHING: ⅜″ diameter, ⅜″ long. SHAFT: ¼″ diameter, 1½″ long, from bushing.

(LA) 15-WATT "L" PADS OPEN FRAME TYPE.

STOCK NO.	IMPEDANCE
LW/TA/LE/LA—8	8 Ohms
LW/TA/LE/LA—16	16 Ohms
LW/TA/LE/LA—50	50 Ohms
LW/TA/LE/LA—200	200 Ohms
LW/TA/LE/LA—500	500 Ohms
LW/TA/LE/LA—1000	1000 Ohms

TYPE AD ADJUSTABLE WIREWOUND RESISTOR

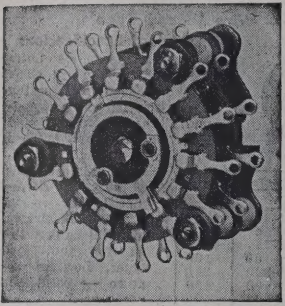


The Carter Type AD Resistor is an inexpensive and compact adjustable resistor capable of dissipating one watt. The arm is slotted for ease of adjustment. Its sturdy construction permits mounting either by its terminals or through the large eyelets.

Stock No.	Resist. in Ohms	Stock No.	Resist. in Ohms
AD-10	10	AD-200	200
AD-20	20	AD-250	250
AD-25	25	AD-400	400
AD-40	40	AD-500	500
AD-50	50	AD-750	750
AD-75	75	AD-1000	1000
AD-100	100	AD-2000	2000

INSTRUMENT AND TESTER SWITCHES (LAMINATED)

Rotary Selector — Single and Multi-Gang — Non-Shorting and Shorting

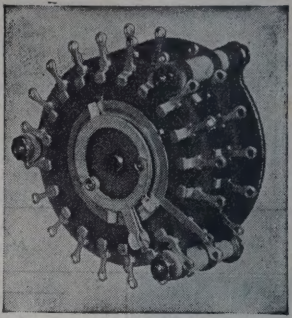

SS-14-2

JBT Instrument-type Rotary Selector Switches are used widely in quality test equipment, portable instruments, inspection setups and avionics where trouble-free, dependable performance is of major importance. Available in two basic types—14 and 20 position—the design gives extra contacts in minimum space. One to six decks.

FEATURES:

Reliability—Rigid, 3-post deck suspension, instead of the usual 2; all current carrying parts are brass or phosphor bronze, nickel coated and then heavily plated with pure silver to meet 100 hour salt spray test; ball bearing action, beryllium-copper spring on SS-14; phosphor bronze on SS-20, and sharp detent assure positive indexing. Springs of both switches are generally replaceable without disturbing soldered connections. Laminated plastic decks and rotors selected for maximum mechanical and dielectric strength.

Exceptional Compactness—14-position switch takes 13 circuits and "off" in 2" circle; 20-position switch handles 19 circuits and "off" in 2-23/32" circle. Extra decks add only 5/16".


SS-20-2

Low Contact Loss—Double-grip collector arms, and large-area contacts, silver to silver, result in an average contact resistance of .007 ohms or less during the useful life of the switch.

Ample Dielectric—AC or DC; normal carrying capacity (not make-and-break), 1 amp.; maximum momentary capacity (not make-and-break), 5 amp.; maximum voltage between contacts and ground, 1000 volts R.M.S.; between decks and ground, 2000 volts R.M.S.

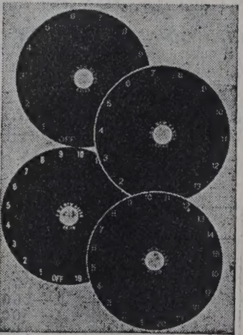
Military Variations—The following can be supplied on special order at extra cost: (a) laminated plastic, Grade LTS-E-3 or better, per Spec. JAN-P-13; (b) vacuum impregnation of rotors, decks, spacers, and ceramic spacers with approved fungicides; (c) hot tin dip on contact surfaces to be soldered, presently available in 14 positions only; (d) 14 or 20 live positions, no off (add suffix F, as SS-14-2F).

BASIC 14-POSITION: 1¼" Bar knob supplied only on individually packed units—not on bulk orders unless specified. **Collector arm** placed directly opposite to flat of shaft, unless otherwise specified. **Contact lugs** and common lugs positioned as shown, 13 contacts per deck. **One to six decks;** for each additional deck (or gang) add 5/16" to depth. **Continuous rotation type** supplied unless otherwise specified. **Adjustable Stop** normally is supplied on standard cataloged switches. **Panel locator** positioned as shown unless otherwise specified on bulk orders.

BASIC 20-POSITION: 2" Bar knob supplied only on individually packed units—not on bulk orders unless specified. **Collector arm** placed directly opposite to flat on shaft, unless otherwise specified. **Contact lugs** and common lugs positioned as shown, 19 contacts per deck, continuous rotation types. **One to six decks;** for each additional deck, add 5/16" to depth. Continuous rotation type supplied unless otherwise specified. **Panel locator** positioned as shown unless otherwise specified on bulk orders.

SWITCH KIT (Laminated Phenolic)

Many of the 14 and 20 position laminated switches shown on this page, plus special variations as needed, can be assembled quickly from the kit shown on the preceding page. Designers, service engineers, laboratories, and industrial maintenance departments will especially appreciate the convenience, flexibility, and time saved.



ETCHED DIAL PLATES

For SS-14 or MS-14 Series; and for SS-20 or MS-20 Series. Dull black finish — with raised bright metal numerals. 2½" diameter.

EP-13	off thru 13	**$0.21**
EP-14	1 thru 14	**.21**
EP-19	off thru 19	**.21**
EP-20	1 thru 20	**.21**

Non-Shorting—Break before make. **Shorting**—Make before break.

LAMINATED SWITCHES, SS-14 TYPE

(14 positions; angular indexing 25° 43')

Model	Positions Per Circuit	Circuits Per Deck	Decks or Gangs	Shorting, Non-Shorting	Boxed, Including Knob
SS-14-1	14	1	1	N-S	**$1.50**
SS-14-1A*	5†	2	1	N-S	**1.55**
SS-14-1S*	14	1	1	S	**1.50**
SS-14-1CS‡	14	1	1	CS	**1.85**
SS-14-2	14	1	2	N-S	**1.80**
SS-14-2A*	5†	2	2	N-S	**1.95**
SS-14-2S	14	1	2	S	**1.80**
SS-14-2CS‡	14	1	2	CS	**2.55**
SS-14-3	14	1	3	N-S	**2.25**
SS-14-3S*	14	1	3	S	**2.25**
SS-14-4	14	1	4	N-S	**2.90**
SS-14-6	14	1	6	N-S	**4.25**

*Standard items, but not regularly stocked; check with your electronic parts distributor.

†Denotes correction in former catalogs; 5 positions include 4 "live" and 1 "off".

‡Complete shorting — all contacts shorted except one in use.

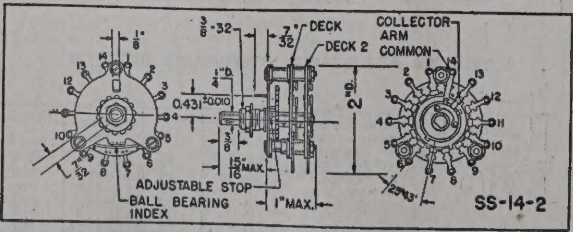
LAMINATED SWITCHES, SS-20 TYPE

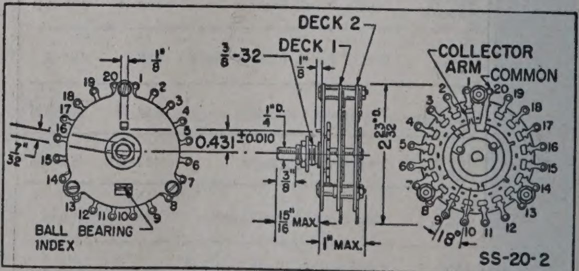
(20-positions; angular indexing, 18°)

SS-20-1	20	1	1	N-S	**$1.95**
SS-20-1A*	6§	2	1	N-S	**2.00**
SS-20-1S*	20	1	1	S	**1.95**
SS-20-2	20	1	2	N-S	**2.40**
SS-20-2S*	20	1	2	S	**2.40**
SS-20-3	20	1	3	N-S	**3.25**
SS-20-4	20	1	4	N-S	**3.95**
SS-20-6	20	1	6	N-S	**5.60**

*Standard items, but not regularly stocked; check with your electronic parts distributor.

§Denotes correction in former catalogs; 6 positions include 5 "live" and 1 "off".



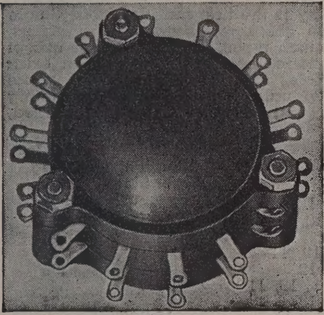


Instruments J-B-T **Testers**

J-B-T INSTRUMENTS, INC.

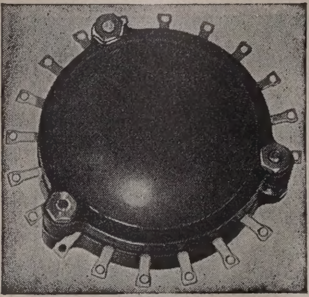
NEW-BUT PROVED-MOLDED ROTARY SELECTOR SWITCHES

Fully Enclosed — Single and Multi-Gang — Shorting and Non-Shorting



MS-14-2

- All moving contacts enclosed — minimizes dirt and corrosion.
- Contact lugs permanently integrated into switch assembly.
- Sturdy construction with 3-post deck suspension, double grip collector arms, and rectangular drive shaft through decks for precision indexing.
- Interchangeable, electrically and mechanically, with J-B-T 14- and 20-position laminated switches, widely used by industry and Armed Services.



MS-20-1

FEATURES:
For description of rigid 3-post construction; heavy pure silver plating to meet 100-hour salt-spray test; exceptional compactness; .007 ohm average contact resistance; current-carrying capacity and voltage breakdown, see adjoining page on SS-14 and SS-20 laminated switches. Besides fully enclosing all the moving contact parts, the molded switches differ from the laminated construction in the design of the detent mechanism, but both types provide the positive indexing which quickly identifies the superior quality of J-B-T switches.

BASIC 14-POSITION MOLDED (MS-14): 13 circuits and "off" per deck in 2" circle for compactness. **Molded end cover** regularly supplied on MS-14 series. **1¼" Bar knob** included with individually boxed units—not on bulk orders unless specified. **Collector arm** placed directly opposite to flat of shaft, so that knob pointer points to live contact. **Common or "off" contact lug** is bent down for ready identification. **Internal construction:** double-grip collector arms hold contact lug on upper and lower surfaces; collector ring is self-wiping. **One to ten decks** add 5/16" per deck (or gang) to depth; for eleven decks and over, add ½" to depth for double indexing mechanism; add 5/32" to depth for adjustable stop mechanism. **Continuous rotation type** supplied unless adjustable stop (type MAS) is ordered or, on quantity orders, pre-set fixed stops are specified. **Panel locator** is available on quantity orders when specified; on MS-14-4 and MS-14-6, extra hex nut and longer screw are supplied for inverting supporting screw nearest common, thus converting into panel locator.

BASIC 20-POSITION MOLDED (MS-20): 19 circuits and "off" per deck in 2 23/32" circle for compactness. **Molded end cover** regularly supplied. **2" Bar knob** included with individually boxed units—not on bulk orders unless specified. **Collector arm** placed directly opposite to flat of shaft, so that knob pointer points to live contact. **Common or "off" contact lug** is bent down for ready identification. **Internal construction:** double-grip collector arms and self-wiping collector ring are standard construction. **One to seven decks;** add 5/16" per deck (or gang) to depth. **Continuous rotation type** supplied; on quantity orders, pre-set fixed stops are available. **Panel locator** available on quantity orders when specified; on MS-20-4 and MS-20-6, extra hex nut and longer screw are supplied for inverting supporting screw nearest common, thus converting into panel locator.

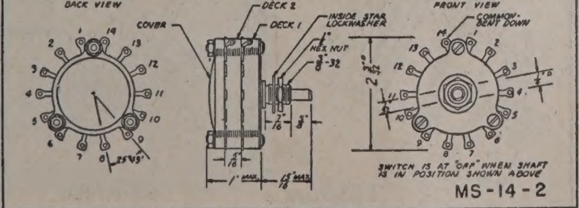
MOLDED SWITCHES, MS-14 TYPE

(14 positions; angular indexing 25° 43')
Continuous rotation, no stops

Non-Shorting—Break before make. **Shorting**—Make before break.

Model	Positions Per Circuit	Circuits Per Deck	Decks or Gangs	Shorting, Non-Shorting	Depth Behind Panel	Boxed Including Knob
MS-14-1	14	1	1	N-S	13/16"	**$1.50**
MS-14-1S*	14	1	1	S	13/16"	**1.50**
MS-14-2	14	1	2	N-S	1⅛"	**1.80**
MS-14-2S*	14	1	2	S	1⅛"	**1.80**
MS-14-3	14	1	3	N-S	1 7/16"	**2.25**
MS-14-4	14	1	4	N-S	1¾"	**2.90**
MS-14-6	14	1	6	N-S	2⅜"	**4.25**

* Standard items, but not regularly stocked; check with your electronic parts distributor.



MOLDED SWITCHES, MS-20 TYPE

(20 positions; angular indexing 18°)

Continuous rotation, no stops

Non-Shorting—Break before make. **Shorting**—Make before break.

Model	Positions Per Circuit	Circuits Per Deck	Decks or Gangs	Shorting, Non-Shorting	Depth Behind Panel	Boxed Including Knob
MS-20-1	20	1	1	N-S	13/16"	**$1.95**
MS-20-1-6DT	2	6	1	N-S	13/16"	**2.70**
MS-20-1S*	20	1	1	S	13/16"	**1.95**
MS-20-2	20	1	2	N-S	1⅛"	**2.40**
MS-20-2-6DT	2	6	2	N-S	1⅛"	**3.90**
MS-20-2S*	20	1	2	S	1⅛"	**2.40**
MS-20-3	20	1	3	N-S	1 7/16"	**3.25**
MS-20-4	20	1	4	N-S	1¾"	**3.95**
MS-20-6	20	1	6	N-S	2⅜"	**5.60**

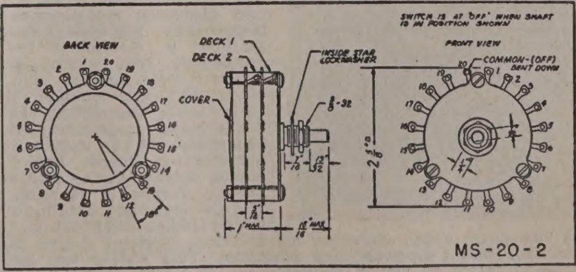
ADJUSTABLE STOP MOLDED SWITCHES, MAS-14 TYPE

(14 positions; angular indexing 25° 43')

IMPORTANT: Enclosed adjustable stop mechanism located on panel side of switch increases switch length 5/32" behind panel; decreases effective bushing length by 3/32"; and shortens shaft extending from bushing by 1/16".

Non-Shorting—Break before make. **Shorting**—Make before break.

Model	Positions Per Circuit	Circuits Per Deck	Decks or Gangs	Shorting, Non-Shorting	Depth Behind Panel	Boxed Including Knob
MAS-14-1	14	1	1	N-S	31/32"	**$1.95**
MAS-14-1S*	14	1	1	S	31/32"	**1.95**
MAS-14-2	14	1	2	N-S	1 9/32"	**2.25**
MAS-14-2S*	14	1	2	S	1 9/32"	**2.25**
MAS-14-3	14	1	3	N-S	1 19/32"	**2.70**
MAS-14-4	14	1	4	N-S	1 29/32"	**3.35**
MAS-14-6	14	1	6	N-S	2 17/32"	**4.70**

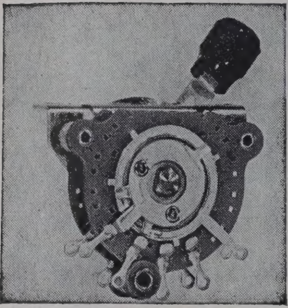


Instruments J-B-T Testers

J-B-T INSTRUMENTS, INC.

LEVER ACTION SWITCHES, KITS AND SPECIAL SWITCHES

4-Position Lever Switches with Standard Mounting — New 12-Circuit Double-Pole


SS-14-1L4F-2
Two-Deck Lever-Action Switch

Positive Type, 3 or 4 position. These sturdy lever switches are adapted from the well known J-B-T SS-14 series rotary switches, widely specified where quality is the first consideration. Single deck lever models, not illustrated, now are built into tube checkers, inspection apparatus, communications set-ups, and hobby equipment. The new 4-position types, interchangeable except in slot length with the standard 3-position, make an excellent replacement wherever an extra circuit is needed. Mounting dimensions are given below. Holes for 4-36 screws or ⅛" rivets can be supplied on long runs involving set-up charges. Individually boxed with 6-32 mounting hardware and KN-19 black knob, as shown. Spacing between single deck switches: recommeded, ¾"; minimum, 9/16". Also, see list of available mounting plates.

Model No.	Pos. per Circuit	Circuits per Deck	No. of Decks	Shorting or Non-Shorting	Stand Cont. Locations	Length of Lever Slot	Boxed, Including Knob
SS-14-1L3	3 pos., no "off"	1	1	N-S	common at 12 contacts 9, 10, 11	15/16"	**$0.75**
SS-14-1L4	3 pos. & "off"	1	1	N-S	common & off at 12 contacts 9, 10, 11	1-5/16"	**.85**
SS-14-1L4F	4 pos., no "off"	1	1	N-S	common at 12 contacts 8, 9, 10, 11	1-5/16"	**.85**
SS-14-1L3S	3 pos., no "off"	1	1	S	common at 12 contacts 9, 10, 11	15/16"	**.75**
SS-14-1L4S	3 pos. & "off"	1	1	S	common & off at 12 contacts 9, 10, 11	1-5/16"	**.85**
SS-14-1L3A	3 pos., no "off"	2	1	N-S	common at 9 & 10 conts. 6, 7, 8, 12, 13, 14	15/16"	**.90**

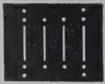
TWO-DECK LEVER-ACTION SWITCHES. These new 3- or 4-position, 2-deck switches cost a bit more than conventional types, but one look shows why they are worth it, and more! They use the same strong parts, 3-pole suspension, and double-grip collector arms which feature the SS-14 laminated phenolic rotary switches on the next page and the 1-deck lever switches on this page. Spacing is ⅜" between decks, the same distance as on TV twinlead wires. Excellent for centralized systems in radio, sound, intercommunication, or public address equipment. Convenient for connecting 3 or 4 single channel TV antennas to one receiver. Bracket mounting holes 1⅝" apart. Recommended spacing between switches, 15/16"; minimum spacing, 13/16". Non-shorting (break before make), positive action, individually boxed, including KN-19 knob and 6-32 hardware.

Model No.	Pos. per Circuit	Circuits per Deck	No. of Decks	Shorting or Non-Shorting	Stand Cont. Locations	Length of Lever Slot	Boxed, Including Knob
SS-14-1L3-2	3 pos., no "off"	1	2	N-S	common at 12; conts. 9, 10, 11 on decks 1 & 2	15/16"	**$1.35**
SS-14-1L4F-2	4 pos., no "off"	1	2	N-S	common at 12; conts. 8, 9, 10, 11 on decks 1 & 2	1-5/16"	**1.45**

SPRING-RETURN TYPE. The same instrument-quality, single-deck, 3-position lever switches as above may be ordered with spring return. Lever returns to one end, giving momentary action on the other two positions. Individually boxed with 6-32 hardware.

SS-14-1L3-R, 3 live positions, no off; non-shorting	**$0.85**
SS-14-1L3S-R, 3 live positions, no off; shorting	**.85**

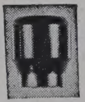
MOUNTING PLATES



These .035" stamped steel plates in black crackle finish simplify alignment of standard 3-position, 1-deck switches (Models SS-14-1L3, SS-14-1L3-R, SS-14-1L3S, SS-14-1L3S-R, and SS-14-1L3A, using 6-32 hardware). Separation is ¾" between switches; all plates are 2-3/16" high.

PL-36, ¾" long, for one switch	**$0.25**
PL-37, 1½" long, for two switches	**.35**
PL-38, 3" long, for 4 switches (Illus.)	**.40**

KNOBS



Spare Knobs of the push-on type may be purchased as follows:

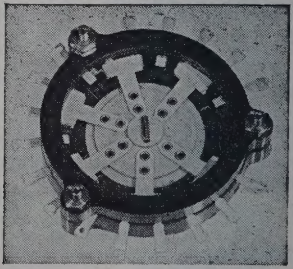
KN-17, black, modern pointed design, including metal insert, shown at left (out of stock when catalog published)	**$0.06**
KN-18, walnut, same as KN-19	**.05**
KN-19, black, round,, flat-type, as shown at right and regularly supplied; no insert required	**.05**

SWITCH KIT—14 and 20 POSITIONS

MODEL K-1. The instrument-quality, laminated phenolic switches described on the next page now are available in kit form for quick assembly. This arrangement is especially helpful to engineers, experimenters, hams, and electronic maintenance departments, for special assemblies or emergency requirements. The sturdy, 4-drawer, steel cabinet with 48 compartments contains 15 SS-14 index assemblies; 11 SS-20 index assemblies; 50 14-position decks, including non-shorting (break before make), shorting (make before break); A-type (2 circuits); CS-type (complete shorting); F-type (14 live positions); and 33 20-position decks including non-shorting, shorting; A-type (2 circuits); and F-type (20 live positions). One simple tool for pushing rotors on switch shafts is supplied with each kit. A replacement parts list is supplied for ordering refills through distributors, to keep the kit ready for instant use.

K-1	**$76.00**

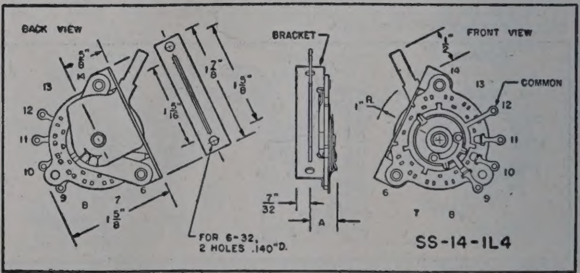
6-POLE or 12-POLE DOUBLE THROW
(Molded Type)



6DT SWITCHES. Double-throw switching, 6 circuits per deck, becomes easy with this unique rotary-type molded switch. It is fully enclosed and similar in appearance to the molded MS-20 switches described later in this catalog. The illustration at the right shows internal construction with back protective cover cut away. Circuit arrangement is designated on the metal front of the switch. Quality features include .007 ohm average contact resistance; heavy, pure-silver plating for 100-hour salt spray test; double-grip collector arms, and 3-post deck suspension. Available only in non-shorting (break before make).

2⅝" maximum diameter; one-deck, 13/16" behind panel; two-deck, 1⅛" behind panel.

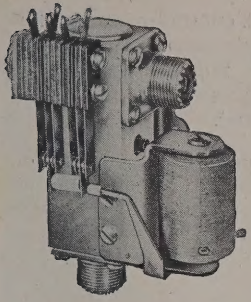
MS-20-1-6DT, 6-pole, double throw, 1 deck	**$2.70**
MS-20-6DT, 6-pole, double throw, 2-deck	**3.90**



Dimension A = 13/32" on 1-deck Switches; 23/32" on 2-deck.
Non-shorting (break before make) is shown.

Advance RELAYS

COAXIAL RELAY



Type 7204

This relay, for use with 52 ohm RG coaxial cable, has SPDT internal contacts, rated at 880 watts maximum. If desired, DPDT auxiliary contacts (as illustrated) may be had. Tests on a 52 ohm line show VSWR of 1.02:1.0 at 100 meg.

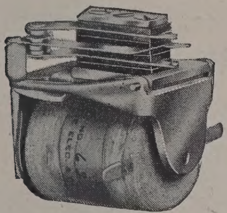
***List Prices:** (Up to 115 V A.C. or 40 V D.C.)

A.C.	D.C.		
7200	8200		**$16.63**
7204	8204	With auxiliary contacts	**20.63**

*For higher voltages up to 440 V A.C. or 240 V D.C., or for other Advance Coaxial Relays, see your nearest jobber.

Size (without auxiliary contacts): 1⅜″ x 2⅞″ x 3½″

MIDGET TELEPHONE RELAY



Type 5203A
"A" denotes
5-amp. contacts

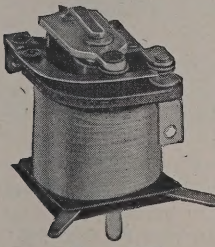
This small, yet sturdy relay is offered in any contact combination from SPST to 4PDT; with ⅛″, 1.5 amp. contacts, or with 3/16″, 5 amp. contacts. Coils draw from .1 to 2 watts D.C. or 1 to 1½ watts A.C. List prices below are for coils up to 115 V A.C. or 1000 ohms D.C.

A.C.	D.C.		
5201	6201	SPST N. O.	$4.65
5201A	6201A	SPST N. O.	4.92
5203	6203	SPDT	4.98
5203A	6203A	SPDT	5.51
5204	6204	DPDT	5.98
5204A	6204A	DPDT	7.05

For higher voltage coils, up to 220 V A.C. or 16,000 ohms D.C., see your nearest jobber. He can also show you other Advance Telephone Relays.

TINY MITE RELAYS

(FOR D.C. ONLY)



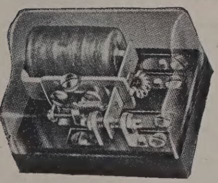
Type 003

In these tiny relays, which require less than ½ cubic inch mounting space, all switching is above ground. Contacts are rated at .35 amperes at 115 V A.C. (non-inductive). Power required is .2 to .5 watt. Coils are available for any D.C. voltage 1 to 80; resistances up to 5000 ohms. Weight: 10 grams. (45 relays per lb.). List prices below are for any coil up to 800 ohms (24 V D.C.). For higher resistances see your nearest jobber.

Type		List
003	SPST N. O.	$3.52
005	DPST N. O.	3.85

Size: 13/16″ x 13/16″ x 9/16″
(Overall dimensions with lugs as illustrated).
If desired, can be supplied with leads.

ULTRA-SENSITIVE D.C. RELAYS



Type 1200

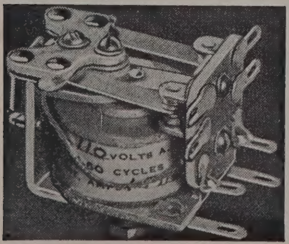
This relay combines many superior features — transparent plastic cover-molded Bakelite base — counter-balanced armature — high overall sensitivity . . . 5 milliwatts for positive operation — 2½ milliwatts with careful adjustment, and light contact load . . . **Three** adjustments with vernier screws: spring, and each contact. Contacts are SPDT, pure silver rated at 1.5 amperes at 115 V A.C. (non-inductive).
Supplied in coil resistances up to 40,000 ohms. **Be sure to specify resistance desired!**

List Prices:

Coil	Price	Coil	Price	Coil	Price
Up to 2200 ohms	$10.97	8700 ohms	$11.98	30000 ohms	$15.30
3500 ohms	11.31	14000 ohms	12.64	40000 ohms	18.63
5500 ohms	11.64	20000 ohms	13.31		

Base Dimensions: 2″ x 2 9/16″. **Height:** 1½″. **Weight:** 6¼ ounces.
Currently available only with DO priority

MIDGET RELAY



Series K1500 and K1600

Of particular interest where size and cost are factors, this new series of Midget Relays, of improved design, incorporates all of the fine construction features typical of the ADVANCE line. This unit measures only 1½″ x ¾″ x 1⅛″ high. Pure Silver contacts are used, ⅛″ in diameter. Standard coils are obtainable from 2 to 40 V D.C. and 1 to 115 V A.C. The following switch combinations can be supplied:

TYPE A.C.	TYPE D.C.	CONTACT COMBINATION	LIST PRICES
K1503S	K1603S	SPDT	$4.31
K1504	K1604	DP-DT	4.65

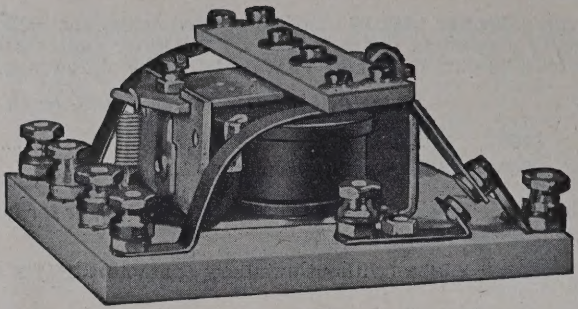
Advance RELAYS

TRANSMITTER RELAYS

Isolantite model Antenna Change-Over. Designed for use in Amateur Transmitters.

The contact system is Double Pole-Double Throw, using ¼″ Pure Silver contacts, with exceptional wiping action.

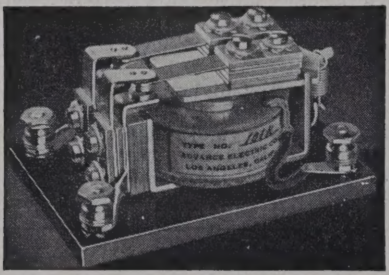
For high radio frequency control. Entirely hum-free where intended for A.C. operation, and highly efficient on D.C. supplies. All metallic parts are cadmium and chromium plated.


Type 400

Standard coils are for 110V A.C. They will also be supplied for lower A.C. or D.C. voltages at no increase in price.

List Price **$13.17**

KEYING RELAYS

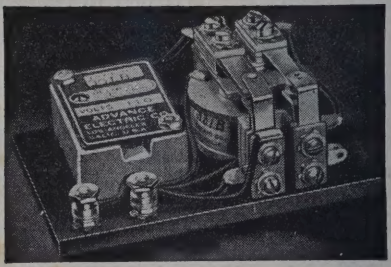

Type 101K—A.C.
Type 201K—D.C.

Designed expressly for use in Keying Circuits where it is desired to use low voltage across the key to control high voltage transmission through the Relay contacts. The heavy duty coil and strong return spring makes possible an exceptional keying speed. Two sets of ¼″ Pure Silver contacts in series allow a carrying capacity of 2500 volts. The complete unit, mounted on a 3/16″ Bakelite base with binding posts for coil connections, has over-all dimensions of 3″ x 2″ x 1⅜″ and is obtainable for A.C. operation to 115 volts or D.C. operation to 60 volts.

List Price **$7.32**

TIME DELAY RELAYS

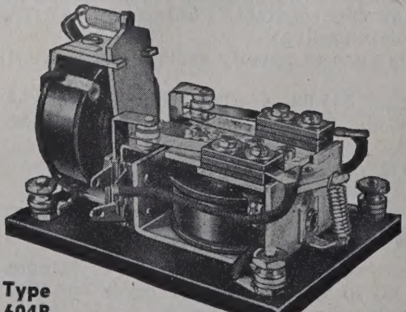
Type 304B
Type 354B



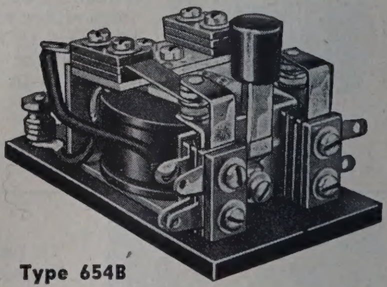
Available either with delay before make, 304B, or delay before break, 354B. This relay is provided with an adjustable range of 10 seconds to one minute. Recycling time is approximately 10 times the delay period. Both models are DPDT with ¼″ 10 ampere contacts (non-inductive). Available in voltages from 3 to 230 volts A.C. or D.C. Standard price applies up to 115V A.C., or 40V D.C. Dimensions 3¾″ x 2⅝″ x 1½″.

List Price **$15.65**

LATCHING RELAYS


Type 604B

These Relays are highly desirable for applications where it is impractical to have the holding coil in constant service. When the coil actuating the contact arrangement is momentarily energized, the armature is locked in the closed position, and may be released electrically (Type 604B) or manually (Type .654B).

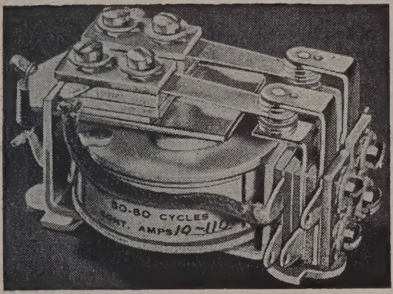

Type 654B

	List			List
Type 604B	**$12.77**	..............................Double Pole-Double Throw..	**Type 654B**	**$9.50**

The above list prices are for ¼″ contacts. For 3/16″ points deduct 25c—for ⅛″ points deduct 50c. When ordering these types SPECIFY THE VOLTAGE.

Advance RELAYS

INDUSTRIAL CONTROL RELAYS

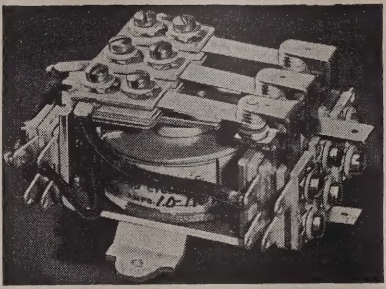


Type 964B

Designed mainly for industrial applications — air conditioning, lighting, and power transfer systems, the Type 964B Relays embody all of the rugged construction features demanded in units of this type without sacrificing the desirable qualities of the midget style. Available in DPDT, and to operate on standard A.C. and D.C. voltages.

	List
Type 964B—Double Pole-Double Throw	$7.32

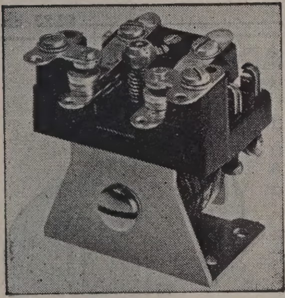
This three pole, double throw relay has the same general characteristics as the Type 964B except that it requires a slightly larger mounting area. Contacts are ¼″ silver, rated at 10 amperes at 115 V A.C. non-inductive. Solder lug terminals are provided for all connections and the metal mounting bracket has two tapped holes on 2″ centers for 6-32 screws.



Type 979B

	List
Type 979B	$8.78

GENERAL PURPOSE RELAY

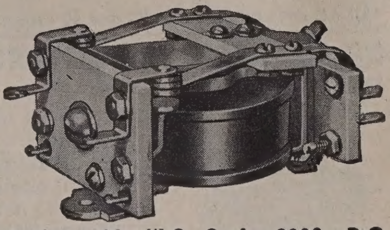


This Advance relay, with molded bakelite insulation, is compact, sturdy, and all electrical connections are well spaced and easily accessible.

Contacts are ¼″ diameter pure silver, rated at 15 amps. at 115 V. A.C. or 24 V. D.C. non-inductive. BE SURE TO SPECIFY CORRECT TYPE NUMBER AND OPERATING VOLTAGE WHEN ORDERING. PRICES BELOW ARE FOR A.C. COILS UP TO 115 VOLTS OR D.C. COILS UP TO 40 VOLTS.

	D.C.	A.C.		List
Type	9003	9103	SPDT—Double Make and Break	$8.47
Type	9004	9104	DPDT—Single Make and Break	8.47

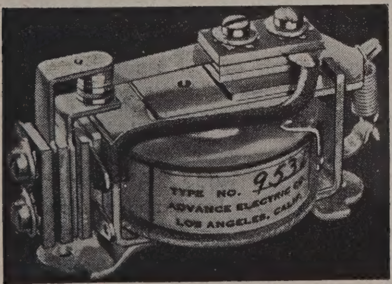
MIDGET TYPE R.F. RELAYS



Series 1000—A.C. Series 2000—D.C.

These models are sturdy, compact Double Pole - Double Throw Transmitter Relays, designed expressly for use in all types of mobile-portable communications equipment where space is at a premium. The insulation on this, as on the Type 400's, is Isolantite for both the cross-arm and end pieces, with all holes adequately well spaced to prevent structural weakness and possible "creepage." Coils are obtainable for all A. C. and D. C. voltages, and will operate in any position, the former consuming approximately four watts—the latter, two watts of power. Dimensions are 2¾″ x 1½″ x 1¼″.

List Price	$10.97



GENERAL PURPOSE RELAYS

Type 953B

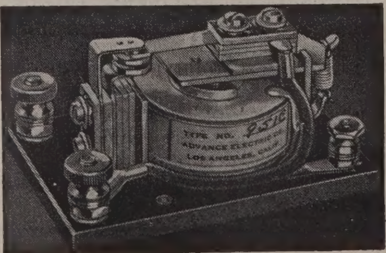
This relay affords maximum power and efficiency at low cost. Contacts are SPDT, rated at 10 amperes at 115V A.C. and are ¼″ pure silver. Solder lug terminals are provided and the relay is mounted on a metal bracket, same as the 964B and 979B. Coils available up to 40V D.C. and 115V A.C. at standard prices.

List Price	$5.12

GEN-E-MOTOR STARTING RELAY

Type 951C

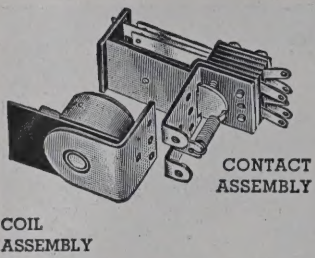
An exceptionally sturdy power transfer Relay, easily capable of handling the heavy current surge encountered on "cold" starts in motor-generator systems. The contacts are ⅜″ Pure Silver and have ample carrying capacity for the usual 200-500V converters. Heavy-duty in every phase of construction, this unit is not to be compared with the common five and ten ampere circuit controls. Base dimensions are 3″ x 2″ and each unit is complete with a braided generator-cable pig-tail and binding posts for all connections. Coils for 5½ to 32V D. C. or 1 to 115 A.C. .... **List Price 8.78**



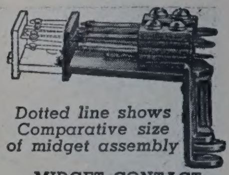
RELAYS BY GUARDIAN

A COMPLETE LINE OF AMATEUR AND INDUSTRIAL RELAYS

SERIES 200—INTERCHANGEABLE



Two basic parts—a coil assembly and a contact assembly—comprise this simple, yet versatile, relay. Coil assembly consists of coil and field piece. Contact assembly consists of switch blades, armature, return spring and mounting bracket. The new midget contact assembly, which is interchangeable with the standard assembly, is also available in either single pole double throw, or double pole, double throw. The standard contact assembly is 2⅞" long, 1¾" high, 1" wide. The midget assembly is 1⅝" long, 1½" high, 1" wide. The four contact assemblies can be used with any one of 13 coils to make a required relay. Contact points are rated at 8 amps., 115 volts, 60 cycles AC, non-inductive load.



MIDGET CONTACT ASSEMBLY

CONTACT SWITCH ASSEMBLIES	List Price ea.
Type 200-1—Stand., with SPDT Contact Ass'bly, 8 Amps.	$2.25
Type 200-2—Stand., with DPDT Contact Ass'bly, 8 Amps.	3.05
Type 200-4—Standard, DPDT, 12.5 Amps.	3.55
Type 200-M1—Midget, with SPDT Contact Ass'bly, 8 Amps.	2.20
Type 200-M2—Midget, with DPDT Contact Ass'bly, 8 Amps.	2.70

AC COILS*	List Price ea.
6 Volt	$2.70
12 Volt	2.70
24 Volt	2.70
115 Volt	3.40

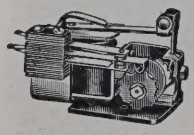
*All AC coils available in 25 and 60 cycles.

DC COILS	List Price ea.
6 Volt	$2.70
12 Volt	2.70
24 Volt	2.70
32 Volt	2.70
110 Volt	3.40
500-D—For Current Type Operation	3.55

CONTACT PARTS KIT 200-3. Assortment of contact parts to make other switch combinations. May be used with SPDT or DPDT contact assemblies to make 3PST, 4PST, 4PDT combinations, etc. Either contact assembly takes any combination up to four pole double throw. Includes complete assembly and wiring information for all possible combinations. Complete with all necessary hardware. Shipping weight 4 oz.

List Price............$2.25 ea.

RC-100 REMOTE LOCKING CONTROL RELAY



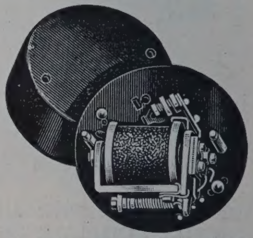
A Guardian development of the momentary impulse locking control relay. The circuit to the coil needs to be energized only long enough to close armature; contacts lock automatically. Each impulse reverses position of contacts. Standard coils operate on 115 volts, 50-60 cycles AC. Coils for other voltage and currents on specification.

Contacts, ¼" fine silver metal rated at 1500 watts at 115 volts, 60 cycle, non-inductive. Can also be used in AC primary circuits of any power supply delivering up to 1 KW. 3" long, 2⅛" wide, $1\frac{17}{32}$" high.

Applications—break-in control and phone to CW switching. Any circuit control where locking circuits are used.

	Shp. Wt.	List Price
RC-100-AR—(4PST)	8 oz.	**$8.70 ea.**
RC-100-BR—(3PDT) (SPDT) (DPST)	8 oz.	**9.05 ea.**

U-100 AND U-200 ADJUSTABLE UNDERLOAD RELAYS



Sensitive, precise, designed and constructed for long, trouble-free service. Relays are encased in attractive black finished metal containers, protecting them from dirt, dust and maladjustment. Normal current through the coil on the U-100 is 300 milliamperes with an adjustable range of 100 to 200 milliamperes DC. Normal current through the coil on the U-200 is 600 milliamperes with an adjustable range of 200 to 400 milliamperes. Oversize contacts of fine silver, rated for the AC primary of any power supply delivering up to 500 watts.

Radio Application—protection of class "B" audio equipment in case of class "C" load failure, also class "C" amplifier in case of excitation failure.

Industrial Application—Any DC circuit where it is desirable to maintain currents above a set value.

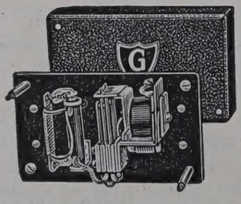
U-100 and U-200 are $3\frac{5}{16}$" in diameter, 2¼" high. Shipping weight 14 oz............**List Price $13.00 ea.**

T-100 AND T-110 TIME DELAY RELAYS

Standard coils operate on 115 volts, 50-60 cycles non-inductive AC. Coils available on other voltages on specification. Oversize contacts rated at 1500 watts on 115 volts, 50-60 cycles non-inductive. Can also be used in the AC primary of any power supply delivering up to 1 KW. Adjustable time delay for any period between 10 and 60 seconds.

Applications—Radio. In transmitter circuits to prevent damage of rectifiers and tube filaments by application of plate current before filaments are sufficiently heated.

Industrial. Any control problem requiring the changing of circuits after a predetermined interval.



GUARDIAN SERIES T-110 TIME DELAY RELAY

T-100—5¼" long, 3" wide, 2¼" high. Shipping weight 1¼ lbs. Laminated construction.

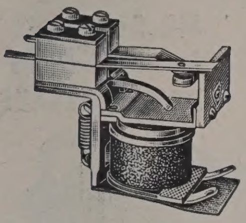
List Price............**$20.75 ea.**

The T-110 is a compact, sturdy, economical time delay relay for use in applications not requiring the capacities of the T-100. Contact capacity — 1250 watts on 115 volt, 60 cycle non-inductive AC. Can also be used in the AC primary circuit of any power supply delivering up to, and including, 1 KW. Adjustable time delay between 10 and 60 seconds.

T-110—$5\frac{5}{32}$" long, $3\frac{1}{16}$" wide, $2\frac{7}{16}$" high. Shipping Weight 8 oz............**List Price $20.75 ea.**

RELAYS BY GUARDIAN

A COMPLETE LINE OF AMATEUR AND INDUSTRIAL RELAYS



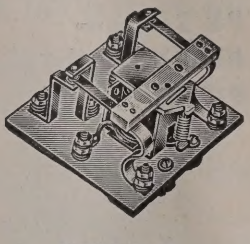
SERIES R-100
H.F. RELAY

HIGH FREQUENCY RELAYS

The Series R-100, R-100B, and A-300 Guardian Relays are primarily designed for high frequency applications. They are low-loss insulated, compact, economical and sturdily constructed. The R-100 and R-100B are AlSiMag insulated, while the A-300 is mounted on a mycalex base with mycalex contact mounting bar.

Radio Applications — Antenna changeover, break-in, high voltage keying, grid controlled rectifier keying, remote control of receiver and transmitter, and other high frequency applications.

Industrial Applications — Oven control, remote motor control, short wave therapy and diathermy, heating equipment.

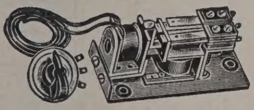


SERIES A-300
H.F. RELAY

	Length	Width	Height	Shpg. Wght. (oz.)	List Price ea.
R-100 —SPST (normally open)	2¾"	1"	2"	6	**$4.80**
R-100-B—SPST (normally closed)	2¾"	1"	2⅜"	6	**4.80**
R-100-C—SPDT	2¾"	1⅛"	2⅜"	6	**5.75**
R-100-G—DPDT	2¾"	1⅞"	2⅜"	6	**10.40**
A-300 —DPDT	3"	3"	2-1/16"	7	**11.00**

X-300-ER
ADJUSTABLE OVERLOAD RELAY

with Electrical Reset

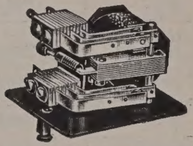


This relay offers positive, precise protection against current surges and continuous overloads — remote panel installation of the control potentiometer simplifying adjustment of relay to operate on any current value from 250 to 750 milliamperes — auxiliary contacts for pilot light indication of "overload" or "clear" position — reset relay can be operated from any convenient point. Voltage drop across overload coil is less than 10 volts at any current value. Insulation between coil and ground rated at 3000 volts.

X-300-ER—4¾" long, 1-15/16" wide, 2" high. Shipping weight 12 oz.

List Price..........**$11.20 ea.**

B-100 BREAK-IN RELAY



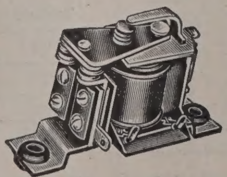
Specially designed for break-in operation on amateur transmitters. Low current drain and compact construction, plus the use of a laminated field piece and armature insuring efficient operation, make the B-100 an ideal relay for this application. Standard coil operates on 115 V., 50-60 cycle AC. Silver contacts rated at 1500 watts, 60 cycles AC non-inductive, and in AC primary circuits of any power supply delivering up to 1 KW.

B-100—2¾" long, 2⅛" high, 2¼" wide. Shipping weight 11 oz.

List Price..........**$13.00 ea.**

K-320 KEYING RELAY

A standard coil operates on 6 volts AC. Coils for other voltages on specification at a minimum of 10% additional to list price. Contacts—special over-size silver. Can handle 5,000 watts on 60 cycle non-inductive 115 volts AC and in AC primary circuit of any power supply delivering up to and including 1 KW. Control capacity—up to 2,000 volts with clean make and break.



Applications—Control of filament center tap keying of any stage having up to 2,000 volts on plate; primary keying or control of power supplies up to and including 1,000 watts; and grid-controlled rectifier keying of 3,000 volt power supplies.

K-320—3" long, 1½" wide, 1-15/16" high. Shipping weight 4 oz.

List Price..........**$5.45 ea.**

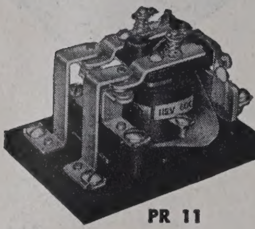
Potter & Brumfield

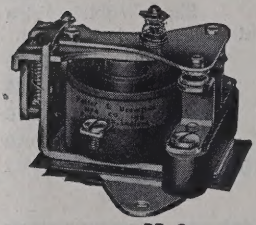
A TRADE-MARK OF QUALITY

On these pages we list a few of the relay types we class as standard. Stocks of either completed relays or component parts are kept on hand for quick assembly, resulting in unusually prompt delivery and lower prices. From these relays a type can be selected for almost any application.

All contact ratings given are for 115 volt 50-60 cycle, non-inductive load. Coils of all open relays baked varnish impregnated to government specifications, protects against moisture and mechanical damage. Sealed relay coils cellulose acetate wrapped.

PR Series—HEAVY DUTY POWER RELAYS


PR 11


PR 3

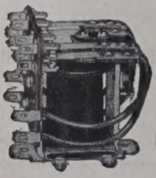
Designed for power circuits such as across-the-line, starting, up to 1 HP., heater loads up to 20 amperes, remote break-in control of transmitters, electro plating devices, elevator controls, or any high load circuit requiring fast, positive switching. AC types operate on approximately 10 volt amperes. DC types require approximately 2 watts. $\frac{5}{16}$" dia. pure silver contacts rated (double break) 20 A (single break) 15 A. Also available with U/L label under type designator PRAX. Auxiliary contacts up to SPDT with 1A rating can be provided for operation by the armature tail piece. Dimensions: PR1 to PR11 2$\frac{11}{16}$" x 2$\frac{13}{32}$" x 2$\frac{5}{16}$" Max. High. PR11—3$\frac{3}{8}$" x 2$\frac{1}{2}$" x 2$\frac{3}{8}$" high.

When ordering, specify coil voltage and frequency.

Contacts	A.C. RELAYS 6-12-24-115-230 Volts 50-60 Cy.		D.C. RELAYS 6-12-24-110 Volts	
	Normally Open	Net	Normally Open	Net
SPST	PR1A	$3.50	PR1D	$3.50
Heavy-Duty SPST-DB	PR3A	3.60	PR3D	3.60
DPST	PR7A	4.25	PR7D	4.25
SPDT	PR5A	3.80	PR5D	3.80
DPDT	PR11A	5.70	PR11D	5.70
	Add 65c for coils 150 to 230 V.		Add 65c for coils 50 V. DC to 110 V. DC.	

Other voltages and contact combinations on request.

KL Series—MULTIPLE CONTACT RELAYS


KL 17

Similar in design to KR but actuating coil approximately twice as long. Permits double the ampere turns giving more power to actuate additional contacts and maintain 25 grams minimum on all. Dimensions: KL17 (4PDT) 1$\frac{15}{16}$" x 1$\frac{11}{16}$" x 1$\frac{7}{8}$" high.

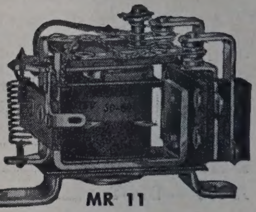
When ordering, specify coil voltage and frequency.

Contacts	A.C. RELAYS 6-12-24-115 Volts 50-60 Cy.		D.C. RELAYS 6-12-24-110 Volts	
	Type	Net	Type	Net
SPDT	KL5A	$2.95	KL5D	$2.75
DPDT	KL11A	3.40	KL11D	3.20
3PDT	KL14A	4.30	KL14D	4.00
4PDT	KL17A	5.80	KL17D	5.50
			Add 65c for coils 50 V. DC to 110 V. DC.	

Other voltages and contact combinations on request.

MR Series—MEDIUM DUTY POWER RELAYS

MR 5


MR 11

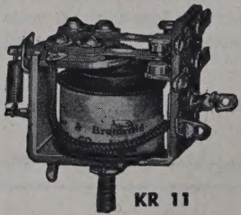
Ideal for safety and signal devices, call systems, heater loads, radio protective circuits, transmitter keying circuits, burglar alarms, photographic applications, electric sign controls, etc. Particularly adaptable to multiple panel mounting. Available in all contact arrangements up to and including 3 pole double throw. AC types operate on approximately 4 volt amperes and DC types on approximately 2 watts. Pure silver contacts rated 8 A. Dimensions: single pole units 2$\frac{31}{32}$" x 1$\frac{3}{16}$" x 1$\frac{5}{8}$" high. Double pole units 2$\frac{19}{32}$" x 2$\frac{1}{8}$" x 1$\frac{11}{16}$" high.

When ordering, specify coil voltage and frequency.

Contacts	A.C. RELAYS 6-12-24-115-230 Volts 50-60 Cy.		D.C. RELAYS 6-12-24-110-220 Volts	
	Normally Open	Net	Normally Open	Net
SPST	MR1A	$2.25	MR1D	$2.25
SPST-DB	MR3A	2.90	MR3D	2.90
DPST	MR7A	3.20	MR7D	3.20
SPDT	MR5A	2.40	MR5D	2.40
DPDT	MR11A	3.65	MR11D	3.65
3PDT	MR14A	4.40	MR14D	4.40
	Add 45c for coils 150 to 230 V.		Add 45c for coils 50 V. DC to 110 V. DC. Add 70c for coils above 110 V. DC.	

Other voltages and contact combinations on request.

KR Series—SMALL—LIGHT DUTY


KR 11

Designed for applications where size and weight are important. Sturdy and efficient. Can be made to withstand high vibration and shock with either voltage or current actuated coils. High dielectric phenolic insulation makes the KR series suitable for either power AF or RF switching. Coin silver contacts rated 5 A. Dimensions: KR-11 (DPDT) 1$\frac{15}{16}$" x 1$\frac{3}{16}$" x 1$\frac{11}{16}$" high. Mounting: single 6-32 screw.

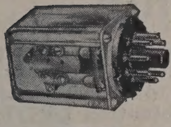
When ordering, specify coil voltage and frequency.

Contacts	A.C. RELAYS 6-12-24-115 Volts 50-60 Cy.		D.C. RELAYS 6-12-24-110 Volts	
	Type	Net	Type	Net
SPDT	KR5A	$2.20	KR5D	$2.10
DPDT	KR11A	2.75	KR11D	2.65
3PDT	KR14A	3.50	KR14D	3.40
			Add 40c to above prices for coils 50 V. to 100 V. DC. For coils above 100 V. add 75c.	

Other voltages and contact combinations on request.

POTTER & BRUMFIELD
PRINCETON, INDIANA
EXPORT SALES AT 13 EAST 40TH ST., NEW YORK, U. S. A.

Potter & Brumfield



KRP—ENCLOSED KR SERIES

The KRP is the KR relay enclosed in a clear polystyrene, dust and weatherproof cover through which the actual working of the relay may be seen. Supplied with standard octal plug only. Dimensions: 1⅜″ x 1⅜″ x 2″ high.

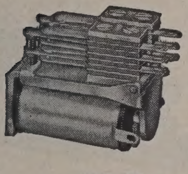
KRP 11

When ordering, specify coil voltage and frequency.

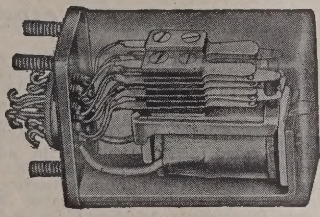
Contacts	A.C. RELAYS 6-12-24-115 Volts 50-60 Cy.		D.C. RELAYS 6-12-24-110 Volts	
	Type	Net	Type	Net
SPDT	KRP5A	$5.50	KRP5D	$5.40
DPDT	KRP11A	6.05	KRP11D	5.95
			Add 40c to above prices for coils 50 V. to 100 V. For coils above 100 V. add 75c.	

Other voltages and contact combinations on request.

MH Series—MINIATURE TELEPHONE RELAYS



MH 17
Open Dimensions:
1 17/32″ x ¾″ x 1 7/16″ high.



MH 17-M
Sealed Dimensions:
1 11/16″ x 1 1/32″ x 2 5/32″ high.

Smallest and most versatile of the telephone type relays. 4 form C (4PDT) ⅛″ diameter pure silver contacts rated 5 A. Tinned solder terminals. Stack insulation, laminated phenolic. Vibration and shock resistance to better than 10G with minimum of 1.5 watts in coil. Coils in molded bakelite bobbin, 500 volts RMS breakdown.

The hermetically sealed version resists all environmental conditions and extends relay life indefinitely. The header is all glass with Kovar solder terminals with a minimum leakage resistance of 10,000 megohms at 50% humidity. Will stand extremely high thermal shock. Sealed relays are desiccated and evacuated at high temperature and sealed in one atmosphere of dry nitrogen, which eliminates oxidation and reduces contact arcing. Housing finish hot tin dipped. Mounting three 6-32 studs on ½″ x 1¼″ centers.

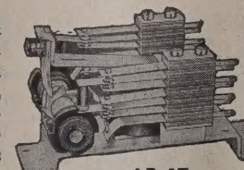
When ordering, specify type, voltage and frequency.

OPEN CONSTRUCTION (4 Form C Contacts)		
MH17A	6 V. 50-60 Cy.	$5.15
MH17A	24 V. 50-60 Cy.	5.30
MH17A	115 V. 50-60 Cy.	5.40
MH17D	6 V. DC	4.85
MH17D	24 V. DC	4.95

HERMETICALLY SEALED CONSTRUCTION Solder Header—(4 Form C Contacts)		
MH17AM	6 V. 50-60 Cy.	$12.45
MH17AM	24 V. 50-60 Cy.	12.55
MH17AM	115 V. 50-60 Cy.	12.65
MH17DM	6 V. DC	12.10
MH17DM	24 V. DC	12.20

MH relays for other voltages and sensitive current operation on request. Max. coil winding 22,000 ohms. Min. operating power .050 watt per movable spring. Max. coil power 4 watts. Bar palladium contacts available.

AP Series—RACHET OR IMPULSE RELAYS



AP 17

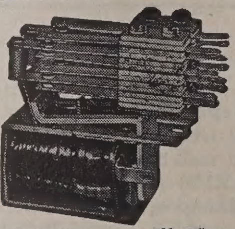
The AP series will actuate on impulses as short as 20 MS. An ingenious stop mechanism prevents overtravel of the cam, giving accurate positive operation on each impulse, regardless of speed. Windings up to 230 volts either AC or DC. Contact combinations up to 4 pole double throw (4 form C). Contacts 3/16″ fine silver rated 5 A. Coils wound on molded bobbins with minimum breakdown 500 volts RMS. Phenolic cams, hardened steel pawl and rachet with pin hinged armature for long life. Tinned solder terminals, hum-free on AC. Dimensions: 4″ x 2⅛″ x 2⅛″ high.

When ordering, specify coil voltage and frequency.

A.C. RELAYS Coil 6-12-24-115 Volts 50-60 Cy.			D.C. RELAYS Coil 6-12-24-110 Volts	
Contacts	Type	Net	Type	Net
DPDT	AP11A	$7.50	AP11D	$7.50
4PDT	AP17A	9.00	AP17D	9.00
			Add 65c for coils 50 V. DC to 110 V. DC.	

Other voltages and contact combinations on request.

SU Series—MULTIPLE LEAF RELAYS



SU 17

Large coil permits most efficient winding for lower dissipation. May be mounted in either vertical or horizontal position. Suitable for applications such as signal or alarm controls, remote indicators, temperature controls, overload or underload protective devices, etc. Pure silver contacts rated at 5 A. Any contact arrangement up to 4 pole double throw (4 form C). DC types require 2.5 watts, AC coils 10 V.A. Dimensions of SU17: 2 9/16″ x 1 7/16″ x 2 7/16″ high.

When ordering, specify coil voltage and frequency.

Contacts	A.C. RELAYS 6-12-24-115 Volts 50-60 Cy.		D.C. RELAYS 6-12-24-110 Volts	
	Type	Net	Type	Net
SPDT	SU5A	$2.35	SU5D	$2.35
DPDT	SU11A	2.95	SU11D	2.95
3PDT	SU14A	3.45	SU14D	3.45
4PDT	SU17A	4.00	SU17D	4.00
			Add 65c for coils 50 V. DC to 110 V. DC.	

Other voltages and contact combinations on request.

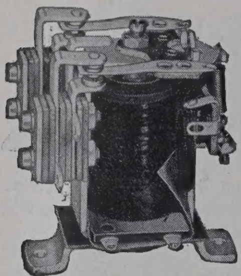
POTTER & BRUMFIELD
PRINCETON, INDIANA

EXPORT SALES AT 13 EAST 40TH ST . NEW YORK, U. A.

Potter & Brumfield

A TRADE-MARK OF QUALITY

LM Series—SENSITIVE PLATE CIRCUIT RELAYS


LM 11

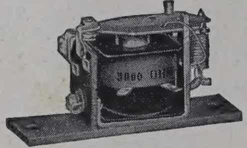
Designed to meet demand for high grade medium cost plate circuit relays in both single and double pole contact arrangements. Large coil for many ampere turns particularly sensitive. The single pole LM operates on as low as .015 watt with standard adjustment .100 watt and the double pole operates on .070 watt with standard adjustment .200 watt. Applicable to photo electric control, packaging, counting and other electronic circuits. Adjustable tail spring and residual screw for regulation of sensitivity and drop out point. Contacts $\frac{3}{16}''$ fine silver rated 5 A. Dimensions: LM11 (DPDT) $2\frac{3}{16}''$ x $2\frac{5}{32}''$ x $2\frac{1}{2}''$ high.

When ordering, specify coil resistance.

Contacts	Type	Resistance Ohms	Standard Adjustment Pull In MA	Net
SPDT	LM5	2500	6.3	$2.80
SPDT	LM5	5000	4.5	2.95
SPDT	LM5	10000	3.2	3.30
DPDT	LM11	2500	9.0	4.20
DPDT	LM11	5000	6.3	4.35
DPDT	LM11	10000	4.5	4.70

Other contact combinations and resistances on request.

LC Series—PLATE CIRCUIT RELAYS

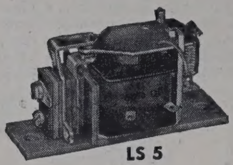

LC 5

Small, fast acting relay offering dependable operation. Fitted with molded bakelite bobbin with breakdown of 500 volts RMS minimum, baked varnish impregnated coil. Contacts rated 5 A. Sensitivity adjustable by bending tailspring hook. Available in all resistances up to 10,000 ohms. Requires .09 watt minimum actuating power with standard adjustment .2 watt. Dimensions: $2\frac{5}{8}''$ x $1\frac{1}{4}''$ x $1\frac{11}{32}''$ high.

When ordering, specify coil resistance or sensitivity.

Contacts	Type	Resistance Ohms	Standard Adjustment Pull In MA	Net
SPDT	LC5	2500	9.0	$2.15
SPDT	LC5	5000	6.3	2.25
SPDT	LC5	10000	4.5	2.40

LS Series—PLATE CIRCUIT RELAYS

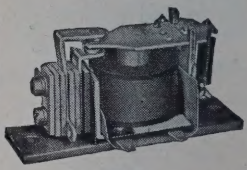

LS 5

Designed for applications where size and cost are important. Windings up to 10,000 ohms. Contact combination DPDT, pure silver rated 5 A, requires .09 watt actuating power minimum with standard adjustment .2 watt. Sensitivity adjustable by bending tailspring hook. Dimensions: $2\frac{5}{8}''$ x $1\frac{1}{4}''$ x $1\frac{5}{16}''$ high. When ordering, specify coil resistance.

Contacts	Type	Resistance Ohms	Standard Adjustment Pull In MA	Net
SPDT	LS5	2500	9.0	$2.25
SPDT	LS5	5000	6.3	2.35
SPDT	LS5	10000	4.5	2.55

LP Series—PLATE CIRCUIT RELAYS

The LP is similar to the LS but has a sturdy metal base that can be riveted or bolted to the chassis. Molded bakelite bobbin with minimum breakdown of 500 volts RMS. Adjustable tailspring for sensitivity. Contacts $\frac{3}{16}''$ silver rated 5 A. Available in all resistances up to 10,000 ohms. Requires .09 watt minimum actuating power with standard adjustment .2 watt. Dimensions: $2\frac{15}{16}''$ x $1\frac{1}{4}''$ x $1\frac{5}{8}''$ high.

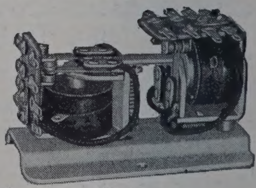

LP 5

When ordering, specify coil resistance or sensitivity.

Contacts	Type	Resistance Ohms	Standard Adjustment Pull In MA	Net
SPDT	LP5	2500	9.0	$2.85
SPDT	LP5	5000	6.3	2.95
SPDT	LP5	10000	4.5	3.15

LK Series—LATCHING RELAYS

Electrical latch, electrical release that will stand 10 G vibration and 50 G shock while operating. For multiple circuit switching of power loads. 35 grams minimum contact pressure. Available open or hermetically sealed in any contact combination up to 4 pole double throw (4 form C). Coil voltages up to 230 volts AC or 110 volts DC. Contacts $\frac{1}{8}''$ diameter fine silver rated at 5 A. Coils on molded bakelite bobbins with 500 volts breakdown. Dimensions: Open relay $2\frac{15}{16}''$ x $1\frac{3}{4}''$ x $1\frac{13}{16}''$ high; sealed relay $3\frac{1}{16}''$ x $1\frac{3}{16}''$ x $2\frac{3}{16}''$ high.


LK 11

When ordering, specify voltage and frequency for both coils.

PRICES FOR 4PDT OPEN RELAY
BOTH COILS SAME VOLTAGE

LK17A	6 V. 50-60 Cy.	$6.90	LK17D	6 V. DC	$6.75
LK17A	12 V. 50-60 Cy,	6.90	LK17D	12 V. DC	6.75
LK17A	24 V. 50-60 Cy.	6.90	LK17D	110 V. DC	8.25
LK17A	115 V. 50-60 Cy.	6.90	LK17D	24 V. DC	6.75

Other voltages and contact combinations on request.

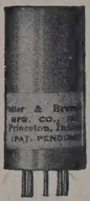
POTTER & BRUMFIELD
PRINCETON, INDIANA

EXPORT SALES AT 13 EAST 40TH ST., NEW YORK, U. S. A.

PB
A TRADE-MARK OF QUALITY

Potter & Brumfield

SM Series—SUPER MIDGET RELAYS

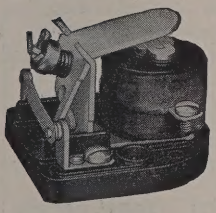

SM5-S

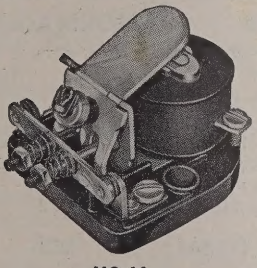
Subminiature relay fits standard miniature tube socket and hold-down shield. Sealed in deep drawn steel can, weighs less than 1 oz. Contacts SPDT, silver-rhodium rated ¼ A at 115 V. AC or ½ A at 28 V. DC. "D" types for any specified DC voltage up to 110; "L" types, current actuated with windings up to 10,000 ohms. Sensitivity 75 MW. Coil dissipation 1.8 watts max. All sealed types stand 10 G vibration to 55 c.p.s. and pass government environment specs.

When ordering, specify voltage or resistance.

SM5DS			SM5LS		
Nom. Voltage	Pull In V	Net	Coil Resistance Ohms	Pull In MA	Net
6.0	4.0	$4.35	5000	3.8	$4.85
24.0	18.0	4.35	10000	2.7	5.55

MS Series—MOTOR STARTING RELAYS VOLTAGE ACTUATED


MS 2A


MS 4A

Voltage controlled relay insures throw-out of the starting winding when motor reaches rated speed regardless of the load on the motor. May be mounted on the motor or remotely located. Ideally suited for use with hermetically sealed or explosion-proof motors that are capacitor start, induction run. Operates on back EMF of running winding.

Pull in voltage can be varied over a wide range by adjusting armature gap. Unusual design permits an exceptionally wide differential between pull in and drop out voltages. Normal adjustment for 115 volt motors is to pull in at 140 V and release at 40 V or less. For 230 V motors, pull in at 255 V and release at 80 V or less.

MS2A single break relay for capacitor start induction run motors up to 1 HP.

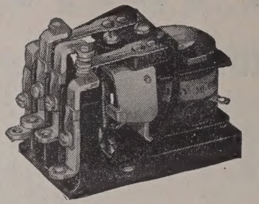
MS4A double break relay with special high current contacts for use on capacitor start induction run motors up to 3 HP. Dimensions: 2¾" x 2 1/16" x 1⅞" high.

When ordering, specify type and voltage or resistance.

Type		Net
MS2A	800 ohms (for 115 volt 50-60 cycle motor)	$2.55
MS2A	2100 ohms (for 230 volt 50-60 cycle motor)	2.65
MS4A	800 ohms (for 115 volt 50-60 cycle motor)	3.75
MS4A	2100 ohms (for 230 volt 50-60 cycle motor)	3.85

Other voltages and adjustments on request.

SP Series—HEAVY DUTY SHOCK PROOF RELAYS


SP 11

Constructed to withstand shock and vibration, SP series presents a heavy duty relay of balanced armature construction which may be mounted in any position. Thick molded bakelite base and contact supports, coils wound on molded bakelite bobbins with breakdown of 500 volts RMS minimum. Average power for DC types 1.5 watts, for AC types 3 to 4 V. A. Contacts are 3/16" diameter fine silver rated at 8 A on double break and 5 A on single break. Minimum contact pressure 25 grams. Dimensions of SP11 (DPDT) 2 7/16" x 1⅝" x 1 21/32" high.

When ordering, specify coil voltage and frequency.

Contacts	A.C. RELAYS 6-115 Volts 50-60 Cy.		D.C. RELAYS 6-24 Volts	
	Type	Net	Type	Net
DPDT	SP11A	$4.75	SP11D	$4.30

Other voltages and contact combinations on request.

FR Series—PHOTO FLASH RELAYS

FR-5

Designed for photo flash units using a high voltage discharge through a gas filled tube requires a relay with extremely high voltage breakdown insulation. When the bulb is flashed, the contacts must carry an extremely high surge of current without sticking, burning or pitting. The repetitive accuracy must be as uniform as a precision built shutter on a fine camera. Unfailing positive contact is vital to synchronization of the shutter with the high voltage capacitor discharge.

The FR relay has been proven under the most severe conditions of temperature, humidity and shock. Special contact material and extremely high breakdown insulation between ground and all current carrying parts combine to give a reliable relay at economy prices. Available in all contact combinations up to DPDT and coil voltages up to 230 V AC and 110 V DC. Coil power 1.5 to 2 watts DC and 3 to 4 VA AC. Breakdown 3,000 volts minimum between current carrying elements and to ground. Dimensions: 2 31/32" x 1 3/16" x 1⅝" high.

When ordering, specify voltage and frequency.

Contacts	A.C. RELAYS 6 Volts 50-60 Cy.		D.C. RELAYS 2 Volts	
	Type	Net	Type	Net
SPDT	FR5A	$3.60	FR5D	$3.60
DPDT	FR11A	4.70	FR11D	4.70

Other voltages and contact combinations on request.

POTTER & BRUMFIELD
PRINCETON, INDIANA

EXPORT SALES AT 13 EAST 40TH ST., NEW YORK, U. S. A.

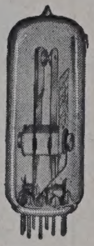
THERMOSTATIC AMPERITE DELAY RELAYS

GLASS ENCLOSED • HERMETICALLY SEALED • A.C., D.C., OR PULSATING CURRENT

AMPERITE
DELAY
RELAY

STANDARD

AMPERITE THERMOSTATIC DELAY RELAYS



MINIATURE

EXCLUSIVE FEATURES:

- Actuated by a heater.
- Operates on A.C., D.C., or Pulsating Current.
- Hermetically sealed, Amperite Relays are not affected by altitude, moisture or other atmospheric conditions.
- Compact, lightweight and inexpensive.

TECHNICAL CHARACTERISTICS

CIRCUITS: SPST only—Normally open or normally closed.

HEATER WATTAGE: 2 W prox.—Heaters can be operated continuously.

STANDARD CONTACT RATING: 115V.—3A A.C. (or 440V—0.5A A.C.); Maximum voltage between contacts and heater—1500V. D.C.

MINIATURE CONTACT RATING: 115V—2A A.C., other specifications same as standard.

AMBIENT TEMPERATURES: Relays are compensated for temperatures of —55° to +70° C. Tolerances given are for 20° C.

LIFE: With 115 V—1A A.C., non-inductive, at least 500,000 operations.

BASE WIRING:

Standard Radio Octal:
Prongs 2-3-heater;
Prongs 5-7-contacts.

9-Pin Miniature:
Prongs 1-6-heater; Prongs 3-4-1 contact; Prongs 8-9-2nd contact

LIST PRICE: Standard and miniature types listed $4.00

RESALE: Standard and miniature types listed $2.40

DELIVERY: The types shown in bold type are most popular, and usually available from stock. Other types delivered in approximately 6 weeks.

Delay-Seconds	Tolerance Seconds	NORMALLY OPEN CONTACTS						NORMALLY CLOSED CONTACTS					
		HEATER VOLTAGES						HEATER VOLTAGES					
		2.5 V.	5.0 V.	6.3 V.	12 V.	26 V. (22-30)	115 V.	2.5 V.	5.0 V.	6.3 V.	12 V.	26 V. (22-30)	115 V.
2	± 1	2N02	5N02	6N02	12N02	26N02	115N02	2C2	5C2	6C2	12C2	26C2	115C2
3	± 1	2N03	5N03	**6N03**	12N03	**26N03**	**115N03**	2C3	5C3	**6C3**	12C3	**26C3**	**115C3**
5	± 2	2N05	5N05	**6N05**	12N05	**26N05**	**115N05**	2C5	5C5	**6C5**	12C5	**26C5**	**115C5**
10	± 3	2N010	5N010	**6N010**	12N010	**26N010**	**115N010**	2C10	5C10	**6C10**	12C10	**26C10**	**115C10**
15	± 3	2N015	5N015	**6N015**	12N015	**26N015**	**115N015**	2C15	5C15	**6C15**	12C15	**26C15**	**115C15**
20	± 4	2N020	5N020	**6N020**	12N020	**26N020**	**115N020**	2C20	5C20	**6C20**	12C20	**26C20**	**115C20**
30	± 8	**2N030**	**5N030**	**6N030**	**12N030**	**26N030**	**115N030**	2C30	5C30	**6C30**	12C30	**26C30**	**115C30**
45	± 10	2N045	5N045	**6N045**	12N045	**26N045**	**115N045**	2C45	5C45	**6C45**	12C45	**26C45**	**115C45**
60	± 12	**2N060**	5N060	**6N060**	12N060	**26N060**	**115N060**	2C60	5C60	**6C60**	12C60	**26C60**	**115C60**
75	± 15	2N075	5N075	**6N075**	12N075	**26N075**	**115N075**	2C75	5C75	**6C75**	12C75	**26C75**	**115C75**
90	± 15	2N090	5N090	**6N090**	12N090	**26N090**	**115N090**	2C90	5C90	**6C90**	12C90	**26C90**	**115C90**
		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
120	± 30	2N0120	5N0120	**6N0120**	12N0120	**26N0120**	**115N0120**	2C120	5C120	**6C120**	12C120	**26C120**	**115C120**

MINIATURE TYPES: Designated by letter T. (e.g. 6NO5T) is available in all delays shown above bold dotted line. Delays of 2 to 90 seconds are available in both standard radio octal and 9-Pin miniature. Prices of both standard and miniature types .... List—$4.00

Flashers available only in low voltage heaters 6.3 — 26 V. . . . . List — $4.00 each

Flash Rate available — pre-set at factory — 5 to 100 fpm. Dealers Cost — $2.40 each

SMALL SWITCHES, LIMIT SWITCHES, AND MAGNETIC RELAYS

SMALL SNAP-ACTION SWITCH, G-E SWITCHETTE CR1070

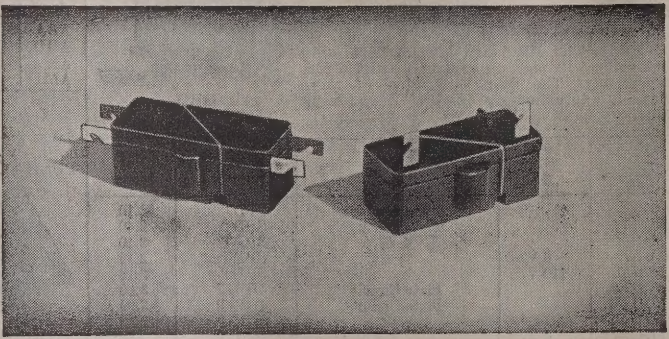
This new, lightweight switch mechanism lends itself especially to applications where space is limited and long life is required.

The Switchette is operated by movement of the spring-return button located in the housing. This button can be actuated by a lever, bellows, or other means. Snap-action, double-break-contact construction gives the G-E Switchette a high current rating and makes it suitable for applications where the vibration is severe.

FEATURES AND ADVANTAGES

1. Small (approximately 1¼ in. by ½ in. by ½ in.) and weighs only 9 grams (0.02 lb).
2. Resists vibration and corrosion.
3. Phenolic-resin operating button provides protection from live parts during operation.
4. Contact tips are 99.95 per cent pure silver.
5. Particularly suited to electronic applications because of negligible amount of contact bounce.
6. Five terminal arrangements are available, including the two shown above.
7. Wide variety of forms available; for example, three basic contact arrangements: single-circuit, normally open; single-circuit, normally closed; and two-circuit, normally open and normally closed. Also many special forms.

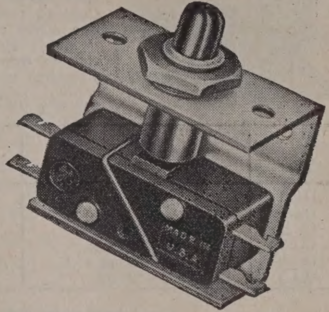
Switchettes are available in ratings up to 10 amperes at 115 or 230 volts a-c. Write for Bulletin GEA-4888.



Switchettes showing two terminal arrangements

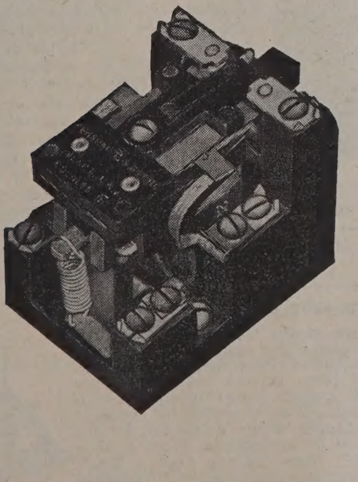
LIMIT SWITCH, CR1070-D112

This sturdy, open-type limit switch is operated by a plunger which provides $\frac{7}{32}$-inch overtravel. The contact mechanism of this device is the G-E Switchette, which can be wired to control one normally open circuit and one normally closed circuit. Rated 10 amperes at 230 volts a-c. Write for Bulletin GEC-197.



Open-type limit switch with push-rod operation

GENERAL PURPOSE RELAY, CR2790-E



The CR2790 relay is a compact, attractively finished device for use either as a motor starter or a relaying unit. Available in either an open form or enclosed in a general-purpose or explosion-proof housing. Three contact arrangements available: single-pole, single-throw; double-pole, single-throw; and double-pole, double-throw. In the open form, all three contact arrangements use the same base, which facilitates mounting. In the enclosed form, the U-shaped cover makes wiring and servicing convenient. Rated 10 amp continuous, 110/120 volts a-c.

Applications

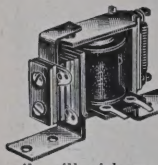
Control of pilot circuits in response to remote control switch or thermostat, or for direct control of small motors.

As a fractional-horsepower motor starter, or in conjunction with a magnetic switch controlling larger motors, heating or lighting circuits, and signal systems. Bulletin GEC-257.

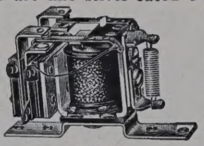
STANDARD ELECTRICAL PRODUCTS CO.
Staco
DAYTON, O. U.S.A.
A QUALITY PRODUCT

RELAYS
FOR AMATEUR AND INDUSTRIAL USES

MINIATURE RELAYS



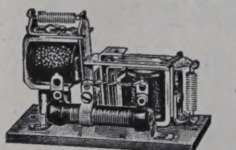
These units are very compact and are especially designed for plate circuit and general purpose control application. Overall dimensions: MR 1⅞" x 1⅜" x ⅞"—MRD 1⅞" x 1⅜" x 1¼". Contacts are fine silver rated 5 amps at 115 V. All AC relays are free from hum and AC chatter. The MR-2 and MRD-2 have 2500 ohm coil, will pick up at 6 ma. and 12 ma. respectively. The MR-5 and MRD-5 have 5000 ohm coils, will pick up at 3 ma. and 7.5 ma. respectively. The drop out value of these relays is approximately 50% of the pick up value.



MRD

Type	A.C.	D.C.	Contacts	Net Prices
MR-2		Plate Circuit	SPDT	$2.10
MR-5		Plate Circuit	SPDT	2.40
MR-6		6 V.	SPDT	2.10
MR-7	6 V.		SPDT	2.19
MR-11	110 V.		SPDT	2.19
MRD-2		Plate Circuit	DPDT	3.60
MRD-5		Plate Circuit	DPDT	3.90
MRD-6		6 V.	DPDT	3.60
MRD-7	6 V.		DPDT	3.69
MRD-11	110 V.		DPDT	3.69

OVERLOAD RELAYS



Adjustable overload relays provide accurate and positive protection against current surges and continuous overloads. Contact arrangements SPDT using 3/16" fine silver contacts. This allows the use of either audible or visual signal to advise of overload. All models are of the electrical reset type which allows remote control resetting of the relay. Size—3¾" x 2" x 1½".

Type	Current Range	Reset Coil	Net Prices
OA-2	250–500 ma.	110 V. A.C.	$5.40
OA-5	500–1000 ma.	110 V. A.C.	5.40
OC-2	250–500 ma.	6 V. A.C.	5.40
OC-5	500–1000 ma.	6 V. A.C.	5.40
OD-2	250–500 ma.	6 V. D.C.	5.40
OD-5	500–1000 ma.	6 V. D.C.	5.40

LATCHING RELAYS

These relays are employed where it is not desirable to have current continuously on the coil. The latching arrangement is such that when the relay coil is energized the armature closes and locks in a closed position by mechanical latching. An electrical impulse on the reset coil releases the armature from the latch and allows the relay to assume its initial position. 3/16" fine silver contacts. Bakelite Base. Size—3¾" x 2" x ¾".

Type	Reset Coil	Pull-in Coil	Net Prices
LEA	110 Volts A.C.	110 Volts A.C.	$4.50
LEA-6	6 Volts A.C.	6 Volts A.C.	4.50
LED	6 Volts D.C.	6 Volts D.C.	4.50

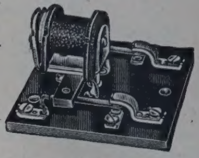
COMMUNICATION RELAYS

Ideally suited for use in telephone, remote control, signaling, communications circuits etc. High speed operation plus high sensitivity with high contact pressure. Contacts will handle 4 amps at 115 V. non-inductive load. Each relay has one make and one break contact sets. Size—3¾" x 1 3/16" x 1⅝".

Type	Res. of Coil Ohms	Volts Pick-up	M.A. Pick-up	Net Prices
T10G	10,000	31	3.2	$4.20
T63F	6,300	24	4.0	4.20
T40F	4,000	19	5.0	4.05
T10F	1,000	10	10.0	3.75
T25E	250	5	20.0	3.45
T10E	100	3	31.6	3.45

ANTENNA CHANGE-OVER

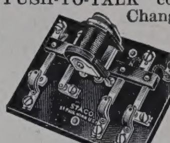
Mycalex Insulation is satisfactory for operation up to 60 MC. Triple-X insulation for operation up to 15 MC. All models use 3/16" fine silver wiping action contacts rated at 4 amps. These relays are designed with ball-bearing armature pivot and have large contact spacing to assure minimum capacity between contact arms. The armature is designed so as to eliminate AC chatter. Size—3⅛" x 3⅛" x 2 3/16".



Type	Insulation	Coil Voltage	Net Prices
ABA	TRIPLE-X	110 V. A.C.	$4.50
ABD	TRIPLE-X	6 V. D.C.	4.50
AMA	MYCALEX	110 V. A.C.	5.70
AMD	MYCALEX	6 V. D.C.	5.70

BREAK-IN RELAYS

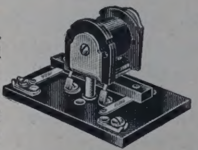
Same type of relay as above only two additional poles are added, one normally open, one normaly closed. This arrangement is perfect for PUSH-TO-TALK control. Contacts etc. identical with Antenna-Change-Over Relay. Size—4½" x 3⅛" x 2 3/16".



Type	Insulation	Coil Voltage	Net Prices
BBA	TRIPLE-X	110 V. A.C.	$5.70
BBD	TRIPLE-X	6 V. D.C.	5.70
BMA	MYCALEX	110 V. A.C.	7.50
BMD	MYCALEX	6 V. D.C.	7.50

R.F. AND GENERAL PURPOSE RELAY

An excellent relay for R.F. or high voltage remote control. Contacts are 3/16" fine silver rated 4 amps. Designed with extremely short R.F. path, Ball-bearing armature pivot. All metal parts cadmium plated. RB Series are TRIPLE-X insulated for frequencies up to 15 MC., RM series are MYCALEX insulated for frequencies up to 60 MC. Size—2¼" x 3⅛" x 2 3/16".

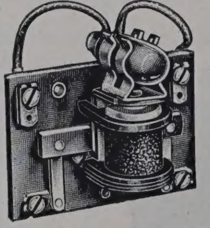


Type	Insulation	Contact Combination	Coil Voltage	Net Prices
RBA-1	TRIPLE-X	SPST (dble-break)	110 V. A.C.	$3.30
RBD-1	TRIPLE-X	SPST (dble-break)	6 V. D.C.	3.30
RMA-1	MYCALEX	SPST (dble-break)	110 V. A.C.	4.05
RMD-1	MYCALEX	SPST (dble-break)	6 V. D.C.	4.05
RBA-2	TRIPLE-X	DPST (sgle-break)	110 V. A.C.	3.45
RBD-2	TRIPLE-X	DPST (sgle-break)	6 V. D.C.	3.45
RMA-2	MYCALEX	DPST (sgle-break)	110 V. A.C.	4.65
RMD-2	MYCALEX	DPST (sgle-break)	6 V. D.C.	4.65

KEYING RELAY

Same specifications as RB Series except that the coil and return spring are faster acting. Follows a "Bug" with ease.

Type	Coil Voltage	Contacts	Net Prices
KBA	110 V. A.C.	SPST (double-break)	$3.30
KBD	6 V. D.C.	SPST (double-break)	3.30
KBA-6	6 V. A.C.	SPST (double-break)	3.30



MERCURY-SWITCH RELAY

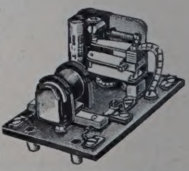
This type relay is used for controlling inductive loads and may be safely used in the presence of explosive dust, gas and vapor. This unit will safely handle a ¼ H.P. motor or its equivalent. This single pole single throw mercury relay can easily be changed from normally open to normally closed by reversing the mercury tube in the clip. In addition this relay is equipped with SPST double break 3/16" fine silver contact sets which can be used to electricaly lock this relay, or other applications. Mounts vertically with adjusting screws. Size—3⅛" x 2⅞" x 3½".

Type	Coil Voltage	Net Prices
MSA	110 V. A.C.	$4.50
MSA-6	6 V. A.C.	4.50
MSD-6	6 V. D.C.	4.50

TIME-DELAY RELAY

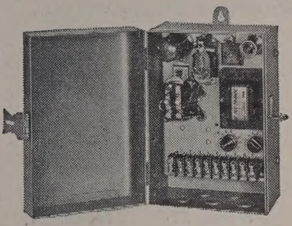
Low cost Thermostatic Time delay relays designed for transmitting and industrial use. Prevents damage to tube filaments due to application of plate current before filaments are thoroughly heated. TD-11 is equipped so that it automatically compensates for ambient temperature changes. Time delay can be adjusted by means of screwdriver. Stock models are 110 V. AC. Size—3⅛" x 3⅛" x 2 3/16".

TD-11 (10-60 Sec.)—With compensator...... Net $6.00



CHICAGO 14 **DE-TEC-TRONIC LABORATORIES INC.** **ILLINOIS, U.S.A.**

PHOTOELECTRIC EQUIPMENT



Model AT-355-P30 AMPLIFIER RELAY

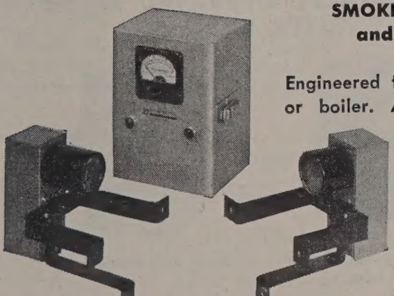
Functions on partial or complete change in light density and operates at speed up to 1,000 a minute. Reversing switch enables operator to select type of action — with switch in NEG position relay energizes on *decrease* in light density; in POS position relay energized on *increase* in light density. Controls and components mounted on 18-gauge removable chassis. Bias control for sensitivity; meter jack for easy adjustment. S.P.D.T. relay contacts rated at 8 amps., 117 volts, non-inductive. For 110/125 or 220/240 volts, 50/60 cycles, 60 watts. Case 8" x 5⅝" x 4¾"; hinged cover.

Model AT-355X-P30 — AMPLIFIER RELAY

Same as above except contacts rated as 15 amps., 117 volts A.C., non-inductive S.P.D.T.

Model AT-355X-P43 — AMPLIFIER RELAY

Incorporates adjustable time delay Load Relay adjustable 0 to 60 seconds and Time Delay reversing switch. Switch permits choice of one of two Time Delay actions: 1. delays operation of load relay for predetermined time when light is blocked off, relay opening when ligst is restored, 2. operates load relay when light is cut off and holds relay closed for predetermined time after light is restored. Controls mounted on 18-gauge removable chassis. Relay action up to 1,000 a minute. Bias control for sensitivity; meter jack for easy adjustment. Relays S.P.D.T. Contacts rated 15 amps., 117 volts, A.C., non-inductive. Case 8" x 5⅝" x 4¾"; hinged cover. For 110/125 or 220/240 volts, 50/60 cycles, 60 watts.

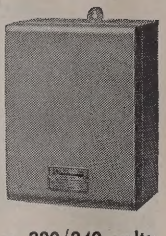


Model AT-405-P48 SMOKE INDICATOR and CONTROL

Engineered for average furnace or boiler. An adjustable time delay circuit permits smoke control equipment to operate up to 2 minutes after smoke has been eliminated. Components mounted on 18-gauge chassis. Sensitivity and time delay controls. 3" meter, green and red indicator lights on case front. Relay contacts S.P.D.T., 8 amps., 117 volt, 60 cycles, non-inductive. Case 8" x 5½" x 4½". Type 1129 lamp for Light Source; Type 930 Phototube.

Model AT-415-P22 — SMOKE INDICATOR

Same as above but without adjustable time delay. Designed to signal when excessive smoke passes through breeching or stack.

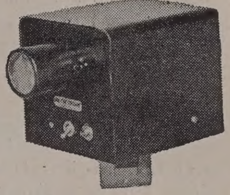


Model AT-355-P53 AMPLIFIER RELAY

High gain two-stage Amplifier Relay designed to operate at high speeds on minute light changes. Ideally suited for register control, index control, high speed sorting, etc. Sensitivity control, on-off switch, meter jack for easy adjustment. Operates at speeds up to 1,000 a minute. Relay Contacts D.P.D.T. rated 12 amps., 117 volts, 60 cycles, non-inductive. For 110/125 or 220/240 volts; 50/60 cycles; 65 watts. Case 11½" x 9¼" x 5"; hinged cover with lock.

Model AT-355X-P55 — AMPLIFIER RELAY

Has two adjustable time delay circuits. First time delay retards operation of equipment controlled by load relay for period of time up to limits of preset adjustment (0 to 60 seconds) before load relay is energized and operation started. Second time delay permits continuation of operation set up by first time delay for period of time up to limits of preset adjustment (0 to 60 seconds) before load relay is de-energized. Relay contacts D.P.D.T. rated 12 amps., 117 volts, 60 cycles, non-inductive. Operating speed up to 1,000 a minute. Voltage 110/125 or 220/240; 50/60 cycles; 90 watts. Case 11½" x 9¼" x 5"; hinged cover.



Model AP-120-P10 AMPLIFIER RELAY

Combines standard Amplifier Relay with Phototube. Energized by any of the Light Source units listed below. Operates at speed up to 600 a minute. Phototube and controls mounted on 18-gauge removable chassis. 6 volts, 3 amps., available for type LX Light Source units. Bias sensitivity; on-off switch; meter jack for easy adjustment. Operating distance with LT-520 Light Source unit, 50 feet; with LX-51, 25 feet. Relay contacts S.P.D.T. rated at 8 amps., 117 volts A.C., non-inductive. For 110/125 or 220/240 volts, 50/60 cycles; 60 watts. Case: 5½" x 5" x 6".

Model AP-120X-P10 — AMPLIFIER RELAY

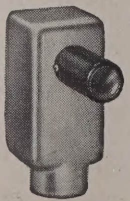
Same as above except contacts rated at 15 amps., 117 volts A.C., non-inductive.

LIGHT SOURCE UNITS

Light Source Units listed here can be used with De-Tec-Tronic Amplifier-Relays shown above in conjunction with Phototube Units. This is but a partial list of Light Sources available. Write for special catalog.

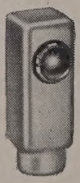
Model LX-51

Operates up to 25'. Width of beam at lens, 1"; at 25', 10". Case 4¾" x 1¾" x 1¾". Lens tube 1¼" diam., 2½" long. Single contact bayonet type 1129 Lamp. Phototube Unit Model PX-71 whose dimensions are the same, should be used with this Light Source Unit.



Model LX-55WP — Weatherproof Case

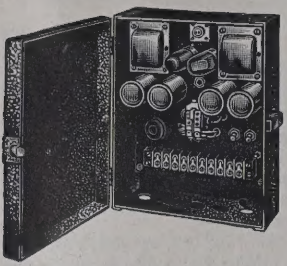
Operates up to 25'. Width of beam at lens, 1"; at 25', 10". Case 5¾" x 2½" x 2½". Lens tube 1 5/16" diam., 2¼" long. Single contact bayonet type 1129 Lamp. Phototube Unit Model PX-75WP whose dimensions are the same, should be used with this Light Source Unit.



Model LX-59WP — Weatherproof Case

Operates up to 3'. Width of beam at lens, ⅞"; at 3', 4". Lens tube 1⅛" diam., ⅜" long. Case 4½" x 1½" x 1½". Double contact type 88 Lamp. Phototube Unit Model PX-79 whose dimensions are the same, should be used with this Light Source Unit.

ELECTRONICALLY OPERATED RELAYS MODEL 63



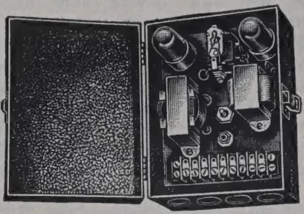
Especially designed for use with a correct combination of the standardized Worner Photo-Cell and Exciter Lamp units shown at right. However, this Electronically Operated Relay will operate also from light source units such as daylight, artificial lights, radiant energy from metallic processing, etc.

Model 63 Electronically Operated Relay is a specially engineered, highest quality unit. It enjoys wide preference as it efficiently meets exacting requirements and replaces the need of costly individually engineered equipment. Technical details on request.

ELECTRONICALLY OPERATED RELAYS

	Price, Each
Model 63, Described Above	**$100.00**
Model 63-A, combines Model 63 and Time Delay Circuit giving delay from zero to 45 seconds	**$150.00**
Model 63-B, same as Model 63 with additional amplification to operate on less active change of light	**$150.00**

ELECTRONICALLY OPERATED RELAY MODEL 64



An economical unit for practically any industrial application where cost is a factor. Designed for use with a combination of standardized Worner Photo-Cell and Exciter Lamp units shown at right.

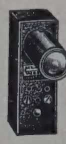
Model 64 Electronically Operated Relay......each $67.50

EXCITER LAMP & PHOTO-CELL RECEIVER UNITS

For Use With Models 63, 63-A, 63-B and 64 Electronically Operated Relays

Model 33

Model 23



Model 31

Model 21

The Exciter Lamp unit is designed to project the light beam and the Photo-Cell Receiver is designed to pick up the beam and convert its light into electrical energy through the Electronically Operated Relay unit.

Model 33 Exciter Lamp is "standard" for general applications and is most generally recommended. Its light beam covers a distance from a few inches to 25 feet from Exciter Lamp to Photo-Cell. Heavy duty, cast iron unit with ½-inch conduit fittings. Gray finish.

Model 23 Photo-Cell Receiver is engineered for use with Model 33 Exciter Lamp. Same case specifications.

For use in damp surroundings, Models 33 and 23 can be made water-proof at slight additional cost.

Model 31 Exciter Lamp is "standard" where a lighter weight case is practical. Its light beam covers a distance from a few inches to 25 feet from Exciter Lamp to Photo-Cell. Case is 18 gauge steel, gray wrinkle finish. Has ½-inch knockout.

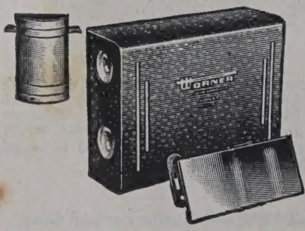
Model 21 Photo-Cell Receiver is engineered for use with Model 31 Exciter Lamp. Same case specifications.

Model No.	Description	Size, Inches	Price, Each
33	Exciter Lamp	4¼ x 2¾ x 2¾	**$13.50**
23	Photo-Cell Receiver	4¼ x 2¾ x 2¾	**19.50**
31	Exciter Lamp	6⅝ x 2 x 1¾	**11.00**
21	Photo-Cell Receiver	6⅝ x 2 x 1¾	**17.00**

FOTOLECTRIC ANNOUNCER SET

Automatically Announces the Entrance or Passing of Any Person

COMPLETE WITH MIRROR AND CHIME



The Fotolectric Announcer is a complete three-piece set. It is designed to project a beam of light across any entrance to any room or building. Breaking of this light beam by person entering activates a pleasant chime, automatically announcing the entrant. Chime can be located wherever signal is desired.

The unit has efficient grid controlled rectifier circuit which insures maximum stability. The Unit combines Exciter Lamp and sensitive Photo-Cell in metal case, size 8¼" x 6½" x 2¾", beautifully finished in gray hammerloid. Bulb has long lamp-life rating of 2000 hours. Operates on 110-120V; 50-60 cycle, A.C.

Model 61 Fotolectric Announcer, three-piece set including Unit, Mirror and Chime..........Set, each **$32.00**

MODEL 62 R & L ELECTRONICALLY OPERATED RELAY AND EXCITER LAMP SET

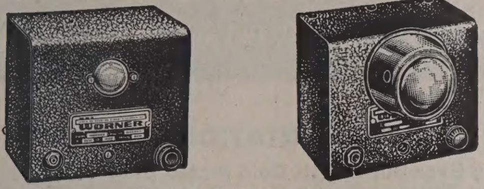
Model 62-R Electronically Operated Relay

Model 62-L Exciter Lamp

This "two-unit" set has specially designed Exciter Lamp Unit and an Electronically Operated Relay unit that includes the Photo-Cell Receiver, Relay and other electrical components. This combination has proved efficient for countless simple applications for distances from a few inches to 75 feet or where Relay is not required to operate in excess of 300 times a minute. Supervises efficiently on simple applications such as: Counting or sorting large objects; limit switches; start and stop operations; light density; fire protection; flame control; opening doors, etc.

Model 62 R & L "Two-Unit Set"	per set	**$85.00**
Model 62-R Electronically Operated Relay	each	**69.75**
Model 62-L Exciter Lamp	each	**21.75**

MODEL 9000 SERIES
FOTOLECTRIC BURGLAR ALARM SYSTEM



Electronically Operated Relays

Model 9100-R Model 9150-R

This series consists of One Master Control Panel operating with one or more (up to 4) Fotolectric Exciter Lamp and Electronically Operated Relay sets. The combination may be used with traps, foil systems and other equipment as used by professional burglar alarm companies, to operate audible or visible alarms.

Any interruption of the light beam operates whatever alarms the user wishes to install. The complete alarm circuit is supervised by the Master Control Panel which is remotely located for operator's convenience.

All Model 9000 series Electronically Operated Relays contain the following: Heavy duty transformers 110-120-volt, 50 to 60 cycle, A.C. with dual secondary. Potentiometer type sensitivity control. Meter Jack to determine correct cut-off and plate current in Relay circuit. Electrolytic condensers. Double pole, double throw 5-amp. relay.

Constructed of 18-gauge steel, welded, gray wrinkle finish. Size: 7 x 6¼ x 4¼ inches. (Not weatherproof.)

Model No.	Description	Range per Set	Price, Each
9100	Master Trespass Trap........	100 ft.	$84.00
9150	Master Trespass Trap........	150 ft.	108.00
9250	Master Trespass Trap........	250 ft.	145.00
9500	Master Trespass Trap........	500 ft.	225.00

Model 9000 Control Panel. Supplied with plate relays equal to the 9000 series Electronically Operated Relays ordered. If 9000 series Electronically Operated Relays are ordered without Control Panel, plate relay is supplied with Electronically Operated Relays to be mounted in Control Panel. each $54.00

Model 9000-R Control Panel. With additional control circuit which protects operation in the event of false alarm should power drop five volts or more. each $74.00

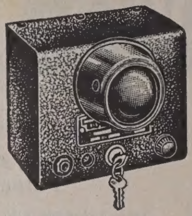
MODEL 7000 SERIES
FOTOLECTRIC BURGLAR ALARM SYSTEM

The Model 7000 series operates in conjunction with professional independent burglar alarm company's central office or local equipment.

The 7000 series Electronically Operated Relays are complete with the following scientifically engineered equipment: Tubes. Lenses. Heavy duty shielded Electronically Operated Relay transformer 110-120 volt, 50-60 cycle, A.C. with dual secondary. Potentiometer sensitivity control. Meter Jack to determine correct cut-off and plate current in relay circuit. Electrolytic condensers. Single-pole, double throw relay, self-wiping contacts rated at 5 amp. non-inductive at 110-120 volts, 50 to 60 cycle.

Model No.	Description	Range per Set	Price, Each
7100	Remote Cont. Trespass Trap	100 ft.	$84.00
7150	Remote Cont. Trespass Trap	150 ft.	108.00
7250	Remote Cont. Trespass Trap	250 ft.	145.00
7500	Remote Cont. Trespass Trap	500 ft.	225.00

MODEL 5000 SERIES
FOTOLECTRIC BURGLAR ALARM SYSTEM



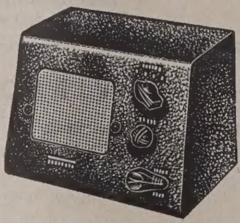
Model 5000 series consists of Exciter Lamp unit and an Electronically Operated Relay unit. This combination is designed for interior use where a single beam is considered ample protection; it is not intended for use with protective devices such as foil systems, etc. Furnished for 110 volts. Electronically Operated Relay Model 5150-R (illustrated) is equipped with a scientifically engineered "unwanted light rejector," which materially increases the day-light range of the unit and makes it equal to the night-time range if equipment is installed so that 90 per cent of the light reaching the Photo-Cell is that generated by the Exciter Lamp.

Model No.	Description	Range	Price, Each
5100	Single Beam Trespass Trap	100 ft.	$90.00
5150	Single Beam Trespass Trap	150 ft.	114.00

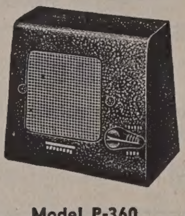
EXCITER LAMP For All Burglar Alarm Sets

with ranges of 100 feet to 150 feet are similar in appearance to Model 62-L. For ranges of 250 feet to 500 feet units are designed for out-door installations and are weather-proofed.

WORNER COMMUNICATING SYSTEMS



Models P-359, P-353



Model P-360

All WORNER units operate efficiently as far as 2000 feet apart. Persons at or near Sub-stations when called may answer without leaving their work, from as far away as 25 feet. "Silent feature" shuts out noise in vicinity at Station. 110 volt to 120 volt, A.C. or D.C. Units are shipped complete with wiring diagrams and instructions for easy installation.

Model P-359 Selective Master Station. Handles 1 to 5 Sub-stations. Has 3-tube amplifier. 1 watt output. Contains 5-inch speaker for maximum input without talking directly into unit. In substantial all-metal cabinet; size: 9 x 6¼ x 6 inches. Finished in hammered walnut lacquer finish. Complete with tubes and instructions ....each $34.75

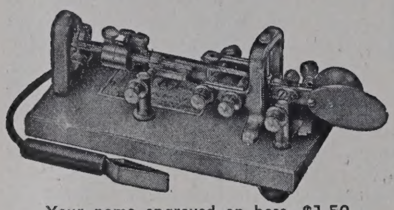
Model P-353 Combination Master Station. 2 to 5 units may be used, in any combination of Masters to Masters, or Masters to Sub-stations. Contains 3-tube amplifier. Complete with tubes and instructions. each $47.50

Model P-360 Sub-station. Has 5-inch speaker. Talk-listen switch used by Sub to originate call; not used after Master answers. In substantial all-metal cabinet as illustrated; size: 7¼ x 4 x 6 inches; finished in attractive hammered walnut lacquer finish. each $11.50

The Vibroplex

THE VIBROPLEX COMPANY INC
TRADE MARK

Telegraph & Wireless Transmitting Machines



Your name engraved on base, $1.50
Additional engraving, 15c per letter

New SUPER DE LUXE "PRESENTATION" VIBROPLEX

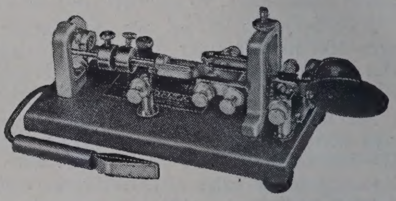
The Finest Bug Ever Built! 24K Gold-Plated Base Top, Patented Jewel Movement and Super-Speed Control!

New patented adjustable main spring affords wider range of speed than ever obtained before in semi-automatic transmitting key. Beautifully-designed with polished chromium precisioned machined parts mounted on a 24K gold-plated base top with colorful red switch knob, finger and thumb piece. This new Super-DeLuxe "Presentation" Vibroplex key at $29.95 affords a life-time of sending enjoyment. Harder than metal, the jewels in this key reduce friction, maintain smoother, easier operation and prolong life.

Amateur Net Price.......... **$29.95**

THE *Improved "ORIGINAL"* VIBROPLEX

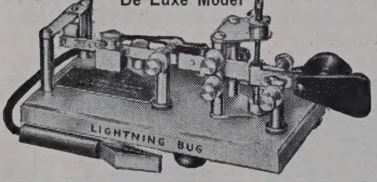
Suitable for All Classes of Transmitting work Where Speed and Perfect Morse Are Prime Essentials



This great new Vibroplex is a smooth and easy working BUG. It has won fame on land and sea for its clarity, precision and ease of manipulation. Can be slowed down to 10 words per minute or less or geared to as high rate of speed as desired. Maintains the same high quality signal at whatever speed, insuring easy reception under all conditions. Weight, 3 lbs. 8 oz. Complete with cord and wedge.

Standard—Chromium top parts, black base. Amateur Net Price.......... **$17.95**
DeLuxe—Chromium base and top parts, with jeweled movement. Amateur Net Price **22.50**

De Luxe Model

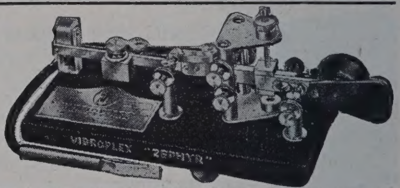


THE "LIGHTNING BUG" VIBROPLEX

High Quality Signals at All Speeds

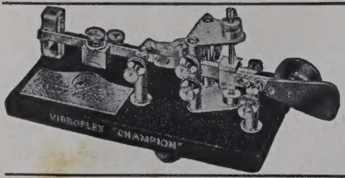
Flat pendulum model. Complete with cord and wedge. Weight 3 lbs. 8 oz.
Standard—Polished Chromium top parts, black base.
Amateur Net Price.......... **$15.95**
DeLuxe—Polished Chromium base and top parts, with jeweled movement.
Amateur Net Price.......... **21.50**

THE "ZEPHYR" VIBROPLEX



⅛" size contact points. Slightly smaller base. Weight 3 lbs. 2 oz. Cord and wedge. Standard finish only. Chromium finished top parts, with black crystal base.

Amateur Net Price.......... **$13.95**

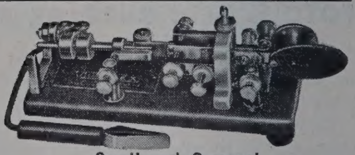


THE "CHAMPION" VIBROPLEX

Weight 3 lbs. 8 oz. Without circuit closer, cord and wedge. Standard finish only. Chromium finished top parts, with black crystal base.

Amateur Net Price.......... **$12.95**

THE "BLUE RACER" VIBROPLEX



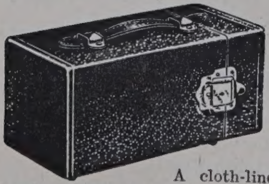
Small and Compact

Weight, 2 lbs. 8 ozs. Complete with cord and wedge.
Standard—Finish Chromium top parts, black base . . . Amateur Net Price.......... **$17.95**
DeLuxe—Polished Chromium base and top parts, with jeweled movement. Amateur Net Price.......... **22.50**

NOTE: All Machines Above Available in Left Hand Models $1.00 Extra.

VIBROPLEX CARRYING CASE

Keeps the Machine Free From Dust, Dirt & Moisture — Insures Safekeeping when Not in Use.



A cloth-lined case, finished in handsome simulated black morocco. Has lock and key.

PRICE.......... **$5.75**

Announcing the new edition of the

PHILLIPS CODE

SPECIAL EDITION Including:

- Radio Code Signals
- International Morse
- American Morse
- Russian, Greek, Arabic, Turkish
- and Japanese Morse Codes
- World Time Chart
- United States Time Chart
- Commercial "Z" Code
- Aeronautical "Q" Code

THE PHILLIPS CODE
TCR EDITION
With RADIO CODE SIGNALS and various MORSE ALPHABETS

$2.00 Post Paid

RCA BATTERIES

FOR RADIOS • FLASHLIGHTS • INDUSTRIAL APPLICATIONS

SERVICING 99% OF PORTABLE AND FARM HOME RADIO REQUIREMENTS.

VS019

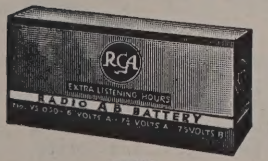
VS047

VS002

VS013

RCA RADIO TRADE DISTRIBUTION MEANS REPEAT RADIO BATTERY BUSINESS FOR RADIO DEALERS AND SERVICEMEN.

VS022



VS050

THE RCA MONOGRAM ON AN ATTRACTIVE PACKAGE ASSURES CUSTOMER ACCEPTANCE.

VS006S

VS028

PORTABLE "AB" PACKS

RCA Type	Volts	Interchangeable with Eveready	Interchangeable with Burgess	Std. Pkg. Qty.	Std. Pkg. Approx. Wt. Lbs.	Max. Overall Dimen. L.	Max. Overall Dimen. W. or Dia.	Max. Overall Dimen. Ht.	Inv. Control Guide	Sugg'd Price Each List	Sugg'd Price Each Dealer
VS019	7½-9-90	753	F6A60	6	33½	9½	2 21/32	4⅜	H	$5.65	$3.96
▲VS020	6-7½-67½	—	F5M45	6	31½	9 7/16	2⅝	4⅜	L	4.95	3.45
▲VS037	1½-90	—	6FA60	5	26	11⅞	1½	6 7/16	H	5.95	4.17
▲VS038	7½-63	—	G5A42	5	22	8⅝	2¾	4 1/16	L	4.50	3.15
▲VS041	1½-67½-7½	—	—	5	21	4 5/16	3¾	6⅜	L	5.50	3.85
VS043	1½-90	—	5DA60	5	25	5½	2 11/16	7⅛	L	5.50	3.85
VS046	6-75	Zenith Z675	G4B50	6	38½	12⅝	2¾	4⅛	L	5.65	3.94
VS047	9-90	Zenith Z985	G6B60	6	46¾	13⅝	2¾	4 9/16	M	6.25	4.38
▲VS048	6-90	Zenith Z659	F4B60	5	34	10¾	2¾	5	L	5.95	4.17
VS050	6-7½-75	755	T5Z50	6	20¾	8 9/16	2 7/16	3 11/16	H	5.25	3.68
VS052	1½-61½	Philco P41A4G	4GA41	5	20	9⅜	2 11/16	3 7/16	L	4.50	3.15
VS053	1½-63	Philco P41A4FL	4GA42	5	21	9⅛	2	4¾	L	4.50	3.15
VS054	1½-90	—	6TA60	5	23½	10	2 5/16	4 3/16	L	5.75	4.02
VS057	7½-9-90	Philco P361-P363	T6Z60	6	24¾	9⅜	2 3/16	3¾	H	5.75	4.03
VS057W	7½-9-90	756	—	6	24¾	8 11/16	2 3/16	3¾	M	5.75	4.03
VS058	9-90	Zenith Z909	F6A60P	6	33	9½	2 21/32	4⅜	M	5.95	4.17
VS064	1½-90	Philco P364	4TZ60	6	23	7¾	2 3/16	3⅝	M	5.75	4.03

PORTABLE "A" BATTERIES

RCA Type	Volts	Eveready	Burgess	Qty.	Wt. Lbs.	L.	W. or Dia.	Ht.	Inv. Control Guide	List	Dealer
VS002	Use Replacement Type VS067										
VS003	7½	687	G5	5	11	3⅞	2⅝	4 9/16	L	1.25	.88
VS004	1½	742	4F	6	8	2⅝	2⅝	4 1/16	H	1.10	.77
VS005	1½	—	4FL	5	7¼	3 13/16	1⅜	5⅝	L	1.00	.70
VS008	1½	745	8FL	6	16¾	3⅞	1 7/16	10¾	L	2.00	1.40
VS009	6	744	F4P1	6	8½	2⅝	2⅝	4¼	L	1.10	.77
VS010	6	718	2F4	5	14½	3⅞	2 13/16	5½	L	2.00	1.40
VS011	6	747	2F4L	6	17	3⅞	1 7/16	10¾	—	2.00	1.40
♦VS035	1½	935	1	100	11½	—	1 1/32	1 15/16	H	.125	.08125
♦VS036	1½	950	2R	192	43	—	2 5/16	2⅜	H	.125	.08125
VS065	7½	717	C5	12	6½	2 5/16	2	3 1/16	M	1.00	.70
VS067	4½	736	F3	6	6¼	4	1⅛	4⅛	H	.85	.60
VS068	6	724	Z4	24	8	1 5/32	1 5/16	2⅜	M	.60	.42
VS069	1½	720	2D	12	6½	2 9/32	1 5/16	2 27/32	M	.55	.39
VS072	4½	726	D3	12	9½	3 15/16	1 5/16	2 15/16	M	.70	.49
VS129	7½	—	B5	12	5¾	4 1/16	15/16	3	M	1.10	.77
♦VS236	1½	—	—	48	19¼	1⅜	4 3/64	4 5/32	M	.375	.2625

PORTABLE "B" BATTERIES

RCA Type	Volts	Eveready	Burgess	Qty.	Wt. Lbs.	L.	W. or Dia.	Ht.	Inv. Control Guide	List	Dealer
VS012	Use Replacement Type VS013										
VS013	45	482	M30	12	22½	3 9/16	1 13/16	5½	H	2.25	1.58
VS014	45	—	A30	6	10¼	3 7/16	2¼	4 9/16	M	2.25	1.58
VS015	45	738	Z30	10	16	3	2¼	4	M	2.85	2.00
VS016	67½	467	XX45	24	21	2 23/32	1 11/32	3¾	H	2.50	1.75
VS055	45	455	XX30	12	7	2 21/32	31/32	3 11/16	M	1.95	1.32
VS090	90	490	N60	12	12½	3 11/16	1⅜	3¾	H	3.25	2.28
VS216	67½	—	—	24	21	1 15/16	1	5 17/32	M	3.95	2.78

FARM "AB" BATTERY PACKS

RCA Type	Volts	Eveready	Burgess	Qty.	Wt. Lbs.	L.	W. or Dia.	Ht.	Inv. Control Guide	List	Dealer
VS022	1½-90	759	17GD60	1	19¾	15¾	4¼	6 13/16	H	6.95	5.21
VS045	1½-90	Zenith Z28	18GD60	1	20½	12 9/16	5⅜	6 13/16	L	6.95	5.21
VS119	7½-9-90	Philco P-326	—	1	21½	8¼	4½	13⅞	L	8.29	6.20

FARM "B" BATTERIES

RCA Type	Volts	Eveready	Burgess	Qty.	Wt. Lbs.	L.	W. or Dia.	Ht.	Inv. Control Guide	List	Dealer
VS026	22½-45	487	2308PI	6	49½	8 1/16	3 3/16	7 3/16	M	3.15	2.21

SMALL "A" AND "B" BATTERIES FOR RADIO AND HEARING AID APPLICATIONS

RCA Type	Volts	Eveready	Burgess	Qty.	Wt. Lbs.	L.	W. or Dia.	Ht.	Inv. Control Guide	List	Dealer
**VS070	1½	Zenith Z1-S	TE	20	8½	—	1 5/16	4 1/16	M	.30	.20
VS084	22½	412	U15E	20	2	1 1/64	⅝	1 25/32	L	1.15	.80
VS085	30	413	U20E	20	2½	1 1/64	⅝	2 17/32	L	1.40	.96

FLASHLIGHT BATTERIES

RCA Type	Volts	Eveready	Burgess	Qty.	Wt. Lbs.	L.	W. or Dia.	Ht.	Inv. Control Guide	List	Dealer
VS034	1½ (Penlite)	915	Z	120	4½	—	37/64	2	M	.10	.065
♦VS035	1½ (Baby)	935	1	100	11½	—	1 1/32	1 15/16	M	.125	.08125
♦VS036	1½	950	2R	192	43	—	1 5/16	2⅜	H	.125	.08125
VS073	1½	—	—	240	6	—	.4375	1.175	L	.075	.050

BATTERIES FOR INDUSTRIAL AND ELECTRONIC APPLICATIONS

RCA Type	Volts	Eveready	Burgess	Qty.	Wt. Lbs.	L.	W. or Dia.	Ht.	Inv. Control Guide	List	Dealer
VS006C	1½	6 IGN	—	25	55	—	2⅝	6⅝	L	.80	.53
VS006S	1½ (Ignition)	6	—	12	26	—	2⅝	6 9/16	H	.80	.53
VS028	4½	781	5360	10	4	2⅜	13/16	2⅞	H	.55	.39
VS029	1½-3-4½-6-7½	773	5540	10	7	3 15/16	⅞	3⅛	H	1.05	.74
▲VS030	3-4½	X771	2370PI	15	11½	4 1/16	1 7/16	3 1/16	L	.90	.62
▲VS031	3-4½-16½-22½	768	5156PI	5	8½	4	2½	3	L	2.05	1.43
VS039	6 (Hotshot)	1461	4F4H	4	41½	10⅜	2⅞	7⅜	M	3.50	2.35
VS040C	6 (Lantern)	409	F4H	10	15¾	2 11/16	2 11/16	4 5/16	M	.80	.54
VS040S	6 (Lantern)	—	F4BP	10	15¾	2 11/16	2 11/16	4 9/16	H	.80	.54
▲VS093	300	493	U200	1	1¼	2⅝	2 5/32	3¾	M	11.00	7.70
VS100	3	—	F2BP	10	8½	2⅝	1⅜	4 11/16	M	.80	.56
▲VS101	1½	—	2FBP	5	3¾	2⅝	1⅜	4 9/16	L	.80	.56
VS102	22½	763	4156	10	13¼	3⅜	2⅛	2¾	H	1.95	1.36
VS106	1½	—	4FH	10	13	2 11/16	2 11/16	4 3/16	H	.75	.52
VS112	22½-45	762S	5308	5	17	4⅛	2⅝	5 7/16	H	2.58	1.80
VS114	22½-45	—	Z30NX	10	17	2 31/32	1 27/32	4 15/16	H	2.80	1.95
▲VS126	22½-45	—	2308SC	5	43	8⅛	3¼	7 9/16	L	3.35	2.30
●VS127W	22½-45	—	10308SC	5	54½	8	4	7⅜	M	4.25	3.10
VS130	1½-3-4½	761T	2370ST	10	10½	3 15/16	1⅜	3	M	.95	.63
VS131	3-4½-6-9- 10½-16½-22½	778	5156SC	5	9½	4⅛	2½	3 5/16	M	2.05	1.45
▲VS132	9	—	D6BP	5	8	4 1/16	2 13/16	3	L	1.90	1.33
▲VS133	4½	703	532	10	3	2⅜	13/16	3 1/16	L	.45	.31
▲VS136	3	—	2F2H	5	8	2 11/16	2 11/16	4 3/16	L	1.00	.67
▲VS137	18-22½	766	2156	5	25	6½	4	3⅞	L	2.65	2.35
▲VS138	3	—	4F2H	5	14	3⅞	2 11/16	5⅞	L	1.45	1.00
▲VS139	7½	—	4F5H	5	40	7 13/16	4	6 5/16	M	4.10	2.90
▲VS140	9	1662	4F6H	5	50	8½	4 1/16	6 7/16	L	4.85	3.40
▲VS157	22½-45	794	21308SC	5	67	8⅛	4⅝	7 11/16	L	4.50	3.35

** Exact equivalent of Ray-O-Vac PFI; slightly larger than Burgess TE and Eveready 1052P.

● Wax Coated. ▲Non-warehouse types—shipping time 2-4 weeks. ♦Sealed-in-Steel.

Terms and conditions of sale and general information are set forth in our current applicable booklet covering sale of these products.

Inventory Control Guide: H—High-volume types. M—Medium-volume types. L—Low-volume types.

Forward all orders to your local RCA BATTERY Distributor.

BURGESS BATTERIES

4FH

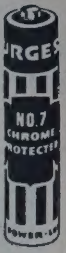
4F2H

F4H

No. 2

No. 1

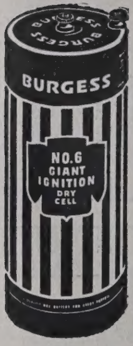
Z


No. 7

4F5H

BURGESS FLASHLIGHT BATTERIES

No. 1.	1½ volts.	Size, 1″x 1 15/16″.	Standard package 12	List price, $.125
No. 2.	1½ volts.	Size, 1 15/16″x 2 5/16″.	Standard package 48	List price, .125
No. Z.	1½ volts.	Size, 9/16″x 1⅞″.	Standard package 24	List price, .10
No. 7.	1½ volts.	13/32″x 1¾″.	Standard package 24.	List price, .10
F4H.	6 volts.	2⅝″ x 2⅝″ x 3 15/16″.	Standard package 12	List price, .80


6 Ign.

6 Tel.

BURGESS IGNITION BATTERIES

4FH.	1½ volts.	Size, 2 9/16″x2 9/16″x3 15/16″x4¼″.	Standard package 12.	List price, .80
4F2H.	3 volts.	Size, 3 29/32″x 2 11/16″x 5 13/32″.	Standard package 8	List price, 1.45
4F4H.	6 volts.	Size, 8¼″x2¾″x5 13/16″x6⅜″.	Standard package 6.	List price, 3.40
4F5H.	7½ volts.	Size, 7 3/16″x3 31/32″x5 13/16″x6⅜″.	Standard package 4	List price, 4.15
4F6H.	9 volts.	Size, 8½″x3 31/32″x5 13/16″x6⅜″.	Standard package 4.	List Price, 4.85

BURGESS NO. 6 LINE

No. 6 IGN.	1½ volts.	Size 2½″ Diam. 6⅝″.	Standard package 12	List price, .80
No. 6 TEL.	1½ volts.	Size 2½″ Diam. 6⅝″.	Standard package 12	List price, .75
S 461.	6 volts.	Size 10½″x 2¾″x7 13/32″.	Standard package 6	List price, 3.50

2F2H

FOR INDUSTRIAL APPLICATIONS

BURGESS "A" BATTERIES

No. 2F2H.	3 volts.	Size, 2 9/16″x 2 9/16″x 4″x 4¾″.	Standard package 5	List price, 1.00
No. 2FBP.	1½ volts.	Size, 2⅝″x 1 11/32″x 3 31/32″x4 11/32″.	Standard package 5	List price, .83
No. 4FH.	1½ volts.	Size 2 9/16″x 2 9/16″x 3 15/16″x 4¼″	Standard package 12	List price, .80
No. F2BP.	3 volts.	Size, 2⅝″x 1 11/32″x 4″x 4 7/16″.	Standard package 5.	List price, .83
No. F4BP.	6 volts.	Size, 2 9/16″x 2 9/16″x 3 15/16″x 4 3/16″.	Standard package 5	List price, .80

F2BP

BURGESS "B" BATTERIES

No. W30.	45 volts.	Size, 2 31/32″x1 7/32″x3¾″x4 3/16″.	Standard package 6	List price, 3.00
W30PBX.	45 volts.	Size, 2 15/16″x1 7/32″x3 19/32″x4⅛″.	Standard package 6	List price, 2.73
No. Z30NX.	45 volts.	Size, 2 21/32″x 1 13/16″x 4 17/32″x 5″.	Standard package 5	List price, 2.90

BURGESS "C" BATTERIES

No. A8BP.	12 volts.	Size, 2¾″x 1 23/64″x 2 7/16″x 2¾″	Standard package 3	List price, 2.25
No. B2BP.	3 volts.	Size, 1 19/32″x 25/32″x2 21/32″x2 29/32″.	Standard package 6.	List price, .95
No. W5BP.	7½ volts.	Size, 23/32″x 2 21/32″x 1⅜″x 1 11/16″.	Standard package 6.	List price, 1.37

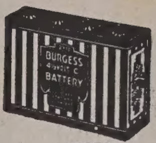
A QUALITY DRY BATTERY FOR EVERY PURPOSE

SUBJECT TO TRADE DISCOUNT

BURGESS BATTERIES

5308

5540


2370

10308

2308

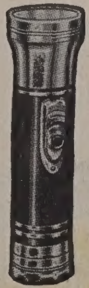
BURGESS RADIO "B" BATTERIES

No. 10308.	45 volts.	Size, 8 1/32"x 4 1/32"x 7 1/16".	Standard package 6	List price, $4.23
No. 21308.	45 volts.	Size, 8⅛"x 4 15/32"x 7 11/32".	Standard package 6	List price, 4.39
No. 2308.	45 volts.	Size, 8 1/32"x 2 23/32"x 7 1/16".	Standard package 6	List price, 3.10
No. 5156.	22½ volts.	Size, 4 1/32"x2 7/16"x2 23/32"x3¼".	Standard package 10	List price, 2.06
No. 5308.	45 volts.	Size, 4"x 2 17/32"x 5 1/16"x 5 9/16".	Standard package 5	List price, 2.57

346

BURGESS RADIO "B" & "C" BATTERIES

No. 2156.	22½ volts.	Size, 6 21/32"x 4 1/16"x 2 21/32"x 3 17/32".	Standard package 6.	List price, 2.62
No. 2370.	4½ volts.	Size, 4 1/32"x 1 13/32"x 2 15/16"x 3 5/16".	Standard package 5	List price, .88
No. 4156.	22½ volts.	Size, 3 15/32"x 2 1/16"x 2 19/32"x 2⅞".	Standard package 5	List price, 1.97
No. 5360.	4½ volts.	Size, 2⅜"x 27/32"x 2⅝"x 2 15/16".	Standard package 5	List price, .57
No. 5540.	7½ volts.	Size, 3⅞"x 27/32"x 2 11/16"x 3 1/32".	Standard package 5	List price, .99

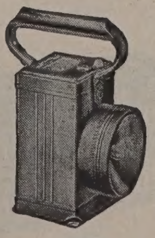

146

BURGESS FARM RADIO "A" BATTERIES

No. 20F.	1½ volts.	Size, 7⅝"x 2 19/32"x 6 15/16".	Standard package 3	List price, 4.25
No. 20F2.	3 volts.	Size, 11⅜"x 3 15/16"x 6⅛".	Standard package 1	List price, 6.07

FLASHLIGHT CASES AND LANTERNS

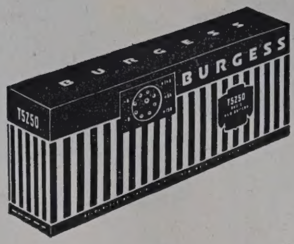
151.	2 cell Prefocused Maroon & Chrome.	Standard package 6	List price $1.25
146.	2 cell prefocused Maroon & Chrome.	Standard package 6	List price, $1.65
346.	2 cell Baby Prefocused Maroon & Chrome	Standard package 6	List price, $1.50
248.	5 cell Prefocused Chrome.	Standard package 1	List price, $3.95
250.	Rangefiinder 2 cell focusing Chrome.	Standard package 4	List price, $2.25
350.	2 cell Tough Industrial Light.	Standard package 6	List price $1.90
TW2.	Focusing Lantern.	Standard package 4	List price, $3.10

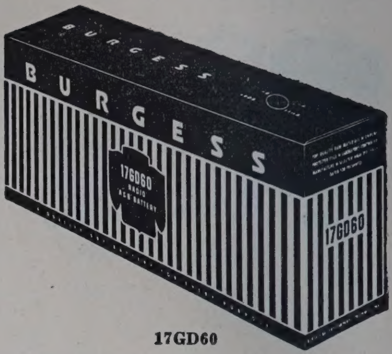

TW2

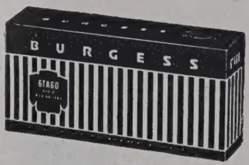
A QUALITY DRY BATTERY FOR EVERY PURPOSE

BURGESS BATTERIES

G6B60


T5Z50


17GD60

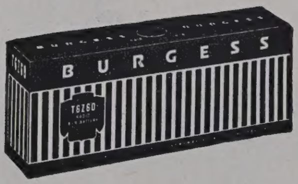

6TA60

BURGESS FARM "A & B" BATTERIES

No. 17GD60. 1½ volt "A", 90 volt "B". Size, 15⅝"x 4 5/16"x 7". Standard package 1. List price, $6.95

No. 4SD60. 1½ volt "A", 90 volt "B". Size 10 11/16"x 4 5/16"x 6 13/16". Standard package 1. List price, $6.95

No. S6D60. 7½ volt "A", 90 volt "B". Size 9⅞"x 4⅛"x 7 3/16". Standard package 1. List price, $8.29


T6Z60

BURGESS PORTABLE "A" & "B" BATTERIES

No.	Voltage	Size	List Price
2TXX40.	1½A, 60B	2⅜"x 1 5/16"x 7⅛"	3.30
4GA41.	1½A, 61½B	9 3/16"x 2 11/16"x 3 5/16"	4.35
4GA42.	1½A, 63B	9"x 2 1/16"x 4 11/16"	4.50
4TA60.	1½A, 90B	8⅛"x 2 11/32"x 4 25/32"	6.00
5DA60.	1½A, 90B	5 9/16"x 2 9/16"x 6 15/16"	5.59
6TA60.	1½A, 90B	9 15/16"x 2 7/32"x 4 13/32"	5.79
F4A50.	6A, 75B	9 1/16"x 2 11/16"x 3⅝"	5.53
F4B60.	6A, 90B	10¾"x 2 11/16"x 4 31/32"	6.00
F6A60.	9A, 90B	9¼"x 2¾"x 4 7/16"	5.65
F6A60P.	9A, 90B,	9 7/16"x2¾"x4 11/32"	5.90
F4B60.	6A, 90B	10¾"x 2 25/32"x 5"	6.00
G5A42.	7½A, 63B	9 1/16"x 2¾"x 4 9/32"	4.48
T5Z50.	7½ A, 75B	8½"x 3 11/32"x 2⅜"	5.25
T5Z60.	7½A, 90B	9½"x 2⅛"x 3¾"	6.00
G6B60.	9A, 90B	13⅞"x 2 25/32"x 4⅝"	6.25
G6M60.	9A, 90B	10 3/16"x 3⅛"x 4 1/32"	5.95
T6Z60.	7½, 9A, 90B	2 3/16"x 9 9/16"x 3 13/16"	5.75
4TZ60.	1½A, 90B	7 13/16"x2 7/32"x3 27/32"	5.25

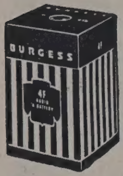
F6A60

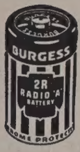
F4B60

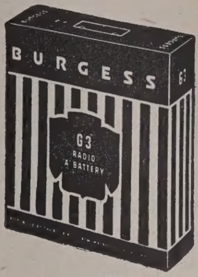
A QUALITY DRY BATTERY FOR EVERY PURPOSE

SUBJECT TO TRADE DISCOUNT

BURGESS BATTERIES


4F


2R


G3

F4PI

T5

F3

BURGESS PORTABLE "A" BATTERIES

No. 2F.	1½ volts.	Size, 2$\frac{17}{32}$"x 1$\frac{5}{16}$"x 4$\frac{3}{16}$".	Standard package 1	List price, $ .75
No. 2F4.	6 volts.	Size, 3$\frac{15}{16}$"x 2¾"x 5⅜".	Standard package 1	List price, 2.00
No. 2F4L.	6 volts.	Size, 3$\frac{29}{32}$"x 1$\frac{7}{16}$"x 10$\frac{11}{16}$".	Standard package 2	List price, 2.00
No. 2R.	1½ volts.	Size, 2$\frac{5}{16}$"x 1$\frac{5}{16}$" diameter.	Standard package 48	List price, .125
No. 4F.	1½ volts.	Size, 2$\frac{9}{16}$"x 2$\frac{9}{16}$"x 4$\frac{1}{32}$".	Standard package 6	List price, 1.05
No. 4FL.	1½ volts.	Size, 3$\frac{27}{32}$"x 1$\frac{5}{16}$"x 5$\frac{17}{32}$".	Standard package 1	List price, 1.02
No. 6F.	1½ volts.	Size, 4$\frac{1}{32}$"x 2$\frac{11}{16}$"x 4".	Standard package 3	List price, 1.50
No. 8F.	1½ volts.	Size, 3$\frac{27}{32}$"x 2$\frac{21}{32}$"x 5$\frac{7}{16}$".	Standard package 1	List price, 1.95
No. F4PI.	6 volts.	Size, 2$\frac{13}{32}$"x 2$\frac{13}{32}$"x 4$\frac{1}{16}$".	Standard package 6	List price, 1.03
No. G3.	4½ volts.	Size, 4"x 1⅜"x 4⅝".	Standard package 6	List price, .90
No. T5.	7½ volts.	Size, 2½"x 2$\frac{9}{16}$"x 3⅞".	Standard package 3	List Price, 1.38
No. D3	4½ volts.	Size, 3⅞"x 1$\frac{5}{16}$"x 2$\frac{15}{16}$".	Standard package 6	List price, .70
No. 2D	1½ volts.	Size, 2$\frac{9}{16}$"x 1$\frac{9}{32}$"x 2$\frac{31}{32}$".	Standard package 12	List price, .55
No. Z4	6 volts.	Size, 1$\frac{3}{16}$"x1$\frac{3}{16}$"x 2$\frac{7}{32}$".	Standard package 12	List price, .60
No. B5	7½ volts.	Size, 3$\frac{29}{32}$"x⅞"x2$\frac{27}{32}$".	Standard package 6	List price, 1.00
No. C5	7½ volts.	Size, 2$\frac{7}{32}$"x 1$\frac{15}{16}$"x 3$\frac{1}{32}$".	Standard package 6	List price, 1.00
No. F3	4½ volts.	Size, 4"x 1$\frac{7}{16}$"x 4⅛".	Standard package 6	List price, .83

A30

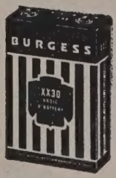
N60

M30

BURGESS PORTABLE "B" BATTERIES

No. A30.	45 volts.	Size, 3½"x 2$\frac{3}{16}$"x 4$\frac{9}{16}$".	Standard package 2	List price, 2.45
No. B30.	45 volts.	Size, 4$\frac{1}{16}$"x 2$\frac{17}{32}$"x 5$\frac{5}{16}$".	Standard package 2	List price, 2.45
No. M30.	45 volts.	Size, 3½"x 1$\frac{11}{16}$"x 5$\frac{7}{16}$".	Standard package 6	List price, 2.25
No. XX30.	45 volts.	Size, 2$\frac{13}{32}$"x $\frac{15}{16}$"x 3$\frac{21}{32}$".	Standard package 6	List price, 1.95
No. XX45.	67½ volts.	Size, 2$\frac{23}{32}$"x 1$\frac{5}{16}$"x 3$\frac{43}{64}$".	Standard package 6	List price, 2.50
No. Z30.	45 volts.	Size, 2$\frac{15}{16}$"x 2¼"x 4$\frac{1}{32}$".	Standard package 2	List price, 2.85
No. U200.	300 volts.	Size, 2¾"x 2$\frac{9}{32}$"x 3⅞".	Standard package 1	List price, 11.40
No. N60.	90 volts.	Size 3$\frac{11}{16}$"x1$\frac{9}{32}$"x3$\frac{13}{32}$".	Standard package 6	List price, 3.25
No. K45.	67½ volts.	Size 2$\frac{11}{16}$"x1$\frac{5}{16}$"x2¼".	Standard package 6	List price, 2.50
No. XX69.	103½ volts.	Size 1$\frac{11}{32}$"x1$\frac{11}{32}$"x11$\frac{23}{32}$".	Standard package 6	List price, 5.07

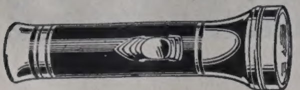
XX45


XX30

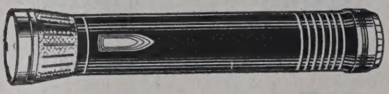
A QUALITY DRY BATTERY FOR EVERY PURPOSE

SUBJECT TO TRADE DISCOUNT

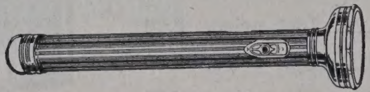
THE COMPLETE LINE OF EVEREADY FLASHLIGHTS



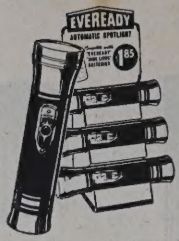
No. 2231 TWO-CELL "EVEREADY" AUTOMATIC SPOTLIGHT—Seamless tube. Chromium finish with rolled-on black decoration. Uses 2 "Eveready" No. 935 batteries and "Eveready" Lamp No. PR4. Unit package quantity 1. **List Price Each (Without Batteries)................................$1.60**



No. 4351 THREE CELL "EVEREADY" AUTOMATIC SPOTLIGHT–Attractively finished in chrome, hammered gray and black. Uses three "Eveready" No. 950 batteries and "Eveready" lamp No. PR-3; Unit package quantity 1. **List Price Each (without batteries)................................$1.49**

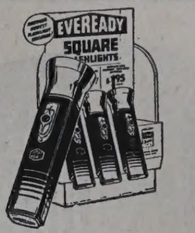


No. 2552 FIVE-CELL "EVEREADY" FOCUSING SEARCHLIGHT—Chromium fittings, seamless tube with durable black baked-on finish equipped with ring hanger. Uses 5 "Eveready" No. 950 batteries and "Eveready" Lamp No. PR-12. Unit package quantity 1. **List Price Each (Without Batteries)...............$3.95**



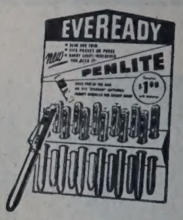
DISPLAY PACKAGE No. 25

Contains 6 No. 2251 two-cell "Eveready" Automatic Spotlights, displays 6. Seamless tube, chromium finish with rolled-on black decoration. Uses 2 "Eveready" No. 950 batteries and "Eveready" Lamp No. PR2.
List Price Each (Complete With Batteries)...$1.85



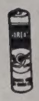
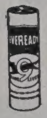
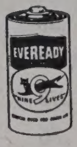
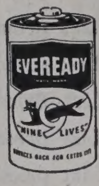
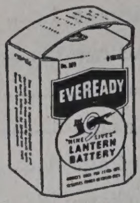
DISPLAY PACKAGE No. 72

Contains 6 No. 7251 "Eveready" Square Masterlites. Rolled-on black decoration trimmed in chromium. Uses 2 "Eveready" No. 950 batteries and "Eveready" lamp No. PR-2.
List Price Each (Complete With Batteries)...$1.95

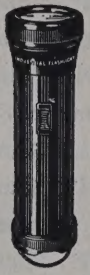


DISPLAY PACKAGE No. 21

Contains 12 No. 212 Penlights . . . assorted in all chrome and black and chrome styles. Uses 2 No. 912 batteries and "Eveready" lamp No. 224.
List Price Each (Complete With Batteries)...$1.00

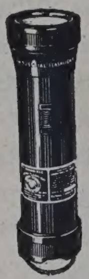
No. 912	**No. 915**	**No. 935**	**No. 950**	**No. 509**
1½ volts. Height 1¾″ Diameter 0.4″ Weight 0.3 oz.	1½ volts. Height 1³¹⁄₃₂″ Diameter ³⁵⁄₆₄″ Weight ½ oz.	1½ volts. Height 2″ Diameter 1¹⁄₃₂″ Weight 1⅓ oz.	1½ volts. Height 2²⁷⁄₆₄″ Diameter 1²¹⁄₆₄″ Weight 3⅓ oz.	Lantern Battery. 6 volts. 2⅝″ x 2⅝″ x 3²⁷⁄₃₂″. Weight 1 lb., 7 oz.



No. 1251

Two-Cell Prefocused Industrial Flashlight —General purpose type. Uses 2 "Eveready" No. 950 batteries and "Eveready" Lamp No. PR6. Unit package quantity 1. **List Price Each (Without Batteries)**

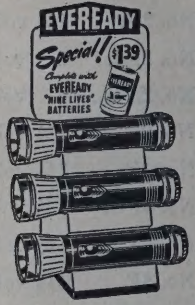
$2.95



No. 1259

Two-Cell Prefocused Permissible Safety Flashlight — Uses 2 "Eveready" No. 950 batteries and "Eveready" Lamp No. PR6. Extra lamp in bottom cap included. Unit package quantity 1. **List Price Each (Without Batteries)**

$5.00


EVEREADY
Special!
$1.39
Complete with EVEREADY "NINE LIVES" BATTERIES

DISPLAY PACKAGE No. 42

Contains 12 "Eveready" No. 4251 Price Leader Automatic Spotlights. Uses two No. 950 batteries and "Eveready" lamp No. PR-2. **List Price Each (complete with batteries)**

$1.39

SCHEDULE OF PRICES

Cat. No.	No. of Cells	Cell Size	List Price Each	Unit Pkg. Qty.	Weight of Unit Packages	
					Lbs.	Ozs.
912	1	—	$ .10	12	—	4
915	1	AA	.10	12	—	7
935	1	C	.125	12	1	2
950	1	D	.125	48	9	7½
Lantern Battery						
509	4	F	.80	12	16	8

"Eveready" Miniature Lamps for Radio Panel Service

"Eveready" No.	Bulb	Volts	Amp.	List Price
40	T-3¼	6-8	0.15	$.11
41	T-3¼	2.5	0.50	.11
44	T-3¼	6-8	0.25	.11
46	T-3¼	6-8	0.25	.11
47	T-3¼	6-8	0.15	.11
48	T-3¼	2	0.06	.16
49	T-3¼	2	0.06	.16
50	G-3½	6-8	C.P. 1	.11
1490	T-3¼	3.2	0.16	.11

FLASHLIGHT LENS ASSORTMENT

Cat. No.	Type	Unit Package Quantity
102	40 No. 53419 Spotlight Lenses for Nos. 2251, 2671, 2351, 7251, 4351 Spotlights.......... 2 No. 53123 Spotlight Lenses for No. 2231 Baby Spotlight.......... 2 No. 53390 Searchlight Lenses for No. 2552 Searchlight	1 Assortment

"EVEREADY" LAMPS *TWO CELL*

"Eveready" No.	Bead Color	Bulb	Volts	Amp.	List Price	Use with Following "Eveready Batteries"
14	Blue	G-3½	2.5	0.30	$.11	2 Nos. 935 or 950
PR-2	Blue	B-3½	2.4	0.27	.15	2 No. 950
PR-4	Lt. Gr.	B-3½	2.3	0.27	.15	2 No. 935
PR-6	Brown	B-3½	2.5	0.30	.15	2 Nos. 935 or 950
222	White	TL-3	2.2	0.25	.11	2 No. 915
224	—	TL-2¾	2.15	0.22	.12	2 No. 912
THREE CELL						
13	Green	G-3½	3.8	0.30	$.11	3 No. 950
PR-3	Green	B-3½	3.6	0.50	.15	3 No. 950
PR-7	Pink	B-3½	3.8	0.30	.15	3 No. 950
FIVE CELL						
605	Brown	G-4½	6.0	0.50	$.13	5 No. 950
PR-12	—	B-3½	6.0	0.50	.15	5 No. 950

EVEREADY
TRADE-MARK
Radio Batteries

Sell the one brand your customers will always buy—"Eveready" Radio Batteries—for fast turnover, repeat sales! Famous for fine quality and quick profits, "Eveready" Radio Batteries—portable and farm packs—equip virtually every battery-type radio in use today!

Complete data describing these best-selling batteries are given on page M-8.

EVEREADY
"NINE LIVES"
RADIO
"B" BATTERY
NATIONAL CARBON COMPANY PRODUCT

482

EVEREADY
"NINE LIVES"
RADIO
"B" BATTERY

467

EVEREADY
"NINE LIVES"
RADIO
"B" BATTERY

455

EVEREADY
NINE LIVES
RADIO
"A" BATTERY

746

EVEREADY
NINE LIVES

950

EVEREADY
"NINE LIVES"
RADIO
"A" BATTERY

717

EVEREADY
"A-B"

752

EVEREADY
NINE LIVES
A-B
RADIO BATTERY PACK
FOR PORTABLE RECEIVERS

753

EVEREADY
NINE LIVES
A-B
RADIO BATTERY PACK

757

EVEREADY
NINE LIVES
"A-B"
RADIO BATTERY PACK

729

EVEREADY
NINE LIVES
RADIO
"A" BATTERY

742

EVEREADY
"NINE LIVES"
RADIO
"A" BATTERY
NATIONAL CARBON PRODUCT

726

EVEREADY
"NINE LIVES"
RADIO
"A" BATTERY

744

No. 493
300 VOLTS
EVEREADY
"NINE LIVES"
BATTERY
FOR ANY HIGH VOLTAGE LOW DRAIN PORTABLE EQUIPMENT
NATIONAL CARBON PRODUCT

493

EVEREADY
"NINE LIVES"
"A-B"

759

EVEREADY
"NINE LIVES"
RADIO
"B" BATTERY

490

EVEREADY
"NINE LIVES"
RADIO
"A" BATTERY

736

EVEREADY
MINI-MAX
B BATTERY
FOR FARM TYPE RECEIVERS

487

EVEREADY
NINE LIVES
A-B
RADIO BATTERY PACK

755

EVEREADY
NINE LIVES
A-B
RADIO BATTERY PACK

756

724

No. 457
67½ VOLTS
EVEREADY
"NINE LIVES"
RADIO
"B" BATTERY
NATIONAL CARBON PRODUCT

457

"EVEREADY" BATTERY SPECIFICATIONS

Catalog Number	VOLTAGE	Overall Dimensions			Unit Package Quantity	Weight of Unit Package in Pounds	Battery Weight	Terminals	List Price
		Length	Width	Height					
"B" BATTERIES FOR PORTABLE RECEIVERS									
411	15	1 1/32"	⅝"	1 29/64"	5	5¼ oz.	4/5 oz.	Flat Contact −, +15	$0.95
412	22½	1 1/32"	⅝"	2"	5	6½ oz.	1 1/5 oz.	Flat Contact −, +22½	1.15
413	30	1 1/32"	⅝"	2 9/16"	5	8¾ oz.	1 2/5 oz.	Flat Contact −, +30	1.40
455	45	2 21/32"	1"	3 11/16"	6	3¼	7 4/5 oz.	Snap Type −, +45	1.95
457	67½	2 13/16"	1⅜"	2½"	6	3	7 2/5 oz.	Snap Type −, +67½	2.50
467	67½	2 13/16"	1⅜"	3 45/64"	6	4¾	12 oz.	Snap Type −, −67½	2.50
477	67½	1 29/32"	63/64"	5 7/16"	6	3 lb. 6 oz.	8 3/5 oz.	Snap Type −, +67½	2.35
482	45	3 19/32"	1 27/32"	5½"	6	11½	1 lb. 15 oz.	Socket −, +45	2.25
484	45	4 1/16"	2 17/32"	5 5/16"	1	2¾	2 lb. 8 oz.	Socket −, +45	2.45
490	90	3 23/32"	1⅜"	3 45/64"	6	6½	15 oz.	Snap Type −, +90	3.25
493	300	2 11/16"	2 7/32	3 29/32"	1	1	14½ oz.	Pin Jacks −, +300	11.00
738	45	3"	2 5/16"	4⅛"	2	2½	1 lb. 3 2/5 oz.	Socket −, +22½, +45	2.85
"A" BATTERIES FOR PORTABLE RECEIVERS									
713	7½	3 29/32"	⅞"	2 27/32"	1	7½ oz.	6¾ oz.	Socket −, +7½	$1.00
717	7½	2 7/32"	1 15/16"	3 1/32"	6	3	8 oz.	Socket −, +7½	1.00
††718	6	3 29/32"	2¾"	5 7/16"	1	2¾	2 lb. 4 oz.	Socket −, +6	2.00
720	1½	2 19/32"	1⅜"	3 1/32"	6	2⅝	6½ oz.	Socket −, +1½	0.55
724	6	1 7/32"	1 7/32"	2 11/32"	12	2	2½ oz.	Flashlight	0.60
726	4½	3 15/16"	1 5/16"	2 15/16"	6	4	10½ oz.	Socket −, +4½	0.70
736	4½	3 15/16"	1 5/16"	4 3/32"	6	6¼	1 lb.	Socket −, +4½	0.85
††741	1½	3⅞"	2 11/16"	5⅜"	1	2¾	2 lb. 10 oz.	Socket −, +1.5	1.95
742	1½	2 9/16"	2 9/16"	3 31/32"	6	8	1 lb. 5 oz.	Socket −, +1.5	1.05
††743	1½	3 13/16"	2⅝"	4 1/32"	3	6	1 lb. 15 oz.	Socket −, +1.5	1.50
744	6	2 21/32"	2 21/32"	3 31/32"	6	8¼	1 lb. 5 oz.	Socket −, +6	1.05
††745	1½	3⅞"	1 7/16"	10 25/32"	2	5½	2 lb. 10½ oz.	Socket −, +1.5	2.00
746	4½	3 15/16"	1 5/16"	4 21/32"	6	7¼	1 lb. 3 2/5 oz.	Socket −, +4.5	0.90
††747	6	3⅞"	1 7/16"	10 25/32"	2	5½	2 lb. 11 oz.	Socket −, +6	2.00
915	1½	35/64" Diam.		1 31/32"	12	½	3/5 oz.	Flashlight	0.10
†935	1½	1 1/64" Diam.		2"	12	1¼	1 2/5 oz.	Flashlight	0.125
950	1½	1 21/64" Diam.		2 27/64"	48	9½	3 oz.	Flashlight	0.125
960-P	1½	1 11/32" Diam.		4 1/16"	1	5 oz.	5 oz.	Socket −, +1.5	0.35
964	1½	1⅜"	4 11/16"	5 9/10	12	4 lb. 10 oz.	5 9/10 oz.	Flashlight	0.80
"A-B" PACKS FOR PORTABLE RECEIVERS									
729	1½ "A" 90 "B"	7 13/16"	2 7/32"	3 27/32"	1	2¾	2 lb. 7 oz.	Socket −"A" +1½ "A" −"B" +90 "B"	$5.25
752	9 "A" 90 "B"	14 1/16"	2 11/16"	4 1/16"	1	6¼	6 lb. 2 oz.	Recessed Plug −"A", +9 "A", −"B", +90 "B"	6.25
752-W	10½ "A" 90 "B"	**14 1/16"	2 11/16"	4 1/16"	1	7	6 lb. 8 oz.	Recessed Plug −"A" +10½ "A", −"B", +90 "B"	6.50
753	7½ & 9 "A" 90 "B"	9 7/32"	2 23/32"	4 5/16"	1	5	4 lb. 12 oz.	Socket −"A" +7½ "A", +9 "A" −"B", +90 "B"	5.65
754	7½ & 9 "A" 90 "B"	10 15/32"	3¼"	4"	1	6¼	6 lb. 1 oz.	Socket −"A" +7½ "A", +9 "A", −"B", +90 "B"	5.95
755	6 & 7½ "A" 75 "B"	8 9/16"	2 7/16"	3¾"	1	3¾	3 lb. 9 oz.	Socket −"A", +6 "A", +7½ "A" −"B", +75 "B"	5.25
756	7½ & 9 "A" 90 "B"	8⅞"	2⅛"	3 25/32"	1	3	2 lb. 14 oz.	Socket −"A" +7½ "A", +9 "A" −"B", +90 "B"	5.75
757	9 "A" 90 "B"	9 7/32"	2 23/32"	4 7/32"	1	5	4 lb. 12 oz.	Recessed Plug −"A" +9 "A" −"B" +90 "B"	5.90
"B" BATTERY FOR HOME RECEIVERS									
487	45	5⅛"	2 1/16"	7¼"	6	27	4 lb. 2 oz.	Socket −, +22½, +45	$3.15
"A-B" PACKS FOR HOME RECEIVERS									
758	1½ "A" 90 "B"	10 11/16"	4⅛"	6 13/16"	1	14¾	14 lb. 4 oz.	Socket −"A", +1.5 "A" −"B", +90 "B"	$6.95
759	1½ "A" 90 "B"	15 11/16"	4 5/32"	6 15/16"	1	17	15 lb. 7 oz.	Socket −"A", +1.5 "A" −"B", +90 "B"	6.95
"A" BATTERY FOR HOME RECEIVERS									
††740	1½	4 19/32"	3⅞"	7¾"	1	6¼	6 lb.	Socket −, +1.5	$4.25
"C" BATTERIES AND MISCELLANEOUS TYPES									
735	1½	2⅝"	2⅝"	4 5/16"	12	15½	1 lb. 4 oz.	Screw Terminals −, +1½	$0.25
768	22½	4⅛"	2 17/32"	2 31/32"	1	1½	1 lb. 8½ oz.	Socket +, −3, −4½, −16½, −22½	2.15
771	4½	3 29/32"	1⅜"	3 1/16"	5	4½	13 oz.	Socket +, −3, −4½	0.95
773	7½	3 29/32"	⅞"	3⅛"	5	3	9 oz.	5 Screw; 1 wire +, −1½, −3, −4½, −6, −7½	1.10
781	4½	2 15/32"	55/64"	3¼"	5	1¾	5 oz.	Screw +, −4½	0.55
762-S	45	4 7/32"	2 9/16"	6 15/32"	1	3	2 lb. 12 oz.	Screw −, +22½, +45	3.50
763	22½	3½"	2 3/32"	2 15/16"	5	4¾	14 oz.	Screw −, +22½	1.95
778	22½	4⅛"	2 17/32"	3 7/16"	10	17	1 lb. 8 oz.	Fahnestock +, −3, −4½, −6, −9, −10½, −16½, −22½	2.15

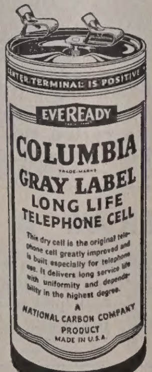
**Exclusive of "A" Cell †Flashlight Types ††Shipped from factory only

EVEREADY
TRADE-MARK
Dry Batteries

Illustrated below are "Eveready" Dry Batteries, known for dependable and long service. Information describing famous "Eveready" Dry Batteries is given with each illustration.

CENTER TERMINAL IS POSITIVE (+)
EVEREADY
TRADE-MARK
NINE LIVES
DRY CELL
FOR IGNITION, BELLS, LANTERNS, ETC.
BOUNCES BACK FOR EXTRA LIFE
RECOVERS POWER BETWEEN USES
No. 6
A NATIONAL CARBON COMPANY PRODUCT
MADE IN U. S. A.

NUMBER 1461
4 CELL POWER 6 VOLTS
EVEREADY
TRADE-MARK
NINE LIVES
HOT SHOT
TRADE-MARK
MULTIPLE BATTERY
FOR ELECTRIC FENCE CONTROLLERS, IGNITION, ALARMS, ETC.
BOUNCES BACK FOR EXTRA LIFE
RECOVERS POWER BETWEEN USES
A NATIONAL CARBON COMPANY PRODUCT
MADE IN U. S. A.


CENTER TERMINAL IS POSITIVE
EVEREADY
COLUMBIA
TRADE-MARK
GRAY LABEL
LONG LIFE
TELEPHONE CELL
This dry cell is the original telephone cell greatly improved and is built especially for telephone use. It delivers long service life with uniformity and dependability in the highest degree.
A NATIONAL CARBON COMPANY PRODUCT
MADE IN U.S.A.

"EVEREADY" "IGNITOR" DRY CELL NO. 6— For extra long life and heavy service in all Dry Cell applications. Its exceptionally high quality and recuperative powers have made the "Eveready" "Ignitor" dry cell famous for ignition, radio, bells, buzzers, electric games, toys, lanterns and other battery operated devices.

"EVEREADY" R.R. AND INDUSTRIAL NO. 6— Especially designed for Railroad and Industrial use where a wide range of service conditions, from extremely heavy to extremely light are encountered.

"EVEREADY" "COLUMBIA" "GRAY LABEL" TELEPHONE CELL NO. 6— Especially designed for telephone service. Noted for its long life on light drain service.

Brand and Type	Jacket	Voltage	Overall Dimensions In Inches		Quantity in Standard Package	Approx. Wt. of Std. Pkg. in Pounds	List Price Each
			Diameter	Height			
*"Eveready" "Ignitor" No. 6	Round	1½	2⅝	6⅝	12	27	$0.80
*"Eveready" R.R. and Industrial No. 6	Round	1½	2⅝	6⅝	12	27½	0.85
**"Eveready" "Columbia" "Gray Label" Telephone Cell No. 6	Round	1½	2⅝	6⅝	12	26	0.75

**Equipped with screw terminals unless Fahnestock spring terminals are specified.*
***Equipped with Fahnestock spring terminals unless screw terminals are specified.*

"EVEREADY" "HOT SHOT" BATTERIES— For all purposes requiring four or more dry cells in series. Particularly adapted for electric fences, gas engines (tractors, motor boats, etc.), blasting, fire and burglar alarms, gongs, bells, annunciators, signals, lights for closets, out-houses, camps, boats, searchlights, etc.

"Eveready" "Hot Shot" Batteries are composed of specially selected cells. Internal connections are securely soldered and the cells are completely insulated against accidental short circuits. Terminals are insulated.

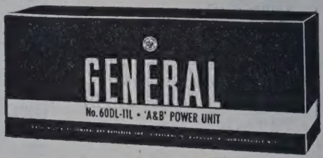
Brand and Type	Voltage	Overall Dimensions In Inches			Quantity in Standard Package	Approx. Wt. of Std. Pkg. in Pounds	List Price Each
		Length	Width	Height			
"Eveready" No. 1461	6	10⅜	2¾	7¼	6	58¼	$3.50
"Eveready" No. 1462	6	5 5/16	5 5/16	7¼	4	39¼	3.50
"Eveready" No. 1562	7½	7⅞	5	7¼	4	50½	4.50
"Eveready" No. 1662	9	7 13/16	5¼	7¼	4	60¼	5.25
SPECIAL TYPE FOR MISCELLANEOUS APPLICATIONS							
No. 715 for Emergency Ltg.	7½	7 3/16	3 31/32	6 7/16	4	33	$4.15
No. 735 Instrument Battery	1½	2⅝	2⅝	4 5/16	12	15½	0.80
		(Square Jacket)					

be sure with GENERAL DRY BATTERIES

GENERAL dry batteries contain many outstanding advancements such as extra heavy seamless extruded zinc cups, the famous paper thin separator permitting more mix and more active zinc area by utilization of the cell bottom, the curled rim lock seal which seals each cell individually. These features, found only in Generals, assure long shelf life as well as the maximum in dry battery performance.

GENERAL A & B RADIO FARM PACKS

General A-B packs are made with L size cells in the A section. These cells are 40% longer than the largest conventional 1¼" diameter cell. This construction assures the perfect balance between these "A" and "B" sections for current drains established by the Radio Industry.



Type	Voltage	Standard Package	Pkg. Lbs. Weight	Interchangeable With			Price	
				Eveready	Burgess	Ray-O-Vac	East	Pacific Coast
60DL11L	1½-90	1	24.5	759	17GD60	AB82	$6.95	$7.10
60D12L6	9-90	1	24	—	3G6D60	AB982	8.50	8.50
60B6L	1½-90	4	39	758	—	AB85	6.45	6.45
90FL6D	135-9C	1	45	—	F90-D6	P8960	10.30	11.11

GENERAL ABC HOME RADIO BATTERIES

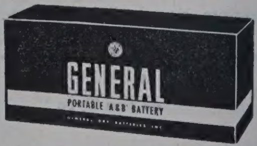
All cells used in General batteries are filled with active mix by loading equipment developed by General which automatically puts the right amount of mix into each cell and packs it uniformly. General home radio batteries are accepted for their uniformity, dependability and long service.

GENERAL
GENERAL
No V30D • B BATTERY
45 VOLTS

Type	Voltage	Standard Package	Pkg. Lbs. Weight	Interchangeable With			Price	
				Eveready	Burgess	Ray-O-Vac	East	Pacific Coast
12L1L	1½	4	34	740	20F	P9203	$4.25	$4.25
12L1S	1½	4	34	A1300	19G	P168A	4.25	4.25
P24L2	3	1	17	X125	20F2	P9403	6.25	6.25
V30D	45	6	45	—	2308	P5233	3.15	3.15
V30F	45	6	68	—	10308	P5933	4.25	4.40
V30FL	45	3	39	—	21308	P9303	4.80	4.98
H3D	4½	10	7.5	X771	2370P1	P231W	.95	.95
H3BS	4½	10	3	781	5360	531R	.55	.55
V5B	7½	10	6.3	773	5540	551	1.10	1.10
H15B5	22½	10	15.4	768	5156P1	P5151	2.15	2.15
H15B	22½	10	15.4	778	5156SC	—	2.15	2.15
H15A	22½	10	10	763	4156	4151	1.95	1.95

GENERAL PORTABLE A & B PACKS

The small size cells used in portable batteries greatly reflect the benefits derived from General's patented construction. General Batteries deliver more service hours per dollar, therefore you will find them used as original equipment in more battery radios than any other brand.



Type	Voltage	Standard Package	Pkg. Lbs. Weight	Interchangeable With			Price
				Eveready	Burgess	Ray-O-Vac	
40N2CF	1½-60	6	8.7	—	—	—	$3.25
41A4FL	1½-61½	6	25.5	—	4GMA41	AB419	4.70
60A2L	1½-90	1	5	—	5DMA60	—	5.95
60A4L	1½-90	6	38.5	—	6FMA60	AB84	5.95
42A5G5	7½-63	6	30	—	5GMA42	AB794	5.25
291	7½-9-90	1	6.5	754	G6M60	AB878	5.95
60A4F4	6-90	6	33.5	—	2F4A60	AB694	5.95
60A6F6-5	7½-9-90	1	6	753	F6A60	AB994	5.65
362	7½-9-90	6	24	756	T5Z60	—	5.75
Z50B4H4	6-75	1	7	—	G4B50	AB670	5.65
Z60B6H6	9-90	1	89	752	G6B60	AB677	6.25

See next page for more General Batteries.

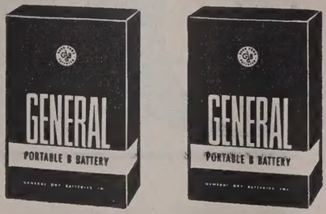
GENERAL PORTABLE A BATTERIES

Type	Voltage	Pkge. Std.	Weight Pkg. Lbs.	Interchangeable With Eveready	Burgess	Ray-O-Vac	Price
D	1½ Radio A	50	12	—	—	—	$0.125
4FI	1½	6	9	742	4F	P94A	1.05
6FI	1½	6	13	743	6F	P96A	1.50
8FI	1½	6	17.4	741	8F	P98A	1.95
3LI	1½	6	11.4	745	4FL	P94L	1.05
3H3	4½	6	8	746	G3	P83A	.90
4F4	6	6	9	744	F4PI	P694A	1.05
8F4	6	6	17.4	718	2F4	P698A	2.00

GENERAL
No. 3H3 • 'A' BATTERY
GENERAL
PORTABLE A BATTERY

GENERAL PORTABLE B BATTERIES

Type	Voltage	Std. Pkge.	Pkg. Lbs. Weight	Interchangeable With Eveready	Burgess	Ray-O-Vac	Price
V30A	45	6	11.4	—	A30	P430	$2.25
F30A	45	6	11.4	—	A30X	BB30P	2.25
V30B	45	6	17	—	B30	P5303	2.25
V30AA	45	6	9	738	Z30	P7R30	2.85
V30AA2	45	6	9	—	Z30N	—	2.85
W30B	45	6	12	482	M30	P7830	2.25


GENERAL
PORTABLE B BATTERY
GENERAL
PORTABLE B BATTERY

GENERAL "DuroMite" BATTERIES

New General DuroMite batteries are the finest in battery design and assembly. Thin, well-balanced flat cells are stacked like a roll of wafers. Each stack of cells sealed in its own plastic case, keeping the cells fresh until put in use. Maximum service life can be obtained from minimum of space used.

Type	Voltage	Std. Pkge.	Pkg. Lbs. Weight	Interchangeable With Eveready	Burgess	Ray-O-Vac	Price
W45A	67½	12	10	467	XX45	4367	$2.50
W30A	45	12	7	455	XX30	P3A30	1.95
W60A	90	12	13.5	490	—	—	3.25

GENERAL
PORTABLE B BATTERY
GENERAL DRY BATTERIES, INC.
GENERAL
PORTABLE B BATTERY
GENERAL DRY BATTERIES, INC.

GENERAL "FlashLite" & LANTERN BATTERIES

The New General *"Flashlite"* cell comes to the market to fulfill the demand of practically every user. This demand is for extra long service, years of shelf life and protection against corrosion damage. The Industrial cell is recommended when light is needed frequently and for long periods.

Type	Voltage	Std. Pkge.	Pkg. Lbs. Weight	Interchangeable With Eveready	Burgess	Ray-O-Vac	Price
C	1½	72	8	935	1	1LP	$0.125
D	1½	240	57	950	2	—	.125
D Industrial	1½	250	59.5	1050	#2 Ind	2111	.15
AA	1½	180	8	915	Z	7-R	.10
V4F Lantern	6	10	15.8	409	F4H	941	.80
4FB Bicycle	6	10	15.5	—	—	—	.90

GENERAL
DuroPower
GENERAL
LANTERN BATTERY

GENERAL IGNITION & ELECTRIC FENCE BATTERIES

All General batteries are designed to use the most efficient cells available. The 641 is made with 12 L cells and this construction has proven to produce exceptional performance when used on Electric Fence controls and other ignition applications.

Type	Voltage	Std. Pkge.	Pkg. Lbs. Weight	Interchangeable With Eveready	Burgess	Ray-O-Vac	Price East	Price Pacific Ct.
#6	1½	24	60	#6 Ig	—	#6 Ig	$0.80	$0.85
#6 Tele	1½	24	60	#6 Co.	—	#6 Tele	.80	.85
641 Multiple	6	6	54	1461	—	641	3.50	3.80

GENERAL
No. 6 • DRY CELL
GENERAL
No. 641 • 6 VOLT • MULTIPLE BATTERY

We manufacture all types of Hearing Aid and Model Airplane batteries. Write for particulars.

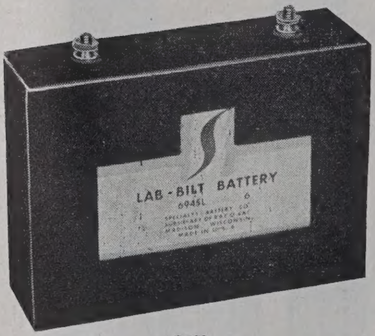
GENERAL DRY BATTERIES, INC.
MAIN OFFICES AND FACTORY • 13000 ATHENS AVE., CLEVELAND, OHIO
FACTORIES • DUBUQUE, IA. • MEMPHIS, TENN. • TORONTO, ONT.
BRANCH OFFICES & WAREHOUSES • NEW YORK, CHICAGO, DALLAS, SAN FRANCISCO,
LOS ANGELES, PORTLAND, MEMPHIS, MINNEAPOLIS

LAB-BILT
BATTERIES

Custom-built dry cell batteries for every unusual power requirement

FOR INDUSTRY ARMED SERVICES LABORATORY

322S


694SL

394S

Catalog No.	Volts	Overall Dimensions L	W	H	Terminals	Comparables Burgess	Ray-O-Vac	Prices: List	Dealer
INDUSTRIAL TYPE "A" BATTERIES									
322S	3	2⅝	1 5/16	3⅛	Screw	D2BP	....	$1.10	$0.76
392S	3	2⅝	1⅜	4⅞	Screw	F2BP	921	0.80	0.55
394SL	3	5⅛	1 5/16	4⅛	Screw	2F2BP	....	1.35	0.94
394S	3	2⅝	2⅝	4⅛	Screw	2F2H	....	0.92	0.64
694SL	6	5⅛	1 5/16	4⅛	Screw	F4X	....	1.95	1.34
192S	1½	2⅝	1 5/16	4 9/16	Screw	2FBP	....	0.80	0.55
194PL	1½	3 13/16	1⅜	5⅝	Plug-In	4FL	P94L	1.02	0.71
198P	1½	3⅞	2 13/16	5½	Plug-In	8F	P98A	1.95	1.36
198PL	1½	3⅞	1 7/16	10¾	Plug-In	8FL	P98L	1.95	1.34
698P	6	3 15/16	2¾	5 9/16	Plug-In	2F4	P698A	2.00	1.40
785P	7½	3⅞	2⅝	4 9/16	Plug-In	G5	P85A	1.10	0.76
755P	7½	4 1/16	1 5/16	3	Plug-In	B5	P551	1.00	0.75
7CD5P	7½	2½	2½	3 5/16	Plug-In	T5	P7CD1	1.38	0.96
694PL	6	3⅞	1 7/16	5⅝	Plug-In	F4L	P694L	1.55	1.07
694S	6	2⅝	2⅝	4⅛	Screw	F4BP	941 Screw	0.80	0.54
191(d)	1½	1⅜ diam.	....	3 9/16	....	No. 10	....	0.24	0.17
698T	6	3⅞	2 13/16	5½	Flex. Leads	....	....	1.70	1.28
698PL	6	3⅞	1 7/16	10¾	Plug-In	2F4L	P698L	2.00	1.40
398S	3	3⅞	2¾	5⅜	2 Screws	4F2BP	....	2.00	1.40

Complete catalog will be mailed on request.

SPECIALTY BATTERY COMPANY

A DIVISION OF RAY-O-VAC

Madison 10, Wisconsin

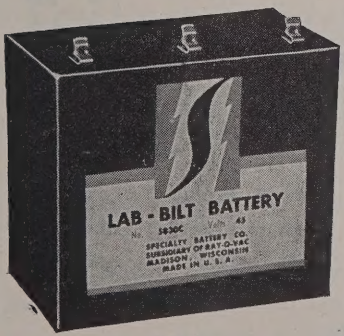
LAB-BILT BATTERIES

LAB-BILT BATTERY

5530S

LAB-BILT BATTERY

57R30S



5830C

INDUSTRIAL TYPE "B" BATTERIES

Catalog No.	Volts	Overall Dimensions L	W	H	Terminals	Comparables Burgess	Ray-O-Vac	Prices: List	Dealer
103SN69	103½	1 11/32	1 11/32	11 23/32	Contacts Top(+)and Bottom(–)	XX69	Sig. Corps No. BA-38	**$4.90**	**$3.35**
57R30S	45	2 15/16	1⅞	4 15/16	Screw	Z30NX	7R30N	**2.90**	**2.00**
57R30P	45	2 15/16	2¼	4⅛	Plug-In	Z30	P7R30	**2.85**	**2.00**
07R60S	90	3 9/16	2 5/16	6 5/16	Screw	Z60BP	7R60	**8.40**	**5.80**
0460P	90	4 7/16	3 7/16	4½	Plug-In	A60	....	**5.00**	**3.45**
5530S	45	4⅛	2⅝	5⅜	Screw	5308	5303	**2.57**	**1.79**
5230C	45	8 1/16	3 13/16	7 3/16	Spring Clip	2308SC	2303	**2.55**	**2.32**
5930C	45	8 1/16	4 5/16	7 3/16	Spring Clip	10308SC	9303	4.20 4.50*	**3.15** **3.35***
5830C	45	8⅛	4½	7 15/16	Spring Clip	21308SC	8303	4.39 4.65*	**3.28** **3.48***
5830P	22½, 45	8 1/16	4½	7 7/16	Plug-In	21308PI	P8303	4.39 4.65*	**3.28** **3.48***
144S7R96S	144	2 9/16	2 9/16	18¼	Screw	Z96P	....	**12.40**	**8.55**
07R60SS	45, 90	3 9/16	2 5/16	6 5/16	3 Screws	Z60X	....	**8.40**	**5.80**
5530P	45	4⅛	2 9/16	5¼	Plug-In	B30	P5303	**2.45**	**1.70**
57R30SS	22½, 45	3⅝	2 9/32	3⅜	3 Screws	Z30BP	....	**4.45**	**3.06**

* West Coast price

INDUSTRIAL TYPE "C" BATTERIES

Catalog No.	Volts	L	W	H	Terminals	Burgess	Ray-O-Vac	List	Dealer
453S	4½	2⅜	13/16	2⅞	Screw	5360	531R	**$0.57**	**$0.39**
423P	4½	4 1/16	1 7/16	3 1/16	Plug-In	2370PI	P231W	**0.85**	**0.60**
423S	4½	4 1/16	1 7/16	3 7/16	Screw	2370BP	231W	**0.85**	**0.60**
755S	7½	3 15/16	⅞	3⅛	Screw	5540	551	**0.99**	**0.69**
926S	9	2¾	4 3/32	3 5/16	Screw	D6BP	....	**1.90**	**1.33**
2515P	22½	4	2½	3	Plug-In	5156PI	P5151	**2.05**	**1.42**
2515C	22½	4	2½	3½	Spring Clip	5156SC	....	**2.05**	**1.42**
2415S	22½	3⅜	2⅛	3⅛	Screw	4156	4151	**1.97**	**1.39**
7N5S	7½	2¾	⅝	2⅛	3 Screws	W5BP	....	**1.40**	**0.96**
13S49S	13½	2 1/16	2 1/16	2¼	2 Screws	A9BP	....	**1.80**	**1.24**
152S	1½	1 19/32	29/32	2 11/16	2 Screws	2BBP	....	**0.88**	**0.61**
352S	3	1 19/32	29/32	2 11/16	2 Screws	B2BP	....	**0.88**	**0.61**
443S	3, 4½	1 31/32	21/32	2½	2 Screws	A3BPX	....	**1.04**	**0.72**
2215C	22½	6½	4	3⅛	3 Spring Clips	2156	....	**3.20**	**2.20**

SPECIAL RADIO "AB" AND "ABC" PACKS

Catalog No.	Volts	L	W	H	Terminals	Burgess	Ray-O-Vac	List	Dealer
AB-100	1½A, 63B	9 1/16	2⅛	4¾	Plug-In	4GMA42	AB944	**$4.50**	**$3.14**
AB-101	1½A, 61½B	9¼	2¾	3⅜	Plug-In	4GMA41	AB1944	**4.35**	**2.98**
AB-102	6A, 90B	10¾	2 13/16	3 15/16	Plug-In	....	AB694	**5.50**	**3.85**
AB-103	7½ or 6A, 67½B	9½	2 11/16	4 7/16	Plug-In	F5M45	AB767	**5.00**	**3.45**
AB-104	1½A, 90B	11⅞	1½	6 7/16	Plug-In	6FA60	AB84	**5.69**	**3.96**
AB-105	7½A, 63B	8⅝	2⅝	4	Plug-In	G5A42	AB794	**4.48**	**3.15**
AB-106	1½A, 90B	5 9/16	2 11/16	7⅛	Plug-In	5DA60	AB24	**5.59**	**3.90**
AB-107	6A, 90B	11 15/16	4⅛	2 11/16	Plug-In	2F4A60	AB6984	**6.25**	**4.30**
AB-108	6A, 90B	10¾	2¾	5	Plug-In	F4B60	AB695	**5.95**	**4.19**
AB-109	1½A, 67½B, 7½C	4¼	3 11/16	6⅝	Screw	4FA50	AB194	**6.25**	**4.30**
AB-110	1½A, 90B	9⅞	2 3/16	4 11/16	Plug-In	6TMA60	AB64	**5.79**	**4.00**
AB-307	6 or 7½A, 75B	8 9/16	3 11/16	2 7/16	Plug-In	T5Z50	....	**5.25**	**3.68**
AB-308	9 or 7½A, 90B	9⅜	2 3/16	3⅜	Plug-In	T5Z60	....	**5.80**	**4.00**
AB-310	1½A, 61½B	9½	4⅞	2 1/16	Plug-In	....	AB419	**3.30**	**2.28**
AB-314	9A, 90B	9½	2 23/32	4⅜	Male Plug	F6A60P	....	**5.90**	**4.14**

Complete catalog will be mailed on request

SPECIALTY BATTERY COMPANY

A DIVISION OF RAY-O-VAC

Madison 10, Wisconsin

LAB-BILT
BATTERIES

LAB-BILT BATTERY
SPECIALTY BATTERY CO.
SUBSIDIARY OF RAY-O-VAC
MADISON, WISCONSIN
MADE IN U. S. A.

7920SM

LAB-BILT
BATTERY

194-IS

LAB-BILT
BATTERY

398C

SPECIAL IGNITION BATTERIES

Catalog No.	Volts	Overall Dimensions L	W	H	Terminals	Comparables Burgess	Ray-O-Vac	Prices: List	Dealer
4912C	4½	3 15/16	3 15/16	5⅞	Spring Clip	4F3H	....	**$3.50**	**$2.40**
194IS	1½	2⅝	2⅝	4⅛	Screw	4FH	94IS	0.79 0.84*	**0.52** **0.56***
398C	3	3⅞	2 15/16	5⅞	Spring Clip	4F2H	....	1.45 1.52*	**1.01** **1.08***
6916S	6	8¼	2¾	6 3/16	Screw	4F4H	....	3.40 3.70*	**2.29** **2.48***
7920SM	7½	7 3/16	4	6 5/16	Screw	4F5H	....	4.05 4.55*	**2.78** **3.16***
9924SM	9	8½	4	6 5/16	Screw	4F6H	....	4.65 5.25*	**3.20** **3.68***

* West Coast price

TELEPHONE AND IGNITION BATTERIES

Catalog No.	Volts	L	W	H	Terminals	Burgess	Ray-O-Vac	List	Dealer
4912TC	4½	3 15/16	3 15/16	5⅞	Spring Clip	4F3J	....	**$2.45**	**$1.95**
194TS	1½	2⅝	2⅝	4⅛	Screw	4FJ	94TS	**0.90**	**0:57**
4945C	4½	12	4	7⅛	Spring Clip	.....	9451	**5.90**	**4.05**
386C	3	3⅞	2⅝	5⅜	Spring Clip	.....	86T	**1.40**	**0.99**
489C	4½	3⅞	3⅞	5⅜	Spring Clip	.....	89T	**2,15**	**1.49**

SPECIAL LIGHTING BATTERIES

Catalog No.	Volts	L	W	H	Terminals	Burgess	Ray-O-Vac	List	Dealer
443	4½	1 31/32	31/32	2½	2 Flat Spring Brass Contacts	432	431	**$0.50**	**$0.33**
453	4½	2 5/16	¾	3	2 Flat Spring Brass Contacts	532	531	**0.50**	**0.33**
1918T	1½	6⅜	5 11/16	3 3/16	2 Pigtails	18FS	....	**2.45**	**1.95**

ELECTRIC SHAVER BATTERIES

Catalog No.	Volts	L	W	H	Terminals	Burgess	Ray-O-Vac	List	Dealer
135SN90P	135	3 1/16	1½	7⅝	Std. 120v Socket	.....	....	**$7.95**	**$5.33**
120S480P	120	4¾	2 7/16	8⅛	Std. 120v Socket	.....	....	**5.97**	**4.00**

SHOT FIRING BATTERIES

Catalog No.	Volts	L	W	H	Terminals	Burgess	Ray-O-Vac	List	Dealer
392PB	3	2⅝	1 5/16	4½	Recessed	.....	921B	**$0.90**	**$0.60**
453P	4½	2⅜	13/16	3 7/16	Recessed	.....	533	**0.80**	**0.54**

HEARING AID BATTERIES

Catalog No.	Volts	L	W	H	Terminals	Burgess	Ray-O-Vac	List	Dealer
*22SN15P	22½	1⅝	1⅜	3	Plug-In	XX15E	PN-15	**$1.60**	**$1.10**
*33SN22P	33	1 9/16	1⅜	3 15/16	Plug-In	XX22E	PN-22	**1.80**	**1.25**
*45SN30P	45	2 1/16	1⅜	3⅞	Plug-In	XX30E	PN-30	**1.98**	**1.36**
416P	4½	3⅜	1 3/16	4¼	Plug-In	T3WE	WE-161	**1.25**	**0.85**
314P	3	3⅜	1 3/16	3 3/16	Plug-In	T2WE	WE-141	**1.10**	**0.76**
*191P	1½	1⅜ diam.....		4	Plug-In	TE	PF-1	**0.35**	**0.21**

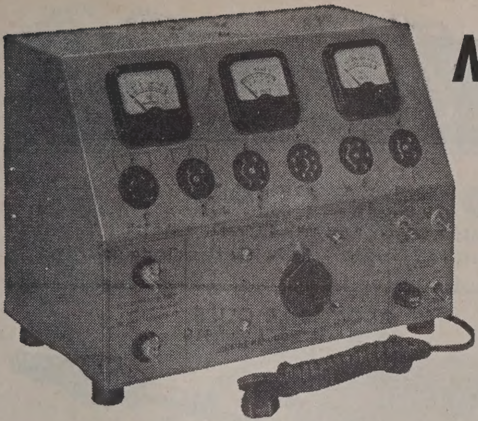
* Not identical as to size with the comparables listed. Check dimensions before ordering.

Complete catalog will be mailed on request

SPECIALTY BATTERY COMPANY

A DIVISION OF RAY-O-VAC

Madison 10, Wisconsin



Model AR-6 Electrox Vibrator Analyzer and Power Supply

New! Electrox Vibrator Analyzer and D. C. Power Supply

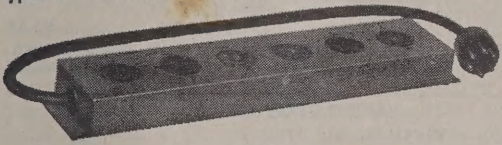
TWO VALUABLE TEST UNITS IN ONE!

Here is the original — and most reliable vibrator analyzer you can own! The Electrox Model AR-6 combines an extremely flexible, adjustable D.C. Power Supply that provides smooth, hum-free D.C. in any voltage needed to operate and test automobile radios — with a Vibrator Analyzer that will *thoroughly test* practically all 6-volt synchronous and non-synchronous vibrators.

Not just a vibrator checker — the AR-6 gives a *complete analysis* of vibrator performance! It accurately determines shorted and otherwise defective vibrators and predicts vibrator failures before they occur. It measures starting voltage, current consumption, output voltage and indicates irregular or intermittent performance. Test results are determined by accurate *meter* readings — not by the unreliable substitution method!

Every radio shop will profit with the Electrox Model AR-6. It will safeguard your repair jobs against premature vibrator failure and increase your parts sales. See your Electrox jobber or write direct for complete information and your free copy of new Bulletin 1467.

BELOW: For testing special or older types of vibrators, an adaptor strip is available as an additional component to the Model AR-6. The adapter strip plugs into the main unit providing six additional sockets that will accommodate most of the older and special types of vibrators.



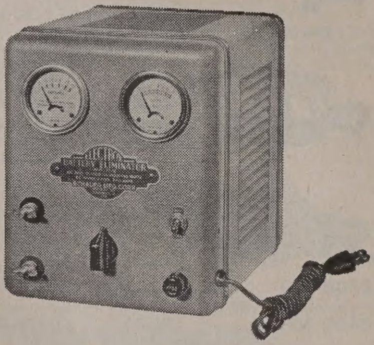
NEW ELECTROX BATTERY ELIMINATORS

Newly designed ELECTROX MODEL AR-5 provides smooth, hum-free D.C. for servicing and demonstrating practically any type and size auto radio, either push button or manually tuned. Delivers 6 volts D.C., adjustable for any load current between 3 and 15 amperes, indicated by accurate 0-15 ampere D.C. ammeter and 0-8 volt D.C. Voltmeter. Handsome, compact steel case.

Model AR-4

MODEL AR-4: A practical, low-cost D.C. power supply constructed to same high standards as the Model AR-5 above, except D.C. output is not adjustable. Delivers smooth, hum-free 6-volts D.C. at approximately 15 amps.

Write for new Bulletin 1467

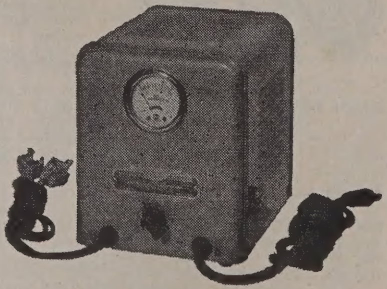


Model AR-5

SCHAUER BATTERY CHARGERS

A complete line of battery chargers designed for safe recharging of single storage batteries. Four to 20 ampere capacities. Equipped with the exclusive Schauer "Charger-Guard" — an automatic corrector which acts instantly in case of an overload or short circuit. No manual resetting of the circuit breaker, and fuses are eliminated. Approved by Underwriters' Laboratories, Inc.

Write for Bulletin 2464



RECTIFIER DIVISION

SCHAUER MANUFACTURING CORP.

4513 ALPINE AVENUE
CINCINNATI 36, OHIO

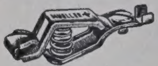
Mueller Electric Co.

CLEVELAND, OHIO

MUELLER BATTERY AND TEST CLIPS

U.S. PATENTS: 1,521,903; 1,686,842; 1,779,442; 1,794,976; 1,965,151; 1,994,251; 1,999,613; 2,074,324; 2,136,814; 2,416,113.

For use in making quick, temporary electrical connections. Packed 10 in a box, half marked + half plain to indicate polarity.
Screw connections

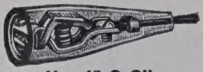


No. 45 PEE WEE

A very small test clip for radio, ignition, meter and similar work. 1½″ long. Jaw spread ⅜″. Steel, cadmium plated.

EACH NET..................$0.07 **LOTS OF 10**..................$0.05

No. 45-C



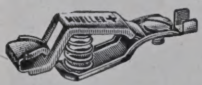
No. 45-C Clip
No. 47 Insulator

Solid Copper R.F. Test Clip

Solid copper radio frequency test clip. Phosphor bronze spring, brass screw. Will not heat up in high frequency test work, entirely non-ferrous. 1½″ long.

EACH NET..................$0.11 **LOTS OF 10**..................$0.08

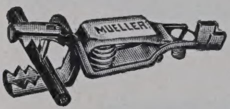
Use **No. 47** Insulator for clips 45 and 45-C.



No. 48-B

A small test and battery clip for radio use and general testing purposes. 2″ long. Jaw spread ½″. Steel, cadmium plated.
EACH NET....$0.08 **LOTS OF 10**....$0.055

No. 48C—Solid Copper. Same size as 48-B.
EACH NET..................$0.13 **LOTS OF 10**..................$0.09

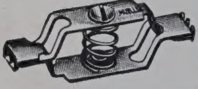


No. 50-C Needle Clip

Solid bronze. Needle pierces insulation of wire for quick test contact. 2¼″ long.
EACH NET..$0.23 **LOTS OF 10**..$0.16

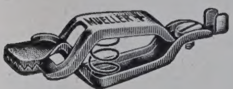
No. 51-C—Large crocodile clip. Same as 50-C but without needle.
EACH NET..$0.16 **LOTS OF 10**..$0.11

Use **No. 49** insulator for Clips 48-B, 48-C, 50-C and 51-C.



No. 22 Twin-Clip

Jaws on both ends. Great time-saver in test work. Used to hold or rack articles for display or processing. 2″ long. Steel cadmium plated.
EACH NET....$0.10 **LOTS OF 10**....$0.07



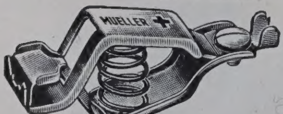
No. 27

A high grade test clip with meshing teeth on three sides of jaws. For laboratory and shop test work $2\frac{7}{16}$″ long. Jaw spread ⅝″. Steel, cadmium plated.

EACH NET..................$0.11 **LOTS OF 10**..................$0.08

No. 27-C—Solid copper. Same size as No. 27.
EACH NET..................$0.19 **LOTS OF 10**..................$0.13

Use **No. 29** Insulator for clips 27 and 27-C.



No. 24-A

A medium sized battery clip. Stands erect on battery post. Lead coated, copper shunt protects spring. 2⅞″ long. Jaw spread 1″. Steel, lead plated.
EACH NET..................$0.15
LOTS OF 10.................. .105

No. 24—Solid copper. Same size as No. 24-A.
EACH NET..................$0.26 **LOTS OF 10**..................$0.18

Use **No. 26** Insulator for Clips 24-A and 24.

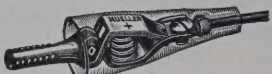
LARGER SIZES OF CLIPS

	Each Net	Lots of 10
No. 21-A—Heavy Duty Steel, lead plated, 4″ long	$0.24	$0.17
No. 21—100 Amp. Solid Copper, 4½″ long....	.65	.46
No. 11A—100 Amp. Steel, lead plated. 6″ long	.84	.59
No. 11—200 Amp. Solid copper. 6″ long..........	1.28	.90
No. 33—300 Amp. Solid copper. 7¾″ long......	2.25	1.58

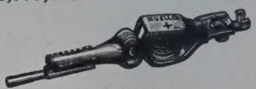
(Above furnished with lug connections.)

CROCODILE CLIPS

U.S. Patent No. 1,999,613



No. 85 or 85-C Clip with
No. 87 Insulator



No. 85-T Clip

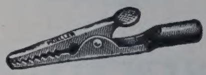
No. 85—A very small clip with slender, elongated jaws for getting into tight places in radio or electrical test work. Screw connection. 2⅛″ long.
EACH NET..................$0.08 **LOTS OF 10**..................$.055

No. 85-C—Same as No. 85, except solid copper. A radio frequency, entirely non-ferrous test clip.
EACH NET..................$0.13 **LOTS OF 10**..................$0.09

No. 85-T—New Crocodile "Tip-Clip"—equipped with standard phone tip on one jaw, otherwise same as No. 85. Ideal for use as a prod, for ordinary clip connections and for connections to insulated binding posts having non-removable heads. 2⅝″ long.
EACH NET..................$0.18 **LOTS OF 10**..................$0.13

Use No. 87 Insulators for clips 85, 85-C and 85-T. Red and Black. Cover entire clip except nose. Protects against short and shock. Helps to distinguish leads.

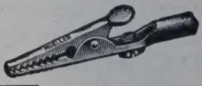
ALLIGATOR CLIPS



No. 60—CONVENTIONAL TYPE

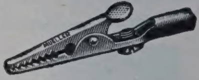
Accurately made, slim jaws, fine meshing teeth. Convenient, round thumb grip, barrel connection for banana plug. Equipped with small soldering lip. Strong spring with a hard bite. Cadmium plated. 2″ long.

EACH NET..................$0.07 **LOTS OF 10**..................$0.05



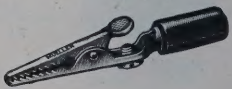
No. 60-S—SCREW CONNECTION

Eliminates necessity for soldering. Otherwise same as No. 60.
EACH NET $0.08 LOTS OF 10 $0.055



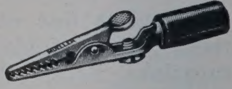
No. 60-CS—COPPER R.F. ALLIGATOR CLIP

Same as No. 60-S except made of solid copper. Has brass screw connection. Ideal for R.F. work. Will not heat up in H.F. circuits. Bright, natural copper finish. 2″ long.
EACH NET..................$0.11 **LOTS OF 10**..................$0.08



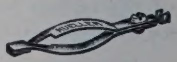
No. 60-HS—STEEL ALLIGATOR CLIP WITH INSULATED HANDLE

Same as No. 60-S except equipped with red and black insulating sleeves on end. Very convenient for distinguishing leads. Has screw connection also. Cadmium plated. 2¼″ long.
EACH NET..................$0.13 **LOTS OF 10**..................$0.09



No. 60-CHS—COPPER ALLIGATOR CLIP WITH INSULATED HANDLE

Same as No. 60-CS except equipped with red and black insulating sleeves on end. Brass screw connection, for R.F. work. 2¼″ long.
EACH NET..................$0.15 **LOTS OF 10**..................$0.10

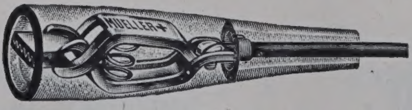


WEE-PEE-WEE No. 88

Entirely Non-ferrous. Smaller Than Ever! An extremely small clip for fine testing in radio and electrical work. Light-Weight; thin-nosed; spring-temper phosphor bronze. **Ideal for close-wound coils.** $1\frac{11}{16}$″ long; jaw spread ¼″.
EACH NET..................$0.18 **LOTS OF 10**..................$0.13

Use No. 93-P R.F.Insulator.

FLEXIBLE INSULATORS FOR CLIPS



A convenient protection against short circuit and electric shock. Packed 10 in a box, 5 red and 5 black to indicate polarity. Long tail prevents breakage of wire. Constructed so that clip is held in firmly.

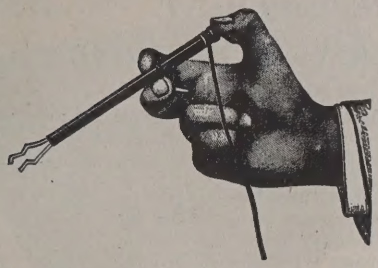
Insulator No.	For Use with Clip No.	Each Net	Lots of 10
13	11, 11-A	$0.63	$0.44
23	21, 21-A	.35	.25
26	24, 24-A	.25	.18
29	27, 27-C	.17	.12
35	33	1.63	1.14
47	45, 45-C	.09	.06
49	48-B, 48-C, 50-C, 51-C	.11	.075
87	85, 85-C, 85-T	.08	.055
93-P	88	.05	.035

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

Mueller Electric Co.

THE SNAPPER

A Long Insulated Test Clip and
A "Triple Threat" Radio Tool



U. S. Patent No. 2,074,324

No. 99—7″ Long Insulated

The long tube is of insulating material and is fitted with spring contact jaws on the far end.

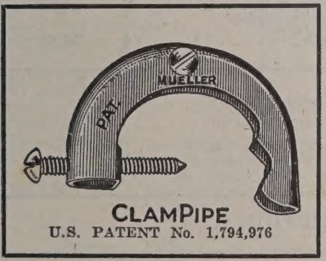
The jaws are operated by a push of the thumb on the near end. Wire is quickly and easily connected in a hole in the insulator knob binding post on the near end.

May be used as (1) A "Deep Sea" Electric Test Clip—test contacts with ease, deep in the recesses of radio chassis with no danger of short circuits; (2) An Electric Contact Prod—clip jaws may be used to make quick prod contacts, or clip one Snapper on ground circuit and prod with another; (3) A Retriever—start small screws and nuts or pick up odds and ends that may accidentally be dropped into inaccessible places.

PRICE....$1.05 EACH Dealers' Wholesale Price, each....**$0.63 Net**

Snappers are generally used in pairs—1 red and 1 black.

CLAMPIPE GROUND CLAMP



No. 58

The exclusive patented feature of a U-shaped cross section in combination with a U-shaped clamp gives a rigidity and effectiveness to the ClamPipe that cannot be found in any other make.

The ClamPipe will not bend or lop over when applied to a pipe. The point of the large case hardened screw, cuts through rust, paint or corrosion into clean, fresh metal, insuring a good contact. The Clamp may be installed on a pipe lying flush against a wall. Will not spread open.

The best ground clamp value on the market. Applicable to pipe ⅜″ to 1⅜″ outside diameter.

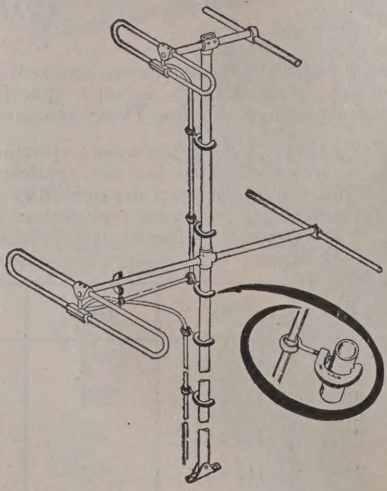
Packed 10 in a box

EACH NET....................$0.15 **LOTS OF 10....................$0.10**

THE "TENNA-CLAMPIPE"

(ClamPipe Trade-mark Reg. U. S. & Can. Pat. Off.)

A Standoff Insulator that clamps on Quickly—Easily—almost anywhere for Television and FM Antenna Lead-Ins.



Quickly and Permanently Supports Lead-Ins

- **On antenna masts & cross-arms.**
- **On pipes, I-beams, etc., on basement ceilings.**
- **On any rigid object up to 1⅜″ in diameter or thickness.**

SIMPLY TURN THE SCREW-EYE BY HAND FOR A SOLID, PERMANENT GRIP.

A great time-saver — the installation man's third hand.

Consists of an assembly of the famous Mueller ClamPipe Ground Clamp and a steel screw-eye with an insulating grommet. Holds lead-in wire from 1¼″ to 2½″ away from clamp. Can be applied to any antenna mast, pipe or other object up to 1⅜″ in diameter or thickness.

All metal parts are completely weatherproofed.

Insulating grommet is molded of high quality plastic having superior dielectric and non-absorptive properties. Will withstand exposure to weather.

No. 130 for all types of Flat Twin-lead.
No. 131 for all Coax Cables up to ½″ O.D.

Packed 100 in a carton

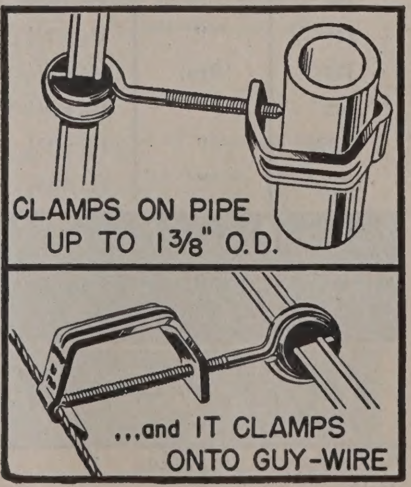
EACH NET............$0.16 **LOTS OF 10............$0.11**
LOTS OF 100............$0.098

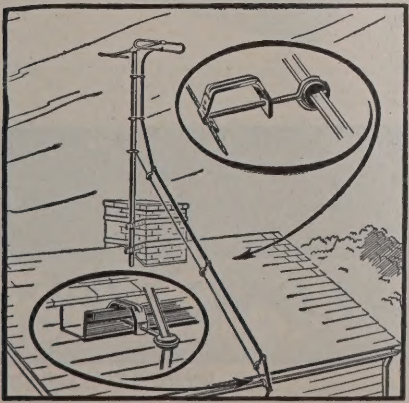
THE "TENNA-CLAMP"

A New 3-in-1 Stand-off Insulator Clamp!

Supports TV and FM Lead-ins on
MASTS, PIPES, GUTTERS AND GUY-WIRES

Has same general features and specifications as Tenna-ClamPipe described above except different type clamp channeled on end to take standard guy-wire in addition to pipes.





HAS THESE USEFUL FEATURES —

- One standard size solves many lead-in problems — far more useful than straps or wire bands.
- Brings lead-in to edge of roof — right where you want it — no more "draping" of wire across the roof.
- On those high jobs, come right down a guy-wire — and get around the gutter in the clear.

LOW PRICES!

All packed 100 in a carton

No. 135 For all types of Flat Twin-Lead.
No. 136 For Coax Cables up to ½″ O.D.
EACH NET, $0.13 LOTS OF 10, $0.09
LOTS OF 100, $0.078

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

JAMES VIBRATORS

AUTO REPLACEMENT
COMMUNICATION — INDUSTRIAL

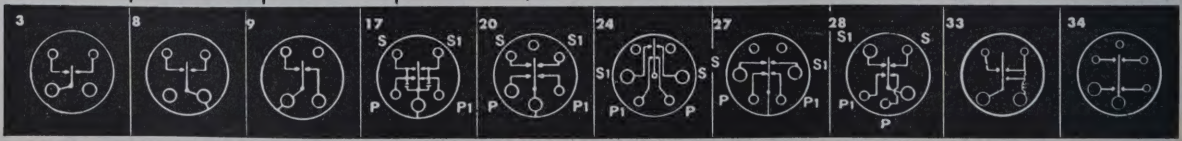
JAMES *vibrators,* the engineers standard, are designed for the more difficult applications. Featuring "Angle-Drive", ceramic spacers, dynamic contact wiping and other JAMES exclusive patented designs. These components are demanded by critical service engineers.

JAMES *auto replacement* vibrators are the complete line. Each model is custom designed for the application. Servicemen depend on JAMES for quiet performance, dependability and adequate capacity. Select the correct model for each auto replacement need. The following types are in general demand and will meet over 90% of service requirements. Ask your JAMES distributor for a complete replacement guide.

JAMES	TYPE	CAN	DIA.	DESCRIPTION	MALLORY	RADIART
J2S	Intr.	1½ x 3⅛	3	4 prong std. — Medium height	294	5300
J2SP	"	1½ x 2⅞	3	4 prong std. — Short height	859	5301
J2SF	"	1½ x 2⅞	3	4 prong std. — Philco	509P	5326
J2SM	"	1½ x 2⅞	3	4 prong std. — Motorola	903M	5342
J8S	"	1½ x 3⅛	8	4 prong std. — special wiring	854	5331
J9	"	1½ x 3⅛	9	Delco base, large can	852	5303
J9SA	"	1½ x 2⅞	9	Delco base, small can	870	5335
J21	"	$1\frac{5}{16}$ x 2⅜	3	4 prong std. small can, Ford	1100	5314
J54	Syn.	1¾ x 4½	17	Large can, Pontiac	273C	5425
J66	"	$1\frac{15}{16}$ x 3½	28	Large can, with handle, Buick	716	5426

JAMES *communications* vibrators are designed for direct replacement in all types of mobile communications equipment. Instant starting, dependable performance and long life are engineered into these components. Insist on JAMES for mobile service where vibrators must not fail.

JAMES	TYPE	CAN	DIA.	DESCRIPTION
J22	Intr.	1½ x 3⅛	3	8 contact, heavy duty, Motorola, Link receiver service.
J23	"	1½ x 2⅞	33	Heavy duty for transmitter service, Motorola, Link.
J24	"	1½ x 2⅞	34	6 prong, 8 contact, Motorola Unichannel, Bendix.
J58	Syn.	1½ x 3⅛	20	6 prong, Karr.
J63	"	1½ x 3⅛	24	Reversible, Link, RCA.
J65M	"	1½ x 3⅛	27	Reversible, Motorola.
J73	"	1½ x 3⅛	24	General Electric.



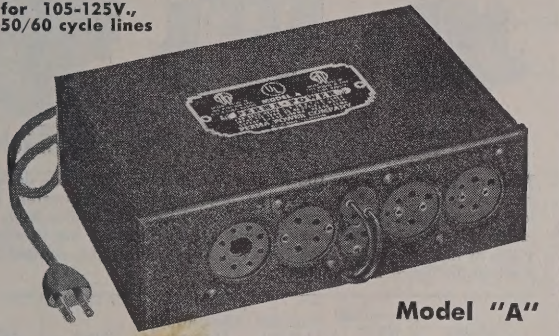
QUIET — DEPENDABLE — LONG LIFE

"Manufacturers of
electronic equipment
since 1928"

Perma-Power®

Battery Eliminators

for 105-125V., 50/60 cycle lines



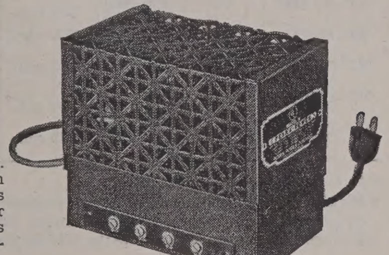
Model "A"

For 1½ volt radios with 4, 5 or 6 tubes. Designed to give nearly constant power from varying line voltages. Maintains rated output under varying tube loads. Universal sockets for all battery plugs. Fits in back of battery radios as well as battery compartments of most portables.

Provides: "A" 1.45 Volts D.C. at 200 to 350 M.A.
"B" 90 Volts D.C. at 13 M.A.
2⅛" x 4½" x 6¾" — 4 lbs.

List Price $16.75

Model "B" Battery Eliminator

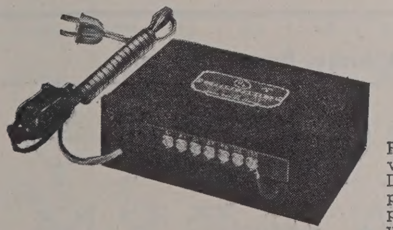


For 6-volt radios. Designed with separate outputs for the vibrator and the filaments eliminating vibrator disturbance assuring high fidelity radio performance. Often used as a trickle battery charger.

Provides: Two isolated sources of 6 Volts D.C. at 1½ amps, or when connected in parallel—3 amps.
3⅝" x 6⅛" x 5½" — 7 lbs.

List Price $19.95

Model "E" Battery Eliminator



For 2 volt radios with 4 to 8 tubes. Designed to supply "A" and "B" power under varying line voltages and loads. Provides hum-free operation without distortion or "motor boating". Fits in back of battery radios as well as battery compartments of most portables.

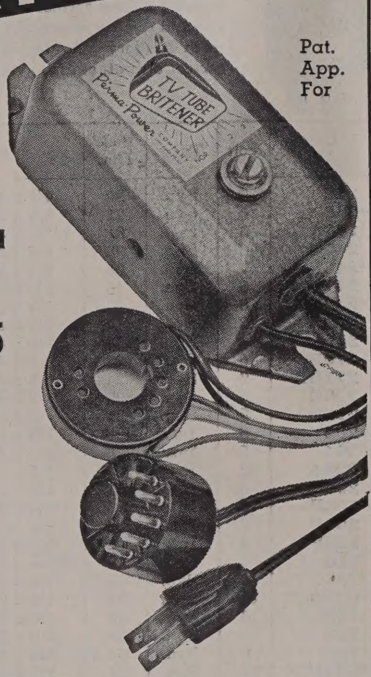
Provides: "A" 2 Volts D.C. at 750 M.A.
"B" 135 Volts D.C. at 25 M.A. tapped at 112 v, 90 v and 67 v.
2¼" x 4⅞" x 6-13/16" — 4 lbs.

List Price $18.75

UL APPROVED WITH 3 YEAR GUARANTEE!

TV TUBE BRITENER

Pat. App. For



Suggested List Price

$9.75

subject to liberal trade discounts

SHIPPED PREPAID

Get a
BRILLIANT
PICTURE

* Over 10,000,000 television sets were purchased prior to 1951. Each of these has a picture tube which is getting dimmer . . . 10,000,000 set owners need the "TV TUBE BRITENER."

- **Prolongs tube brilliance; fully automatic.**
- **Isolates filament; relieves cathode-filament shorts.**
- **Eliminates nuisance calls.**
- **Works on all sets and all makes of sets with only one *model.***
- **Permanently plugged in into television set without wiring or soldering.**
- **Less than 3 minutes to install.**
- **Made to sell; packaged to sell.**
- **Producing sales everywhere.**
- **Standard R.M.A. warranty.**

"TV TUBE BRITENER" was designed by engineers to produce sales for television servicemen.

Adds brilliance to any picture tube; extends useful life of tube for year or more; adaptable for all tubes with duodecal base.

Write for complete, illustrated literature.
SOLD through recognized wholesalers ONLY.

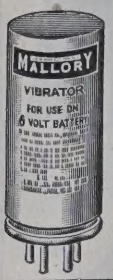
ORDER TODAY!

Perma-Power CO. 4721 NORTH DAMEN AVENUE • CHICAGO 25

VIBRATORS AND VIBRAPACK® POWER SUPPLIES

P. R. MALLORY & CO. Inc.
MALLORY

P. R. MALLORY & CO., INC. · INDIANAPOLIS



Vibrators

Mallory Vibrators are engineered to exacting specifications. Their superior action is a result of more than 20 years' research. Pure, natural rubber liners deaden sound and assure quiet operation. Special, tough-spring steel eliminates reed breakage. Heavy framing insures correct and exact alignment. Extra size and quality of contact points assure longer life. Each Mallory Vibrator is tested individually for correct output, starting voltage and wave form.

Cat. No.	Volt	Type	Base Dia.	Size	List Price
222	6	Syn.	20	4⅞ x 1¹³⁄₁₆ x 1⅞	$9.15
▲245	6	Syn.	21	1½ x 3¼	7.70
▲245A	6	Syn.	21	1¹⁵⁄₁₆ x 3½	7.70
245C	6	Syn.	28	1½ x 3¼	7.70
▲246	6	Syn.	38	1½ x 3¼	7.70
247	6	Syn.	46	1½ x 3¼	7.70
▲248	6	Syn.	44	1½ x 3¼	7.70
G248	12	Syn.	44	1½ x 3¼	8.55
▲249	6	Syn.	32	1½ x 3¼	7.70
270B	6	Syn.	23	2 x 4½	9.15
271HD	6	Syn.	24	2 x 4½	9.15
273C	6	Syn.	29	2 x 4½	9.15
273D	6	Syn.	31	2 x 4½	9.15
292	6	Int.	3	1½ x 2⁷⁄₁₆ x 1⅜	6.35
294	6	Int.	8	1½ x 3¼	4.90
▲F294	32	Int.	8	1½ x 3¼	7.15
298	6	Int.	51	1½ x 2⅞	6.35
505P	6	Int.	8	1¹⁵⁄₁₆ x 3½	4.90
506P	6	Int.	36	1¹⁵⁄₁₆ x3½	6.35
509P	6	Int.	8	1½ x 2⅞	4.15
716	6	Syn.	30	1¹⁵⁄₁₆ x 3½	7.70
▲725C*	6	Syn.	32	1½ x 3¼	8.55
▲G725C*	12	Syn.	32	1½ x 3¼	9.95
742	6	Syn.	32	1½ x 2⅞	7.70
743	6	Syn.	38	1¼ x 3¼	7.70
748	6	Syn.	44	1½ x 2⅞	7.70
▲G749C*	12	Syn.	21	1½ x 3¼	9.95
W759	4	Syn.	21	1½ x 2⅞	8.25
▲825C*	6	Int.	8	1½ x 3¼	6.90
▲826C*	6	Int.	8	1½ x 3¼	6.35
▲F826C*	32	Int.	8	1½ x 3¼	7.70
▲G826C*	12	Int.	8	1½ x 3¼	7.70
839	6	Int.	8	1½ x 3¼	6.35
854	6	Int.	11	1½ x 3¼	4.90
▲859	6	Int.	8	1½ x 2⅞	4.90
W859	4	Int.	8	1½ x 2⅞	5.50
860	6	Int.	14	1½ x 3¼	4.90
870	6	Int.	14	1½ x 2⅞	4.90
903M	6	Int.	8	1½ x 2⅞	4.15
953W	6	Syn.	16	1½ x 3⁵⁄₁₆	7.70
954	6	Syn.	39	1½ x 3	7.70
▲1100	6	Int.	8	1⁵⁄₁₆ x 2⅜	4.90
▲1501	6	Int.	53	1½ x 2⅞	6.35
▲G1501	12	Int.	53	1½ x 2⅞	6.90
1502	6	Int.	54	1½ x 2⅞	6.90
T4002	2	Syn.	52	1½ x 2⅛ x 1½	10.70
T4003	2	Syn.	50	1⁵⁄₁₆ x 2⅛	9.80
GC7†	Ground Cup				.45
AR-1	Adapter				1.50
■SK-1	Socket Kit				1.25

Int.—Interrupter Syn.—Synchronous

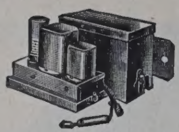
▲ Use only these types in design of new equipment. Other types are for replacement purposes only.

* Hermetically Sealed Construction.

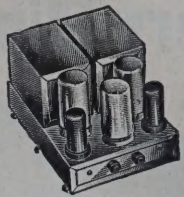
† A grounding cup for 1½" diameter vibrators which makes a low r.f. ground connection between vibrator can and power supply chassis.

■ Five special sockets for Practical Vibrator Tester. Supplied as complete kit only.

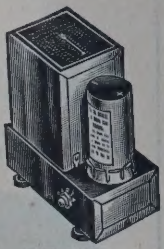
Vibrapacks



VP-540



VP-555H
VP-557



VP-552
VP-G556

Mallory Vibrapacks are the ideal vibrator power supplies designed to provide at low cost, dependable, high-voltage, direct current from low-voltage, storage batteries. Mallory Vibrapacks offer high efficiency, dependability, low maintenance cost and long life because of years of field testing. Added features are; light weight, compactness and simplicity of installation.

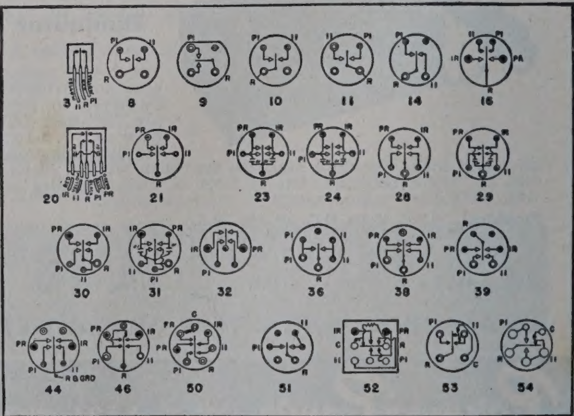
Catalog Number	Nominal Operating Voltage	Nominal Output Voltage	Maximum Output Current	Type	List Price
VP-540*	6.3	250	60 ma.	Self-Rectifying	$33.00
VP-551	6.3	125–150 175–200	100 ma.	Self-Rectifying	24.20
VP-552†	6.3	225–250 275–300	100 ma.	Self-Rectifying	28.90
VP-553	6.3	125–150 175–200	100 ma.	Tube Rectifier	26.95
VP-554H†	6.3	225–250 275–300	100 ma.	Tube Rectifier	31.65
VP-555H†	6.3	300	200 ma.	Tube Rectifier	57.20
VP-557†	6.3	400	150 ma.	Tube Rectifier	57.20
VP-G556	12.6	225–250 275–300	100 ma.	Self-Rectifying	31.65
VP-F558	32.	225–250 275–300	100 ma.	Tube Rectifier	34.40

* Includes complete audio filter.

† Maximum ratings are for mobile transmitter service. For continuous duty with radio receivers where longer vibrator life is essential. Reduces maximum output watts ratings to 75% of listed values.

● Use the Mallory 6VT1 Vibrator Checker for direct readings on "good-bad" conditions of doubtful vibrators. For complete description and illustration of the 6VT1 see page 3, Mallory Rectifier and Power Supply section, this catalog.

Vibrator Base Diagrams



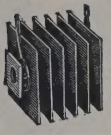
R—Reed
PI—Pull Interrupter
PR—Pull Rectifier
II—Inertia Interrupter
IR—Inertia Rectifier
C—Coil
FR—Frame

RECTIFIER STACKS

P. R. MALLORY & CO., INC. · INDIANAPOLIS

P. R. MALLORY & CO. Inc. MALLORY

Selenium Rectifier Stacks



Mallory Selenium stacks are conservatively rated to provide long dependable service and good voltage regulation at high efficiency. Rectification is immediate—no warm-up period is required. 5-volt average drop across stack results in cooler operation.

Catalog Number	Maximum DC Output (MA)	Size	List Price
8S20	20 ma.	½ x ½ x 1 1/16	$1.15
6S65	65 ma.	1 x 1 x 1 1/16	1.20
6S75	75 ma.	1 x 1 x 53/64	1.45
6S100	100 ma.	1¼ x 1¼ x 53/64	1.75
6S100A	100 ma.	1 x 1 x 1	1.75
6S150	150 ma.	1¼ x 1¼ x 1 11/64	2.10
6S200	200 ma.	1.6 x 1.6 x 1	2.50
6S250	250 ma.	1.6 x 1.6 x 1 19/64	2.80
6S300	300 ma.	1.6 x 1.6 x 1 27/32	2.80
6S350	350 ma.	2 x 2 x 1 19/64	3.10
6S450	450 ma.	2 x 2 x 1 27/32	3.40

Chart of Replacement Magnesium-Copper Sulfide Rectifier Stacks

New Catalog Number	List Price	Maximum AC Volts (Normal Line)		Approx. DC Volts			Max. DC† Amperes		Approximate Overall Dimensions in Inches			Replacement for Old Catalog Number	Replacement in Equipment
		No Load	Full Load	Inductive Load	Resistive Load	Capacitive-Battery Load	Continuous Duty§	Intermittent Duty	Length	Width	Height		
IB4R	**$2.40**	3.6	3.2	1.5	1.7	2.5	1.5	5.0	1	9/16	⅞		G.T.C. Porta-Power Electro Battery Eliminator
IB8R	**2.85**	7.2	6.4	3.1	3.4	5.1	1.5	5.0	1⅜	9/16	⅞		G.T.C. Porta-Power Electro Battery Eliminator
IB12R	**3.25**	10.8	9.7	4.8	5.2	7.8	1.3	5.0	1¾	9/16	⅞		All Power Supplies for Electric Fence
IB12L5	**5.85**	10.8	9.7	4.5	5.0	7.6	4.5	15.0	2½	2⅛	2⅝		6AC4-2
IB12C1J	**6.55**	10.8	9.8	4.6	5.1	7.7	3.2	24	2¾	1¼	1⅝	12C1, F12C1, IF12C1B, 12C1F, F12C1K, IB12C1, IB12C1M, X12, X112, U12	4-2 Amp. Boosters Mallory E, 3C, 6AC4
IB12C3	**6.80**	10.8	9.7	4.5	5.0	7.6	4.5	24	2¾	1¾	2⅛		Mallory 6-AC-6-2
IB12C5	**7.40**	10.8	9.7	4.5	5.0	7.6	5.3	24.0	3	2⅛	2⅝		6AC6-3
F16C3	**8.85**	14.4	13.0	6.1	6.8	10.2	3.9	24	3	1¾	2⅛	16C3, F16CB3, 16CB3, 16C3B*, XB16*, M16*, X16, X116, ME16	5-3 Amp. Old Chargers Mallory 5535, 250, 320, 310
IF16CB7M	**10.20**	14.4	12.8	5.9	6.6	9.9	6.0	24	3	2½	3 3/16		6-3 Amp. Charger, Mallory 5535A
IS16CB7	**10.20**	14.4	12.8	5.9	6.6	9.9	6.0	24	3¾	2½	3	IS16CB7M	6-3 Amp. Charger Mallory 5535B, 6AC6
IS16B7	**11.25**	14.4	12.8	5.8	6.5	9.8	8.3	24	5½	2½	3	IS16B7M, IB16B7	10-7 Amp. Charger, Mallory 107, 6-AC-10-2
IS16B9	**12.80**	14.4	12.7	5.7	6.4	9.7	11.6	24	5½	3½	4¼		10-7 Amp. Charger, Mallory 6AC10
F20C7	**12.75**	18.0	16.2	7.6	8.4	12.6	4.8	24	4⅜	2½	3 3/16	F20C7P	A.T.R. Battery Eliminators, etc.
IS24C7J	**12.60**	21.6	19.4	9.0	10.1	15.1	4.0	24	4¾	2½	3 3/16	IB24C7, F24C3, F24C3P, F24C7P, F24C7, FCX24D7, 201C1, R24LR, R24LS	Mallory 12-AC-5-2, Stancor Eliminators, Univerters, Pin Game Supplies, etc.
IS24B9	**17.95**	21.6	19.1	8.5	9.6	14.4	11.0	24	7½	3½	4¼		Stancor Battery Elimintaors, etc.
IS28C7J	**15.30**	25.2	22.7	10.7	11.7	17.8	4.3	24	6	2½	3	F28C7, F28C7P, 228C1, 267C1, R28LS	5-3 Amp. 12-volt Chargers, Mallory 125, 12AC5
F16H1P	**7.05**	14.4	13.1	6.3	7.0	10.4	2.2	24	2¼	1¼	2	16A1, F16G1, F16G1P, F16H1, W16A1, 211C1, R16S	Electropak, Rectopak, Univerter, etc.
F20H1P	**8.65**	18.0	16.4	7.9	8.7	13.0	2.0	24	2¾	1¼	2	20A1, F20G1, F20G1P, F20H1, W20A1, 212C1, R20S, X20	Electropak, Rectopak, Univerter, etc.
F24H1P	**10.30**	21.6	19.7	9.6	10.4	15.7	1.9	24	3	1¼	2	F24G1, F24G1P, F24H1, W24A1, 203C1, R24S	Electropak, Rectopak, Univerter, etc.
F28H1P	**11.90**	25.2	23.0	11.2	12.2	18.4	1.7	24	3¼	1¼	2	F28G1, F28G1P, F28H1, F28H1P, W28A1, F28H1MP, 210C1, R28S	Electropak, Rectopak, Univerter, etc.
F32H1P	**13.55**	28.8	26.2	12.8	14.0	21.0	1.6	24	3¾	1¼	2	F32G1, F32G1P, F32H1, F32H1P	Electropak, Rectopak, Univerter, etc.

NOTE: All rectifiers are single phase, full wave, bridge type.

Mounting Prefix: IB=Insulated Bolt; F=Grounded Foot; IF=Insulated Foot; IS=Insulated Stud.

P suffix designates reverse polarity stacking. Center terminal is DC positive.

J suffix designates universal construction with loose mounting feet for foot, bolt or stud mounting replacement.

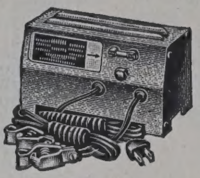
† To determine AC Amps: Multiply the DC amps by the following factors: Inductive load by 1.1; resistive load by 1.2; capacitive load by 1.4.

* Use base from old rectifier.

§ Ratings given are for resistive and inductive loads. To determine the Max. continuous DC amp. rating for capacitive and battery loads multiply these ratings by 0.82.

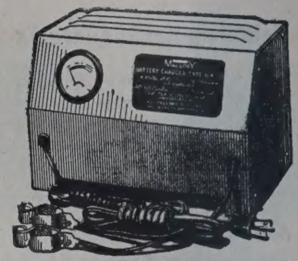
Rectifier Battery Chargers—Power Supplies

Mallory Automotive, Marine and Aviation Battery Chargers provide convenient, efficient and economical charging of any storage battery used in automobiles, buses, trucks, tractors, taxicabs, small boats, airplanes and on the farm. Taper charging (an automatically decreasing charging rate) is designed into all Mallory chargers to prevent damage to battery plates and to insure maximum battery life. These chargers also are ideal for charging any 6 or 12-volt storage battery used in industrial, engineering and research laboratories.



6AC4

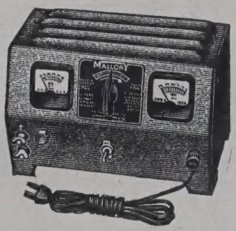
6AC6



6AC10
12AC5

Mallory Charger Catalog Number	Nominal Battery DC Volts	Maximum Charging Rate DC Amps.	Tapered Rate DC Amps.	Approx. 10 Hr. Charge in Amp. Hrs.	Charging Indicator	Approx. Overall Dimensions in Inches			Approx. Shipping Weight in Pounds	List Price
						Height	Width	Depth		
6AC4	6	4	2	30	No	4 7/16	7⅜	3 5/16	4¾	**$16.95**
6AC6	6	6	4	50	Light Bulb	4 7/16	7⅜	3 5/16	7	**22.95**
6AC10	6	10	7	85	Meter	6	8	4¼	12¼	**34.95**
12AC5	12	5	3	40	Meter	6	8	4¼	10¾	**37.95**

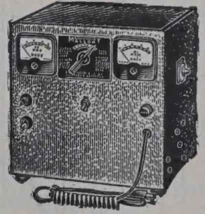
Mallory 12RS6D Bench Power Supply



The Mallory 12RS6D is a dual purpose bench power supply designed for use on the radio service bench for operating conventional 6 and 12 volt automobile and truck radio sets. Fully AC-operated from the 115V/60 cycle line, the 12RS6D supplies rectified and filtered DC in either of 2 ranges. Range "A" supplies 0 to 16 volts at 6 amperes continuously, or 12 amperes intermittently. Range "B" supplies 0 to 8 volts at 10 amperes; or 20 amperes intermittently. Both ranges are infinitely variable from zero to maximum output to permit precise adjustment of bench test voltages. The 12RS6D is equipped with a DC voltmeter, a DC ammeter, infinitely variable voltage control, a range switch, an on-off toggle switch, automatic overload protection, primary fuse and rubber-covered line cord and plug. The rectifying system employs a full-wave metallic rectifier. The cabinet is sheet steel finished in blue enamel and measures 6¾" high, 10⅜" wide and 5½" deep.

Catalog No. **12RS6D** **$39.95** Net

Mallory 6RS25 Heavy Duty Six Volt DC Power Supply



The Mallory 6RS25 6 volt, 25 ampere rectifier type power supply is designed to replace storage battery-charger combinations for bench testing medium power 2-way mobile-phone equipment. It may also be utilized for non-radio uses requiring well-filtered low voltage DC in the 25 ampere range. Heavy sheet-steel housing makes it adaptable for use in garages as mobile radio bench equipment.

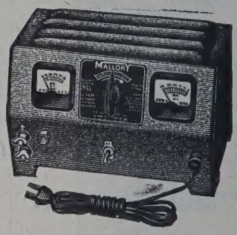
The 6RS25 operates from a standard 115 volt 60 cycle source to supply DC voltage from 0 to 8 volts at continuous or variable loads of 0 to 25 amperes. Intermittently, it will supply a maximum of 40 amperes at 6 volts.

An adjustable variable control allows quick selection of any voltage from 0 to 8 at 0 to 25 amperes. Three capacitors totaling 30,000 mfd. filter the output to less than 1 volt ripple and suppress RF and power line interference. A 0-10 volt DC voltmeter and a 0–40 ampere DC ammeter are included.

Conduction cooling of the full-wave Selenium Rectifier Cells, automatic overloading protection, and a self resetting circuit breaker insure long life.

Overall dimensions—11" high, 10½" wide, 8¾" deep. Shipping weight—26 lbs. Catalog No. **6RS25** **$74.50** Net

Mallory 6RS10 Bench Power Supply



The Mallory 6RS10 6 volt power supply has been designed as a convenient source of DC current wherever 115 volt AC current is available. It is particularly suited for testing of automobile radio sets and has ample power to operate those with electrical tuning mechanisms. DC voltage is continuously variable from 0 to 8 volts. The unit may be safely operated continuously at 10 amperes and intermittently at 20 amperes. A 10,000 mfd. capacitor is employed as an efficient filter. Full-wave rectification is obtained from a conservatively rated Mallory Magnesium-Copper Sulfide Rectifier Stack.

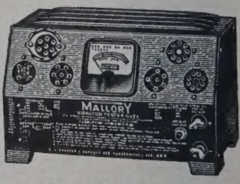
The power supply is fully equipped with a 0-20 ampere DC ammeter, a 0–10 volt DC voltmeter, a self resetting circuit breaker in the DC line, a switch and fuse in the AC line, and a six foot AC cord. Overall dimensions: 6¾" wide, and 5½" deep. Shipping weight approx. 13 lbs. Catalog No. **6RS10** **$36.75** Net

6RS10 Construction Kit

The 6RS10 Bench Power Supply, described above, is also available in kit form for experimenters, students and others. All parts are supplied including a punched and painted metal cabinet, a variable transformer, 10,000 mfd. filter capacitor, full-wave metallic rectifier, 0-10 DC voltmeter, 0-20 DC ammeter, circuit breaker, binding posts, fuse clip, knobs, AC line cord and plug, AC toggle switch, hardware and instructions. Solder is not included.

Catalog No. **6RS10K** **$26.95** Net

Mallory Vibrator Checker

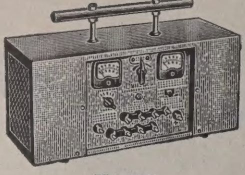


The Mallory 6VT1 vibrator checker has been designed as a companion unit to the famous Mallory 6RS10 rectifier power supply to test directly, without adapters, most of the popular vibrators and all of the 6 volt passenger car radio vibrators used since 1940. Either 6X5 or 0Z4 rectifier tubes may be plugged into the front panel, thus permitting interrupter vibrators to be tested in conjunction with the rectifier tube with which they normally work in the equipment. Defective vibrators or rectifiers can readily be determined by the substitution method. Self rectifying vibrators are tested by removing the rectifier tube. Either shunt or separate drive vibrators can be tested of any frequency from 100 to 250 cycles. The condition of the vibrator being tested may be read directly from the "good-bad" meter scale. Catalog No. **6VT1** **$29.50** Net

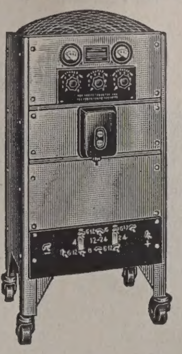
Mallory VA Series Rectopower® Rectifier DC Power Supplies

Seven models are contained in the line of general utility filtered rectifier DC power supplies for designing, building, testing and repairing electrical and electronic equipment for the automotive, aviation and military equipment industries. The models may also be used for battery charging and electrolytic processes such as plating, anodizing, electrocleaning and electropolishing. These units incorporate voltmeter, ammeter, isolating-type transformer and many other features which make them desirable for production or laboratory use.

The four independent filtered output circuits may be paralleled, series-paralleled, seriesed, used independently or connected in several different combinations to provide simultaneous outputs as required. Delivery information and more detailed specifications on special Rectostarters® for aircraft engine starting and industrial electric truck battery charging, may be had by writing to P. R. Mallory & Co., Inc., Box 1558, Indianapolis, Ind.



VA200
VA400



VA1500
VA3000
VA4500
VA6000

VA800

MODEL	VA200	VA400	VA800	VA1500	VA3000	VA4500	VA6000
AC Input							
Volts ± 10%	115	115	208–230	208–230 or 460	208–230 or 460	208–230 or 460	208–230 or 460
Phase	1	1	1	3	3	3	3
Cycles	60	60	60	60	60	60	60
Kva	.6	1.2	2.4	3.0	6.0	9.0	12.0
DC Output Rating							
Max. Amperes at nominal	Amps.	Amps.	Amps.	Amps.	Amps.	Amps.	Amps.
Volts of different circuit combinations 6 volts	25	50	100	200	400	600	800
12	12½	25	50	100	200	300	400
24	6¼	12½	25	50	100	150	200
DC Output Ripple—at Rated Output	3%	5%	3%	2%	2%	2%	2%
Overall Dimensions—Width	22	22	16½	25½	25½	25½	25½
Depth	8	8	15½	19	19	19	19
Height	13½	13½	25	55	55	55	55
Weight—Net	70	90	175	300	370	415	480
Shipping	95	115	225	415	485	530	600
Net Price	**$255.00**	**$325.00**	**$510.00**	**$740.00**	**$900.00**	**$995.00**	**$1100.00**

Mallory Six and Twelve Volt Fast Chargers —Unfiltered DC Power Supplies

6AC75

Mallory Fast Chargers, designed in extremely compact form, provide the advantages of portability with high-charging currents. Light weight, small size, perfect balance and a convenient carrying-handle make them ideal for one man to transport directly to the job for most efficient operation. Suitable for use wherever a reliable source of 6 volt, high amperage power is required, such as: garages, filling stations, parking lots, electrical service shops, schools and testing laboratories. The portability of these units provides many advantages over the conventional stationary or semi-fixed type supply.

Despite their small overall size, these Mallory Fast Chargers are ruggedly constructed with full-size components. Heavy duty, metallic rectifiers, connected in full-wave circuits, are cooled automatically by means of built-in, electrically-operated fans, assuring long life and effective service under the most severe conditions. Strong sheet-metal cabinets offer adequate protection against accidental damage. A tough, white enamel finish not only adds to the appearance of these units but also protects the metal cabinet from rust and corrosion.

Operating refinements found in Mallory Fast Chargers, usually omitted in conventional fast chargers, permit both fast or slow charging rates by the throwing of a panel switch. Three rates of fast charge and three rates of slow charge may be selected by means of a positive acting, rotary panel switch. A panel-controlled, synchronous motor, timer mechanism with a range o from 1 through 57 minutes in increments of 1 minute is a standard part of these units. When pre-set, this timer automatically disconnects the charger from the 115V/60 cycle line at a predetermined time up to a maximum of 57 minutes. A switch is included to disconnect the timer motor for continuous operation when using the charger as a power supply.

All Mallory Fast Chargers are equipped with: easy-to-read 2¼″ ammeters to indicate charging rates; abrasion-resistant, rubber-covered, 6-foot, AC-line cords; and heavy-duty, 2-conductor, 12-foot, rubber-covered cables to which large copper battery clamps are attached. Each charger is equipped with racks to accommodate the power cables when not in use. Cabinet dimensions are: 7¼″ x 6½″ x 15″. AC input is 115V/60 cycles, single phase, for both models.

Model 6AC75 is rated at 75 amperes with a minimum DC voltage of 6 when used as a fast charger on a 3-cell battery. An output of 60 amperes at the same voltage may be obtained when using this model as an unfiltered power supply.

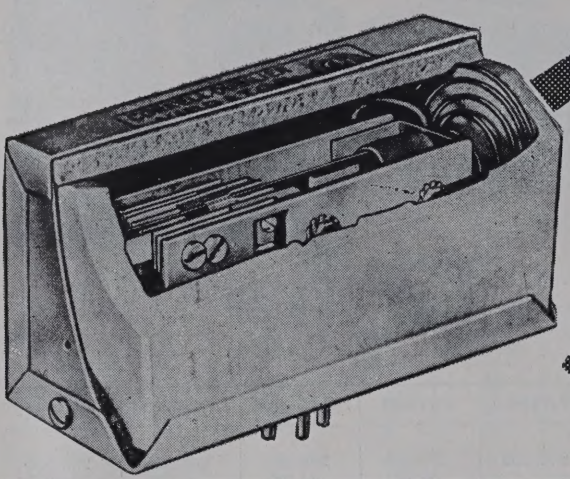
Catalog No. **6AC75** **$109.50** Net

Model 12AC60D has a dual range output selected by means of a panel switch. Range A: 6 volts DC at 90 amperes when employed for battery fast charging and 65 amperes at 6 volts when employed as an unfiltered power supply. Range B: 12 volts DC at 60 amperes for battery fast charging and 45 amperes at 12 volts when employed as an unfiltered power supply.

Catalog No. **12AC60D** **$149.50** Net

CORNELL DUBILIER

CAPACITORS — ROTATORS — VIBRATORS — AUTO ANTENNAS — TV ANTENNAS — POWER SUPPLIES



C-D *Heavy Duty* REPLACEMENT VIBRATORS

Catalog No.	Voltage	Frequency in Cycles	Dimensions L.	W.	H.	List Price
6VB6	6	60	5 9/16	x 2 5/32	x 2 9/16	$12.25
110VB6	110	60	5 9/16	x 2 5/32	x 2 9/16	12.25
330**	12	60	5 9/16	x 2 5/32	x 2 9/16	12.25
390**	12	60	5 5/16	x 2 23/32	x 3 3/8	17 10
425**	6	90	4 11/16	x 2 3/16	Diam.	12.25
426**	6	60	5 9/16	x 2 5/32	x 2 9/16	12.25
427	6	60	4 11/16	x 2 3/16	Diam.	12.25
431	6	60	5 9/16	x 2 5/32	x 2 9/16	12.25
490	6	60	5 15/16	x 2 23/32	x 3 3/8	17.10
491	6	60	5 3/8	x 2 5/32	x 2 9/16	17.10
1057**	6	120	5 9/16	x 2 5/32	x 2 9/16	12.25
1083**	110	60	5 5/16	x 2 23/32	x 3 3/8	17.10
1315	110	60	5 9/16	x 2 5/32	x 2 9/16	12.25
1315H	110	60	5 15/16	x 2 5/32	x 2 9/16	14.10
1339**	110	60	2 23/32	x 5 7/32	x 3 5/16	17 10
1506	32	60	5 5/16	x 2 23/32	x 3 3/8	17 10
1640***	110	60	5 9/16	x 2 5/32	x 2 9/16	14.55
1684**	6	120	5 9/16	x 2 5/32	x 2 9/16	21.35
1823**	6	180	3 1/8	x 1 1/2	Diam.	9.70
2117	12	100	5 15/16	x 2 23/32	x 3 3/8	21.35
2507	45*	60	2 7/8	x 1 1/2	Diam.	8.65
2522	45*	60	2 7/8	x 1 1/2	Diam.	8.65
2639	6	60	5 15/16	x 2 23/32	x 3 3/8	17.10
2641	24	60	5 1/16	x 2 1/8	x 2 1/16	15.35
2989	32	60	5 9/16	x 2 5/32	x 2 9/16	12.25
3047	12	60	5 15/16	x 2 23/32	x 3 3/8	17.10
3077*	110	60	5 9/16	x 2 5/32	x 2 9/16	14.55
3077V	Use 1315H					
3079	110	60	5 5/16	x 2 23/32	x 3 3/8	19.40
3087	12	60	5 9/16	x 2 5/32	x 2 9/16	12.25
3103	6	60	5 9/16	x 2 5/32	x 2 9/16	12.25
3217**	32	90	2 5/32	x 5 9/16	x 2 9/16	15.35
4123	6	60	5 15/16	x 2 23/32	x 3 3/8	17.10
11028	110	60	5 9/16	x 2 5/32	x 2 9/16	12.25
11030**	110	60	5 9/16	x 2 5/32	x 2 9/16	15.35
11032**	115	60	2 23/32	x 5 15/16	x 3 3/8	21.35
32171	32	60	5 9/16	x 2 5/32	x 2 9/16	12.25

C-D "POWERCON" - REPLACEMENT VIBRATORS

For Model No.	Use Vibrator No.
6R5	3103
6R10	4123
12R8	3087
12RU15	3047
32R8	2989
32RU15	2989
110PA5	2522
110PB5	2522
110R10	1315
110R15	1315
110RT15	1315H
110RT25	1315H
110RT35	3079
110WR15A	1315
110WR15B	1315

*For operation on 115 volts DC, connect a 2200 ohm resistor in series with the coil.
**Available only on Special Order.
***Denotes adjustable frequency vibrator. Use 1000 ohm variable resistor in coil circuit.
- Refer to C-D Catalogs No. 410 & VB for detailed applications and specifications.

RAILROAD Converter VIBRATORS

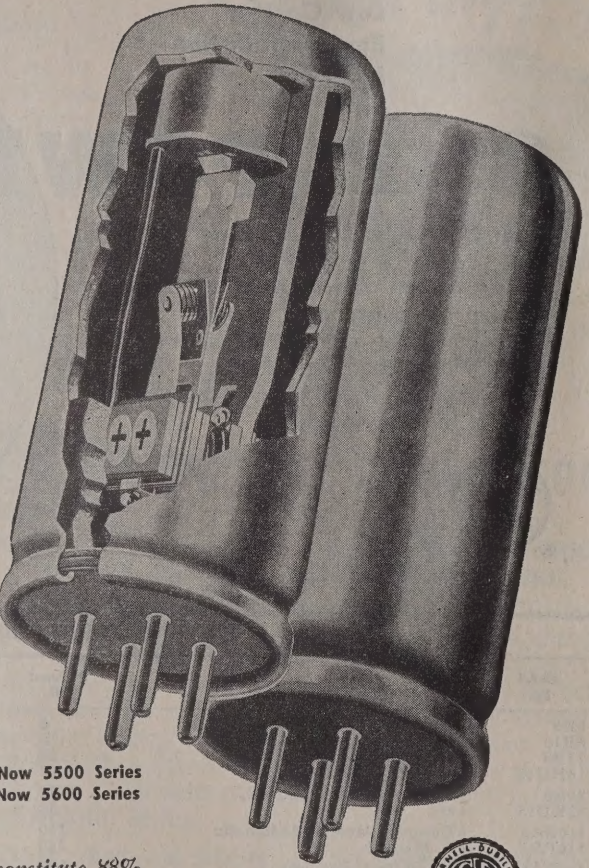
Catalog No.	Voltage	Frequency in Cycles	Dimensions L.	W.	H.	Net Price	Use in C-D Railroad Converter Model No.
12VG6H	12	60	5 15/16	x 2 23/32	x 3 3/8	$9.00	3212A
32VF6H	32	60	5 15/16	x 2 23/32	x 3 3/8	9.00	3232 and 3248
64VF6H	64	60	5 15/16	x 2 23/32	x 3 3/8	9.00	3264
64VG6H	64	60	5 15/16	x 2 23/32	x 3 3/8	9.00	3128
110VF6H	110	60	5 15/16	x 2 23/32	x 3 3/8	9.00	3210

WARNING: Always check the Buffer Capacitors before installing a new vibrator: Failure to do so will void the guarantee. Always use C-D Buffer Capacitors for replacement.
Prices Subject to Change Without Notice.

CORNELL DUBILIER

*CORNELL-DUBILIER AUTO RADIO

VIBRATORS



FEATURES

- C-D designed electronic micrometric equipment removes guesswork in contact point setting and assures consistent high quality.
- Exclusive C-D pole piece design and armature weight results in a perfectly-balanced unit with greater efficiency.
- Exclusive C-D base mounting results in a full floating unit. That's why C-D vibrators last longer.
- Unit completely enclosed in new floating sock—an exclusive with C-D vibrators. Eliminates usual difficulties found in other vibrators.
- New stack design will take peak voltages of even 4,200 volts with no damage to vibrator.

NOTE: ALL CORNELL DUBILIER VIBRATORS HAVE NEW TYPE NUMBERS AS FOLLOWS:

Former C 00 Series—Now 5300 Series
Former D 00 Series—Now 5400 Series
Former CS 00 Series—Now 5500 Series
Former DS 00 Series—Now 5600 Series

EX.—DS04 is now 5604, etc.

Mr. Serviceman: Always have these types on hand. They constitute 88% of all your demand in the ratio shown.

5300	22%	5323P	4%	5400	3%
5301	5%	5326P	11%	5425	3%
5303	5%	5335	9%	5426	7%
5314	4%	5342	10%	5406	2%
5320P	3%				

® SUBSIDIARY

* Refer to C-D Cat.-VB for detailed applications and specifications.

5300 SERIES Standard Automotive and Household **Non-Synchronous** units.

Type No.	List Price	Type No.	List Price	Type No.	List Price
5300	$4.90	5314	$4.90	5333	$4.90
5300-32	7.15	5320	4.90	5335	4.90
5301	4.90	5321	4.90	5342	4.15
5303	4.90	5323	4.15	5343	6 35
5304	6.35	5326	4.15	5363	6.35
5307	4.90	5328-32	9.15	5366	6.35
5308	6.35	5331	4.90	5367-32	7.70
5309	4.90				

5400 SERIES Standard Automotive and Household **Synchronous** units.

Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price
5400	$7.70	5411	$7.70	5429	$9.15	5440	$8.55
5404	7.70	5413	7.70	5431-4	8.55	5443	7.70
5406	7.70	5413-4	7.70	5434	7.70	5443-32	8.55
5407	7.70	5416	9.15	5435	7.70	5454	7.70
5408	7.70	5421	7.70	5435-4	7.70	5463	9.15
5409	7.70	5422	8.55	5436	7.70	5464	9.15
5409-4	7.70	5425	9.15	5437	7.70	5468-2	10.70
5410	7.70	5426	7.70	5438	7.70	5469-2	9.80

5500 SERIES Special Application **Non-Synchronous** units.

Type No.	List Price	Type No.	List Price	Type No.	List Price
5503-12	$7.70	5511-12	$7.70	5516	$6.90
5504	6.35	5513-12	7.70	5517-12	7.70
5506	7.15	5514-4	7.70	5518	6.90
5510	7.15	5515	6.90	5519	4.90
				5560	8.55

5600 SERIES Special Application **Synchronous** units.

Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price
5604	$9.15	5607-12	$9.95	5610-12	$8.55	5616-12	$9.95
5605	8.55	5607-32	9.95	5614-12	8.55	5620	7.70
5605-12	9.95	5609-12	9.95	5615-12	8.55	5621	6.90
5605-32	9.95	5610	7.70	5615-24	8.55	5622	8.55
5607	8.55			5616	8.55	5623	7.70

WARNING: Always check the Buffer Capacitors before installing a new vibrator: Failure to do so will void the guarantee. Always use C-D Buffer Capacitors for replacement.

Prices Subject to Change Without Notice.

For CD "POWERCON" Battery Charger see page S-97

CORNELL DUBILIER

Low Cost
Easy Installation
Long Life

C-D POWERCONS

for DC to AC or AC to DC Power Conversion

Here is an assortment of converters that are outstanding for their dependable operation, their low initial cost and their simple, economical installation. A complete line for every purpose.

POWERCON
VIBRATOR CONVERTER

110 VOLT 60 CYCLE OUTPUT FROM DC INPUT

Model No.	Applications	DC Input Volts	Output - Watts Cont.	Output - Watts Int.	Size	Weight Lbs.	List Price
6R5	Automobile, Bus, Truck, Airplane, Marine & other General Uses: Mobile, Portable, Stationary	6	50	55	6¾ x 7¾ x 5⅞	12	$ 48.25
6R10		6	100	125	7 x 12⅝ x 7½	19	68.45
12R8		12	80	120	6¾ x 7¾ x 5⅞	12	48.25
12RU15		12	150	200	7 x 12⅝ x 7½	22	90.80
32R8	Farm, Marine, Railroad, etc.	32	80	100	6¼ x 7⅝ x 5⅞	13¼	55.80
32RU15		32	150	200	6⅜ x 12⅜ x 7½	22¼	84.55
110PA5	Record Players—Automatic & Manual	110	50 Volt-Amperes		3¾ x 6¼ x 2¾	2	17.20
110PB5		110	50 Volt-Amperes		3¾ x 6¼ x 2¾	2	19.50
110R10	Radio and Business Machines	110	100	150	6⅜ x 7¾ x 5¼	10½	45.95
110RA15		110	150	250	6¾ x 7¾ x 5⅞	13½	56.10
110RT15	Especially Designed for Television —Adjustable Frequency Control	110	150	250	6⅞ x 12¼ x 7½	16¾	74.75
110RT25		110	250	300	6½ x 12⅜ x 8½	22½	79.95
110RT35		110	350	500	7½ x 14 x 8⅝	40½	143.50
110WR15A	Wire or Tape Recorders	110	150	200	6⅞ x 12¼ x 7½	22½	76.50
110WR15B	Wire or Tape Recorders (Phantom switch)	110	150	200	6⅞ x 12¼ x 7½	21	90.75

HIGH-VOLTAGE DC OUTPUT — from 6-Volt DC Input

Model No.	Applications	Input Volts	Output Power (Continuous, Max.)	Type	List Price
6DS2	Operation of Mobile Transmitters, Receivers, and similar equipment from 6-volt Battery. (12-volt units are available on special order.)	6vDC	250vDC at 60ma., or 180vDC at 40ma.—15 watts	Synch.	$35.65
6DS3		6vDC	300, 275, 250 or 225vDC at 100ma.—30 watts	Synch.	39.10
6DR3		6vDC	300, 275, 250 or 225vDC at 100ma.—30 watts	Rect. Tube	41.40
6DRA6		6vDC	300vDC at 200ma.—60 watts	Rect. Tube	59.80
6DRB6		6vDC	400vDC at 150ma.—60 watts	Rect. Tube	59.80

HIGH-VOLTAGE DC & AC OUTPUT — from Battery or 110vAC Input (Dual Operation)

Model No.	Applications	Input Volts	Output Power (Continuous, Max.)	Type	List Price
6/110DH6	High-voltage DC, primarily for operation of transmitters, receivers, sound equipment, etc., from battery or AC power line —mobile or fixed station. See Output Power column for AC output. (12-volt units available on special order.)	(1) 6vDC	(1) 300vDC at 150ma., or 225vDC at 200ma. (45 watts); & 110v-AC, 60 cycles (15 watts, for phono motors)	Rect. Tube	Price on Request
		(2) 110vAC	(2) 300vDC at 150ma., or 225vDC at 200ma. (45 watts); & 6.3v-AC at 5 amperes (for heaters)	Rect. Tube	
6/110DH10		(1) 6vDC	(1) 400vDC at 200ma. (80 watts), or 325vDC at 200ma. (65 watts); & 110vAC, 60 cycles (20 watts, for phono motors)	Rect. Tube	Price on Request
		(2) 110vAC	(2) 400vDC at 200ma. (80 watts), or 325vDC at 200ma. (65 watts); & 6.3vAC at 5 amperes (for heaters)	Rect. Tube	

Prices subject to change without notice.

Less Than 1% Ripple at Top Load

MODEL "NF" • 0-28 VOLTS, 1-15 AMPS. CONTINUOUS RATING, 25 AMPS. INTERMITTENT RATING

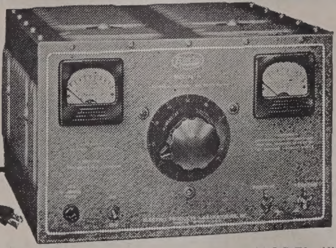
Tests, Services DC Equipment From AC Lines

Serves broadest uses in industry, research and servicing. ONLY EPL offers a moderately priced Power Supply with less than 1% ripple at this output. Exclusive "EPL" selenium rectifier application increases power rating and lowers cost per ampere output. Finest components assure long life and trouble-free operation. Peak instantaneous current rating of 25 amperes (from 50/60 cycle 115 volt source). 0-36 volts up to 6 amperes. Size 14¼x14¼x9¾". Net weight: 71 lbs.

MODEL "N" • Same rating and specifications except for: 5% ripple at 10 amperes, 8% at 15 amperes; less 1 choke and 2 condensers; lower cost; net weight 65 lbs.

NEW!

filtered DC power supply



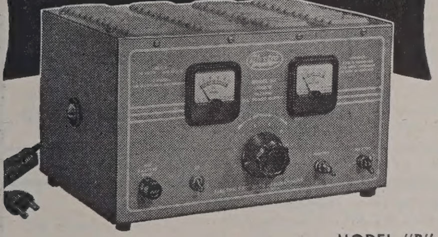
MODEL "NF"

Choke input and Pi type filters with 1 choke, 2000 mfd. condenser plus 1 choke, 4000 mfd. condenser. D'Arsenval-type voltmeter 0-50 volts; ammeter 0-25 amperes, 2% accuracy. Bridge-type selenium rectifiers. Superior Powerstat for incremental voltage adjustment.

BATTERY ELIMINATORS Electro ELECTRONIC EQUIPMENT BATTERY ELIMINATORS

SUPPLIES 1 to 20 AMPS

6 Volts D C, Continuous Duty



MODEL "B"

Less than 3% AC ripple or hum. Damped volt and ammeters (no wiggling). 8 Heavy-duty power tap adjustments. Voltmeter 0-10 volts 3% accuracy. Heavy duty selenium rectifiers, switch, transformer, choke & 6000 mfd. filter condenser.

MODEL "B" • 6 VOLTS, 1-20 AMPS. CONTINUOUS RATING, 35 AMPS. INTERMITTENT RATING

Tests, Services DC Equipment From AC Lines

Tests, operates auto radios, relays, phone circuits, other low voltage devices. New conduction cooling method increases rectifier power rating 1½ times, lowest cost per ampere output. Ample power to operate two auto radios at once. Peak instantaneous current rating of 35 amperes (from 50/60 cycle 115 volt source). Supplies 3 to 9 volts at other ratings. Size: 12 x 7 x 8½". Net weight: 29 lbs.

MODEL "BJ" • 6 VOLTS, 1-12.5 AMPS. CONTINUOUS RATING, 25 AMPS. INTERMITTENT RATING

Same as "B" except for: lower cost; operates 1 auto radio; 1-12.5 amperes at 6 volt continuous rating; 25 amperes intermittent; AC ripple less than 0.4 volts at 6 volts DC 8 amperes; voltmeter 0-10 volts; ammeter 0-20 amperes 5% accuracy; 2000 mfd. filted condenser; net weight 21 lbs.

BATTERY ELIMINATORS Electro ELECTRONIC EQUIPMENT BATTERY ELIMINATORS

MODEL "S" CONVERTS BATTERY RADIOS TO AC ALL-ELECTRIC

Operates any 1.4 volt 4 to 6 tube battery radio from 115 volt 50/60 cycle source. Complete filtering insures hum-free silent operation. Easily fits into battery compartment of most radios. Eliminates batteries, saves money. Low operating cost, uses only 11 watts. Has on-off switch, standard plug and sockets.

Cabinet: Blue Hammerloid finished steel. Size 2⅜ x 3¾ x 6¾". Net weight: 2½ lbs.

MODEL "F" • Same specifications except for: 2 volt 4 to 6 tube battery radio operation; size 2⅜ x 4½ x 8"; Net weight 4½ lbs.

Many Other Models Available

MODEL "S"

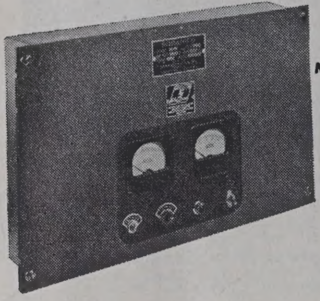
"A" Supply Output: 5-6 tubes (average) 1.4 volts at 320 ma; 4 tubes 1.4 volts at 250 ma; 4 tubes 1.4 volts at 200 ma. **"B" Supply Output:** 90 volts DC at 12 ma. **Primary:** 115 volts AC at 60 cycles. Also for 220 volt operation.

ELECTRO PRODUCTS LABORATORIES, INC. • **Pioneer Manufacturers of Battery Eliminators**

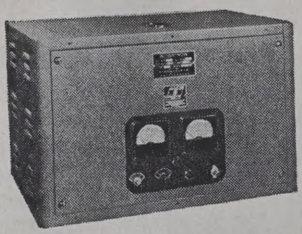
Specify SORENSEN

AC REGULATORS • DC POWER SOURCES

STANDARD UNITS AND SPECIFICATIONS



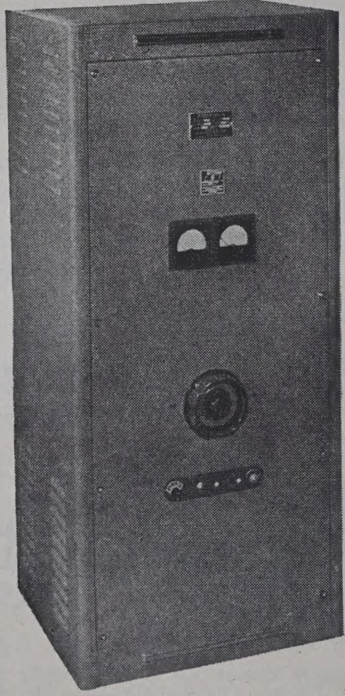
Nobatron Model E-6-15



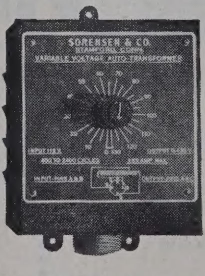
Nobatron Model SWR-5

AC REGULATORS Models available (numbers denote VA capacities) 150S 250S 500S (-2S) also 1000S (-2S) also 2000S 3000S (-2S) also 5000S (-2S) also 10000S (-2S) also 15000-2S	Input	95-130 VAC, 1Φ, 50-60~, 190-260 VAC in "-2S" models
	Output	115 VAC ±5%; 230 VAC with "-2S" models
	Reg. accuracy	±0.1% against line or load
	Distortion	2% — 3% max.
	P. F. range	Down to 0.7
	Load range	0 to full load
	Miscellaneous	Fully protected against overload or overvoltage. Models 150S, 250S, 500S, 1000S, 5000S, 10000S, and 15000-2S are self-contained. Cabinets available for others.
NOBATRONS** (DC Supplys—low voltage) Models available (numbers indicate voltage & current) E-6-5A E-6-15A E-6-40A E-6-100A E-12-5 E-12-15 E-12-50 E-28-5 E-28-10 E-28-30 E-28-70 E-28-150 E-28-350 E-125-10 E-200-5 Also Model SWR-5 with output either 6VDC @ 10 amp or 12VDC @ 5 amp	Input	95 — 130 VAC, 1Φ, 50-60~. In heavy current 28-volt series — 115/208, 3Φ, 4-wire, wye.
	Reg. accuracy	±0.2% against line or load changes
	Ripple	1% RMS max.
	Load range	1/10 to full load
	Output range	Adjustable ±10%; down to −25% at lesser accuracy
	Recovery time	0.2 seconds — this value includes charging time of filter circuit for most severe change in load or input conditions.
	Miscellaneous	Fully protected against overload and overvoltage. Normally for rack mounting — cabinets available. Normal finish — gray wrinkle. Meters standard in some models; available in all.
	Note	"A" models output either 6 or 7 volts.
400~ EQUIPMENT: **LINE REGULATORS**	Similar to 60~ regulators except: Accuracy ±0.5%; distortion 5% max.; VA capacities 250, 500, 1200, 2500.	
NOBATRONS**	Same general specifications as 60~ Nobatrons. Models 6VDC @ 40 amp., 12VDC @ 10 amp., 28VDC @ 10 amp.	

** Reg. U. S. Pat. Off. by Sorensen & Co., Inc.



Ranger Model SR-100



Variable Auto Transformer

B-Nobatron Model 500BB

SORENSEN AND COMPANY • 375 FAIRFIELD AVE., STAMFORD, CONN.

Specify SORENSEN

AC REGULATORS • DC POWER SOURCES

STANDARD UNITS AND SPECIFICATIONS

B-NOBATRONS** (DC Supplys — high voltage)	Input	105-125 VAC, 1Φ, 50 — 60~.
	Load range	0 — full load
	Ripple	10 mv (20 mv in 1000BB)

	Model	325BB*	360BB**	500BB*	520BB**	560BB*	1000BB*
output	VDC	0-325	175-360	0-500	200-500	0-500	200-1000
	Ma	0-125	0-120	0-300	0-200	0-200	0-500

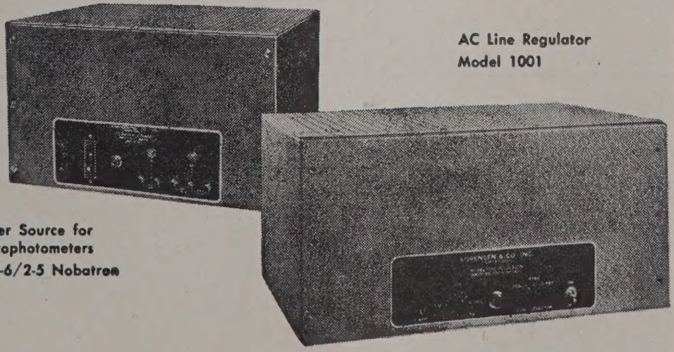
* meters furnished as standard equipment.
regulation accuracy ±0.5%
bias supply 0-150 VDC @ 0-5Ma (except model 1000BB)
** no meters, no bias supply
regulation accuracy ±1.0%

All have 6.3 VAC, 6-10 amperes, unregulated, C.T. except Model 1000BB.

RANGERS (Full-range-variable DC Supplys)	Input range	95 — 130 VAC, 1Φ, 50 — 60~.		
	Reg. accuracy	±0.25% at any voltage setting.		
	Ripple	1% RMS max.		
	Output	Model	SR-100	SR-30	SR-2
		VDC	3-135	3-30	100-300
		Amps	1-10	3-30	1-10

ISOTRONIC* EXCLUSIVES

Super-accurate AC Line Regulator Model 1001	Load range	0 — 1000 VA
	Input volt. range	95 — 130 VAC, 1Φ, 55 — 65~.
	Load P. F. range	0.7 lagging to 0.95 leading
	Output voltage	115 VAC, 1Φ (adjustable from 110-120 volts)
	Distortion	3% max.
	Time constant	0.1 seconds
	Reg. accuracy	±0.01%
DC Power Source for Spectrophotometers Model E-6/2-5 Nobatron	Input volt. range	95-130 VAC, 1Φ, 50-60 cycles
	Output	
	#1 for lamp	6VDC adjustable ±10% at 5 amperes
	#2 for filament	6VDC at 100 Ma.
	#3 for bias	2VDC adjustable ±10% at 100 Ma.
	Filtering	
	#1	1% max.
	#2 & 3	0.05% max.
	Reg. accuracy	±0.01% against line changes
	Time constant	0.1 seconds under most severe line changes


AC Line Regulator Model 1001

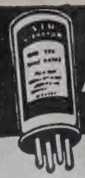
DC Power Source for Spectrophotometers Model E-6/2-5 Nobatron

*"Isotronic" is a registered trademark denoting the electronic regulation and control of voltage, current, power, and frequency.

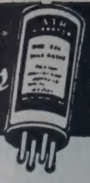
COAST TO COAST

Authorized Sorensen representatives and their field engineers are listed below. Find the one located nearest you — don't hesitate to call on him for consultation and advice.

CALIFORNIA — HOLLYWOOD
Neely Enterprises
7422 Melrose Ave.; Phone Whitney 1147
CALIFORNIA — SACRAMENTO
Neely Enterprises
309 Ochsner Bldg.; Phone Gilbert 3-7461
CALIFORNIA — SAN FRANCISCO
Neely Enterprises
2830 Geary Blvd.; Phone Walnut 1-3960
COLORADO — DENVER
Ronald G. Bowen
852 Broadway
D.C. — WASHINGTON
Burlingame Associates — F. L. Horman
2017 S St., N.W.; Phone Decatur 8000
FLORIDA — FORT MEYERS
Arthur H. Lynch & Associates
P. O. Box 466; Phone 5-6762
GEORGIA — ATLANTA
Floyd Fausett & Son
1347 Beecher St., S.W.; Phone Raymond 3104
ILLINOIS — CHICAGO
Loren F. Green & Associates
4949 W. Diversey Ave.; Ph. National 2-2370
KANSAS — WICHITA
Standard Products, Inc.
650 E. Gilbert Ave.; Phone Wichita 2-1431
KENTUCKY
H. A. Watson, Jr.
817 Citizens Bldg.; Cleveland, Ohio
MASSACHUSETTS — BOSTON
Burlingame Associates — P. G. Yewell
270 Commonwealth Ave.; Ph. Kenmore 6-8100
MICHIGAN — DETROIT
S. Sterling Company
13331 Linwood Ave.; Ph. Townsend 8-3130
NEW MEXICO — ALBUQUERQUE
Neely Enterprises
107 S. Washington St.; Phone 5-8731
NEW YORK — SYRACUSE
Burlingame Associates — J. D. Ryerson
712 State Tower Bldg.; Phone 2-0194
NEW YORK — NEW YORK
Burlingame Associates
103 Lafayette St.; Phone Digby 9-1240
NORTH CAROLINA — CHARLOTTE
James L. Highsmith
P. O. Box 1011; Phone 5-6436
OREGON — PORTLAND
The James L. Kearns Co.
P. O. Box 5108; Phone East 4331
PENNSYLVANIA — PHILADELPHIA
Burlingame Associates — Ivan Robinson
7060 Garret Rd. (Upper Darby).
Phone Flanders 2-1597
PENNSYLVANIA — PITTSBURGH
H. E. Ransford & Co.
Grant Bldg.; Phone Grant 1-1880
TENNESSEE — KNOXVILLE
A. R. Hough
P. O. Box 1452; Phone 8-4312
TEXAS — HOUSTON
Earl W. Lipscomb & Associates
2420-B Rice Blvd.; Phone Linden 9303
TEXAS — DALLAS
Earl W. Lipscomb & Associates
5103 W. Lovers Lane; Phone Elmhurst 5345
CANADA — TORONTO, ONT.
Charles W. Pointon
1926 Gerrard St., East.; Phone Oxford 7435



ATR VIBRATORS *have Ceramic Stack Spacers*



ATR Replacement Vibrator Specifications

N.S.—Non Synchronous S.—Synchronous Frequency: 115 Cycles except as noted.

Type No.	Voltage	Type	Base Dia.	Can Style	Dimensions	List Price
303	6	N.S.	17	J	1½″ x 1⅜″ x 2½″	$5.75
324	6	N.S.	1	A	1½″ x 3⅛″	4.45
324A	6	N.S.	2	A	1⅝″ x 3⅝″	4.45
324B	6	N.S.	1	A	1 15/16″ x 3½″	4.45
324C	6	N.S.	2	A	1⅝″ x 4¾″	4.45
325	6	N.S.	51	A	1½″ x 2⅞″	5.75
328	6	N.S.	4	A	1½″ x 3⅛″	4.45
335	6	N.S.	9	A	1⅝″ x 3⅝″	4.45
337	6	N.S.	14	A	1 15/16″ x 3½″	5.75
338	6	N.S.	9	C	1½″ x 3⅛″	4.45
340	6	N.S.	1	A	1½″ x 2⅞″	4.45
345	6	N.S.	9	A	1½″ x 2⅞″	4.45
347†	6	N.S.	1	A	1½″ x 3⅛″	5.75
350	6	N.S.	1	A	1¼″ x 2⅜″	4.45
503	6	S.	43	A	1 15/16″ x 4½″	8.30
ADAPTER	....	......	......	.....	....	1.35
506	6	S.	40	A	1 15/16″ x 4½″	8.30
507	6	S.	44	A	1 15/16″ x 4½″	8.30
508	6	S.	42	A	1 15/16″ x 4½″	8.30
520	6	S.	19	A	1½″ x 3⅛″	7.00
520A	6	S.	19	A	1 15/16″ x 3½″	7.00

Type No.	Voltage	Type	Base Dia.	Can Style	Dimensions	List Price
521	6	S.	20	A	1½″ x 3⅛″	$7.00
522	6	S.	21	A	1½″ x 3⅛″	7.00
522A	6	S.	21	A	1 15/16″ x 3½″	7.00
523	6	S.	22	A	1½″ x 3⅛″	7.00
524	6	S.	23	A	1½″ x 3⅛″	7.00
525	6	S.	24	A	1½″ x 3⅛″	7.00
529	4	S.	21	A	1½″ x 3⅛″	7.00
540	6	S.	27	A	1½″ x 3⅛″	7.00
541	4	S.	19	A	1½″ x 3⅛″	7.00
541A	4	S.	19	A	1 15/16″ x 3½″	7.00
544‡	6	S.	28	A	1⅜″ x 2⅞″	7.00
545‡	6	S.	28	A	1½″ x 3⅛″	7.00
547	6	S.	29	C	1 15/16″ x 3½″	7.00
550	6	S.	32	K	4⅞″ x 1¾″ x 1¾″	8.30
561	6	S.	24	A	1½″ x 2⅞″	7.00
562	6	S.	21	A	1¼″ x 3⅛″	7.00
564*	6	S.	23	A	1½″ x 2⅞″	7.00
900	2	S.	52	A	1½″ x 2⅞″	8.90
2324	32	N.S.	1	A	1½″ x 3⅛″	6.50
2401	32	S.	22	A	1½″ x 3⅛″	7.75

Recommended Substitutions for Discontinued Vibrators

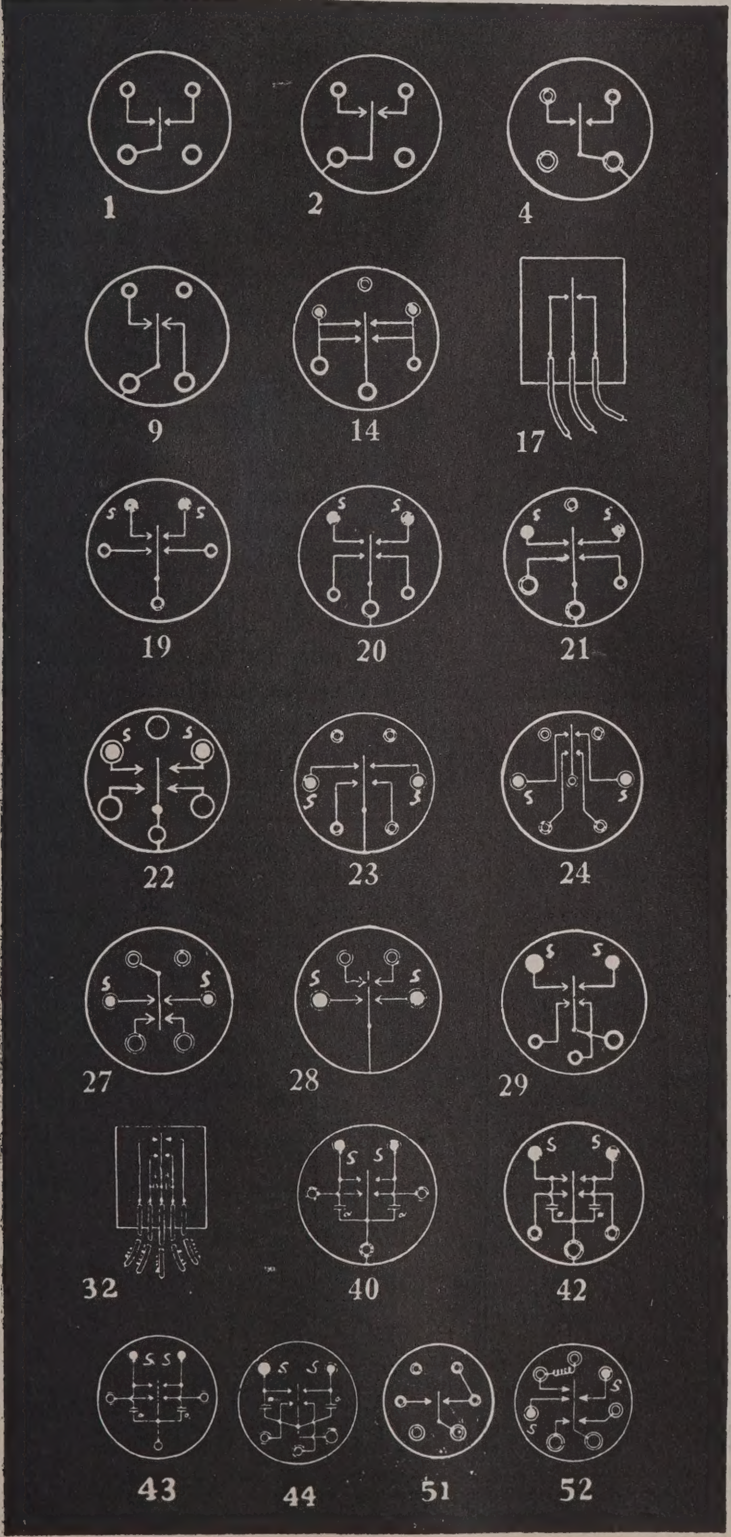
Discontinued Type	Recommended Replacement	Discontinued Type	Recommended Replacement	Discontinued Type	Recommended Replacement
305	**303**	**330**	**324C**	**543**	**522A (Refer Note 3)**
307	**303 (Refer Note 1)**	**332**	**522 (Refer Note 8)**	**543A**	**522A (Refer Note 3)**
314	**324**	**342**	**325**	**546**	**522 (Refer Note 6)**
316	**324**	**504**	**503**	**551**	**550 (Refer Note 14)**
317	**324**	**505**	**503 (Plus Adapter)**	**553**	**550 (Refer Note 11)**
323	**340**	**531**	**550 (Refer Note 13)**	**591**	**524 (Refer Note 9)**
326	**325**	**536**	**524 (Refer Note 10)**	**2327**	**2324 (Refer Note 12)**
327	**325**	**537**	**525**	**2403**	**2324**

The Installation Notes listed above are shown in Section G of the ATR Vibrator Manual.

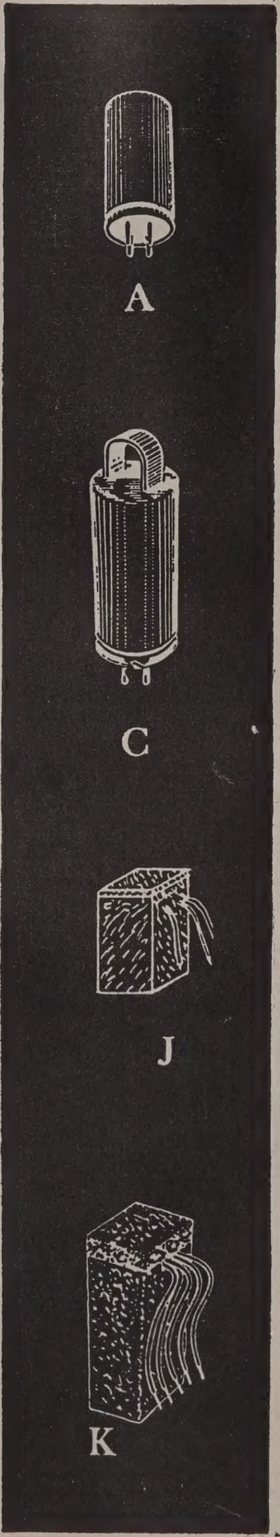
INSIST on ATR VIBRATORS-*Get the Best!!*

ATR Replacement Vibrator Specifications

Base Diagrams


1
2
4
9
14
17
19
20
21
22
23
24
27
28
29
32
40
42
43
44
51
52

External Views



ATR · VIBRATORS · ATR

AMERICAN TELEVISION & RADIO CO.

ATR *AUTO RADIO* VIBRATORS

ATR
VIBRATOR
TYPE 524
Serial 44705
For use only as recommended on approved 6 Volt D.C. Circuits. See directions.
PATENTS PENDING
ATR VIBRATOR REPLACEMENT
TYPE 524
ATR
REPLACEMENT
A QUALITY PRODUCT
ATR VIBRATORS
FULLY GUARANTEED
THE BEST BY TEST

ATR Manufactures a Complete Line of Auto Radio Replacement Vibrators

Ask your ATR Distributor for your Free Copy of the Latest ATR Vibrator Guide

ATR VIBRATORS

feature Ceramic Stack Spacers, and are proven units of the highest quality, engineered to perfection. They are backed by more than 17 years of vibrator design and research, development and manufacturing — *ATR Pioneered in the Vibrator Field.*

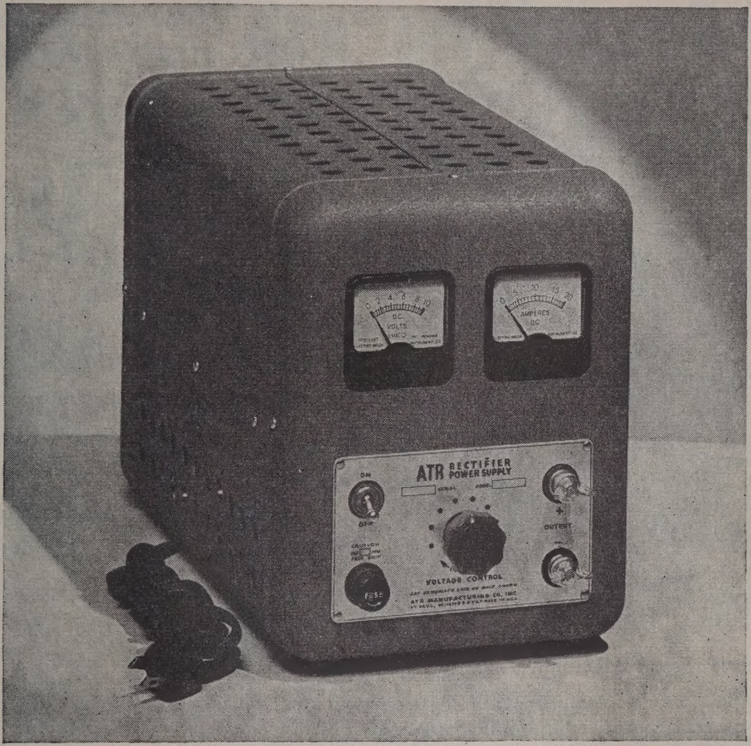
ATR VIBRATOR EQUIVALENT CHART

ATR	TYPE	SIZE	ATR LIST PRICE	E-L	MALLORY	RADIART
324	Int.	1½″ x 3⅛″	$4.45	1703	294	5300
328	Int.	1½″ x 3⅛″	4.45	2090	854	5331
335	Int.	1½″ x 3⅛″	4.45	2088	852	5303
340	Int.	1½″ x 2⅞″	4.45	2605	859	5301
508	Syn.	1 15⁄16″ x 4½″	8.30	2682	273C	5425
520	Syn.	1½″ x 3⅛″	7.00	2688	245	5409
522	Syn.	1½″ x 3⅛″	7.00	2089	246	5411
524	Syn.	1½″ x 3⅛″	7.00	2107	248	5400
525	Syn.	1½″ x 3⅛″	7.00	2687	249	5406
547	Syn.	1 15⁄16″ x 3½″	7.00	2092	716	5426

THESE 10 POPULAR ATR VIBRATORS MEET 90% OF YOUR SERVICE NEEDS

ATR • INVERTERS • ATR

AMERICAN TELEVISION & RADIO CO.



Illustrates Heavy Duty "A" Battery Eliminator, Type 620C-ELIP, Equipped with Voltmeter, Ammeter and Voltage Control.

ATR "A" BATTERY ELIMINATORS

Specially Designed for Testing and Operating Auto Radios and D. C. Electrical Apparatus on Regular A. C. Lines, 105-125 Volts 50-60 Cycles.

- Fully Automatic and Fool-Proof.
- Eliminates Storage Batteries and Battery Chargers.
- Operates the Equipment at Maximum Efficiency at all Times.
- Delivers Filtered Direct Current at the Correct Voltage for Proper Operation.

SUGGESTED USES:

As a power supply for radio sets, aircraft instruments, relays, motors and other electrical and electronic equipments. In the laboratory, for supplying various low D. C. voltages.

Battery Eliminators may be treated as batteries in the sense that they can be connected in series for higher voltages at the same current output per unit or in parallel for the same output voltage per unit at higher currents.

Equipped with Full-Wave Dry Disc Type Rectifier, Assuring Noiseless, Interference-Free Operation and Extreme Long Life and Reliability.

TYPE 610 ELIB—Rated output 6 volts at 10 amperes. Size 6½" x 9⅛" x 8½"; shipping weight, 22 lbs. Code word, "SELIB".

Net Price **$35.64**

TYPE 620C ELIP—Uses dual rectifiers. Size 6½" x 12⅞" x 8½". Shipping weight, 33 lbs. Code word, "HELIN".

Rated Output: 6 volts at 18 amperes or 12 volts at 9 amperes. Either output obtainable by means of simple output terminal switching arrangement.

Net Price **$54.78**

All ATR Eliminators have as standard equipment: On-Off Switch, Voltage Control, Meter(s), Fuse Protection, Rubber Mounting Feet, 6-Ft. All-Rubber Cord Set, and Cabinet of heavy gauge metal having attractive grey-wrinkled finish.

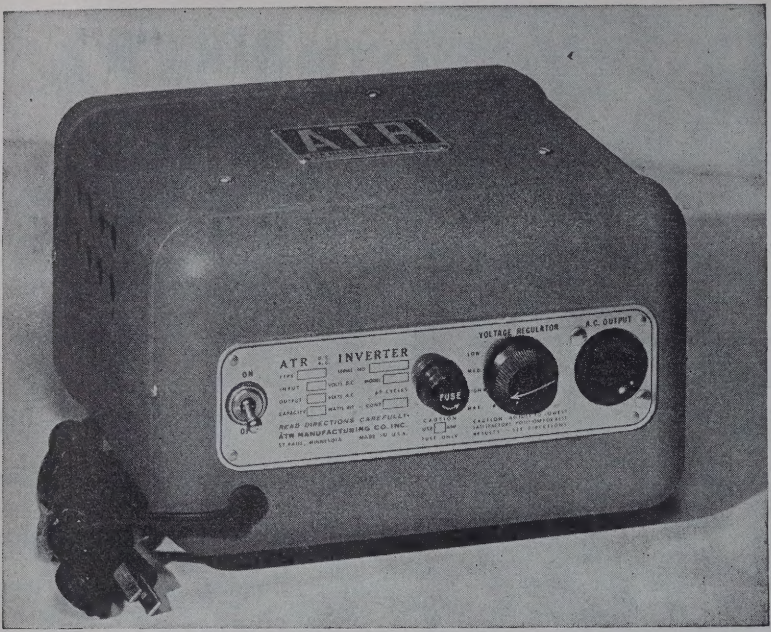
ATR RECTIFIER POWER SUPPLY

Illustrating Standard "A" Battery Eliminator, Type 610 ELIB, Equipped with Voltmeter and Voltage Control.

Net

ATR • ELIMINATORS • ATR

AMERICAN TELEVISION & RADIO CO.



Illustrates all Standard ATR Radio Inverters except types 6 and 12 RSC.

ATR STANDARD AND HEAVY DUTY RADIO INVERTERS

Specially Designed for Operating A. C. Radios, Public Address Systems, Amplifiers, Intercall Systems, and Radio Test Equipment from D. C. Voltages in Vehicles, Ships, Trains, Planes, and in D. C. Districts.

This group of ATR Inverters is especially recommended for use with A.C. radios, amplifiers, and similar electronic equipment, being exceptionally well filtered to insure interference-free radio reception. With ATR Inverters, the need for special equipment is eliminated. They are designed for quiet, long-life radio operation. All models indicated are equipped with ATR plug-in Inverter Vibrators and also with four-point voltage regulators as fully described on the reverse side. The operating efficiency is in excess of 85%. These Radio Inverters are recommended for use with loads having power factors in excess of 80%.

ATR Inverters **should be used only** for the applications as outlined above.

ATR Inverters **are not recommended** for operating refrigerators, washing machines or similar motor-driven appliances; also, ATR Inverters **are not recommended** for operating toasters, electric irons, sun lamps, or similar appliances of high wattage or low power factor. Any attempt to use the Inverter for applications not recommended will ruin the Inverter immediately and void the guarantee.

Type	Input D.C. Volts	A.C. Output 60 Cycles	Output Wattage		Code Word	List Price
			Inter-mittent	Con-tinuous		
6 RSC	6	110 volts	85	75	ARSCD	$54.95
12 RSC	12	110	125	100	BRSCE	54.95
28 RSC	28	100	125	100	ORSCR	62.70
32 RSC	32	110	150	100	CRSCF	54.95
32B-RHD	32	110	200	180	DRHDG	87.45
50 RSC	50	110	150	100	ERSCH	71.50
110 RSC	110	110	250	150	GRSCJ	54.95
110C-RSC	110	110/220	250	150	JRSCM	71.50
220 RSC	220	110	250	150	LRSCO	62.70
220A-RSC	220	110/220	250	150	MRSCP	71.50

Radio frequency interference completely suppressed.

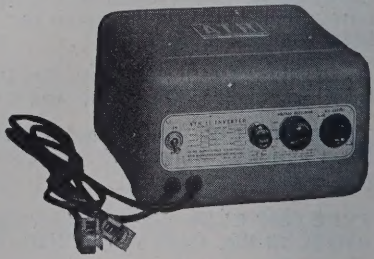
Any of the above type Inverters are available with 220 volt A.C. output at prices 25% higher. In ordering, specify "S" after the type number and substitute for the last letter in the code word "T"; that is, if a 110 volt D. C. Inverter having a 220 volt A. C. output is desired, this would be ordered as Type 110S covered by code word, "GRSCT".

ATR Standard and Heavy Duty Radio Inverters are housed in attractively finished grey-wrinkled metal cabinets.

Dimensions of Standard Model Radio Inverters, 8⅜" x 9" x 5¼"; Shipping weight, 19 lbs.

Dimensions of Heavy Duty Model Radio Inverters, 6½" x 11⅛" x 8½"; Shipping weight, 30 lbs.

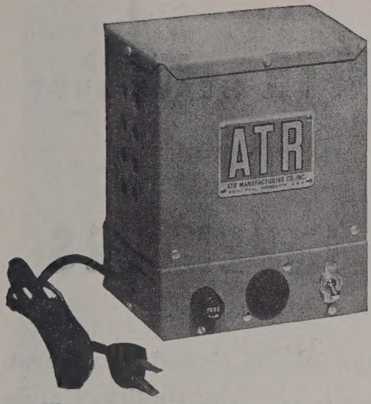
For correct replacement vibrator, consult Inverter Vibrator Guide.



Illustrates Types 6 and 12 RSC Standard Radio and Industrial Inverters only.

ATR • INVERTERS • ATR

AMERICAN TELEVISION & RADIO CO.



Illustrating all Types LID Inverters except Types 6 and 12.

ATR Low Power INVERTERS

For Operating Small A. C. Motors, Electric Razors, Radios, and Devices of Approximately 35 watts Consumption from 6, 12, 28, 32, 110, and 220 volt D. C. Lines.

This line of ATR Low Power Inverters was specially brought out to meet the insistent demand for a good, low power, inexpensive Inverter for operating phonograph and other A.C. motors and a host of small A.C. devices from D.C. voltage sources. These Inverters operate at an efficiency in excess of 90% and are designed for operation of loads having a power factor as low as 60%. They are ruggedly built and powered by a special ATR six-contact plug-in Inverter Vibrator utilizing four ¼" diameter tungsten power contacts and two silver alloy driver contacts.

ATR Inverters **should be used only** for the applications as outlined above.

ATR Inverters **are not recommended** for operating refrigerators, washing machines or similar motor-driven appliances; also, ATR Inverters **are not recommended** for operating toasters, electric irons, sun lamps, or similar appliances of high wattage or low power **factor.** Any attempt to use the Inverter for applications not recommended will ruin the Inverter immediately and void the guarantee.

Type	Input D. C. volts	A.C. Output 60 cycles	Wattage		Code Word	List Price
			Intermittent	Continuous		
6 LID	6	110 volts	40	35	ALIDM	**$35.75**
12 LID	12	110	50	35	BLIDN	**35.75**
28 LID	28	110	50	35	GLIPS	**40.15**
32 LID	32	110	50	85	CLIDO	**40.15**
110 LID	110	110	75	50	DLIDP	**35.75**
220 LID	220	110	75	50	ELIDQ	**40.15**

Radio frequency interference suppressed.

Any of the above type Low Power Inverters are available with 220 volt A. C. output at prices 25% higher. In ordering, specify "S" after the type number and substitute for the last letter in the code word "T"; that is, if a 110 volt D. C. Low Power Inverter having a 220 volt A. C. output is desired, this would be ordered as Type 110S covered by code word, "DLIDT".

Dimensions, 5⅜" x 4" x 6⅝"; shipping weight, 7 lbs.

Replacement Vibrators for any of the above Low Power Inverters are available. Be sure to mention the type number as well as model number when ordering. Consult Inverter Vibrator Guide.

ATR STANDARD AND HEAVY DUTY ‡ INDUSTRIAL INVERTERS

For Operating A. C. Motors, Electronic Apparatus, Electrical Testing Equipment, and A. C. Electrical Appliances from D. C. Lines.

These units are specially designed for applications as indicated, permitting the use of standard A.C. equipment on D.C. lines. These Inverters operate at an efficiency in excess of 80% and are carefully built and equipped to give the longest possible life and operating satisfaction. All models indicated are equipped with an ATR plug-in Inverter Vibrator of new design and construction, insuring increased long life and reliable service. These Inverters also come equipped with four-point voltage regulators, which make possible the correct voltage for minimum to maximum loads and also help compensate for input voltages which are lower or higher than normal. These Industrial Inverters are recommended for use with loads having power factors as low as 60%, and as low as 50% for the "P" Inverters indicated. These Inverters should not be used with Neon signs.

ATR Inverters **should be used only** for the applications as outlined above.

ATR Inverters **are not recommended** for operating refrigerators, washing machines or similar motor-driven appliances; also, ATR Inverters **are not recommended** for operating toasters, electric irons, sun lamps, or similar appliances of high wattage or low power factor. Any attempt to use the Inverter for applications not recommended will ruin the Inverter immediately and void the guarantee.

Illustrating Heavy Duty Models Radio and Industrial Inverters except types 6 and 12. Types 6 and 12 Industrial Inverters are illustrated by small cut on page M-34.

Type	Input D.C. volts	A.C. Output 60 cycles	Output Wattage		Code Word	List Price
			Intermittent	Continuous		
6 ISP-F	6	110 volts	85	75	AISFD	**$69.95**
12 ISP-F	12	110	125	100	BISFE	**69.95**
28 ISP-F	28	110	125	100	LISFE	**77.75**
32 ISP-F	32	110	150	100	CISFE	**69.95**
32P*-ISP-F	32	110	150	125	DISFF	**86.50**
32B-IHQ-F	32	110	200	180	EIHFG	**102.50**
110 ISP-F	110	110	250	150	FISFH	**69.95**
110P*-ISP-F	110	110	250	150	GISFI	**86.50**
110A-IHQ-F	110	110	325	225	HIHFJ	**94.75**
110B-IHQ-F	110	110	500	350	IIHFK	**105.75**
220 ISP-F	220	110	250	150	JISFI	**77.75**
220P*-ISP-F	220	110	300	150	KISFM	**86.75**

‡Radio frequency interference suppressed.

Any of the above type Inverters are available with 220 volt A. C. output at slightly higher prices. In ordering, follow similar directions given above.

ATR Standard and Heavy Duty Industrial Inverters are housed in attractively finished grey-wrinkled metal cabinets.

Dimensions of Standard Model Industrial Inverters, 8⅜" x 9" x 5¼". Shipping weight, 19 lbs.

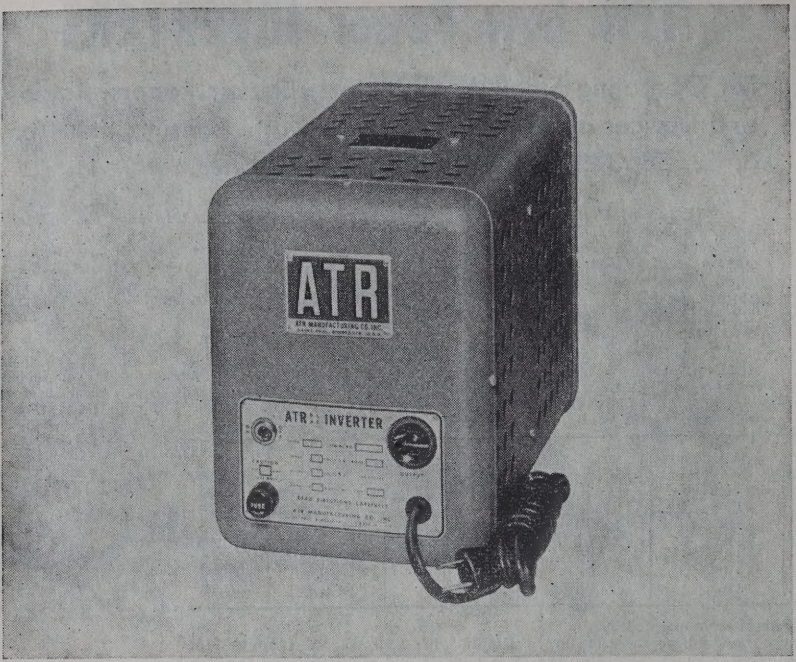
Dimensions of Heavy Duty Industrial Inverters, 6½" x 11⅛" x 8½"; shipping weight, 30 lbs.

For correct replacement vibrator, consult Inverter Vibrator Guide.

*"P" Inverters are corrected for loads having power factors as low as 50%.

ATR · INVERTERS · ATR

AMERICAN TELEVISION & RADIO CO.



Illustrates all ATR SUPER HEAVY DUTY Types except Types 6 and 12-HSF

ATR SUPER HEAVY DUTY RADIO INVERTERS

Specially Designed for Operating Large A.C. Radios, Public Address Systems, Tape Recorders, Amplifiers, Intercall Systems, and Radio Transmitters from D.C. Voltages in Vehicles, Ships, Trains, Planes, and in D.C. Districts.

This group of ATR Inverters is especially recommended for use with large A.C. radios, amplifiers, and similar electronic equipment, being exceptionally well filtered to insure interference-free operation. With ATR Inverters, the need for special equipment is eliminated. They are designed for long-life operation. All models indicated are equipped with ATR twenty-contact plug-in Inverter Vibrators and also with four-point voltage regulators which make possible the correct output voltage for minimum to maximum loads and also help compensate for input voltages which are lower or higher than normal. High operating efficiency is provided. These Radio Inverters are recommended for use with loads having power factors in excess of 80%.

ATR Inverters **should be used only** for the applications as outlined above.

ATR Inverters **are not recommended** for operating refrigerators, washing machines or similar motor-driven appliances; also, ATR Inverters **are not recommended** for operating toasters, electric irons, sun lamps, or similar appliances of high wattage or low power factor. Any attempt to use the Inverter for applications not recommended will ruin the Inverter immediately and void the guarantee.

Type	Input D.C. Volts	A.C. Output 60 Cycles	Output Wattage		Code Word	List Price
			Inter-mittent	Con-tinuous		
6-HSF	6	110 Volts	175	150	AHSFD	$125.00
12-HSF	12	110	250	200	BHSFE	125.00
28-HSF	28	110	250	200	OHSFR	145.00
32-HSF	32	110	325	225	CHSFF	125.00
110-HSF	110	110	600	400	GHSFJ	125.00
220-HSF	220	110	500	300	LHSFO	145.00

Radio frequency interference completely suppressed.

Any of the above type Inverters are available with 220 volt A.C. output at prices slightly higher. In ordering, specify "S" after the type number and substitute for the last letter in the code word "T"; that is, if a 110 volt D.C. Inverter having a 220 volt A.C. output is desired, this would be ordered as Type 110S-HSF covered by code word, "GHSFT."

ATR Super Heavy Duty Inverters are housed in attractively finished grey-wrinkled metal cabinets.

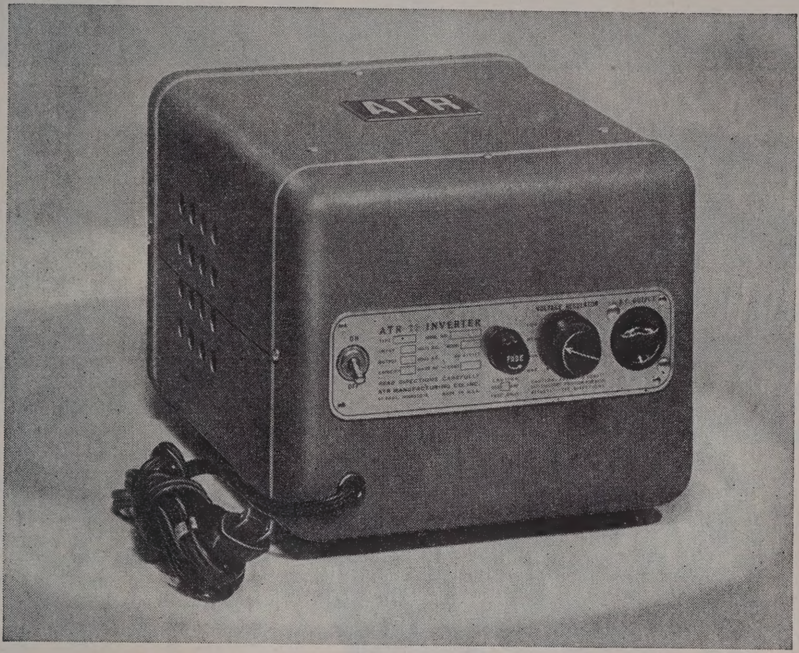
Dimensions of all Super Heavy Duty Inverters, 6½" x 12⅞" x 8½"; Shipping weight, 36 lbs.

For correct replacement vibrator consult Inverter Vibrator Guide.

ATR
ATR :: INVERTER

Illustrates Types 6 and 12-HSF SUPER HEAVY DUTY INVERTERS only.

ATR • INVERTERS • ATR
AMERICAN TELEVISION & RADIO CO.



Illustrates Model 110AT-RHD. See other pages for other Inverter illustrations.

ATR STANDARD AND HEAVY DUTY
TELEVISION INVERTERS

Specially Designed and Carefully Adjusted for Operating Television Receivers from D.C. Voltages in Vehicles, Ships, Trains, Planes, and D.C. Districts. Suitable for Use with All Types of Electronic Equipment where Precise Output Frequency is Required.

This group of ATR Inverters has been selected from the ATR line of Standard and Heavy Duty Radio Inverters and Super Heavy Duty Inverters and have specially adjusted ATR Vibrators installed in them to provide the precisely adjusted output power frequency required for the operation of Television Sets. They are exceptionally well filtered to insure interference-free reception. They are equipped with four-point voltage regulators. The operating efficiency is in excess of 85%. They are recommended for use with loads having power factors in excess of 80%.

ATR Inverters **should be used only** for the applications as outlined above.

ATR Inverters **are not recommended** for operating refrigerators, washing machines or similar motor-driven appliances; also, ATR Inverters **are not recommended** for operating toasters, electric irons, sun lamps, or similar appliances of high wattage or low power factor. Any attempt to use the Inverter for applications not recommended will ruin the Inverter immediately and void the guarantee.

Type	Input D.C. Volts	A.C. Output 60 Cycles	Output Wattage		Code Word	List Price
			Inter-mittent	Con-tinuous		
6T-HSF	6	110 Volts	175	150	THSFD	$135.00
12T-HSF	12	110	250	200	THSFE	135.00
28T-HSF	28	110	250	200	THSFO	155.00
32BT-RHD	32	110	200	180	TRHCG	92.95
32T-HSF	32	110	325	225	THSFF	135.00
110T-RSC	110	110	250	150	TRSCJ	60.45
110AT-RHD	110	110	325	225	TRHCK	79.75
110BT-RHD	110	110	500	350	TRHCL	105.75
110T-HSF	110	110	600	400	THSFJ	135.00
220T-RSC	220	110	250	150	TRSCO	68.20
220T-HSF	220	110	500	300	THSFO	155.00

ATR Standard (RSC), Heavy Duty (RHD), and Super-Heavy Duty (HSF) Television Inverters are housed in attractively finished grey-wrinkled metal cabinets.

Dimensions of Standard (RSC) Model Television Inverters, 8⅜" x 9" x 5¼"; Shipping weight, 19 lbs.

Dimensions of Heavy Duty (RHD) Model Television Inverters, 6½" x 11⅛" x 8½"; Shipping weight, 30 lbs.

Dimensions of Super Heavy Duty (HSF) Model Television Inverters, 6½" x 12⅞" x 8½"; Shipping weight, 36 lbs.

For correct replacement vibrator, consult Inverter Vibrator Guide.

THE RADIART CORPORATION
CLEVELAND 2, OHIO

- ROTATORS
- VIBRATORS
- AUTO AERIALS
- TV ANTENNAS
- POWER SUPPLIES

RADIART Seal-Vent RED SEAL VIBRATORS

VIBRATOR
5300
INPUT 6 VOLTS
BASE DIAG-A
THE RADIART CORP.
MADE IN U.S.A.
RADIART
VIBRATOR
TYPE
5300
INPUT 6 VOLTS
M-2

NOW — with the RADIART SEAL VENT, the vibrator is sealed BEFORE it is used — and VENTED after it is put into use. The RED SEAL rubber-faced bakelite plug prevents formation of an insulating film on the contacts. Heat generated when the vibrator is put into service melts the wax out of the sealed vent-hole and permits air circulation . . . FOR LONGER LIFE AND EVEN GREATER PERFORMANCE!

There are many reasons for the nation-wide preference for Radiart Vibrators! One is the absolutely complete selection of types manufactured . . . there is a CORRECT Radiart replacement vibrator for most every need, to original specifications. In addition, the precision engineering behind the design of each type is backed up by highest standards of manufacture that assure peak performance . . . always!

The Radiart Vibrator Guide is the Standard of the Industry — Ask your jobber for your copy today!

5300 SERIES vibrator types are Standard Automotive and Household Non-Synchronous units. They are stocked by all RADIART Distributors who carry a complete line.

Type No.	Price	Type No.	Price	Type No.	Price
5300	$4.90	5314	$4.90	5335	$4.90
5300-32	7.15	5320	4.90	5342	4.15
5301	4.90	5321	4.90	5343	6.35
5303	4.90	5323	4.15	5363	6.35
5304	6.35	5326	4.15	5366	6.35
5307	4.90	5328-32	9.15	5367-32	7.70
5308	6.35	5331	4.90		
5309	4.90	5333	4.90		

5400 SERIES vibrator types are Standard Automotive and Household Synchronous units. They are stocked by all RADIART Distributors who carry a complete line.

Type No.	Price	Type No.	Price	Type No.	Price	Type No.	Price
5400	$7.70	5411	$7.70	5429	$9.15	5440	$8.55
5404	7.70	5413	7.70	5431-4	8.55	5443	7.70
5406	7.70	5413-4	7.70	5434	7.70	5443-32	8.55
5407	7.70	5416	9.15	5435	7.70	5454	7.70
5408	7.70	5421	7.70	5435-4	7.70	5463	9.15
5409	7.70	5422	8.55	5436	7.70	5464	9.15
5409-4	7.70	5425	9.15	5437	7.70	5468-2	10.70
5410	7.70	5426	7.70	5438	7.70	5469-2	9.80

5500 SERIES vibrator types are Special Application Non-Synchronous units. These are stocked by RADIART Distributors in accordance with local requirements. They are available for immediate shipment from the Factory. Order through your local distributor.

5503-12	$7.70	5513-12	$7.70	5518	$6.90
5504	6.35	5514-4	7.70	5519	4.90
5506	7.15	5515	6.90	5560	8.55
5510	7.15	5516	6.90		
5511-12	7.70	5517-12	7.70		

5600 SERIES vibrator types are Special Application Synchronous units. These are stocked by RADIART Distributors in accordance with local requirements. They are available for immediate shipment from the Factory. Order through your local distributor.

5604	$9.15	5607-12	$9.95	5614-12	$8.55	5620	$7.70
5605	8.55	5607-32	9.95	5615-12	8.55	5621	6.90
5605-12	9.95	5609-12	9.95	5615-24	8.55	5622	8.55
5605-32	9.95	5610	7.70	5616	8.55	5623	7.70
5607	8.55	5610-12	8.55	5616-12	9.95		

- ROTATORS
- VIBRATORS
- AUTO AERIALS
- TV ANTENNAS
- POWER SUPPLIES

THE RADIART CORPORATION
CLEVELAND 2, OHIO

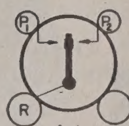
VIBRATOR BASE DIAGRAM CROSS INDEX

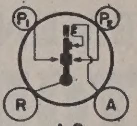
A—A hot line into vibrator.
B—By-pass for driving point.
C—External coil lead in shunt vibrator.
P_1—Primary contact, usually, but not necessarily connected to the magnet coil in shunt vibrators.
PP_1—Dual primary contact, closed when P_1 is closed.

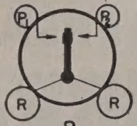
Radiart Type No.	Base Diagram	Voltage	Frequency	Max. Load	Dia.*	Height
5300	A-1	6	115	6	1½	3⅛
5300-32	A-1	32	115	1.4	1½	3⅛
5301	A-1	6	115	6	1½	2⅞
5303	F-1	6	115	6	1⅝	3 9/16
5304	I	6	115	6	1¼	3⅛
5307	A-1	6	150	6	1½	3⅛
5308	E	6	115	6	1½	3⅛
5309	C-1	6	115	6	1½	2½
5314	A-1	6	115	6	1¼	2⅜
5320	A-1	6	115	6	1 15/16	3½
5321	A-1	6	115	6	1⅝	3 9/16
5323	A-1	6	115	6	1⅝	4¾
5326	A-1	6	115	6	1½	2⅞
5328-32	H-1	32	115	1.4	1⅝	3½
5331	C-1	6	115	6	1½	3⅛
5333	F-1	6	115	6	1½	3⅛
5335	F-1	6	115	6	1½	2⅞
5342	A-1	6	115	6	1½	2⅞
5343	B	6	115	6	1 15/16	4½
5363	LEADS	6	115	4	—	—
5366	R-1	6	115	6	1½	2⅞
5367-32	T	32	115	1.4	1½	3⅛
5400	AB-1	6	115	6	1½	3⅛
5404	AH-1	6	130	6	1½	3⅛
5406	AD-1	6	115	6	1½	3⅛
5407	AB-1	6	180	5	1½	3⅛
5408	AB-1	6	140	6	1½	2⅞
5409	K-1	6	115	6	1½	3⅛
5409-4	K-1	4	115	6	1½	3⅛
5410	O-1	6	115	6	1½	3⅛
5411	V-1	6	115	6	1½	3⅛
5413	K-1	6	115	6	1 15/16	3¼
5413-4	K-1	4	115	6	1 15/16	3½
5416	K-2	6	115	6	1 15/16	4½
5421	V-1	6	115	6	1 15/16	3½
5422	AE-1	6	115	5	1½	3⅛
5425	O-2	6	115	6	1 15/16	4½
5426	P-1	6	115	6	1 15/16	3½
5429	P-3	6	115	6	1 15/16	4½
5431-4	AG	4	115	5	1½	3⅛
5434	W-1	6	115	6	1 15/16	3½
5435	V-1	6	115	6	1⅜	3⅛
5435-4	V-1	4	115	6	1⅜	3⅛
5436	V-1	6	180	5	1½	2⅞
5437	AB-1	6	180	5	1⅜	2⅞
5438	AB-1	6	140	6	1½	3⅛
5440	AB-1	6	115	6	1 15/16	4½
5443	AA-1	6	115	6	1½	3⅛
5443-32	AA-1	32	115	1.4	1½	3⅛
5454	AD-1	6	115	6	1½	2⅞
5463	LEADS	6	115	6	—	—
5464	AI-1	6	115	6	1 15/16	4½
5468-2	AM	2	115	2	1½ sq.	2⅛
5469-2	AN	2	115	2	1 5/16	2⅛
5503-12	A-1	12	115	6	1½	3⅛
5504	V-1	6	115	6	1 15/16	3½
5506	D	6	115	10	1½	3⅛
5510	OA-1	6	115	10	1½	3⅛
5511-12	OB-1	12	115	6	1½	3⅛
5513-12	AK	12	180	3	1½	3⅛
5514-4	A-1	4	180	5	1½	2⅞
5515	A-1	6	115	10	1½	3⅛
5516	A-1	6	115	10	1½	3⅛
5517-12	V-1	12	180	3	1½	3⅛
5518	V-1	6	115	10	1½	2⅞
5519	A-1	6	115	6	1½	2⅞
5560	A-2	6	60	6	1½	3⅛
5604	K-2	6	115	6	1 15/16	4½
5605	AD-1	6	115	10	1½	3⅛
5605-12	AD-1	12	115	6	1½	3⅛
5605-32	AD-1	32	115	2.5	1½	3⅛
5607	AJ	6	180	5	1⅜	2¾
5607-12	AJ	12	180	3	1⅜	2¾
5607-32	AJ	32	180	1.4	1⅜	2¾
5609-12	K-1	12	115	3	1½	3⅛
5610	V-1	6	115	6	1¼	3⅛
5610-12	V-1	12	115	3	1¼	3⅛
5614-12	AD-1	12	115	4	1½	2⅞
5615-12	V-1	12	180	3	1½	2⅝
5615-24	V-1	24	180	1.4	1½	2⅝
5616	AJ	6	180	5	1½	2⅞
5616-12	AJ	12	180	3	1½	2⅞
5620	AB-1	6	115	6	1½	2⅞
5621	V-1	6	115	10	1½	2⅞
5622	AE-1	6	100	5	1½	2⅞
5623	AD-1	6	115	6	1½	2⅞

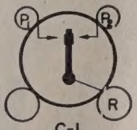
Symbols Used in Vibrator Base Diagrams

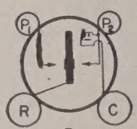
P_2—Primary contact, may be the magnet coil connection instead of P_1.
PP_2—Dual primary contact, closed when P_2 is closed.
R—Vibrating reed in single-reed vibrators.
RP—Primary vibrating reed in split-reed vibrators.
RS—Secondary vibrating reed in split-reed vibrators.
S_1—Secondary contact, closed when P_1 is closed.
S_2—Secondary contact, closed when P_2 is closed.
* All dimensions given are in inches.
† For further information see Vibrator type in Radiart Replacement Guide.

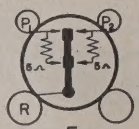

A-1

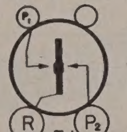

A-2

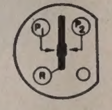

B

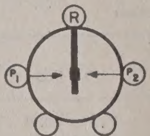

C-1

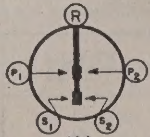

D

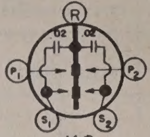

E

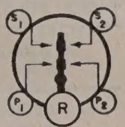

F-1

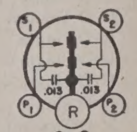

H-1

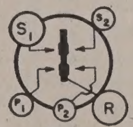

I

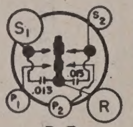

K-1

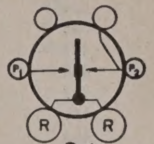

K-2

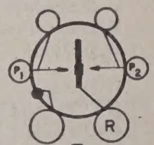

O-1

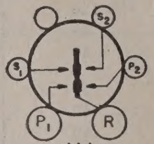

O-2

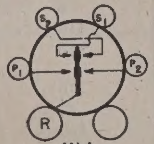

P-1

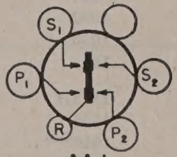

P-3

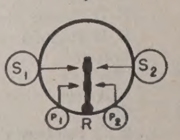

R-1

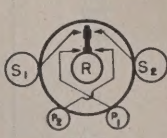

T

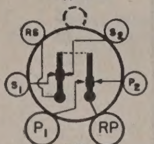

V-1

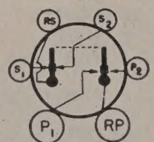

W-1

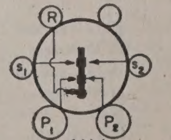

AA-1

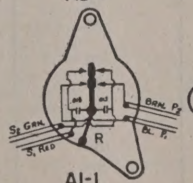

AB-1

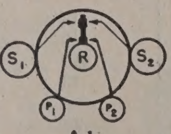

AD-1

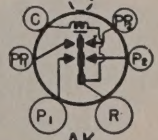

AE-1

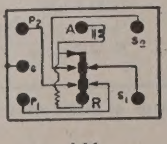

AG

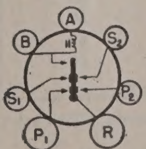

AH-1

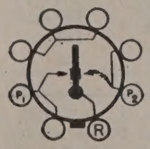

AI-1

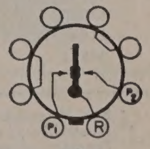

AJ


AK


AM


AN


OA-1

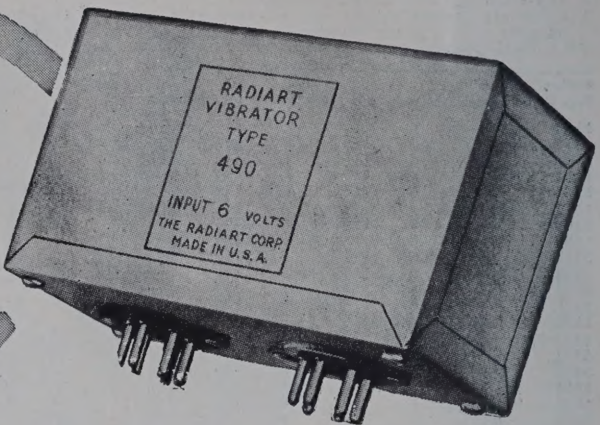

OB-1

Dotted pin on AE-1 and AK units furnished at our option

THE **RADIART** CORPORATION
CLEVELAND 2, OHIO

- ROTATORS
- VIBRATORS
- AUTO AERIALS
- TV ANTENNAS
- POWER SUPPLIES

RADIART *Heavy Duty* REPLACEMENT VIBRATORS



As in the standard "RED SEAL" line of replacement vibrators, the RADIART HEAVY DUTY Replacement Vibrators offer a complete selection for every standard need. Quality construction and superb performance featuring long life make this heavy duty line the "Standard of Comparison".

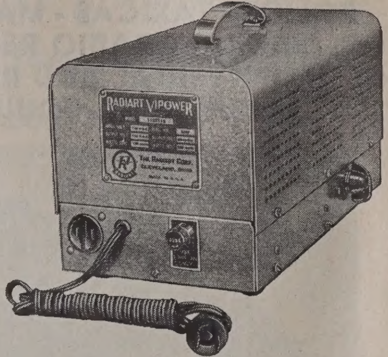
MODEL NO.	VOLTAGE	FREQ. CYCLES	TYPE	CONTAINER	USED IN
6VB6	6	60	H-D Single	5 9/16 x 2 5/32 x 2 9/16	
110VB6	110	60	H-D Single	5 9/16 x 2 5/32 x 2 9/16	
330**	12	60	H-D Single	5 9/16 x 2 5/32 x 2 9/16	
390**	12	60	H-D Tandem	5 5/16 x 2 23/32 x 3 3/8	
425**	6	90	H-D Single	2 3/16 x 4 11/16	
426	6	60	H-D Single	5 9/16 x 2 5/32 x 2 9/16	
427	6	60	H-D Single	2 3/16 x 4 11/16	
431	6	60	H-D Single	5 9/16 x 2 5/32 x 2 9/16	
490	6	60	H-D Tandem	5 5/16 x 2 23/32 x 3 3/8	
491	6	60	H-D Tandem	5 3/8 x 2 5/32 x 2 9/16	
1057	6	120	H-D Single	5 9/16 x 2 5/32 x 2 9/16	
1083	110	60	H-D Tandem	5 5/16 x 2 23/32 x 3 3/8	110WR15A 110WR15B 110R10 110R15
1315	110	60	H-D Single	5 9/16 x 2 5/32 x 2 9/16	
1315H	110	60	H-D Single	5 15/16 x 2 5/32 x 2 9/16	110RT25
1506	32	60	H-D Tandem	5 5/16 x 2 23/32 x 3 3/8	
1640***	110	60	H-D Single	5 9/16 x 2 5/32 x 2 9/16	
1684**	6	120	H-D Single	5 9/16 x 2 5/32 x 2 9/16	
1823**	6	180	H-D Single	1 1/2 x 3 1/8	
2117**	12	100	H-D Tandem	5 15/16 x 2 23/32 x 3 3/8	
2507	45*	60	Polarity Changer	1 1/2 x 2 7/8	
2522	45*	60	Polarity Changer	1 1/2 x 2 7/8	110PA5 110PB5
2639	6	60	H-D Tandem	5 15/16 x 2 23/32 x 3 3/8	
2641**	24	60	H-D Single	5 1/16 x 2 1/8 x 2 1/16	
2989	32	60	H-D Single	5 9/16 x 2 5/32 x 2 9/16	32R8 32RU15
3047	12	60	H-D Tandem	5 15/16 x 2 23/32 x 3 3/8	12RU15
3077***	110	60	H-D Single	5 9/16 x 2 5/32 x 2 9/16	110RT15
3079	110	60	H-D Tandem	5 5/16 x 2 23/32 x 3 3/8	110RT35
3087	12	60	H-D Single	5 9/16 x 2 5/32 x 2 9/16	12R8
3103	6	60	H-D Single	5 9/16 x 2 5/32 x 2 9/16	6R5
3217**	32	90	H-D Single	2 5/32 x 5 9/16 x 2 9/16	
4123	6	60	H-D Tandem	5 15/16 x 2 23/32 x 3 3/8	6R10
11028	110	60	H-D Single	5 9/16 x 2 5/32 x 2 9/16	
11032**	115	60	Special Tandem	2 23/32 x 5 15/16 x 3 3/8	
32171	32	60	H-D Single	5 9/16 x 2 5/32 x 2 9/16	

* For operation on 115 volts DC, connect a 2200 ohm resistor in series with the coil.
** Available only on Special Order.
*** Denotes adjustable frequency vibrator.

- ROTATORS
- VIBRATORS
- AUTO AERIALS
- TV ANTENNAS
- POWER SUPPLIES

THE RADIART CORPORATION
CLEVELAND 2, OHIO

DC TO AC CONVERTERS



The RADIART line of converters is complete and furnishes 110 volt 60 cycle AC current from 6, 12, 32, or 110 volt direct current sources. Vibrator powered, they are completely dependable . . . easily installed and fit most any requirement. The RADIART name plate on each converter is your assurance of long life and outstanding performance.

110 VOLT 60 CYCLE OUTPUT:

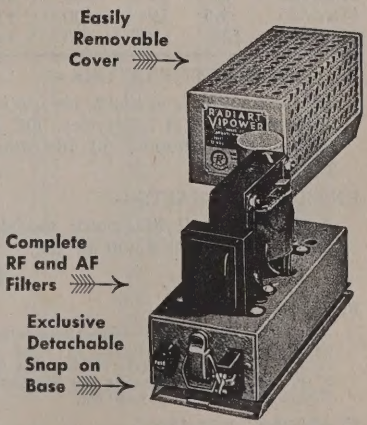
Model No.	Application	DC Input Volts	Output Watts	Size	Weight Lbs.
6R5	Automotive	6	50	6¾ x 7¾ x 5⅞	12
6R10		6	100	7 x 12⅝ x 7½	19
12R8	Marine-Craft, Busses and Trailers	12	80	6¾ x 7¾ x 5⅞	12
12RU15		12	150	7 x 12⅝ x 12½	22
32R8	Farm and Marine	32	80	6¼ x 7⅝ x 5⅞	13¼
32RU15		32	150	6⅜ x 12⅜ x 7½	22¼
110PA5	Phonograph Motors	110	50VA	3¾ x 6¼ x 2¾	2
110PB5		110	50VA	3¾ x 6¼ x 2¾	2
110R10	Radio and Business Machines	110	100	6⅜ x 7¾ x 5¼	10½
110RA15		110	150	6¾ x 7¾ x 5⅞	14
110RT15	Especially Designed for Television-with Frequency Control	110	150	6⅞ x 12¼ x 7½	16¾
110RT25		110	250	6½ x 12⅞ x 8½	22½
110RT35		110	350	7½ x 14 x 8⅝	40½
110WR15A	Wire Recorders	110	150	6⅞ x 12¼ x 7½	16¾
110WR15B		110	150	6⅞ x 12¼ x 7½	16¾

Super RADIART VIPOWERS

Vipower Model	DC Input Volts (Nominal	DC Output Volts (Nominal)	Output Mills.	Type
451A	6	250	60	Self-rectifying
452	6	300*	100	Self-rectifying
453	6	300*	100	OZ4A Rectifier
454	6	300	200	Two OZ4A Rectifiers
455	6	400	150	Two 6X5GT Rectifiers
456	6 V DC or 110 V 60 Cy. AC	300*	100	OZ4A Rectifier
457	6	150	40	Self-rectifying

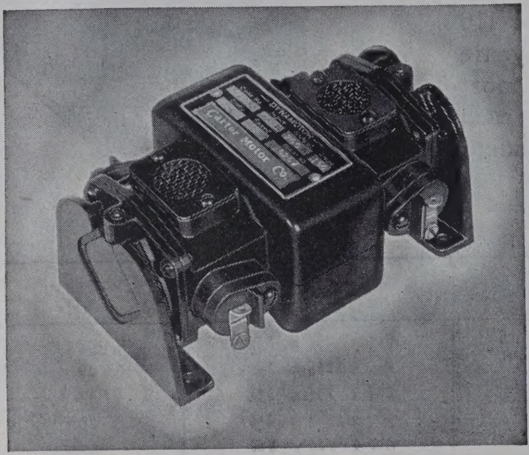
* NOTE: — Tapped at 275V, 250V, 225V.
12 volt models available on special order at slightly higher prices.

RADIART vibrator power supplies top the field. Complete RF and AF filtering is built into each unit. No extra filter accessories are required. Easily installed with the exclusive Snap-on base plate that allows instant removal of the entire chassis by opening one snap-latch.



Magmotor Carter *Genemotor*

THE CARTER MAGMOTOR FOR POLICE - TAXICAB - MARINE AND AIRCRAFT RADIO RECEIVERS GEOPHYSICAL AND RESEARCH ELECTRONIC EQUIPMENT



Carter Magmotor—5⅝" Long, 3-11/16" Wide, 2½" High, Weight 4¾ lbs.
Furnished with Rigid Mounting.
Shock Mounting Illustrated, $1.00 List Extra.

Code No.	DC Input Volts	DC Input Amps	DC Output Volts	DC Output MA	Duty	List Price
MV1865	5.5	5	180	65	Con.	$48.30
MA250	6	4.3	250	50	Con.	$50.93
MV280	5.5	5.8	200	80	Con.	$50.40
MA265	6	5.4	250	65	Con.	$51.45
MA251	6	8	250	100	Con.	$53.03
MB251	12	3.8	250	100	Con.	$55.65
MA301	6	9.5	300	100	Con.	$53.55
MB301	12	4.6	300	100	Con.	$56.18
MA351	6	10.3	350	100	Con.	$54.60
MAS3515	6	15	350	150	Int.	$55.65
MAS320	6	19	300	200	Int.	$57.75
MVS415	5.5	19	400	150	Int.	$60.38
MBS415	12	8.5	400	150	Int.	$60.38

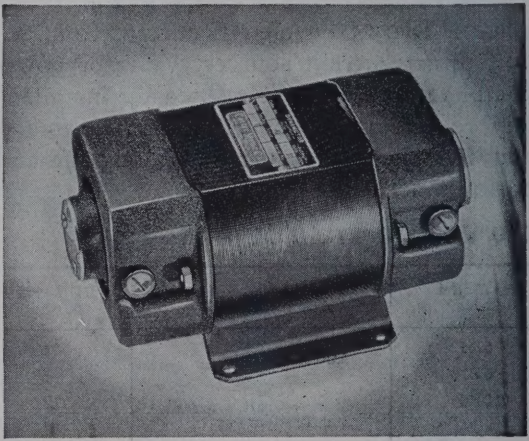
AC AND DC GENERATORS—

The Magmotor is available on special order for AC output up to 220 volts at 120 cycles. DC output up to 400 volts 30 watts continuous, 50 intermittent, depending upon armature speed.

EXTENDED SHAFTS—

Available on all Magmotor models add "S" to end of code number and $5.00 to list.

THE ORIGINAL CARTER GENEMOTOR FOR POLICE - TAXICAB - MARINE AND SMALL AIRCRAFT MOBILE COMMUNICATIONS



3" Frame Genemotor—7⅛" Long, 4⅛" Wide, 3½" High, Weight 10 lbs.

Code No.	DC Input Volts	DC Input Amps	DC Output Volts	DC Output MA	Duty	List Price
420A	6.0	23.4	400	200	Con.	$60.38
420V	5.5	25	400	200	Con.	$63.00
425BS	12.0	12.8	400	225	Int.	$62.35
450AS	6.0	28	400	250	Int.	$60.90
4037AS	6.0	41	400	375	Int.	$71.40
4228VS	5.5	35	420	280	Int.	$67.73
4228VSC	5.8	33	420	280	Int.	$69.30
520AS	6.0	28	500	200	Int.	$61.95
520VS	5.5	31	500	200	Int.	$64.58
5925AS	6.0	42	590	250	Int.	$73.50
671V	5.5	30	600	170	Int.	$63.00
620AS	6.0	29.5	600	200	Int.	$67.73
624VS	5.5	46	600	240	Int.	$71.19
650AS	6.0	39.0	600	250	Int.	$71.19
2" Frame Genemotor— 6⅛" long, 4⅛" wide, 3½" high, weight 8 lbs.						
3515VB	5.5	18.0	350	150	Con.	$58.48
3515AB	6.0	16.4	350	150	Con.	$55.85
415VB	5.5	20.0	400	150	Con.	$60.58
415AB	6.0	18.2	400	150	Con.	$57.95
1½" Frame Genemotor— 5-9/16" long, 4⅛" wide, 3½" high, weight 7 lbs.						
210AB	6	6	200	100	Con.	$47.45
251AB	6	7.9	250	100	Con.	$51.60
351AB	6	10.9	350	100	Con.	$52.70

FILTERS — STARTING RELAYS

FILTERS—

Any of the above Carter Genemotors or Magmotors can be furnished with complete filter mounted in metal box mounted below unit. Add "X" to end of code number and following prices. 1½" and 2" Frame Genemotor models and Magmotors, $24.00 list, 3" Frame Genemotor Models, $25.00 list.

STARTING RELAYS—

Heavy Duty solenoid contactor starting relays are available for 5.5, 6, 12, 24, 28, 32 and 115 volt DC input. Add "R" to end of code number and $8.00 to list price (Relay draws 1.3 amps at 6 volts). Seldom required on low power Magmotors.

DUTY RATINGS

Intermittent duty shall be considered 10 seconds on 20 seconds off. Continuous duty is considered 24 hours per day.

INPUT VOLTAGES—

Any Carter Genemotor or Magmotor can be supplied for special input voltages other than 6 volts. For 5.5, 12, 24, 28, 32 or 64 volt input add $2.50 to list. For 115 volt DC input add $3.50 to list.

LINE-O-LIFE* BRUSHES—

All Carter products equipped with exclusive "LINE-O-LIFE" Brushes. Takes guess work out of brush replacements.

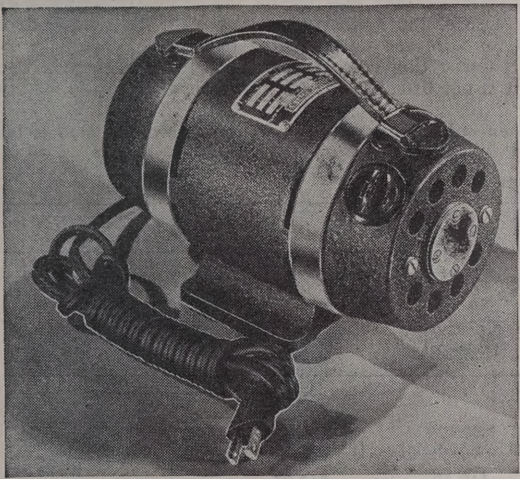
*PAT. PENDING

See replacement parts reference chart page for other special models, parts and prices.

Carter Super Converter

The oldest name in Rotary Power Supplies for Mobile Radio

CARTER SUPER CONVERTER—Changes DC to AC for Amplifiers - Radios - High Power Factor equipment



Carter Super Converter, Less Filter, 8¼" Long, 4½" Wide, 5" High, Weight 13 lbs.

Wherever DC to AC Conversion is necessary, the Carter Super Converter provides an efficient and reliable source of AC power. Standard models are designed for high power factor, non-inductive AC loads such as amplifiers, radio receivers, (requires filtered converter), etc. Ball bearing equipped, 3600 RPM. CAUTION: Standard Super Converters will not satisfactorily operate inductive loads such as AC motors, low power factor transformers, etc.

Manually operated frequency controlled Converters available on special order. Maintain 60 cycle output with a + or — 10% input voltage fluctuation.

Special custom-matched Converters are also available for Wire and Tape Recorders, Sound Projectors, Television Receivers, etc. See Carter Selector Chart on next page.

Overall efficiency 60% AC voltage regulation 15%.

HEAVY DUTY SUPER CONVERTER

10¼" long, 4½" wide, 5" high, weight 19 lbs.

Code No.	*DC Input Volts*	*DC Input Amps*	*AC Output 60 cy. Volts*	*AC Output 60 cy. (Watts)*	*Type Duty*	*List Price*
K1020C	230	1.3	115	200	Con.	$92.40
K1025C	230	1.6	115	250	Con.	$97.90
D1020C	115	2.6	115	200	Con.	$81.40
D1025C	115	3.2	115	250	Con.	$86.90
H1020C	64	4.8	115	200	Con.	$84.15
H1025C	64	5.3	115	250	Con.	$89.65
C1020C	32	10	115	200	Con.	$84.15
C1025C	32	12	115	250	Con.	$89.65
J1020C	28	12	115	200	Con.	$84.15
J1025C	28	14	115	250	Con.	$89.65
E1020C	24	15	115	200	Con.	$84.15
E1025C	24	19	115	250	Con.	$89.65
B1020C	12	30	115	200	Con.	$84.15
B1025C	12	34	115	250	Con.	$89.65

OUTSTANDING FEATURES

SMALL SIZE—Smallest Rotary Converter. Lightweight.

CARRYING HANDLE
Easier to carry, no more "juggling" with a hot unit.

OUTPUT RECEPTACLE—Convenient plug in AC outlet.

ARMATURE
Double wound, insulated ungrounded winding. Built-in cooling fan.

BALL BEARINGS
Sealed ball bearings require no lubrication or attention.

SPECIFICATIONS

Carter Super Converter, 40 to 150 watts models 8¼" long, 4½" wide, 5" high, weight 13 lbs. High power factor, 85 to 100%. Less filter.

Code No.	*DC Input Volts*	*DC Input Amps.*	*AC Output 60 cy. Volts*	*AC Output 60 cy. Volt-Amps (Watts)*	*Type Duty*	*List Price*
K1040C	230	.36	115	40	Con.	$74.80
K1060C	230	.5	115	60	Con.	75.35
K1080C	230	.6	115	80	Con.	75.90
K1010C	230	.8	115	100	Con.	77.00
K1015C	230	1.	115	150	Con.	82.50
D1040C	115	.7	115	40	Con.	63.80
D1060C	115	1	115	60	Con.	64.35
D1080C	115	1.1	115	80	Con.	64.90
D1010C	115	1.7	115	100	Con.	66.00
D1015C	115	2.0	115	150	Con.	71.50
H1040C	64	1.5	115	40	Con.	66.55
H1060C	64	2	115	60	Con.	67.10
H1080C	64	2.2	115	80	Con.	67.65
H1010C	64	2.5	115	100	Con.	68.75
H1015C	64	3.4	115	150	Con.	74.25
C1040C	32	3	115	40	Con.	66.55
C1060C	32	4	115	60	Con.	67.10
C1080C	32	5	115	80	Con.	67.65
C1010C	32	5.5	115	100	Con.	68.75
C1015C	32	7.4	115	150	Con.	74.25
J1040C	28	3	115	40	Con.	66.55
J1060C	28	4	115	60	Con.	67.10
J1080C	28	5.2	115	80	Con.	67.65
J1010C	28	7	115	100	Con.	68.75
J1015C	28	9	115	150	Con.	74.25
E1040C	24	3.5	115	40	Con.	66.55
E1060C	24	4.3	115	60	Con.	67.10
E1080C	24	6	115	80	Con.	67.65
E1010C	24	8.3	115	100	Con.	68.75
E1015C	24	10	115	150	Con.	74.25
B1040C	12	8	115	40	Con.	66.55
B1060C	12	10	115	60	Con.	67.10
B1080C	12	14	115	80	Con.	67.65
B1010C	12	15	115	100	Con.	68.75
B1015C	12	23	115	150	Con.	74.25
A1040C	6	15	115	40	Con.	66.55
A1060C	6	19	115	60	Con.	67.10
A1080C	6	25	115	80	Con.	67.65
A1010C	6	27	115	100	Con.	68.75
A1015C	6	40	115	150	Con.	74.25

FILTERS—Available on all Super Converters. Eliminates Converter noise on most frequencies from 560 KC to 54 MC. Filter mounted in cast aluminum housing below Converter. Add "X" to Code Number and $25.00 to list.

FREQUENCY CONTROL—Manually operated frequency control available on all models. Complete with vibrating reed meter, and rheostat control in aluminum housing. Add $60.00 to list.

VOLTAGE-FREQUENCY—Add $5.00 to list for 50 cycle output. Add $10.00 to list for 230 volt D.C. input.

See Carter Selector Chart for Wire and Tape recorder, Television receivers, etc., custom-matched Converters.

Carter Selector Chart

*Carter Custom-Matched Converters for Popular Wire and Tape Recorders - Sound Projectors - Phono Motors - Television ***

Whenever DC to AC Rotary Converters are used to power wire and tape recorders or other similar recording equipment, the Converter AC output frequency and Converter Power Factor must be perfectly matched to the recorder load to assure proper recording and play back performance. Most wire and tape recorders are of medium Power Factor design, approximately 70%. Standard high power factor (85 to 100%) Rotary Converters therefore *will not operate* the recorders properly as this type Converter will produce higher AC voltage and frequency because of the inductive recorder load. It is imperative therefore, only factory-tested and recommended Converters be selected for wire and tape recorder operation.

The equipment listed below has been laboratory-tested and the correct Carter Converter recommended for each model. Use this chart for your recorder Converter requirements. If the equipment is not listed on the chart, please write to the factory and information will be supplied, if available.

****Television converters for 100 and 130 watt maximum output available on order, equipped with frequency control. Models for inputs from 6 to 115 volts D.C. Please write for further information on these units.**

WIRE AND TAPE RECORDER CONVERTERS 70% P.F.

EQUIPMENT MAKE & MODEL		CARTER CONVERTER MODEL AND DC INPUT			
		6 Volt	12 Volt	115 Volt	Size and Weight
60 WATT	**Air King 750, Ampro 730-731 Crescent H22A1, Knight Wire Web-Cor 80-180-228-18 Wilcox-Gay 8-U-12, Wireway**	A1060CW (29 amps drain) **$67.10**	B1060CW (14 amp drain) **$67.10**	D1060CW (1 amp drain) **$64.35**	8¼" L, 4½" W, 5" H Wt. 13 lbs.
WITH FILTER	**Pentron 748 and C-2 Wiretone MR-6**	A1060CWX (29 amps) **$92.10**	B1060CWX (14 amps) **$92.10**	D1060CWX (1 amp) **$89.35**	8¼" L, 4½" W, 7½" H Wt. 15 lbs.
80 WATT	**Bell Record-O-Fone RT50-RT65B Crestwood CP201, Dukane Eicor 1000-15-115, Gray Audograph General Industries Foundation Unit* Knight Tape, Peirce 55B Masco D37, LD37, DC37 Pentron T-3, 9T3, 9T3C—RCA Revere T-100, T-500 Sales-O-Matic LR-1 Tape Master Foundation Unit** Web-Cor 210-1, Wilcox-Gay 1-C-10, 2-C-10**	A1080CW (31 amps drain) **$67.65**	B1080CW (15 amps drain) **$67.65**	D1080CW (1.5 amps drain) **$64.90**	8¼" L, 4½" W, 5" H Wt. 13 lbs.
WITH FILTER	**Revere TR-200, TR-600 Masco LD37R Ultratone PT-9**	A1080CWX **$92.65**	B1080CWX **$92.65**	D1080CWX **$89.90**	8¼" L, 4½" W, 7½" H Wt. 15 lbs.
		(These Converters equipped with filter to operate radio section also)			
130 WATT	**Brush BK411-414 BK-442-BK443P**	A1090CW4 (35 amps drain) **$74.80**	B1090CW4 (17 amps drain) **$74.80**	D1010CW (2 amps drain) **$66.00**	
	Berlant Concertone Model 1401 Brush BK401-403 Crescent H19A1 Magnecord PT6-PT6-JA-PT63 Peirce 260-265-270—Reelest Webster Racine, Ekotape 101-109-111	A1010CW4 (35 amps drain) **$77.00**	B1010CW4 (17 amps drain) **$77.00**	D1010CW (2 amps drain) **$66.00**	6 & 12 Volt 10¼" L, 4½" W, 5" H Wt. 18 lbs. 115 Volt 8¼" L, 4½" W, 5" H Wt. 13 lbs.
160 WATT	**Magnecord PT7—Presto PT900** *Including average recorder amplifier **Including Preamplifier only	6 Volt not recommended	B1016CW4 **$77.00**	D1016CW4 **$77.00**	10¼" L, 4½" W, 5" H Wt. 18 lbs.

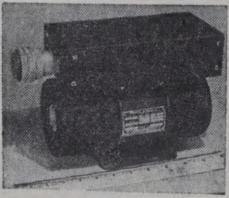
SOUND PROJECTORS AND PHONO MOTOR CONVERTERS

Ampro Premier 20 & 30, Bell & Howell No. 179, DeVry Super No. 16, Victor Lite Weight*, Victor Triumph No. 60*, Victor Sonomaster*, General Industries RM4, Green Flier Dual Speed...... D1015C

*Victor Animatograph Co.

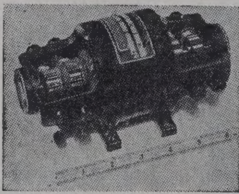
CONVERTER OPERATES SOUND AMPLIFIER ONLY, NOT PROJECTOR LAMP OR MOTOR. WILL NOT OPERATE PROJECTORS FROM BATTERY INPUT. 115 OR 230 VOLT D.C. INPUT ONLY

★ Other Carter Products ★



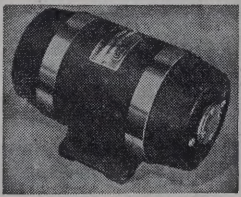
INDUCTOR ALTERNATOR

Provides mobile high frequency AC power (400 to 800 cycles), up to 150 watts, from DC source. Perfect for aircraft, geophysical, Government and laboratory research. Can also supply up to 400 v. DC plate voltage if necessary. Write for Bulletin No. 350.



MULTI-MAGMOTOR

Ideal power for geophysical instruments, government and laboratory research, aircraft and mobile communications. Two, three and four commutator models with permag field, provide up to 3 output voltages from single input; 2 outputs from 1 or 2 inputs; or vice-versa, over wide range. Ask for Bulletin No. 450.



SUPER-DYNAMOTOR

For aircraft, marine, police and railroad communications. Input voltages range from 5.5 v. DC to 115 v. DC . . . outputs from 400 v. to 1000 v. DC. Specified by leading airlines, marine, and mobile radio manufacturers. Size 8¼" x 4½". Weight 11¾ lbs. Described in Catalog No. 649.

Carter
C CONVERTERS
Carter
DYNAMOTOR
POWER SUPPLIES
Carter Motor Co.
Motor Co.

WRITE FOR CATALOGS

Catalog No. 452 shows complete line Carter DC to AC Converters. Catalog No. 649 covers Dynamotor power supplies, magmotors, Genemotors. Both fully illustrated, contain full specifications, performance charts, etc. Write on your letterhead please.

Carter *Replacement Parts Reference Chart*

The oldest name in Rotary Power Supplies for Mobile Radio

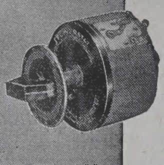
REPLACEMENT PARTS REFERENCE CHART

Use this handy chart for ordering the correct CARTER Replacement Dynamotor or Replacement parts. All parts guaranteed to conform to original manufacturer's specifications.

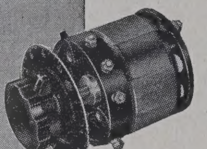
Mfg. Model No.	*Frequency*	*Carter Model No.*	*List Price*	*Carter Armature No.*	*Armature List Price*	*Input Brushes & List Per Set*	*Output Brushes & List Per Set*	*Ball Bearings & List Per Each*
Doolittle PFY-2 PFY-2A PFY-3 PFY-3A	30-40 MC-FM	4726VS	$65.63	233-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
PFY-12	152-162 MC-FM	4726VS	$65.63	233-2	$30.00	No. 7 $1.20	No. 2 80c	
Federal FT-125-B-25AZ	152-162 MC-FM	4037AS	$71.40	179-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
FT-110-25AZ	30-44 MC-FM	5915AS	$63.00	252-2	$30.00	No. 7 $1.20	No. 2 80c	
FT-110-50AZ	30-44 MC-FM	5925AS	$73.50	261-2	$30.00	No. 7 $1.20	No. 2 80c	
General Electric MC202	152-162 MC-FM	MVS415 Transmitter	$60.38	360-4	$27.25	No. 18 $1.20	No. 9 80c	37KVL $2.50
		MA251 Receiver	$53.03	300-6	$26.00	No. 23 $1.20	No. 9 80c	
MC-1	30-44 MC-FM	617V	$63.00	279-2	$30.00	No. 7 $1.20	No. 2 80c	
MC-2 MC-3	30-44 MC-FM	624VS	$71.19	309-2	$30.00	No. 7 $1.20	No. 2 80c	
Harvey 505 506	30-44 MC-FM	620VS	$70.35	307-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
542	152-162 MC-FM	620VS	$70.35	307-2	$30.00	No. 7 $1.20	No. 2 80c	
Kaar FM50X	30-44 MC-FM	6175VS early model	$65.10	278-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
		530VS late model	$68.25					
FM100X	1600-6000 KC	VSF820	$94.50	360-2	$40.00	No. 30 $1.20	No. 14 80c	38KVL $2.50
PTL-46X		VSF820	$94.50	360-2	$40.00	No. 30 $1.20	No. 14 80c	
FM-175X	152-162 MC-FM	4232VS	$69.83	231-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
Mobile Communications (Taxi-Talkie) MFM-25-150	150-170 MC-FM	450AS	$60.90	175-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
MFM-25-150B	150-170 MC-FM	520AS	$61.95	208-2	$30.00	No. 7 $1.20	No. 2 80c	
Motorola P8050	30-44 MC-FM	617V	$63.00	279-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
P8051	30-44 MC-FM	624VS	$71.19	309-2	$30.00	No. 7 $1.20	No. 2 80c	
P8051 P8661 P8317 P8431	30-44 MC-FM 152-162 MC-FM	VSF630 VSF6237M 4228VS 4228VSC	$90.83 $92.93 $67.73 $69.30	276-2 301-2 207-2 195-2	$40.00 $40.00 $30.00 $30.00	No. 30—$1.20 No. 25—$1.20 No. 7 $1.20	No. 14 80c No. 2 80c	38KVL $2.50 37KVL $2.50
RCA M1-7771A	30-44 MC-FM	6175VS	$65.10	278-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
M1-31514	152-162 MC-FM	3732VS	$69.30	176-2	$30.00	No. 7 $1.20	No. 2 80c	
M1-7772A	30-44 MC-FM	VSF627	$88.20	274-2	$40.00	No. 30 $1.20	No. 14 80c	38KVL $2.50
Radio Specialties Mfg. Co. 1096-1-1		520AS	$61.95	208-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50
1114-1147		520VS	64.58	231-2	30.00			
Wilcox Electric 358A	152-162 MC-FM	4228VS	$67.73	207-2	$30.00	No. 7 $1.20	No. 2 80c	37KVL $2.50

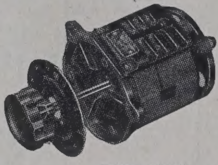
CARTER MOTOR COMPANY • CHICAGO 47, ILL.

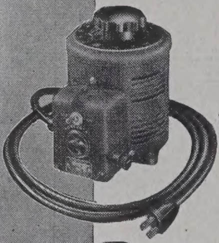
A Complete Line of POWERSTAT
VARIABLE TRANSFORMERS

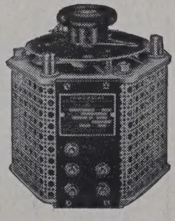

TYPE 10

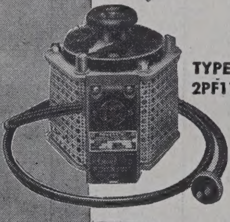
POWERSTAT variable transformers are autotransformers of toroidal core design with a movable brush tap which rotates to deliver a continuously adjustable output voltage from a-c power lines. Features of every POWERSTAT are excellent regulation, high efficiency, conservative ratings, zero waveform distortion, rugged mechanical construction, smooth control and standard mountings. Numerous types are available for 115, 230 and 460 volts, single and three phase operation in ratings from 150 VA to 100 KVA. Most models are offered for either manual or motor-driven operation. In addition, oil-cooled and explosion-proof types are available. In the chart are listed some of the standard types. If one of the units listed does not suit your particular need, consult us. There's a POWERSTAT for every variable a-c voltage control requirement.

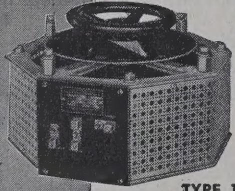

TYPE 20


TYPE 116U

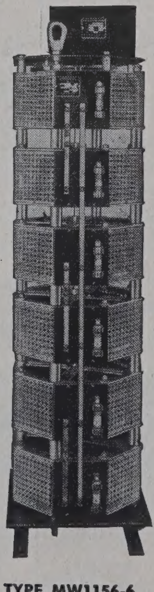

TYPE 116


TYPE 1226


TYPE 2PF1126


TYPE 1156

TYPE MZ1126-3Y


TYPE MW1156-6

Line Volt.	Output Volt.	Max. Output Amp.	Output KVA	Frequency	Type	Approximate Net Wt. (Lbs.)	Approximate Shipp. Wt. (Lbs.)	**Standard Motor Speeds
115	0-132	1.3	0.2	60	10	1.8	3	———
	0-135	3.0	0.4	‡60	*20	4	6	———
	0-135	7.5	1.0	50/60	*116U	10	11	———
	0-135	7.5	1.0	50/60	116	11	12	———
	0-135	7.5	1.0	50/60	3PF116	11	12	———
	0-135	7.5	1.0	50/60	3TF116	11	12	———
	0-135	15.0	2.0	50/60	1126	21	25	W,X,Y,Z
	0-135	15.0	2.0	50/60	F1126	21	25	W,X,Y,Z
	0-135	30.0	4.0	50/60	1126-2P	48	55	W,X,Y,Z
	0-135	45.0	6.1	50/60	1156	73	80	W,X,Y,Z
	0-135	45.0	6.1	50/60	F1156	74	81	W,X,Y,Z
	0-135	90.0	12.1	50/60	1156-2P	150	170	W,X,Y,Z
	0-135	135.0	18.2	50/60	1156-3P	225	295	W,X,Y,Z
	0-135	180.0	24.3	50/60	1156-4P	330	420	W,X,Y
	0-135	270.0	36.4	50/60	1156-6P	500	600	W,X,Y
230	0-270	3.0	0.81	50/60	*216U	10	11	———
	0-270	3.0	0.81	50/60	216	11	12	———
	0-270	3.0	0.81	50/60	3PF216	11	12	———
	0-270	3.0	0.81	50/60	3TF216	11	12	———
	0-270	7.5	2.0	50/60	*116U-2S	17	22	———
	0-270	7.5	2.0	50/60	*116-2S	18	23	———
	0-270	9.0	2.4	50/60	1226	25	29	W,X,Y,Z
	0-270	9.0	2.4	50/60	F1226	25	29	W,X,Y,Z
	0-270	15.0	4.0	50/60	1126-2S	45	52	W,X,Y,Z
	0-270	28.0	7.5	50/60	1256	73	80	W,X,Y,Z
	0-270	28.0	7.5	50/60	F1256	74	80	W,X,Y,Z
	0-270	45.0	12.1	50/60	1156-2S	144	164	W,X,Y,Z
	0-270	56.0	15.1	50/60	1256-2P	150	170	W,X,Y,Z
	0-270	84.0	22.7	50/60	1256-3P	225	295	W,X,Y,Z
	0-270	112.0	30.2	50/60	1256-4P	330	420	W,X,Y
	0-270	168.0	45.3	50/60	1256-6P	500	600	W,X,Y
460	0-540	3.0	1.6	50/60	216U-2S	17	22	———
	0-540	3.0	1.6	50/60	216-2S	18	23	———
	0-540	9.0	4.9	50/60	1226-2S	53	60	W,X,Y,Z
	0-540	28.0	15.1	50/60	1256-2S	144	164	W,X,Y,Z
	0-540	56.0	30.2	50/60	1256-4PS	330	420	W,X,Y
	0-540	84.0	45.3	50/60	1256-6PS	500	600	W,X,Y
Three Phase								
115	0-135	3.0	0.7	‡60	*20-2D	9	15	———
	0-135	7.5	1.8	50/60	*116U-2D	17	22	———
	0-135	7.5	1.8	50/60	*116-2D	18	23	———
	0-135	15.0	3.5	50/60	1126-2D	45	52	W,X,Y,Z
	0-135	45.0	10.5	50/60	1156-2D	144	164	W,X,Y,Z
	0-135	90.0	21.0	50/60	1156-4D	320	410	W,X,Y
	0-135	135.0	31.6	50/60	1156-6D	490	590	W,X,Y
230	0-230	3.0	1.2	60	20L-3Y	15	24	———
	0-270	3.0	1.4	50/60	*216U-2D	17	22	———
	0-270	3.0	1.4	50/60	*216-2D	18	23	———
	0-270	7.5	3.5	‡60	*116U-3Y	26	36	———
	0-270	7.5	3.5	‡60	*116-3Y	27	37	———
	0-270	9.0	4.2	50/60	1226-2D	53	60	W,X,Y,Z
	0-270	15.0	7.0	‡60	1126-3Y	65	75	W,X,Y,Z
	0-270	28.0	13.1	50/60	1256-2D	144	164	W,X,Y,Z
	0-230	45.0	17.9	50/60	1156L-3Y	215	280	W,X,Y,Z
	0-270	56.0	26.2	50/60	1256-4D	320	410	W,X,Y
	0-270	84.0	39.3	50/60	1256-6D	490	590	W,X,Y
	0-230	90.0	35.8	50/60	1156L-6Y	500	600	W,X,Y
460	0-540	3.0	2.8	‡60	*216U-3Y	26	36	———
	0-540	3.0	2.8	‡60	216-3Y	27	37	———
	0-540	9.0	8.4	‡60	1226-3Y	76	86	W,X,Y,Z
	0-540	28.0	26.2	‡60	1256-3Y	215	280	W,X,Y,Z
	0-540	56.0	52.5	‡60	1256-6Y	500	600	W,X,Y

* These units are supplied with an "L" terminal which allows connecting in the field to limit the output voltage to the applied voltage. If "L" type connection is required on other models, the "L" must be included in the type number when ordering.

‡ When these POWERSTATS are "L" connected so that the output voltage does not exceed the applied voltage, the frequency range is 50/60 cycles.

** When a motor-drive is required, prefix the letter "M" together with the speed designation letter to the type number. Z — 6 seconds, Y — 14 seconds, X — 19 seconds and W — 45 seconds for full range travel. Since the driving motors are frequency sensitive, be sure to specify whether 50 or 60 cycles is required. Only manually-operated unit weights are listed. For motor-drives add 10, 11 and 14 pounds to the 116-216, 1126-1226 and 1156-1256 types, respectively.

WRITE FOR POWERSTAT BULLETIN P550

THE SUPERIOR ELECTRIC COMPANY

THE SUPERIOR ELECTRIC COMPANY

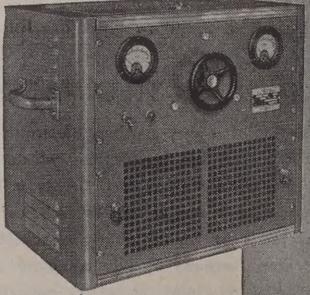
THE ONE SOURCE FOR VOLTAGE CONTROL EQUIPMENT

The Superior Electric Company offers equipment for most voltage control applications. In the shop, laboratory or inspection department or any other place voltage must be controlled — you can look to SUPERIOR for precision perfected voltage control apparatus to suit your needs.

VARICELL D-C POWER SUPPLIES

The VARICELL operates from an a-c source to deliver a stabilized and regulated variable d-c output voltage. Any setting of output voltage is unaffected by line voltage changes or load current variations. For any setting in the range of 6 to 30 volts, R.M.S. ripple voltage never exceeds 0.1 volts, stabilization and regulation is ± 0.25 volts. A-C input: 95-135 volts, 60 cycle, single phase; D-C output: 0-30 volts, 15 amperes.

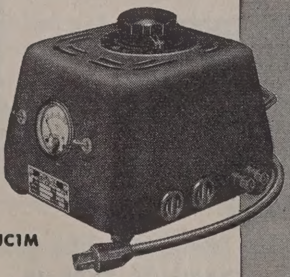
WRITE FOR VARICELL BULLETIN V1051


TYPE 13015

VOLTBOX A-C POWER SUPPLIES

This compact, portable source of variable a-c voltage is widely used in laboratories and in inspection, test and plant maintenance departments. All necessary components are housed in the cast-aluminum case. Connected to a 50/60 cycle, single phase source, turning the "ON-OFF" switch to "ON", snapping the line-load switch to "LOAD" and rotating the knob produces a continuously adjustable output voltage at the output receptacles and binding posts. Various models are offered in ratings to suit each requirement.

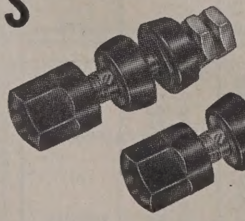
WRITE FOR BULLETIN P550


TYPE UC1M

Superior 5-WAY BINDING POSTS

This versatile binding post offers 5 different methods of connection — permanent clamping, spade lug, clip-lead, banana plug, or looping and clamping. Ruggedly built of the finest materials, it is easy to install and use. Complete insulation is provided with a current capacity of 30 amperes and a working voltage of 1,000 volts. Available in red or black.

WRITE ON YOUR LETTERHEAD FOR A FREE SAMPLE


5-WAY BINDING POST

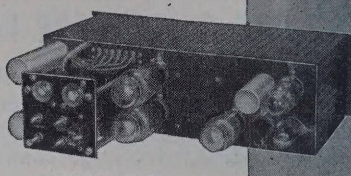
Long active in the development of precision voltage control apparatus, The Superior Electric Company is thoroughly familiar with every aspect of this important subject. Sound, practical advice will gladly be given on any type of installation. A complete engineering service is available to develop special adaptations or new designs for unusual applications. Equipment for defense orders will be engineered and manufactured to meet government specifications.

WRITE TO 52 THURE AVENUE
THE SUPERIOR ELECTRIC COMPANY
BRISTOL, CONNECTICUT

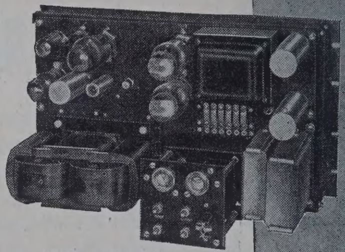
STABILINE

Automatic VOLTAGE REGULATORS

Two types of STABILINE automatic voltage regulators are built by The Superior Electric Company to meet the requirements of maintaining constant voltage to electrical equipment.



TYPE IE51002R



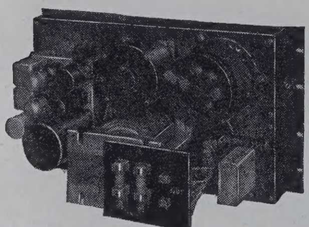
TYPE IE5101R

TYPE IE INSTANTANEOUS ELECTRONIC

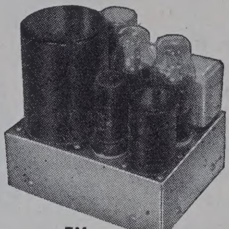
The completely electronic type IE has no moving parts and provides instantaneous correction of line voltage variations. At no load, full load or any intermediate load, constant output voltage is maintained regardless of line fluctuations. The output voltage is held to within ± 0.1 volts of nominal for wide line variations and within ± 0.15 volts of nominal for any load current or load power factor change from lagging .5 to leading .9 Waveform distortion never exceeds 3%. Standard types are listed below.

TYPE EM ELECTRO MECHANICAL

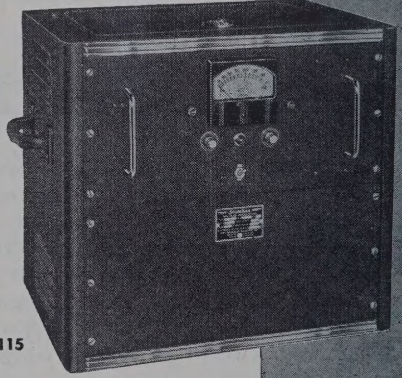
The type EM consists of a very sensitive electronic detector controlling a motor-driven POWERSTAT variable transformer which feeds a buck-boost auxiliary transformer While not instantaneous, the type EM corrects faster than most automatic voltage regulators. It is ideal for maintaining constant voltages to large industrial loads or for obtaining a constant output voltage with zero waveform distortion. Features include complete insensitivity to the magnitude and power factor of the load, no effect on system power factor, no critical adjustments, high efficiency and adjustable output voltage



TYPE EM4102R



EM
CONTROL CIRCUIT



TYPE EM4115

RATINGS TYPE IE

Input Voltage Range	Output Voltage Range	Frequency In Cycles	Load Range In Amperes	Load Power Factor Range	Rated Output KVA	Type
95-135	110-120	60 ± 10%	0 - 2.2	.5 lagging to .9 leading	0.25	IE51002
95-135	110-120	60 ± 10%	0 - 2.2		0.25	IE51002R
95-135	110-120	60 ± 10%	0 - 4.5		0.5	IE51005
95-135	110-120	60 ± 10%	0 - 4.5		0.5	IE51005R
95-135	110-120	50 ± 10%	0 - 4.5		0.5	IEL51005
95-135	110-120	50 ± 10%	0 - 4.5		0.5	IEL51005R
195-255	220-240	50 ± 10%	0 - 2.2		0.5	IEL52005
195-255	220-240	50 ± 10%	0 - 2.2		0.5	IEL52005R
95-135	110-120	60 ± 10%	0 - 8.5		1.0	IE5101
95-135	110-120	60 ± 10%	0 - 8.5		1.0	IE5101R
95-135	110-120	50 ± 10%	0 - 8.5		1.0	IEL5101
95-135	110-120	50 ± 10%	0 - 8.5		1.0	IEL5101R
195-255	220-240	50 ± 10%	0 - 4.5		1.0	IEL5201
195-255	220-240	50 ± 10%	0 - 4.5		1.0	IEL5201R
95-135	110-120	60 ± 10%	0 - 22.0		2.5	IE5102
95-135	110-120	60 ± 10%	0 - 22.0		2.5	IE5102R
195-255	220-240	60 ± 10%	0 - 11.0		2.5	IE5202
195-255	220-240	60 ± 10%	0 - 11.0		2.5	IE5202R
195-225	220-240	50 ± 10%	0 - 11.0		2.5	IEL5202
195-225	220-240	50 ± 10%	0 - 11.0		2.5	IEL5202R
95-135	110-120	60 ± 10%	0 - 43.5		5.0	IE5105
195-255	220-240	60 ± 10%	0 - 22.0		5.0	IE5205

RATINGS TYPE EM

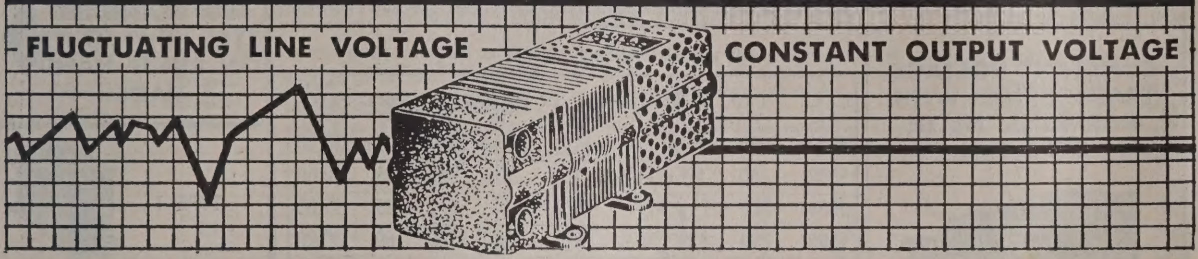
Nominal Output Voltage	Input Voltage Range	Output Voltage Range	Output Current (Amperes)	Output KVA	Type
Single Phase					
115	95-135	110-120	17.5	2.0	EM4102
			52.0	6.0	EM4106
			130.0	15.0	EM4115
230	195-255	220-240	32.5	7.5	EM4207
			120.0	27.5	EM4228
460	400-520	420-460	15.0	6.6	EM4407
			40.0	17.6	EM4418
Three Phase					
230	195-255	220-240	25.0	10.0	EM6210Y
			38.0	15.0	EM6215Y
			50.0	20.0	EM6220Y
			113.0	45.0	EM6245Y
			175.0	70.0	EM6270D
460	400-520	420-460	16.0	12.5	EM6412Y
			22.0	17.5	EM6417Y
			33.0	25.0	EM6425Y
			66.0	50.0	EM6450Y
			100.0	75.0	EM6475Y
	420-500	420-460	131.0	100.0	EM64100Y

WRITE FOR STABILINE BULLETIN S 351

52 THURE AVENUE, BRISTOL, CONNECTICUT

SOLA *Constant Voltage* TRANSFORMERS

SOLA Electric Co. • Chicago 50, Ill.



Automatic Instantaneous Voltage Regulation

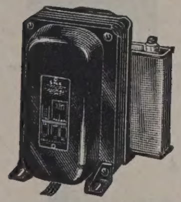
SOLA Constant Voltage Transformers are static magnetic voltage regulators. They are designed to provide a constant output voltage which is unaffected by changes in input voltage. You will find, listed in the following pages, the widest range of ratings and types available from stock offered by any manufacturer.

In addition, CUSTOM DESIGNED UNITS can be manufactured in capacities from 1 VA to 25,000 VA, to suit your individual specifications. When ordered in substantial quantities, they cost only slightly more than standard units of the same general size. Often, time and money can be saved by direct use or modification of a regulator from the several hundred special designs on file. Custom designs can include: SPECIAL VOLTAGE RATIOS, SPECIAL FREQUENCIES, COMPENSATION FOR FREQUENCY VARIATION, MULTIPLE OUTPUT VOLTAGES, THREE-PHASE SERVICE, and MILITARY SPECIFICATIONS.

SOLA Constant Voltage Transformers have eight distinct advantages over regulators which depend solely upon saturation of core materials for their regulating action, or electronic type regulators:

1. Response time, 1.5 cycles or less.
2. No moving or renewable parts . . . no manual adjustments.
3. Completely automatic continuous regulation.
4. Self-protecting against short circuits.
5. Current limiting characteristic protects load equipment from excessive fault currents.
6. Can often be substituted for conventional non-regulating transformers.
7. Relatively compact.
8. Provide isolation between input and output circuits.

For complete operational data write for Bulletin 13 CV-142



CONSTANT VOLTAGE TRANSFORMER FOR PLATE AND FILAMENT SUPPLY

TYPE CVE

A single, compact source of filament and plate supply voltages . . . regulated to within ±3% or less with line voltage variations of 100-130 volts. Supplied with separate capacitor.

ELECTRICAL AND MECHANICAL SPECIFICATIONS: Input 100-130 v.

CATALOG NUMBER	CAP. V.A.	D.C. INPUT VOLTS TO FILTER	FILAMENT WINDINGS 6.3v	FILAMENT WINDINGS 5.0v	OVERALL DIMENSIONS IN INCHES Length	Width	Height	SHIP. WEIGHT.	*NET PRICE EACH
7105	42	275v D.C. @ 50 M.A.	2.5 amps C.T.	2.0 amps	4 13/16	3 1/8	3 3/16	5 1/2	$14.50
7106	75	385v D.C. @ 110 M.A.	3.0 amps C.T.	2.0 amps	4 13/16	3 1/8	3 15/16	8 3/4	18.00
7107	210	380v D.C. @ 250 M.A.	#1: 4.0 amps #2: 8.0 amps unregulated	3.0 amps	7	4 1/2	4 7/8	19	28.00

DIMENSIONS — A: OVERALL LENGTH C: OVERALL HEIGHT
B: OVERALL WIDTH E & F: MOUNTING DIMENSIONS

*PRICES F.O.B. CHICAGO, ILL. SUBJECT TO CHANGE WITHOUT NOTICE

DATA ON STANDARD "CV" AND OTHER TYPES ON FOLLOWING PAGES

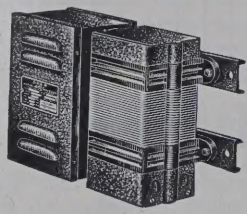
SPECIALIZED STANDARD TYPES

SOLA ELECTRIC CO.

TYPES

ELECTRICAL and MECHANICAL SPECIFICATIONS

CONSTANT VOLTAGE TRANSFORMER WITH HARMONIC FILTER TYPE CVH



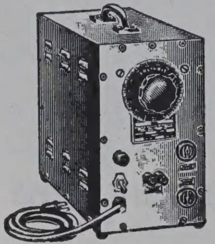
Incorporates harmonic neutralizer circuit . . . ±1% regulated . . . less than 3% harmonic distortion.

All models — Input 95-125 v, Output 115 v

CAT. NO.	CAP. V.A.	DIMENSIONS IN INCHES A	B	C	E	F	SHIP'G WGHT.	*NET PRICE EACH
5002	30	4 3/16	11 3/8	4 1/2	2 5/16	10 3/8	27	$30.00
5003	60	4 3/16	11 3/4	4 1/2	2 5/16	10 3/4	35	38.00
5004	120	7 1/8	11	5 7/8	6 1/2	8 3/4	45	51.00
5005	250	8 1/2	16 7/8	6 1/4	3 1/2	15 3/8	60	80.00
5006	500	10 1/4	16 7/8	6 1/4	5 1/4	15 3/8	70	110.00
5008	1000	14 1/8	21 1/4	8 3/4	6 3/4	20	160	180.00
5010	2000	20 1/16	26 1/4	11 1/4	12 1/4	24 1/4	320	310.00

Transformers of catalog numbers 5002, 5003 and 5004 are now equipped with a primary cord and a secondary receptacle output for convenience in the laboratory. All other transformers are manufactured with knockout boxes.

ADJUSTABLE . . . REGULATED . . . A.C. VOLTAGE SUPPLY With Harmonic Filter TYPE CVL

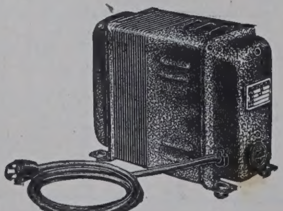


One outlet regulated ±1% and adjustable from 0 to 130 volts. One outlet for fixed value 115 volts regulated ±1%. Total harmonic distortion less than 3%. Regulating response 1.5 cycles or less. Self-protecting against short circuit. Portable for use in shop or laboratory.

Input 95-125 v; Output No. 1, 115 v; Output No. 2, 0-130 v

CAT. NO.	CAP. V.A.	DIMENSIONS IN INCHES A	B	C	SHIP. WEIGHT	*NET PRICE EACH
50105	250	12 5/8	7 1/2	12 5/8	50	$ 98.00
50106	500	13 5/8	7 1/2	14 3/8	70	138.00

CONSTANT VOLTAGE TRANSFORMER FOR TELEVISION RECEIVERS TYPE CVA



Voltage regulation for home TV Receivers eliminates flicker and distortion due to line voltage variations. Moderate price . . . plug-in type . . . regulation ±3% or less.

Input 95-130 v, Nominal Output Value in 115-120 v range.

CAT. NO.	CAP. V.A.	DIMENSIONS IN INCHES A	B	C	SHIP. WEIGHT	*NET PRICE EACH
7201	180	7 1/4	8 1/8	4 1/2	19	$34.50
7202	300	7 1/4	9 1/8	4 1/2	26	37.50

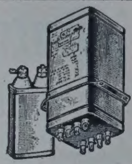
DIMENSIONS — A: Overall Length C: Overall Height
B: Overall Width E & F: Mounting Dimensions

*Prices F.O.B. Chicago, Ill. Subject to change without notice.

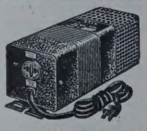
ILLUSTRATIONS FOR STANDARD TYPE "CV" UNITS ON RIGHT HAND PAGE

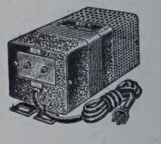
TYPE 1

TYPE 12



TYPE 2

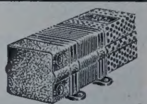




TYPE 21

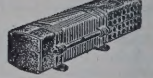
TYPE 22

TYPE 3

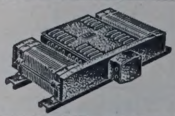


TYPE 41

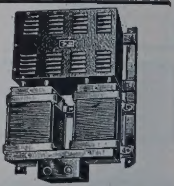
TYPE 4



TYPE 5



TYPE 6



SOLA Electric Co. • Chicago 50, Ill.

Net

STANDARD TYPE "CV"

SOLA *Constant Voltage* TRANSFORMERS

ELECTRICAL AND MECHANICAL SPECIFICATIONS

60 CYCLE, SINGLE PHASE

Catalog Number	Output Capacity in VA	VOLTAGE Input Range	VOLTAGE ±1% Regulated Output	Dimensions in Inches A	B	C	E	F	Approx. Shipping Weight	*Net Price Each
TYPE 1										
30488	15	95-125	6.0	$5\frac{11}{16}$	$2\frac{5}{8}$	$3\frac{7}{16}$	$5\frac{1}{16}$	....	6	$ 16.00
30492	15	95-125	6.3	$5\frac{11}{16}$	$2\frac{5}{8}$	$3\frac{7}{16}$	$5\frac{1}{16}$	....	6	16.00
30498	15	95-125	115.0	$5\frac{11}{16}$	$2\frac{5}{8}$	$3\frac{7}{16}$	$5\frac{1}{16}$	....	6	16.00
TYPE 12										
301002	15	95-125	6.3	$5\frac{5}{16}$	$3\frac{1}{2}$	$2\frac{1}{4}$	3	$1\frac{1}{2}$	$2\frac{1}{2}$	20.00
301003	15	95-125	115.0	$5\frac{5}{16}$	$3\frac{1}{2}$	$2\frac{1}{4}$	3	$1\frac{1}{2}$	$2\frac{1}{2}$	20.00
TYPE 2										
30804	30	95-125	115.0	$8\frac{9}{16}$	$4\frac{3}{16}$	$4\frac{3}{8}$	$7\frac{13}{16}$	$2\frac{3}{8}$	12	18.00
30805	60	95-125	115.0	$8\frac{13}{16}$	$4\frac{3}{16}$	$4\frac{3}{8}$	$8\frac{1}{16}$	$2\frac{3}{8}$	13	25.00
30806	120	95-125	115.0	$9\frac{11}{16}$	$4\frac{3}{16}$	$4\frac{3}{8}$	$8\frac{15}{16}$	$2\frac{3}{8}$	17	34.00
30888	150	95-125	115.0	$10\frac{3}{16}$	$4\frac{3}{16}$	$4\frac{3}{8}$	$9\frac{7}{16}$	$2\frac{3}{8}$	19	43.00
TYPE 21										
30881	25	95-125	6.3	$8\frac{7}{16}$	$4\frac{3}{16}$	$4\frac{3}{8}$	$7\frac{1}{16}$	$2\frac{3}{8}$	12	17.00
30882	50	95-125	6.3	$8\frac{13}{16}$	$4\frac{3}{16}$	$4\frac{3}{8}$	$8\frac{1}{16}$	$2\frac{3}{8}$	13	24.00
TYPE 22										
30885	60	95-125	115.0	$10\frac{5}{16}$	$4\frac{3}{16}$	$4\frac{3}{8}$	$9\frac{9}{16}$	$2\frac{3}{8}$	13	25.00
30886	120	95-125	115.0	$11\frac{3}{16}$	$4\frac{3}{16}$	$4\frac{3}{8}$	$10\frac{7}{16}$	$2\frac{3}{8}$	19	34.00
TYPE 3										
30807	250	95-125	115.0	$11\frac{5}{8}$	$6\frac{15}{16}$	$5\frac{5}{8}$	$3\frac{1}{4}$	$6\frac{1}{8}$	30	56.00
30M807	250	190-250	115.0	$11\frac{5}{8}$	$6\frac{15}{16}$	$5\frac{5}{8}$	$3\frac{1}{4}$	$6\frac{1}{8}$	30	56.00
30808	500	95-125	115.0	$14\frac{1}{2}$	$6\frac{15}{16}$	$5\frac{5}{8}$	5	$6\frac{1}{8}$	40	81.00
30M808	500	190-250	115.0	$14\frac{1}{2}$	$6\frac{15}{16}$	$5\frac{5}{8}$	5	$6\frac{1}{8}$	40	81.00
TYPE 4										
30809	1000	95-125	115.0	$19\frac{1}{8}$	$9\frac{1}{2}$	$7\frac{7}{8}$	$6\frac{3}{4}$	$8\frac{1}{2}$	115	135.00
30M809	1000	190-250	115.0	$19\frac{1}{8}$	$9\frac{1}{2}$	$7\frac{7}{8}$	$6\frac{3}{4}$	$8\frac{1}{2}$	115	135.00
30811	2000	95-125	115.0	$31\frac{1}{8}$	$9\frac{1}{2}$	$7\frac{7}{8}$	$12\frac{1}{4}$	$8\frac{1}{2}$	205	245.00
30M811	2000	190-250	115.0	$31\frac{1}{8}$	$9\frac{1}{2}$	$7\frac{7}{8}$	$12\frac{1}{4}$	$8\frac{1}{2}$	205	245.00
30968	2000	190-250	230.0	$31\frac{1}{8}$	$9\frac{1}{2}$	$7\frac{7}{8}$	$12\frac{1}{4}$	$8\frac{1}{2}$	205	245.00
TYPE 41										
30M813	3000	95/190-125/250	115.0	$44\frac{11}{16}$	10	$9\frac{3}{8}$	$42\frac{5}{8}$	$8\frac{1}{2}$	325	325.00
30877	3000	95/190-125/250	230.0	$44\frac{11}{16}$	10	$9\frac{3}{8}$	$42\frac{5}{8}$	$8\frac{1}{2}$	325	325.00
TYPE 5										
30M814	4000	95/190-125/250	115.0	$21\frac{5}{8}$	$42\frac{3}{4}$	$9\frac{7}{16}$	$12\frac{1}{4}$	$40\frac{1}{4}$	520	410.00
30M815	5000	95/190-125/250	115.0	$24\frac{1}{8}$	$42\frac{3}{4}$	$9\frac{7}{16}$	$14\frac{3}{4}$	$40\frac{1}{4}$	570	515.00
30M816	5000	95/190-125/250	230.0	$24\frac{1}{8}$	$42\frac{3}{4}$	$9\frac{7}{16}$	$14\frac{3}{4}$	$40\frac{1}{4}$	570	515.00
TYPE 6										
301700	10,000	190/380-250/500	115.0	48	$35\frac{1}{4}$	$9\frac{5}{8}$	$38\frac{7}{8}$	$33\frac{1}{4}$	1025	990.00
301701	10,000	190/380-250/500	230.0	48	$35\frac{1}{4}$	$9\frac{5}{8}$	$38\frac{7}{8}$	$33\frac{1}{4}$	1025	990.00

DIMENSIONS — A: OVERALL LENGTH C: OVERALL HEIGHT
B: OVERALL WIDTH E & F: MOUNTING DIMENSIONS

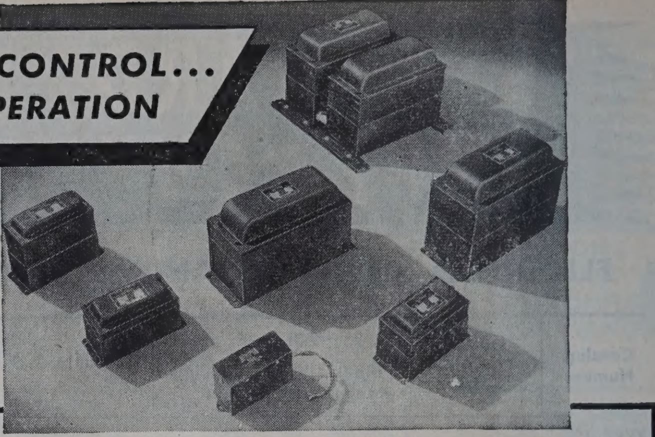
*PRICES F.O.B. CHICAGO, ILL. SUBJECT TO CHANGE WITHOUT NOTICE

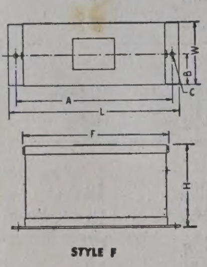
SOLA Electric Co. • Chicago 50, Ill.

FOR POSITIVE VOLTAGE CONTROL... DEPENDABLE, ACCURATE OPERATION

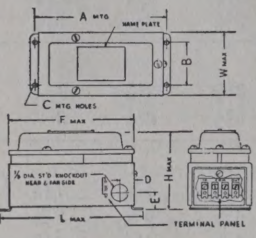
RAYTHEON

VOLTAGE STABILIZERS

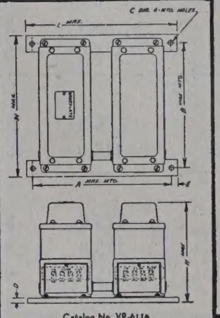




STYLE F



STYLE E



Catalog No. VR-6116

CATALOG NO.	OUTPUT CAP. WATTS	STYLE	DIMENSIONS IN INCHES									NET WEIGHT LBS.
			OVERALL			MOUNTING			LOCATIONS			
			L	W	H	A	B	C	D	E	F	
VR-6110	15	F	6¼	2½	3	5 11/16	1¼	¼ dia.	5/16	3/16	5 3/16	4
VR-6101*	30	E	7½	3⅜	4⅛	6⅞	2¼	9/32x7/32	11/16	⅞	6 9/16	5
VR-6111	30	E	7½	3⅜	4⅛	6⅞	2¼	9/32x7/32	11/16	⅞	6 9/16	5
VR-6112	60	E	7½	3⅜	4 9/16	6⅞	2¼	9/32x7/32	11/16	⅞	6 9/16	8
VR-6113	120	E	7½	3⅜	5 15/16	6⅞	2¼	9/32x7/32	11/16	⅞	6 9/16	14
VR-6114	250	E	12⅜	5	7⅝	11 9/16	3½	9/32x11/32	⅞	1	11 1/16	25
VR-6115	500	E	12⅜	5	9⅛	11 9/16	3½	9/32x11/32	⅞	1	11 1/16	45
VR-6116	1000	H	14 1/16	13 3/16	9⅝	12⅞	11 9/16	7/16	½	9/16		92
VR-6117	2000	H	36¼	14⅝	10⅛	34	12 3/16	9/16 dia.				200

*Output 6.0 or 7.5 volts stabilized to ± ½%

Style E Models, VR-6101 to VR-6113 inclusive, available with cord and plug; specify by adding "CP" to catalog number. For accessory cord, plug and mounting plate on Model VR-6114 and VR-6115, specify "Assembly 51-590G2".

TESTS PROVE 10 POINTS OF RAYTHEON SUPERIORITY

1. Deliver accurate DC voltage within ±½%
2. Stabilize output with more precision
3. Regulate better at full load
4. Hold up better under overload
5. Better no-load to full-load regulation
6. Accept wider input voltage range
7. Less voltage change as units heat up
8. Less change in output as frequencies fluctuate
9. Smaller, lighter, more compact; no moving parts
10. Cost less to operate

RAYTHEON®
Excellence in Electronics

THE complete line of Raytheon Voltage Stabilizers is available through 114 authorized distributors. All models operate on input of 95 to 130 volt, 60 cycle, single phase current. They are produced in a wide range of catalog types rated from 15 to 2000 watts as outlined in table above. Each model compensates for widely varying input (±15%) within 1/20 of a second, maintains voltage within ±½% of rated output. Special custom-built units, in ratings from 5 to 10,000 watts, are also available to meet special needs; write for complete information.

RAYTHEON
MANUFACTURING COMPANY
EQUIPMENT SALES DIVISION
DEPT. 6470-ME, WALTHAM 54, MASSACHUSETTS
DISTRICT OFFICES: BOSTON, NEW YORK, CLEVELAND, CHICAGO, NEW ORLEANS, LOS ANGELES (WILMINGTON), SAN FRANCISCO, SEATTLE
INTERNATIONAL DIVISION: 19 RECTOR ST., NEW YORK CITY

RAYTHEON PRODUCTS INCLUDE:

MARINERS PATHFINDER* radar; Submarine Signal FATHOMETERS*; Marine radiotelephones; WELD-POWER* welders; Voltage stabilizers (regulators); Transformers; RectiChargeR* battery chargers; RectiFilteR* battery eliminators; Sonic oscillators for laboratory research; Standard control knobs; Electronic calculators and computers; Television receivers; Radio, television, subminiature and special purpose tubes; MICROTHERM* diathermy and other electronic equipment. *Reg. U. S. Pat. Off.

DYNAMOTORS Gothard CONVERTERS

Springfield, Illinois

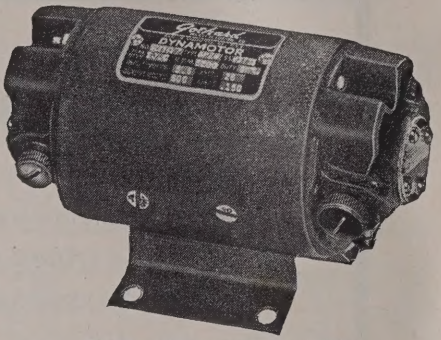
GOTHARD DYNAMOTORS

The GOTHARD Model "GP-26" is especially designed and built for Mobile Transmitter applications, intermittent duty. Length 7¼", Diam. 3½", Height 4", Weight 8¼ lbs.

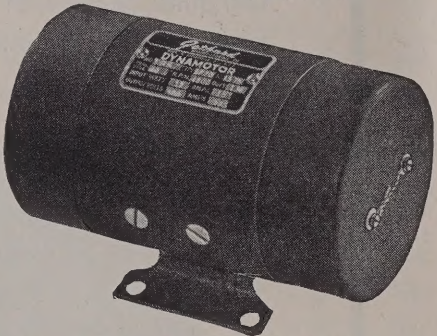
INPUT		OUTPUT			Approx.	App.
Volts	Amps.	Volts	MA	Watts	Effic.	Reg.
5.6	24	400	200	80	60%	17%
5.6	26	600	150	90	61%	18%
5.6	29	400	250	100	61%	19%
5.6	31	620	170	105	61%	20%
5.6	33	500	225	112	61%	21%
5.6	34	420	280	118	62%	22%
6.0	40	400	375	150	63%	25%

Prices upon request. Submit your special requirements to our engineers.

Also supplied for 12, 14, 24, 28, or 32 Volt input
For continuous duty applications, Models GP-12, GP-17 and GP-26 cover wattage ratings from 20 to 80 Watts. Input voltages 6, 12, 24, or 32.
GP-12: Length 5¾", Diam. 3½", Height 4", Weight 5¼ lbs.
GP-17: Length 6¼", Diam. 3½", Height 4", Weight 6 lbs.
GP Models have steel mounting bases; width 4$\frac{5}{16}$".



MODEL "GP-26" DYNAMOTOR



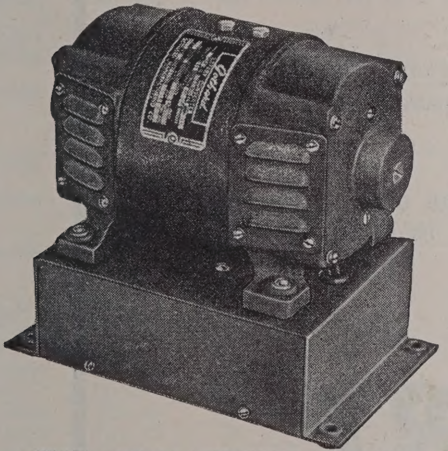
MODEL "SF-20" DYNAMOTOR

GOTHARD AIRCRAFT DYNAMOTORS

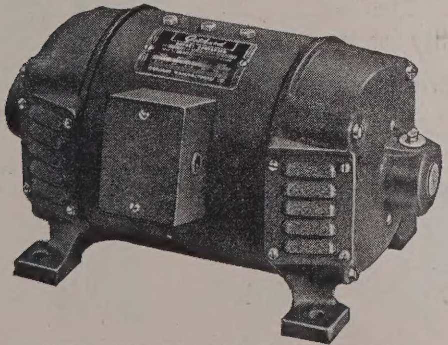
Frame	INPUT		OUTPUT				
Size	Volts	Amps.	Volts	MA	Length	Diam.	Weight
DS-12	12	2.6	250	60	4¾"	2¾"	2⅞"
DS-17	12	3.6	250	90	5¼"	2¾"	3⅞"
SP-12	12	4.0	250	100	6"	3½"	4¾"
SP-17	12	5.2	300	125	6½"	3½"	5⅝"
SP-22	12	6.4	400	125	7"	3½"	6½"
SF-20	12	8.4	400	150	6¾"	4"	8½"
SF-25	12	10.	500	150	7¼"	4"	9¾"

Prices upon request. Submit your special requirements to our engineers.

Above ratings are continuous duty with temperature of 40°C.
Also supplied for 6, 14, 24, 28, or 32 Volt input. "SP" and "SF" dynamotors may be supplied in fan-ventilated construction as types "SPF" and "SFF". Prices upon request.



MODEL "AK-15" CONVERTER (With Filter)



MODEL "BK-35" CONVERTER (Less Filter)

GOTHARD ROTARY CONVERTERS

TYPE "K" 3600 RPM (60 Cycle) • 3000 RPM (50 Cycle)

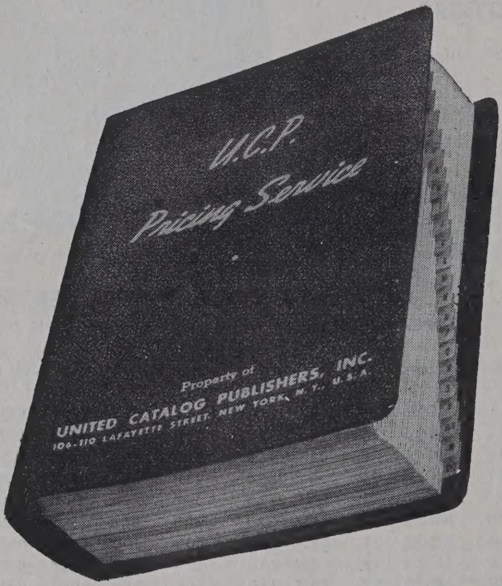
Model No.	Frame Size	INPUT Volts	INPUT Amps.	OUTPUT at 90% P.F. A.C. Volts	VA at 60 cy.	VA at 50 cy.	App. Net Wt. Conv. only	App. Net Wt. Add for Filter	List Price Less Filter	List Price With Filter
6K11	AK-15	6	36	110	110	90	24#	6#	$88.55	$112.60
12K11	AK-15	12	18	110	110	90	24#	6#	88.55	112.60
12K16	AK-25	12	24	110	160	125	29#	6#	108.80	141.70
24K11	AK-15	24	9	110	110	90	24#	6#	88.55	112.60
24K20	AK-25	24	14	110	200	160	29#	6#	108.80	141.70
24K30	BK-22	24	19.4	110	300	250	38#	6#	151.25	169.95
24K50	BK-35	24	30.4	110	500	400	45#	6#	175.45	201.15
3K11	AK-15	32	6.2	110	110	90	24#	6#	81.00	105.00
3K20	AK-25	32	10.4	110	200	160	29#	6#	101.20	134.10
3K30	BK-22	32	14.5	110	300	250	38#	6#	127.80	161.95
3K50	BK-35	32	22.0	110	500	400	45#	6#	158.15	193.55
3K75	CK-35	32	34	110	750	600	68#	7#	231.50	288.45
4K11	AK-15	48	4.4	110	110	90	24#	6#	88.55	112.60
4K20	AK-25	48	7.0	110	200	160	29#	6#	108.80	141.70
4K30	BK-22	48	9.7	110	300	250	38#	6#	151.25	169.95
4K50	BK-35	48	15.2	110	500	400	45#	6#	175.45	201.15
4K75	CK-35	48	22.7	110	750	600	68#	7#	231.50	287.35
1K11	AK-15	115	1.8	110	110	90	24#	6#	81.00	105.00
1K20	AK-25	115	3.0	110	200	160	29#	6#	101.20	134.10
1K30	BK-22	115	4.2	110	300	250	38#	6#	127.80	161.95
1K50	BK-35	115	6.6	110	500	400	45#	6#	158.15	193.55
1K75	CK-35	115	9.4	110	750	600	68#	7#	231.50	288.45
1K100	CK-35	115	12.4	110	1000	800	80#	7#	283.40	358.00
2K11	AK-15	230	.9	110	110	90	24#	6#	84.80	108.80
2K20	AK-25	230	1.5	110	200	160	29#	6#	105.00	137.90
2K30	BK-22	230	2.1	110	300	250	38#	6#	131.60	165.75
2K50	BK-35	230	3.3	110	500	400	45#	6#	161.95	197.35
2K75	CK-35	230	4.7	110	750	600	68#	7#	235.30	292.25
2K100	CK-35	230	6.2	110	1000	800	80#	7#	287.20	361.80

Also supplied for Marine Type Filter, 220 Volt A.C. Output, and automatic frequency control, manual frequency control, 28 volts input, 1500 V.A. output, 50 cycles. Prices upon request.
Ball Bearings are standard on all models.

PRICES

Prices of manufacturers and suppliers' products listed in **RADIO'S MASTER** are subject at all times to change without notice — they should not be considered final.

Get quick on-the-spot quotations from your distributor who subscribes to our perpetual up-to-the-minute **PRICING SERVICE.**


U.C.P.
Pricing Service
Property of
UNITED CATALOG PUBLISHERS, INC.
106-110 LAFAYETTE STREET, NEW YORK, N.Y., U.S.A.

Official Pricing System of radio - electronic - television parts and equipment. Supported by the industry: distributors, manufacturers, and their sales representatives.

•

Loose-leaf, flexible binder. Contains over 1100 pages.

•

Published by
UNITED CATALOG PUBLISHERS, INC.
106-110 Lafayette Street
New York 13, N. Y.

DELIVERY

Delivery is often dependent on the availability of raw materials. So check with your distributor for delivery information.

STANDARD TRANSFORMER CORPORATION

STANCOR TRANSFORMERS

AND RELATED COMPONENTS

FOR TELEVISION, RADIO,
SOUND AND OTHER
ELECTRONIC APPLICATIONS

The STANCOR Transformer line is the most complete in the industry. There are over 450 transformers and related components listed on the following fifteen pages. Every one is a dependable, tested unit, designed for maximum service and efficiency. For industrial, amateur, experimental or replacement use, you can be sure of a quality product when you specify "STANCOR."

Our engineering staff will assist you in designing transformers to meet special industrial applications and can supply production samples where desired.

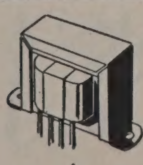
TELEVISION COMPONENTS

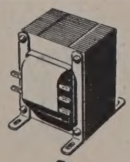
This section contains only specific television components. Consult following Stancor pages for other audios, powers and chokes having extensive application in television, radio and electronics.

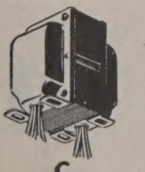
POWER TRANSFORMERS—ALL PRIMARIES FOR 117V, 60 CYCLE OPERATION

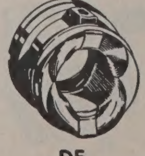
Part No.	Plate Supply AC Volts	Plate Supply DC Ma.	Plate Supply Max. DC Ma.#	Rect. Fil. Volts	Rect. Fil. Amps.	Other Fils. Volts	Other Fils. Amps.	Height Overall	Base Area	Mtg. Ctrs.	Mtg. Type	Shpg. Wt. in Lbs.	List Price
P-5059	337.5–0–337.5	200	225	5.0 CT	3.0	6.3 CT	5.0	4⅜	4¾ x 4	3 x 3⁵⁄₁₆	C	9.6	**$15.35**
P-6315	370–0–370	275	310	5.0 CT	3.0	6.3 CT	7.0	4¼	3¾ x 4½	3 x 3¾	M	9.3	**17.70**
P-8154	375–0–375	205	230	5.0	3.0	5.0 6.3	2.0 5.6	4¼	3¾ x 4½	3 x 3¾	M	9.1	**16.35**
P-8155	225–0–225	90	105	5.0	2.0	6.3	5.15	3¾	2¹³⁄₁₆ x 3⅜	2¼ x 2¹³⁄₁₆	M	4.5	**9.80**
P-8156	365–0–365	295	340	5.0	6.0	5.0 12.6 CT	2.0 5.0	6⅝	3¹³⁄₁₆ x 4¾	3³⁄₁₆ x 4¹⁄₁₆	M*	16.5	**26.50**
P-8157	385–0–385 235–0–235	195 105		5.0 5.0	3.0 2.0	6.3 6.3 5.0	7.65 0.6 2.0	4¾	3¾ x 4½	3 x 3¾	M	11.1	**22.80**
P-8158	117	600				6.3 6.3 6.3	4.25 4.0 2.0	3½	3⁷⁄₁₆ x 4⅛	2¾ x 3⁷⁄₁₆	M*	6.2	**14.00**
P-8159	360–0–360	250	290	5.0	3.0	5.0 6.3 6.3	2.0 8.0 0.6	5⁵⁄₁₆	3¹³⁄₁₆ x 4¾	3³⁄₁₆ x 4¹⁄₁₆	M*	10.0	**21.85**
P-8160	358–0–358 166–0–166	185 65		5.0	3.0	6.45	12.0	4¼	3¾ x 4½	3 x 3¾	M*	9.6	**18.40**
P-8161	390–0–390	230	270	5.0 5.0	3.0 2.0	6.3	9.0	5⁹⁄₁₆	3¹³⁄₁₆ x 4¾	3³⁄₁₆ x 4¹⁄₁₆	M*	11.8	**23.75**
P-8162	380–0–380	180	210	5.0 CT	3.0	6.3	9.0	5½	4⅛ x 3⁷⁄₁₆	2¾ x 3⁷⁄₁₆	M3*	9.0	**17.00**
P-8163	360–0–360	200	225	5.0	3.0	6.3 6.3	7.75 1.2	5⁹⁄₁₆	3¹³⁄₁₆ x 4¾	3³⁄₁₆ x 4¹⁄₁₆	M*	10.8	**21.90**
P-8164	300–0–300	225	250	5.0	3.0	6.3	9.0	4⅛	3⁷⁄₁₆ x 4⅛	2¾ x 3⁷⁄₁₆	M*	7.5	**18.25**
P-8165	350–0–350 220–0–220	180 70		5.0	3.0	6.3 6.3	2.0 10.0	4¾	3¾ x 4½	3 x 3¾	M*	11.0	**25.30**
P-8166	340–0–340	330	360	5.0	6.0	6.3 {6.3† {6.3† or 12.6† CT	2.5 5.0 5.0 5.0	6	3¹³⁄₁₆ x 4¾	3³⁄₁₆ x 4¹⁄₁₆	M*	13.0	**26.85**
P-8167	280–0–280	400	450	5.0	6.0	6.3 6.3	4.5 8.5	6	3¹³⁄₁₆ x 4¾	3³⁄₁₆ x 4¹⁄₁₆	M*	13.0	**25.20**
P-8168	220–0–220 130–0–130	330 220		5.0	3.0	6.3† 6.3† or 12.6 CT†	6.5 6.5 6.5	4⅞	3¾ x 4½	3 x 3¾	M*	10.5	**23.55**
P-8169	380–0–380	220	250	5.0	3.0	6.3 6.3 6.3	1.2 5.0 7.0	4⅝	3¾ x 4½	3 x 3¾	M*	10.5	**21.50**
PC8403	250–0–250	70		5.0	2.0	6.3 CT	2.5	3³⁄₁₆	2⅝ x 3⅛	2 x 2¹⁄₁₆	C	3.2	**7.65**
PC8408	340–0–340	70		5.0	2.0	6.3 CT	2.5	3⅝	3 x 3⅜	2¼ x 2⅛	C	3.8	**7.95**
PC8410	360–0–360	120		5.0	3.0	6.3 CT	3.5	4	3¼ x 3¾	2½ x 2⁷⁄₁₆	C	5.5	**9.65**
PC8411	375–0–375	150		5.0	3.0	6.3 CT	4.5	4⁵⁄₁₆	3⅝ x 4	2¾ x 2¹³⁄₁₆	C	5.8	**11.55**
PC8413	400–0–400	250		5.0	4.0	6.3 CT	5.0	4¾	4 x 4½	3 x 3⁵⁄₁₆	C	10.0	**16.30**
PM8403	250–0–250	70		5.0	2.0	6.3 CT	2.5	3⅛	2½ x 3	2 x 2½	M	3.2	**7.65**
PM8407	325–0–325	55		5.0	2.0	6.3 CT	2.0	3⅛	2½ x 3	2 x 2½	M	3.2	**6.90**
PM8408	340–0–340	70		5.0	2.0	6.3 CT	2.5	3½	2⅞ x 3⅜	2¼ x 2¹³⁄₁₆	M	3.8	**7.95**
PM8409	350–0–350	90		5.0	2.0	6.3 CT	3.0	3¾	2⅞ x 3⅜	2¼ x 2¹³⁄₁₆	M	4.5	**8.95**
PM8410	360–0–360	120		5.0	3.0	6.3 CT	3.5	3¾	3⅛ x 3¾	2½ x 3⅛	M	5.5	**9.65**
PM8411	375–0–375	150		5.0	3.0	6.3 CT	4.5	3⅞	3½ x 4⅛	2¾ x 3⁷⁄₁₆	M	5.8	**11.55**
PM8412	400–0–400	200		5.0	3.0	6.3 CT	5.0	3⅞	3¾ x 4½	3 x 3¾	M	8.2	**13.25**
PM8418	230–0–230	50				6.3	2.5	3³⁄₁₆	2⅝ x 2⅝	2 x 1⁹⁄₁₆	M	2.2	**5.95**
PM8419	240–0–240	70				6.3	3.0	2⅞	2½ x 3	2 x 2½	M	2.6	**6.80**

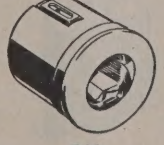
#Loading to maximum DC MA will have no appreciable effect on the service or life of the transformer.
†May be used as 6.3V windings or in series as 12.6V C.T. *With copper shorting band to reduce external magnetic field.

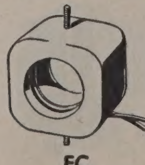

A

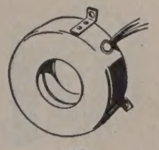

B


C


DF


DY


FC


FO

Copyright by U. C. P., Inc.

TELEVISION COMPONENTS

STANDARD TRANSFORMER CORPORATION

FILAMENT TRANSFORMERS

Part No.	Secondary Volts	Secondary Amps.	RMS. V. Insul.	Primary Volts	Height Overall	Base Area	Mounting Centers	Mtg. Type	Shpg. Wt. in Lbs.	List Price
P-3064	6.3 CT	6.0	2,500	117	3 1/8	2 1/2 x 2 7/8	2 x 2	B	2.4	**$5.80**
P-5014	6.3 CT	3.0	2,500	117	3 1/8	2 1/2 x 2 1/2	2 x 1 3/4	B	2.0	**4.75**
P-6134	6.3 CT	1.2	2,500	117	1 5/8	2 7/8 x 1 5/8	2 3/8	A	0.8	**2.70**
P-6308	6.3 CT	10.0	2,500	117/107	3 1/2	2 7/8 x 2 3/4	2 1/4 x 2 3/16	N	3.4	**6.95**
P-8190	6.3	1.2	5,000	117	2	3 1/4 x 1 3/4	2 13/16	A	1.0	**3.45**
P-8191	6.3	1.2	5,000	6.3	2	3 1/4 x 1 3/4	2 13/16	A	1.0	**3.70**

HORIZONTAL DEFLECTION and HIGH VOLTAGE TRANSFORMERS

Part No.	Approx. Anode KV#	Max. Scan	Core Material	Height Overall	Base Area	Mtg. Type	Shpg. Wt. in Lbs.	List Price
A-8119†	13–14	53°	Powdered Iron	4 11/32	2 1/4 x 3 3/4	HO	1.8	**$10.40**
A-8127	9–10	53°	Powdered Iron	4 11/32	2 1/4 x 3 3/4	HO	1.8	**9.25**
A-8128	10–11	53°	Powdered Iron	4 11/32	2 1/4 x 3 3/4	HO	1.8	**10.50**
A-8129	12–13	70°	Ferrite Pole	4 11/32	2 1/4 x 3 3/4	HO	1.8	**11.00**
A-8130	10–14	70°	Ferrite	4 1/16	2 3/16 x 2 7/8	HG	0.9	**11.00**
A-8131	11–13	70°	Air	2 5/8	3 x 3 1/2	HR	0.5	**7.00**
A-8133	12.5–15	70°	Ferrite "E"	4 11/16	3 1/2 x 4	HA	1.0	**11.00**
A-8134	12.5–15	70°	Ferrite "E"	4 11/16	3 1/2 x 4	HA	1.0	**11.00**

#Actual high voltage obtained is dependent upon circuit parameters. †For use with two rectifiers in a voltage-doubling circuit.

DEFLECTION YOKES

Part No.	Horizontal Scanning Coil in M.H.	Vertical Scanning Coil in M.H.	Max. Scan	Core Material	Case Diameter	Unit Length	Mtg. Type	Shpg. Wt. in Lbs.	List Price
DY-1	8.3	50	53°	Flake Iron	3 1/8	3	DY	1.0	**$7.50**
DY-7‡	8.5	50	70°	Flake Iron	3 1/8	2 5/8	DY	1.0	**8.95**
DY-8§	8.5	50	70°	Ferrite	3 1/8	2 5/8	DF	1.0	**10.75**
DY-9§	13.5	50	70°	Ferrite	3 1/8	2 5/8	DF	1.0	**10.75**
DY-10§	30.0	3.5	70°	Ferrite	3 1/8	2 5/8	DF	1.0	**10.75**

§Has cosine windings for anti-astigmatic focusing. ‡To be removed from next catalog. Replaced by DY-8.

FOCUS COILS

Part No.	Resistance DC Ohms	Max. DC Ma.	Case Dimensions	Case Depth	Mounting Centers	Mtg. Type	Shpg. Wt. in Lbs.	List Price
FC-10	247	200	3 11/32 x 3 11/32	1 29/64	Single 8-32 Screw	FC	2.0	**$7.50**
FC-11	470	140	4 3/4 Dia.	1 1/8	2 11/16 Radius—120° Apart	FO	3.2	**10.75**

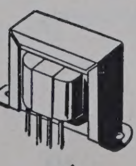
VERTICAL DEFLECTION OUTPUT TRANSFORMERS

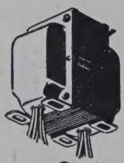
Part No.	Turns Ratio Pri./Sec.	Primary Impedance#	DC Res. Pr.	DC Res. Sec.	Height Overall	Base Area	Mtg. Ctrs.	Mtg. Type	Shpg. Wt. in Lbs.	List Price
A-8112	10:1	18,000 Ω @ 12 DCMA	1300 Ω	10 Ω	2	1 3/4 x 3 1/4	2 13/16	A	1.0	**$4.00**
A-8113	8.8:1	16,500 Ω @ 10 DCMA	700 Ω	12 Ω	2	1 3/4 x 3 1/4	2 13/16	A	1.0	**4.05**
A-8115	10:1	19,000 Ω @ 13 DCMA	600 Ω	7 Ω	3 1/16	2 1/2 x 2 1/2	1 19/32 x 2	N	2.5	**6.00**
A-8116	10:1	18,000 Ω @ 10 DCMA	525 Ω	7 Ω	3 1/16	2 1/4 x 2 1/2	1 19/32 x 1 3/4	N	2.2	**5.50**
A-8123	11.4:1	17,000 Ω @ 20 DCMA	1200 Ω	11 Ω	2	1 3/4 x 3 1/4	2 13/16	A	1.2	**3.75**
A-8140	44:1	11,000 Ω @ 20 DCMA	400 Ω	0.3 Ω	3 1/16	2 1/2 x 2 1/2	1 19/32x2	N	2.5	**6.20**
A-8141*	18:1	30,000 Ω @ 10 DCMA	1650 Ω	4.5 Ω	2 1/4	3 3/4 x 2 1/8	3 1/8	A	1.5	**5.30**

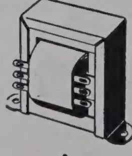
#Primary impedance measured at 30 V. 60 cycle. *Autoformer type.

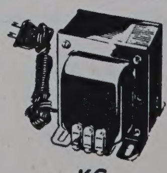
HORIZONTAL BLOCKING-OSCILLATOR TRANSFORMERS

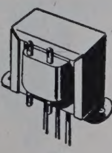
Part No.	Turns Ratio Pri./Sec.	Height Overall	Base Area	Mounting Centers	Mtg. Type	Shpg. Wt. in Lbs.	List Price
A-8110	2:1	1 1/2	1 1/2 x 2 1/2	2	A	0.4	**$2.75**
A-8120	2:1	1 3/4	1 1/2 x 2 5/16	1 15/16	TD	0.4	**3 90**

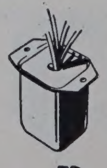

A

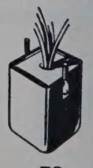

C

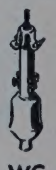

J


KC


Q


TD


TS


WC

TELEVISION COMPONENTS

STANCOR

STANDARD TRANSFORMER CORPORATION

VERTICAL BLOCKING-OSCILLATOR TRANSFORMERS

Part No.	Turns Ratio Pri./Sec.	Height Overall	Base Area	Mounting Centers	Mtg. Type	Shpg. Wt. in Lbs.	List Price
A-8111	1:4.2	1½	1½ x 2½	2	A	0.4	**$2.50**
A-8121	1:4.2	1¾	1½ x 2 5/16	1 15/16	TD	0.4	**3.20**
A-8122	1:4.2	1 9/16	1 3/16 x 1 3/16	1¼	TS	0.3	**3.90**
A-8124	Sec. #1 1:0.48 Sec. #2 1:1	1⅝	1⅝ x 2⅞	2⅜	A	0.7	**3.75**

WIDTH CONTROL With AGC Winding

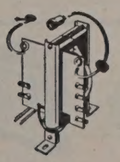
Part No.	Induc.	Res.	Q	AGC Induct.	AGC Res.	AGC Q	Mtg. Type	Shpg. Wt. in Lbs.	List Price
WC-5	4–39 mh.	32 Ω	70 max.	2.7–7.6 mh.	19.5 Ω	37 max.	WC	0.3	**$1.90**

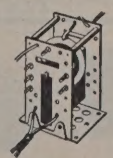
AUDIO OUTPUT TRANSFORMERS

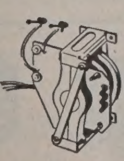
Part No.	Application	Max. Pri. DC	Max. Audio Watts	Height Overall	Base Area	Mtg. Ctrs.	Mtg. Type	Shpg. Wt. in Lbs.	List Price
A-2313	Single plate, 7,000 ohms, to 8 ohms voice coil	40 ma.	10	2	3¼ x 3¾	2 13/16	A	1.0	**$3.10**
A-3303	Push-pull plates, 14,000 ohms, to 500/15/8/4 ohms line or voice coil	55 ma.	20	3 3/16	2⅝ x 2⅝	2 x 1 11/16	C	2.7	**8.65**
A-3330	Single plate, 2,000 ohms to 3.5 ohm voice coil	50 ma.	5	1⅜	2⅜ x 1⅜	2	A	0.4	**2.10**
A-3332	Single plate, 2,000 ohms to 3.2 ohm voice coil	50 ma.	3	1 3/16	2⅛ x 1	1¾	A	0.4	**1.45**
A-3823	Single or push-pull plates, 4,000–14,000 ohms, to voice coil	40 ma.	8	1⅝	2⅞ x 1½	2⅜	Q	0.7	**2.85**
A-3824	Single or push-pull plates, 6,000–10,000 ohms, to voice coil	75 ma.	8	2	3¼ x 2	2 13/16	Q	1.4	**4.50**
A-3825	Single plate, 1,500-4,500 ohms, to voice coil	75 ma.	8	2	3¼ x 1⅝	2 13/16	Q	0.9	**3.60**
A-3830	Push-pull plates, 3,000–10,000 ohms, to voice coil	60 ma.	20	2 11/16	3 5/16 x 2¼	2 13/16	J	1.8	**4.90**
A-3849	Single plate, 1,500–10,000 ohms, to voice coil	55 ma.	10	1⅝	2⅞ x 1½	2⅜	Q	0.7	**2.85**
A-3850	Single or push-pull plates, 4,000–10,000 ohms, to voice coil	40 ma.	8	2	2⅜ x 1½	2	J	0.7	**3.25**
A-3852	Push-pull plates, 4,000–14,000 ohms, to voice coil	40 ma.	18	2 5/16	2⅞ x 2	2⅜	J	1.3	**3.65**
A-3856	Single or push-pull plates, 4,000–14,000 ohms, to voice coil	35 ma.	4	1⅜	2⅜ x 1⅜	2	Q	0.4	**2.65**
A-3870	Push-pull plates, 4,000–14,000 ohms, to voice coil	50 ma. ea. ½	18	2	3¼ x 2	2 13/16	Q	1.3	**4.50**
A-3876	Single plate, 2,000 ohms, to 4 ohm voice coil	60 ma.	5	1⅜	2⅜ x 1⅜	2	A	0.4	**1.75**
A-3877	Single plate, 5,000 ohms, to 4 ohm voice coil	40 ma.	5	1⅜	2⅜ x 1⅜	2	A	0.4	**1.85**
A-3878	Single plate, 7,000 ohms, to 4 ohm voice coil	30 ma.	5	1⅜	2⅜ x 1⅜	2	A	0.4	**1.80**
A-3879	Single plate, 10,000 ohms, to 4 ohm voice coil	30 ma.	5	1⅜	2⅜ x 1⅜	2	A	0.4	**1.75**
A-3880	Push-pull plates, 4,000–14,000 ohms, to voice coil	40 ma.	15	2¼	3¾ x 2¼	3⅛	Q	1.7	**5.40**
A-8114	Single plate, 7,600 ohms, to 3.2 ohm voice coil	32 ma.	5	1⅜	2⅜ x 1⅜	2	A	0.4	**2.40**

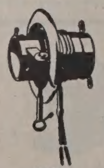
CHOKES

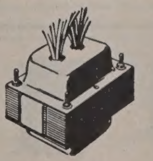
Part No.	At Rated DC Ma.	Inductance At 75 % Ma.	At 115 % Ma.	DC Res. in Ohms	RMS. V. Insul.	Height Overall	Base Area	Mtg. Ctrs.	Mtg. Type	Shpg. Wt. in Lbs.	List Price
C-1001	10.5 hy. 110 ma.	11.5 hy.	9.0 hy.	225	3,000	2⅝	4 x 2¼	3 9/16	A	2.3	**$4.10**
C-1215	9.0 hy. 50 ma.	10.5 hy.	8.0 hy.	500	1,500	1⅝	2⅞ x 1½	2⅜	A	0.7	**1.85**
C-1325	5.0 hy. 50 ma.	5.8 hy.	4.2 hy.	250	1,500	1⅝	2⅞ x 1½	2⅜	A	0.7	**2.10**
C-1410	4.0 hy. 175 ma.	4.7 hy.	3.5 hy.	100	3,000	3 3/16	2⅝ x 2⅝	2 x 1 11/16	C	2.4	**5.70**
C-1412	4.0 hy. 250 ma.	4.5 hy.	3.5 hy.	60	3,000	3⅝	3 x 3½	2¼ x 2⅜	C	4.3	**9.50**
C-1646	5.0 hy. 200 ma.	7.0 hy.	3.7 hy.	90	5,000	4	3¼ x 3⅜	2½ x 2 3/16	C	4.5	**8.15**
C-1703	4.0 hy. 250 ma.	4.5 hy.	3.5 hy.	60	3,000	3½	2⅞ x 3⅛	2¼ x 2½	B	4.2	**8.25**
C-1706	4.5 hy. 50 ma.	5.5 hy.	3.5 hy.	300	1,500	1⅜	2⅜ x 1⅜	2	A	0.4	**1.65**
C-1707	7.0 hy. 50 ma.	8.5 hy.	5.0 hy.	550	1,500	1⅜	2⅜ x 1⅜	2	A	0.4	**1.80**
C-1709	9.0 hy. 85 ma.	10.5 hy.	7.5 hy.	250	1,500	2	3¼ x 2	2 13/16	A	1.4	**3.10**
C-1721	8.5 hy. 200 ma.	9.5 hy.	7.5 hy.	120	3,000	3⅞	3⅛ x 3	2½ x 2¼	N	4.4	**7.45**
C-2303	2.5 hy. 130 ma.	3.0 hy.	2.1 hy.	100	2,000	2	3¼ x 1¾	2 13/16	A	1.0	**2.80**
C-2304	2.3 hy. 150 ma.	2.6 hy.	2.0 hy.	60	1,500	2	3¼ x 1¾	2 13/16	A	1.0	**2.90**
C-2309	3.0 hy. 150 ma.	3.6 hy.	2.5 hy.	90	2,000	2¼	3¾ x 2¼	3⅛	A	1.7	**3.50**
C-2325	2.0 hy. 200 ma.	2.5 hy.	1.5 hy.	60	1,500	2¼	3¾ x 2¼	3⅛	A	1.8	**3.50**
C-2326	1.0 hy. 300 ma.	1.5 hy.	0.6 hy.	43	1,500	2¼	3¾ x 2¼	3 5/16	A	1.7	**3.95**
C-2327	1.5 hy. 200 ma.	1.7 hy.	1.3 hy.	85	1,500	1⅝	2⅞ x 1½	2⅜	A	0.8	**2.20**
C-2328	0.8 hy. 375 ma.	1.0 hy.	0.65 hy.	25	1,500	2¼	3¾ x 2	3⅛	A	1.5	**4.45**

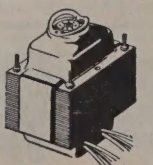

HA

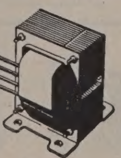

HG


HO


HR


M


M3


N

HIGH FIDELITY TRANSFORMERS

STANDARD TRANSFORMER CORPORATION

HIGH FIDELITY OUTPUT TRANSFORMERS

Better than ±1 db from 20 to 20,000 cps.

These Stancor output transformers combine the most advanced design and manufacturing practices to provide outstanding audio response at low cost. Maximum power level is conservatively rated at 50 watts. They are designed to match the most popular types of output tubes to speaker or line impedances. Extensively interleaved "trifilar" windings, extremely tight coupling and careful electrical balance result in audio fidelity to please the most critical specialist. Inasmuch as elaborate shielding is not required at the audio output level, an inexpensive, but thoroughly practical, Type C mounting is used. Shipping weight is 6.5 lbs.

Part No.	Pri. Imp. (P-P) in Ohms	Sec. Imp. in Ohms	Max. Pri. D.C. Per Side	Audio Watts	Height Overall	Base Area	List Price
A-8050	1500	8, 16	200	50	4⁵⁄₁₆"	3⁹⁄₁₆" x 4¼"	**$18.10**
A-8051	2500	8, 16	150	50	4⁵⁄₁₆"	3⁹⁄₁₆" x 4¼"	**18.10**
A-8052	3000	8, 16	175	50	4⁵⁄₁₆"	3⁹⁄₁₆" x 4¼"	**18.10**
A-8053	5000	8, 16	150	50	4⁵⁄₁₆"	3⁹⁄₁₆" x 4¼"	**18.10**
A-8054	9000	8, 16	100	50	4⁵⁄₁₆"	3⁹⁄₁₆" x 4¼"	**18.10**
A-8060	1500	500	200	50	4⁵⁄₁₆"	3⁹⁄₁₆" x 4¼"	**18.10**
A-8061	2500	500	150	50	4⁵⁄₁₆"	3⁹⁄₁₆" x 4¼"	**18.10**
A-8062	3000	500	175	50	4⁵⁄₁₆"	3⁹⁄₁₆" x 4¼"	**18.10**
A-8063	5000	500	150	50	4⁵⁄₁₆"	3⁹⁄₁₆" x 4¼"	**18.10**
A-8064	9000	500	100	50	4⁵⁄₁₆"	3⁹⁄₁₆" x 4¼"	**18.10**

*Where more than one secondary impedance is shown, only one value is to be used at any time.

STANCOR-WILLIAMSON HIGH FIDELITY AMPLIFIER

Superb audio quality at low cost is now possible through the use of Stancor transformers. Write for Stancor Bulletin 382R or ask your Stancor distributor for a free copy. Detailed instructions for the construction of a Williamson Amplifier, using Stancor transformers A-8054, PC8412 and C-1411, will be found in this bulletin.

A set of chassis for the Williamson Amplifier, completely punched and finished, is available from your distributor. Ask for Stancor Chassis WM-8, $5.75 net.

AUDIO FILTERS

SPLATTER SUPPRESSOR FILTER

Use of a splatter suppressor filter between the modulator and Class C amplifier eliminates undesirable high audio frequencies and harmonics which cause interference to stations on other channels. Stancor Part Number C-2317, illustrated in a typical circuit application in Figure 1, attenuates frequencies higher than 3,000 cps when used in accordance with supplied instruction data. The effectiveness of the system is greatly enhanced by the negative peak limiter tube shown in the circuit.

Part No.	Application	Range of Inductance†	Max. D.C. in Ma.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
C-2317	Splatter Suppressor Filter	0.048 to 0.9 hy.	300	B	2⅝"	3" x 3"	2.3	**$6.75**

†Taps provided for obtaining various amounts of inductance.

BAND PASS FILTER

In radiotelephony, it is highly desirable to limit frequencies in the sidebands to those providing the greatest degree of intelligibility. Useless, power-consuming low and high frequencies can be efficiently eliminated by insertion of the Stancor Part Number C-2340 band-pass filter in the speech amplifier. When used in conjunction with a peak-clipper, a high *average* percentage of modulation is possible, providing a signal that rides over the QRM. The graph (Figure 2) illustrates the frequency curve of this three-section, *m*-derived filter.

Part No.	Application	Input Impedance	Output Impedance	Max. Level	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
C-2340	Band Pass Filter 200 to 3,000 C.P.S.	10,000 ohms	500 or 100,000 ohms	10.0 V. RMS. Across Output	TD	2¹¹⁄₁₆"	2¾" x 2³⁄₁₆"	0.6	**$15.50**

LOW PASS FILTER

The economical Stancor Part Number C-2341 unit offers an *m*-derived, low-pass filter that will give a good account of itself and may be used to further advantage with a peak-clipper. Typical circuit application of this low-pass filter may be found on page 24 of the November, 1946, issue of QST. See Figure 3 below for frequency curve of the C-2341.

C-2341	Low-Pass Filter 3,000 C.P.S. Cutoff	100,000 ohms	100,000 ohms	1.5V. RMS. Across Output	TD	2"	2½" x 1¹⁵⁄₁₆"	0.5	**$6.90**

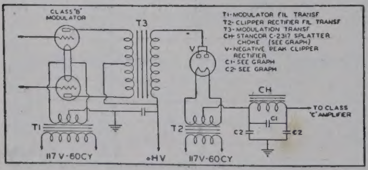


Figure 1

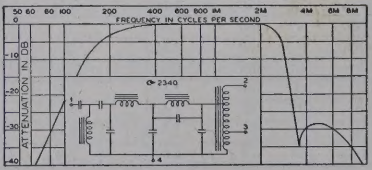


Figure 2

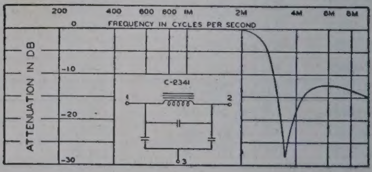
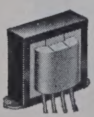
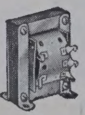
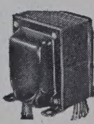
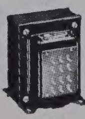


Figure 3

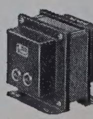

A

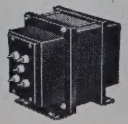

B

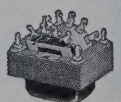

C


D

FA-FB


FK


FS

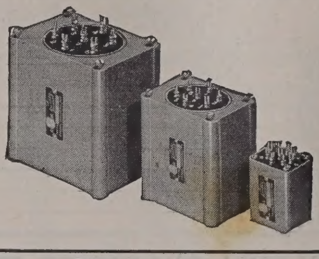

G

J

HIGH FIDELITY TRANSFORMERS

STANDARD TRANSFORMER CORPORATION

HF AND WF SERIES HIGH FIDELITY AUDIO TRANSFORMERS



HF Series

These units have a wide frequency response of 20 to 20,000 cps with ±1 db. Correct design reduces harmonic and intermodulation distortion to a negligible amount. Balanced construction minimizes hum pickup. Stancor impregnation insures long life. Cases are finished in gray enamel and have four threaded holes at each end for flush mounting. Stud-type terminals are plainly marked for easy identification.

Part No.	Application	Primary Imp/Ohms	Secondary Imp/Ohms	Max. Level	Hum-Pickup Reduction ¶	Mtg. §	List Price
LOW IMPEDANCE TO GRID							
HF-20	Low Imp. Mic., Pickup, or Line to Grid	50, 125/150, 200, 250, 333, 500/600	60,000 overall, in two sections	15 db	−74 db	HF-1	**$28.75**
HF-20X	Low Imp. Mic., Pickup, or Line to Grid	50, 125/150, 200, 250, 333, 500/600	50,000	14 db	−92 db‡	HF-1	**36.80**
HF-22	Low Imp. Mic., Pickup, or Line to P.P. Grids	50, 125/150, 200, 250, 333, 500/600	120,000 overall, in two sections	15 db	−74 db	HF-1	**32.20**
HF-22X	Low Imp. Mic., Pickup, or Line to P.P. Grids	50, 125/150, 200, 250, 333, 500/600	80,000 overall, in two sections	14 db	−92 db‡	HF-1	**40.25**
INTERSTAGE							
HF-29	Sgl. Pl. to P.P. Grids—Split secondary	15,000	95,000 (Turn ratio 2.5:1 overall)	17 db	−50 db	HF-1	**$27.60**
HF-31	Single Plate to P.P. Grids. Split pri. and sec.	15,000	135,000 (Turn ratio 3:1 overall)	14 db	−74 db	HF-1	**27.60**
HF-32 ▶	P.P. Plates to P.P. Grids. Split pri. and sec.	30,000 Plate to Plate	80,000 (Turn ratio 1.6:1 overall)	26 db	−50 db	HF-2	**35.65**
MIXING							
HF-40	Low Imp. Mixer, Mic., Pickup, or Line to Line	50, 125/150, 200, 250, 333, 500/600	50, 125/150, 200, 250, 333, 500/600	17 db	−74 db	HF-1	**$28.75**
OUTPUT							
HF-65†	P.P. 2A3's, 6L6's, etc. to Line or Voice Coil	3,000 or 5,000 Plate to Plate	1.2, 2.5, 5, 7.5, 10, 15, 20, 30, 50, 125, 200, 250, 333 or 500	20 watts	......	HF-2	**$32.20**
HF-67†	P.P. 2A3's, 6L6's, etc. to Voice Coil	3,000 or 5,000 Plate to Plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	20 watts	......	HF-2	**23.00**
HF-68†	P.P. Par. 2A3's, 6A5G's, 300A's, 6A3's to Line or Voice Coil	1,500 or 2,500 Plate to Plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	40 watts	......	HF-3	**57.50**

§HF-1 Case: *Shpg. wt., 3.0 lbs. Height overall, 3¼". Base area, 2 9/16x3 1/16". Mtg. ctrs., 1 15/16"x2 7/16".* HF-2 Case: *Shpg. wt., 7.5 lbs. Height overall, 4⅛". Base area, 3 3/16"x4 3/16". Mtg. ctrs., 2 11/16"x3 11/16".* HF-3 Case: *Shpg. wt., 15.0 lbs. Height overall, 4 11/16". Base area, 4 11/16"x5 9/16". Mtg. ctrs., 4 3/16"x5 1/32".*

†Response ± 1 db from 25 to 20,000 cps.

¶As compared to standard uncased units.

‡Quadruple alloy magnetic shield.

WF Series

These units are of the same outstanding quality as the HF Series above, and, with the exception of two units, have a frequency response of 30–20,000 cps within ±2 db. The WF-21 and WF-35 have a response within ±2 db from 50–20,000 cps and have multiple alloy shields for extremely low hum pickup. All WF units are cased in the WF-6 type cast case with phenolic terminal board and four tapped holes for flush mounting. Overall dimensions are 2" high with 1½" x 1½" base area. Mounting centers are 1 5/32" x 1 5/32". Shipping weight is 0.6 lbs.

Part No.	Application	Primary Imp/Ohms	Secondary Imp/Ohms	List Price
INPUT				
WF-20	Low Imp. Mic., Pickup, or Line to Grid	50, 125/150, 200, 250, 333, 500/600	50,000	**$17.25**
WF-21	Low Imp. Mic., Pickup, or L. to Sgl. or P.P. Grids	50, 200, 500	50,000	**18.40**
WF-22	Low Imp. Mic., Pickup, or Line to P.P. Grids	50, 125/150, 200, 250, 333, 500/600	80,000 overall, in two sections	**17.25**
WF-24	Dynamic Microphone to 1 or 2 Grids	30	50,000 overall, in two sections	**16.10**
INTERSTAGE				
WF-26	Single Plate to Single Grid	15,000	60,000 (Turn ratio 2:1)	**$14.95**
WF-28	Sgl. Pl. to 2 Grids. Can use split pri. for P.P. Pl.	15,000	80,000 overall (Turn ratio 2.3:1 overall)	**16.10**
LOW LEVEL OUTPUT				
WF-34	Single Plate to Line	15,000	50, 125/150, 200, 250, 333, 500/600	**$17.25**
WF-36	P.P. Low Level Plates to Line	30,000 Plate to Plate	50, 125/150, 200, 250, 333, 500/600	**17.25**
WF-35	Single Plate to Multiple Line Primary D.C. 8.0 ma. Response from 50–20,000 cps within ±2 db	15,000	50, 125/150, 200, 250, 333, 500/600	**16.10**
MIXING				
WF-30	Low Imp. Mixer, Mic., Pickup, or Line to Line	50, 125/150, 200, 250, 333, 500/600	50, 125/150, 200, 250, 333, 500/600	**$17.25**

DRIVER TRANSFORMERS

STANDARD TRANSFORMER CORPORATION

SINGLE PLATE TO PUSH-PULL GRIDS

Part No.	Pri. Impedance in Ohms	Pri./½ Sec. Ratio	Core	Max. Pri. D.C.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-4713	10,000	2:1	⅝″ x ⅝″	30 ma.	A	1⅝″	2⅞″ x 1⅛″	0.7	**$2.70**
A-4752	10,000	2/1.5/1:1	¾″ x ¾″	40 ma.	A	2″	3¼″ x 1¾″	1.2	**4.00**
A-4722	10,000	2:1	¾″ x 1″	30 ma.	TD	2$\frac{11}{16}$″	2¾″ x 2$\frac{3}{16}$″	1.7	**5.90**
A-4292	10,000	2.5:1	⅝″ x ⅝″	20 ma.	A	1⅝″	2⅞″ x 1½″	0.7	**2.85**
‡A-4734	10,000	2.5:1	¾″ x ¾″	25 ma.	S	2$\frac{5}{16}$″	2⅞″ x 1¾″	1.2	**3.90**
A-4723	10,000	3:1	⅝″ x ⅝″	30 ma.	A	1⅝″	2⅞″ x 1½″	0.7	**2.70**
‡A-4721	10,000 to 22,500	3/2:1	¾″ x 1″	25 ma.	TD	2$\frac{11}{16}$″	2¾″ x 2$\frac{3}{16}$″	1.5	**6.45**
A-4210	1,500 to 5,000	3:1	1″ x 1″	40 ma.	C	3$\frac{3}{16}$″	2⅝″ x 2⅝″	2.4	**6.60**
A-4702	1,500 to 5,000	5:1	1″ x 1″	80 ma.	C	3$\frac{3}{16}$″	2⅝″ x 2⅝″	2.5	**6.50**

PUSH-PULL PLATES TO PUSH-PULL GRIDS

Part No.	Pri. Imp. (P.P.) in Ohms	Pri./½ Sec. Ratio	Core	Max. Pri. D.C.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-4404	3,000 to 5,000	2:1	1⅛″ x 1⅛″	90 ma.	C	3⅝″	3″ x 3⅛″	3.7	**$8.65**
A-4208#	20,000 to 30,000	2.8:1	1″ x 1″	15 ma.	C	3$\frac{3}{16}$″	2⅝″ x 2⅝″	2.5	**7.40**
A-4712	20,000	3:1	⅝″ x ⅝″	10 ma.	A	1⅝″	2⅞″ x 1½″	0.7	**3.20**
A-4701#	20,000	3:1	1″ x 1″	25 ma.	C	3$\frac{3}{16}$″	2⅝″ x 2⅝″	2.7	**8.50**
A-4212	1,500 to 5,000	3.2:1	1″ x 1″	50 ma.	C	3$\frac{3}{16}$″	2⅝″ x 2⅝″	2.5	**6.90**
A-4416#	3,000 to 10,000	5:1	1″ x 1″	40 ma.	C	3$\frac{3}{16}$″	2⅝″ x 2⅝″	2.8	**7.70**
A-4703#	3,000 to 10,000	5:1	1⅛″ x 1⅛″	95 ma.	C	3⅝″	3″ x 3⅛″	3.7	**8.40**

POLY-PEDANCE DRIVER MULTI-TAPPED UNITS FOR USE IN CIRCUITS WHERE THE OPTIMUM RATIO CANNOT BE PREDETERMINED.

Driver circuit changes often require new transformers. Many times it is impossible to match correctly tubes involved with a specific transformer, with high distortion resulting. *Poly-Pedance* units solve that problem; three transformers with the maximum number of usable ratios will match the driver tubes to any Class B modulator grid circuit without exceeding the power capabilities of the driver tubes.

Part No.	Application and Ratio Pri./½ Sec.	Max. D.C.	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-4761	Driver to Class "B" Grids 1.25:1/ 1.4:1/ 1.6:1/ 1.8:1/ 2:1/ 2.2:1/ 2.4:1	Pri—150 ma. Sec—100 ma.	15	CD	3$\frac{3}{16}$″	2⅝″ x 3⅝″	3.4	**$14.75**
A-4762	Driver to Class "B" Grids 2.6:1/ 3:1/ 3.2:1/ 3.4:1/ 4:1/ 4.5:1/ 5:1	Pri—150 ma. Sec—180 ma.	15	CD	3$\frac{3}{16}$″	2⅝″ x 3⅛″	2.7	**13.90**
A-4763	Driver to Class "B" Grids 1.25:1/ 1.5:1/ 1.75:1/ 2:1/ 2.25:1/ 3.2:1	Pri—225 ma. Sec—280 ma.	30	CD	3⅝″	3″ x 4″	4.3	**17.20**

POLY-PEDANCE LINE DRIVER MULTI-TAPPED UNITS TO MATCH ALL COMMON LINE IMPEDANCES TO GRID CIRCUIT OF MODULATOR OR CLASS "B" AMPLIFIER.

Designed with pie wound coils to assure low leakage inductance, low resistance and low capacity, these two units will easily match all common line impedances to any modulator grid circuit. Individually boxed with complete instructions.

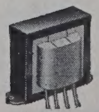
Part No.	Application and Ratio Pri./ ½ Sec.	Max. D.C.	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-4765	Line to Grid 1:0.75/ 1:0.85/ 1:1/ 1:1.25/ 1:1.45/ 1:1.75/ 1:2/ 1:2.25/ 1:2.5/ 1:2.75/ 1:3.15	Pri—180 ma. Sec—100 ma.	15	CD	3$\frac{3}{16}$″	2⅝″ x 3⅜″	3.2	**$15.25**
‡A-4766	Line to Grid 1:0.75/ 1:0.85/ 1:1/ 1:1.25/ 1:1.45/ 1:1.75/ 1:2/ 1:2.25/ 1:2.5/ 1:2.75/ 1:3.15	Pri—280 ma. Sec—200 ma.	30	CD	3⅜″	3″ x 3¾″	3.9	**16.95**

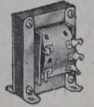
AUDIO CHOKES

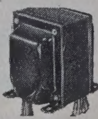
Audio reactors are rated at 2 volts, 200 cycles, with maximum D.C. in windings. Tolerance of plus 15% is maintained on all ratings.

Part No.	Rated Inductance	Max. D.C.	D.C. Res. in Ohms	Test Volts	Core	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
C-1034¶	8 hy at 30 ma.	30 ma.	1365	1500	¾″ x ¾″	A	2″	3¼″ x 1¾″	1.1	**$3.35**
C-1003	16 hy at 50 ma.	50 ma.	580	1500	¾″ x ¾″	A	2″	3¼″ x 1¾″	1.1	**2.25**
C-2301	135 hy at 5 ma.	10 ma.	6500	1500	¾″ x 1″	TD	2$\frac{11}{16}$″	2¾″ x 2$\frac{3}{16}$″	1.7	**5.60**

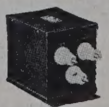
#These units have split secondaries for individual bias adjustment and/or use of inverse feedback.
¶Center tapped.

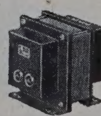

A

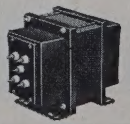

B


C

D


FA-FB


FK


FS

G

J

INPUT INTERSTAGE

STANDARD TRANSFORMER CORPORATION

MICROPHONE OR LINE TO LINE

Part No.	Impedance In Ohms	Mtg.	Height Overall	Base Area	Shpt. Wt. In Lbs.	List Price
A-4350#	Pri—500/333/200/125/50 Sec—500/333/200/125/50	Q	2″	3¼″ x 1¾″	1.0	**$ 5.90**
A-4407#†	Pri—500/333/200/125/50 Sec—500/333/200/125/50	D	3 3/16″	2⅝″ x 3¼″	2.4	**11.60**

MICROPHONE PICKUP OR LINE TO GRID

Part No.	Application	Impedance in Ohms	Turns Ratio	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-4705	S. B. Mic. to S. Grid	Pri—200/70 Sec—80,000	1:20	A	1⅜″	2⅜″ x 1⅜″	0.4	**$2.90**
A-4706	S. B. Mic. to S. Grid	Pri—100 Sec—60,000	1:24.5	A	1⅜″	2⅜″ x 1½″	0.5	**2.95**
A-4708	D. B. Mic. to S. Grid	Pri—200 CT Sec—57,000	1:17	J	2″	2⅜″ x 1⅝″	0.7	**3.90**
A-4742	S. B. Mic. to P.P. Grids	Pri—100 Sec—400,000 CT	1:64	S	2 5/16″	2⅞″ x 1¾″	1.2	**4.15**
A-4743	S. B. Mic. to P.P. Grids	Pri—100 Sec—400,000 CT	1:64	VE	2 5/16″	2⅞″ x 2⅛″	1.2	**5.70**
A-4351#	Mic. or Line to S. Grid	Pri—500/333/200/125/50 Sec—89,000	1:13.3	TD	2 11/16″	2¾″ x 2 3/16″	1.4	**6.30**
A-4352#	Mic. or Line to S. Grid	Pri—500/333/200/125/50 Sec—89,000	1:13.3	Q	2″	3¼″ x 1¾″	1.0	**5.50**
‡A-4726	Line and High Imp. to P.P. Grids	Pri—200 CT/50 and 2,500 Sec—100,000	1:22.4 1:6.3	TD	2 11/16″	2¾″ x 2 3/16″	1.4	**7.10**
A-4709	Dynamic Mic. or Pickup to S. Grid	Pri—30/15/8/4 Sec—106,000	1:60	TD	2 11/16″	2¾″ x 2 3/16″	1.7	**6.90**

INTERCOMMUNICATOR AND TRANSCEIVER

Part No.	Application	Impedance in Ohms	Max. Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-4744	Intercom. input	Pri—4 Sec—25,000	—	VE	1⅜″	2⅜″ x 1½″	0.5	**$2.55**
A-3833	Transceiver Input Mic. and Plate to Grid	Pri—200 and 5,000 Sec—60,000	5	A	1⅝″	2⅞″ x 1½″	0.7	**3.90**
‡A-3836	Transceiver Output. Plate to Low or High impedance phones	Pri—10,000 Sec—50 and 2,000	5	A	1⅝″	2⅞″ x 1½″	0.7	**3.80**

SINGLE PLATE TO SINGLE GRID—FOR 7,000-20,000 OHM PLATE IMPEDANCES

Part No.	Turns Ratio	Core	Max. Pri. D.C.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-53	1:3	½″ x ½″	10 ma.	A	1⅜″	2⅜″ x 1½″	0.5	**$2.40**

SINGLE PLATE TO PUSH-PULL GRIDS—FOR 7,000-15,000 OHM PLATE IMPEDANCES

A-52-C	1:2	½″ x ½″	10 ma.	A	1⅜″	2⅜″ x 1⅜″	0.4	**$2.50**
A-62-C	1:2	⅝″ x ⅝″	10 ma.	A	1⅝″	2⅞″ x 1½″	0.7	**2.75**
‡A-4745	1:2	¾″ x 1″	10 ma.	TD	2 11/16″	2¾″ x 2 3/16″	1.7	**7.50**

Recommended for use in super-regenerative circuits. Has a static shield between pri. and sec. windings.

A-53-C	1:3	½″ x ½″	10 ma.	A	1⅜″	2⅜″ x 1⅜″	0.5	**2.45**
A-63-C	1:3	⅝″ x ⅝″	10 ma.	A	1⅝″	2⅞″ x 1½″	0.7	**2.75**
A-73-C	1:3	¾″ x ¾″	10 ma.	A	2″	3¼″ x 1¾″	1.0	**3.45**
A-4719	1:3	¾″ x 1″	10 ma.	TD	2 11/16″	2¾″ x 2 3/16″	1.7	**6.60**
‡A-83-C	1:3	⅞″ x ⅞″	10 ma.	A	2¼″	3¾″ x 2¼″	1.5	**5.85**
‡A-103-C	1:3	1″ x 1″	10 ma.	A	2⅝″	4″ x 2¼″	2.2	**6.85**
A-64-C	1:4	⅝″ x ⅝″	10 ma.	A	2″	2⅜″ x 1¾″	0.7	**3.25**
A-4206#	1:3.25	1″ x 1″	15 ma.	C	3⅛″	2⅝″ x 2⅝″	2.5	**8.70**

MULTI-PURPOSE INTERSTAGE—PIE-WOUND SPLIT SECONDARIES

May be used as a single plate to single grid, single plate to push-pull grid, or push-pull plate to push-pull grid interstate transformers. Overall ratios are 3:1, however, primaries are center-tapped and secondaries have split windings, thus providing ratios of 1:1, 3:1 and 6:1 in either step-up or step-down applications.

A-4774	1:3	¾″ x ¾″	10 ma.	S	2 5/16″	2⅞″ x 1¾″	1.2	**$4.15**
A-4773	1:3	¾″ x 1″	10 ma.	TD	2 11/16″	2¾″ x 2 3/16″	1.7	**6.90**

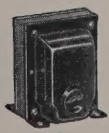
PUSH-PULL PLATES TO PUSH-PULL GRIDS—FOR 7,000-15,000 OHM PLATE IMPEDANCES

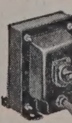
A-4711	1:1	⅝″ x ⅝″	10 ma.	A	1⅝″	2⅞″ x 1½″	0.7	**$3.30**
A-4155	1:3	¾″ x ¾″	10 ma.	L	2 1/16″	2 5/16″ x 1¾″	1.0	**5.80**

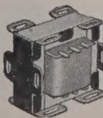
PUSH-PULL PLATES TO PARALLEL OR PUSH-PULL GRIDS—FOR 7,000-20,000 OHM PLATE IMPEDANCES

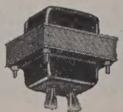
A-4208	1:1.4	1″ x 1″	15 ma.	C	3 3/16″	2⅝″ x 2⅝″	2.5	**$7.40**
‡A-4777	1:1.5	1″ x 1″	10 ma.	C	3 3/16″	2⅝″ x 2⅝″	2.5	**8.60**

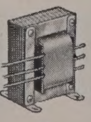
#Has a dual primary—when properly connected the 500 and 200 ohm sections are center tapped.
†Has a static shield between primary and secondary windings.
‡Designates part numbers to be removed from next catalog.

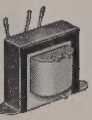

K

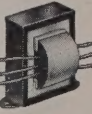

KA

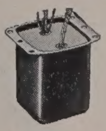

L

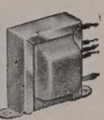

M


N


Q


S


TD


VE

OUTPUT TRANSFORMERS

STANDARD TRANSFORMER CORPORATION

SINGLE PLATE TO VOICE COIL

Part No.	Application	Max. Pri. D.C.	Typical Output Tubes	Class	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-3865	1,500 ohms to 6/4/2 ohms	55 ma.	48, 25B6, 25L6, 50L6	A	5	A	1⅜″	2⅜″ x 1⅜″	0.4	**$3.00**
A-3332	2,000 ohms to 3.2 ohms	50 ma.	25B5, 25B6, 25L6, 35A5, 35L6, 50L6	A	3	A	1 3/16″	2⅛″ x 1″	0.4	**1.45**
A-3330	2,000# ohms to 3.5 ohms	50 ma.	25B5, 25B6, 25L6, 35A5, 35L6, 50L6	A	5	A	1⅜″	2⅜″ x 1⅜″	0.4	**2.10**
A-3876	2,000 ohms to 4 ohms	60 ma.	2A3, 6A3, 6B4, 6W6, 6Y6, 25AC5, 25B5, 25B6, 25L6, 35A5, 35L6, 50L6	A	5	A	1⅜″	2⅜″ x 1⅜″	0.4	**1.75**
A-3328	4,000 ohms to 3.5 ohms	10 ma.	1S4, 3S4	A	3	A	1 3/16″	2⅛″ x 1″	0.4	**1.85**
‡A-2203	4,000 ohms to 8 ohms	40 ma.	43, 45, 48, 12A5, 25A6	A	5	A	1⅝″	2⅛″ x 1⅝″	0.7	**3.35**
A-3877	5,000 ohms to 4 ohms	40 ma.	43, 59, 6V6, 7C5, 25A5	A	5	A	1⅜″	2⅜″ x 1⅜″	0.4	**1.85**
A-3310	5,000 ohms to 500/15/8/4 ohms	55 ma.	45, 6L6, 6V6, 25A6, 25A7	A	20	C	3 3/16″	2⅝″ x 2⅝″	2.5	**7.30**
A-3878	7,000 ohms to 4 ohms	30 ma.	20, 31, 33, 42, 2A5, 6AC5, 6B5, 6F6, 6K6, 6N6, 7B5	A	5	A	1⅜″	2⅜″ x 1⅜″	0.4	**1.80**
A-2313	7,000 ohms to 8 ohms	40 ma.	33, 41, 42, 47, 59, 89, 2A5, 6AC5, 6F6, 6K6, 6N6, 7B5	A	10	A	2″	3¼″ x 1¾″	1.0	**3.10**
A-8114	7,600 ohms to 3.2 ohms	32 ma.	33, 41, 42, 47, 59, 89, 2A5, 6AC5, 6F6, 6K6, 6N6, 7B5	A	5	A	1⅜″	2⅜″ x 1⅝″	0.4	**2.40**
A-3329	8,000 ohms to 3.5 ohms	10 ma.	1C5-GT, 1G5-G, 1Q5-GT/G, 1S4, 3S4	A	3	A	1 3/16″	2⅛″ x 1″	0.4	**1.75**
A-3879	10,000 ohms to 4 ohms	30 ma.	1J6, 3C5, 6A4, 6G6, 6N7	A	5	A	1⅜″	2⅜″ x 1⅜″	0.4	**1.75**
A-3881	15,000 ohms to 4 ohms	10 ma.	1D8, 1E7, 1F4, 1F5, 1J5, 1T5, 6V7, 6Y7, 12A7	A	5	A	1⅜″	2⅜″ x 1⅜″	0.4	**1.95**
A-3327	25,000 ohms to 4 ohms	5 ma.	1A5, 1D8-GT, 1F4, 1F5-G, 1LA4, 1LB4, 1N6-G	A	5	A	1⅜″	2⅜″ x 1⅜″	0.4	**2.20**

PUSH-PULL PLATES TO VOICE COIL

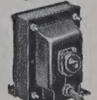
Part No.	Application	Max. Pri. D.C.	Typical Output Tubes	Class	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
‡A-3306	P.P. Par. 2,500 ohms to 500/15/8/4 ohms	100 ma.	45, 48, 2A3, 25L6	AB	25	C	3⅝″	3″ x 3⅛″	3.8	**$9.95**
‡A-3301	3,000 ohms to 500/15/8/4 ohms	55 ma.	48, 2A3, 6A3, 6B4, 25L6	AB	30	C	3⅝″	3″ x 3⅛″	3.7	**9.25**
A-3802	3,800/3,300 to 500/250/8/4 ohms	250 ma.	45, 6L6, Par. 6L6	AB2, AB1	75	C	4¾″	4″ x 3⅞″	7.9	**12.95**
A-5528	4,000 ohms to 500/15/8/4 ohms	65 ma.	6Y6, 25LG	AB	8	C	3 3/16″	2⅝″ x 2¼″	1.9	**7.25**
A-3851§	4,400 ohms to 500/250/15/8/4 ohms	70 ma.	6L6	AB1	30	C	3⅝″	3″ x 3⅛″	3.6	**9.55**
A-3872	5,000 ohms to 15/8/4 ohms	75 ma.	45, 2A3, 6A3, 6L6	AB	18	TD	2 11/16″	2¾″ x 2 3/16″	1.7	**6.20**
A-3800	5,000 ohms to 500/250/15/8/4 ohms	80 ma.	45, 2A3, 6A3, 6L6	AB	30	C	3⅝″	3″ x 3⅜″	3.7	**7.90**
A-3307	6,000 ohms to 500/15/8/4 ohms	100 ma.	46, 59, 42, 2A5, 6F6, Par. 53, 6A6, 6N7	B, AB2	30	C	3⅝″	3″ x 3⅛″	3.5	**10.25**
A-3801	6,600 ohms to 500/250/15/8/4 ohms	150 ma.	6L6	AB1	35	C	4″	3¼″ x 3⅜″	5.8	**9.50**
‡A-2201	8,000 ohms to 6 ohms	40 ma.	43, 45, 48, 71, 25A6	AB	10	A	2″	3¼″ x 1¾″	1.0	**4.25**
A-3885	9,000 ohms to 500/250/15/8/4 ohms	150 ma.	6L6	AB1	35	C	4″	3¼″ x 3⅜″	4.5	**11.25**
A-3304	10,000/7,000 ohms to 500/15/8/4 ohms	60 ma.	45, 6V6, 6AC5	AB	25	C	3 3/16″	2⅝″ x 2⅝″	2.7	**8.75**
A-3311	10,000 ohms to 500/15/8/4 ohms	70 ma.	6F6, 6V6, 6AC5	AB	25	C	3⅝″	3″ x 3⅛″	3.5	**8.25**
A-3831	10,000 ohms to 8/4/2 ohms	40 ma.	30, 49	AB	5	A	1⅝″	2″ x 1½″	0.7	**3.05**
A-2312	14,000 ohms to 4 ohms	40 ma.	33, 41, 42, 47, 49, 2A5, 6F6, 6K6, 7B5	AB	10	A	2″	3¼″ x 1¾″	1.0	**3.15**
A-3496	14,000 ohms to 4 ohms	25 ma.	33, 41, 42, 47, 49, 2A5, 6F6, 6K6, 7B5	AB	5	A	1⅜″	2⅜″ x 1⅜″	0.4	**2.90**
A-3303	14,000 ohms to 500/15/8/4 ohms	55 ma.	41, 42, 47, 59, 89, 2A5, 6F6, 6K6, 7B5	AB	20	C	3 3/16″	2⅝″ x 2⅝″	2.7	**8.65**
A-3857	25,000 ohms to 4 ohms	10 ma.	1F4, 1F5, 1J5, 1T5, 6G6 12A7, 950	A	5	A	1⅜″	2⅜″ x 1⅜″	0.4	**2.30**

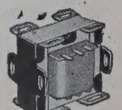
CRYSTAL RECORDER OUTPUT

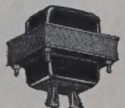
Part No.	Application	Max. Pri. D.C.	Audio Watts	Core Size	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-3853	Single 7,000 ohm plate to 70,000 ohm crystal cutter OR 4 ohm voice coil	35 ma.	5	¾″ x ¾″	A	2″	3¼″ x 1¾″	1.0	**$5.25**
A-3854	Single 7,000 ohm plate to 70,000 ohm crystal cutter AND 4 ohm voice coil	35 ma.	10	⅞″ x ⅞″	A	2¼″	3¾″ x 2¼″	1.5	**5.85**
A-3859	Push-pull 10,000 ohm plates to 70,000 ohm crystal cutter OR 4 ohm voice coil	30 ma. ea. ½	5	¾″ x ¾″	A	2″	3¼″ x 1¾″	1.0	**5.65**
A-3860	Push-pull 10,000 ohm plates to 70,000 ohm crystal cutter AND 4 ohm voice coil	35 ma. ea. ½	10	⅞″ x ⅞″	A	2¼″	3¾″ x 2¼″	1.5	**6.35**

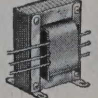
#Has tapped primary for use in hum-reducing circuit. §This unit has a tertiary winding to provide 10% inverse feedback.
‡Designates part number to be removed from next catalog.

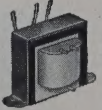
CD

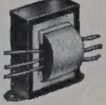

KA


L


M


N


Q


S

TD

WI-2

OUTPUT TRANSFORMERS

STANDARD TRANSFORMER CORPORATION

UNIVERSAL OUTPUT

Part No.	Application	Max. Pri. D.C.	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-3856	Single or Push-pull plates (4,000 to 14,000 ohms) to voice coil	35 ma.	4	Q	1⅜″	2⅜″ x 1⅜″	0.4	**$2.65**
A-3822	Single plate (7,000 to 10,000 ohms) to voice coil	35 ma.	4	Q	1⅜″	2⅜″ x 1⅜″	0.4	**2.50**
A-3848	Single plate (7,000 to 16,000 ohms) to voice coil	10 ma.	5	Q	1⅜″	2⅜″ x 1⅜″	0.4	**3.45**
A-3823	Single or Push-pull plates (4,000 to 14,000 ohms) to voice coil	40 ma.	8	Q	1⅝″	2⅜″ x 1½″	0.7	**2.85**
A-3850	Single or Push-pull plates (4,000 to 14,000 ohms) to voice coil	40 ma.	8	J	2″	2⅜″ x 1½″	0.7	**3.25**
A-3825	Single plate (1,500 to 4,500 ohms) to voice coil	75 ma.	8	Q	2″	3¼″ x 1⅝″	0.9	**3.60**
A-3824	Single or Push-pull plates (6,000 to 10,000 ohms) to voice coil	75 ma.	8	Q	2″	3¼″ x 2″	1.4	**4.50**
A-3849	Single plate (1,500 to 10,000 ohms) to voice coil	55 ma.	10	Q	1⅝″	2⅞″ x 1½″	0.7	**2.85**
A-3880	Push-pull plates (4,000 to 14,000 ohms) to voice coil	40 ma. ea. ½	15	Q	2¼″	3¾″ x 2¼″	1.7	**5.40**
A-2855	Push-pull plates (4,000 to 14,000 ohms) to voice coil	50 ma. ea. ½	15	L	2 1/16″	2 5/16″ x 1¾″	1.0	**4.70**
A-3890	Push-pull plates (4,000 to 14,000 ohms) to voice coil	50 ma. ea. ½	15	TD	2 11/16″	2¾″ x 2 3/16″	1.5	**7.20**
A-3852	Push-pull plates (4,000 to 14,000 ohms) to voice coil	40 ma. ea. ½	18	J	2 5/16″	2⅞″ x 2″	1.3	**3.65**
A-3870	Push-pull plates (4,000 to 14,000 ohms) to voice coil	50 ma. ea. ½	18	Q	2″	3¼″ x 2″	1.3	**4.50**
A-3830	Push-pull plates (3,000 to 10,000 ohms) to voice coil	60 ma. ea. ½	20	J	2 11/16″	3 5/16″ x 2¼″	1.8	**4.90**

TUBE TO LINE

Part No.	Application	Impedance in Ohms	Max. Pri. D.C.	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-3841	Single plate to line	Pri—7,000/6,000/5,000/4,000/2,500 Sec—500	60 ma.	10	J	2 11/16″	3 5/16″ x 2¼″	1.5	**$6.80**
A-3842	Push-pull plates to line	Pri—14,000/12,000/10,000/8,000 CT Sec—500	55 ma.	10	J	2 11/16″	3 5/16″ x 2¼″	1.7	**6.90**
A-4770	Single plate to line	Pri—7,000/6,000/5,000/4,000/2,500 Sec—500	60 ma.	20	J	3⅛″	3⅝″ x 2¼″	2.4	**7.00**
A-3250	Single plate or Push-pull plates to line	Pri—20,000/10,000/5,000 Pri—20,000 CT Sec—500/333/200/125/50	15 ma.	—	Q	2″	3¼″ x 1¾″	1.0	**4.50**
A-3315	Single plate or Push-pull plates to line	Pri—20,000/10,000/5,000 Pri—20,000 CT Sec—500/333/200/125/50	35 ma.	—	D	3 3/16″	2⅝″ x 2⅝″	2.7	**10.00**

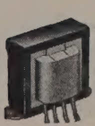
LINE TO VOICE COIL

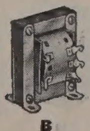
Part No.	Impedance in Ohms	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-8101	Pri—500 Sec—3.2/6-8	5	Q	1⅜″	2⅜″ x 1⅜″	0.4	**$2.00**
A-3883	Pri—500 Sec—15/8/6/4	25	J	2 5/16″	2⅞″ x 1¾″	1.1	**4.25**
A-3882	Pri—500/333/250 Sec—15/8/4	25	D	3 3/16″	2⅝″ x 3½″	2.4	**8.25**
A-3838	500/250/175/150/140/125/100/85/45/14/4/0.7 This Unit is designed to operate one or more speakers in series across a 500 ohm line or to match unequal lines.	30	B	3⅛″	2½″ x 2¼″	2.3	**6.50**
A-3818	Pri—1,500/1,000/500 Sec—15/8/4	25	J	3⅛″	3⅝″ x 2¼″	2.2	**4.95**
A-7947	Pri—2,000/1,500/1,000/500 Sec—6 ohms	8	Q	1⅝″	2 13/16″ x 1 9/16″	0.7	**2.95**
A-7949	Pri—2,000/1,500/1,000/500 Sec—6-8 ohms	12	J	2 5/16″	2⅞″ x 1 13/16″	1.1	**3.85**
A-3820	Pri—2,000/1,500/1,000/500 Sec—15/8/4	40	D	4 5/16″	3⅝″ x 4½″	5.0	**13.45**
A-3837	Line to Line or V. C. (Autoformer) Pri—500 Sec—8/4/2.65/2.35/2/1.5/0.7/0.5/0.3/0.2/0.1/0.05 This Unit is designed to operate one or more speakers in parallel across a 500 ohm line.	15	J	2 5/16″	2⅞″ x 2″	1.4	**5.00**

LINE TO VOICE COIL—OUTDOOR TYPE

Part No.	Impedance in Ohms	Rated Watts	Mtg.	Mtg. Centers Can or Brkt.	Height Overall	Base Area†	Shpg. Wt. in Lbs.	List Price
A-3333	Pri—3,000/2,000/1,500/1,000/500 Sec—16/8/4	14	TW	2″ x 3 5/32″	3½″	3½″ x 3″	3.4	**$12.95**
A-3334	Pri—3,000/2,000/1,500/1,000/500 Sec—16/8/4	25	TW	2″ x 3 5/32″	3½″	3½″ x 3″	3.5	**15.70**
20-337	Adapter Hardware Set For clamping Part Numbers A-3333 and A-3334 to the mounting bracket of a trumpet projector. Set consists of holding plate and four each of screws, nuts and lockwashers to secure transformer assembly to speaker bracket up to 2″ wide.							**.50**

†Dimensions with bracket.

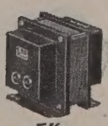

A

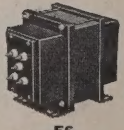

B

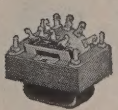
C

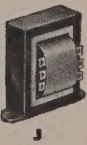
D

FA-FB


FK


FS


G


J

POWER TRANSFORMERS

STANDARD TRANSFORMER CORPORATION

COMBINATION PLATE AND FILAMENT SUPPLY

POWER TRANSFORMERS TO PROVIDE APPROXIMATELY 260 VOLTS D.C. TO CONDENSER INPUT FILTER

Type and Part No.	Plate Supply A.C. Volts	Plate Supply D.C. Ma.	Rectifier Fil. Volts	Rectifier Fil. Amps.	Other Windings Volts	Other Windings Amps.	Base Area	Overall Height	Mtg. Centers	Shpg. Wt. in Lbs.	List Price
PC8401 **PM8401**	235-0-235	40	5.0	2.0	6.3 CT	2.0	2⅝″ x 2⅝″ 2½″ x 3″	3³⁄₁₆″ 2⅝″	2″ x 1⁹⁄₁₆″ 2″ x 2½″	2.2	**$ 6.15**
PC8402 **PM8402**	240-0-240	55	5.0	2.0	6.3 CT	2.0	2⅝″ x 2¾″ 2½″ x 3″	3³⁄₁₆″ 2¾″	2″ x 1¹¹⁄₁₆″ 2″ x 2½″	2.4	**6.80**
PC8403 **PM8403**	250-0-250	70	5.0	2.0	6.3 CT	2.5	2⅝″ x 3⅛″ 2½″ x 3″	3³⁄₁₆″ 3⅛″	2″ x 2¹⁄₁₆″ 2″ x 2½″	3.2	**7.65**
PC8404 **PM8404**	260-0-260	90	5.0	2.0	6.3 CT	3.0	3″ x 3½″ 2⅞″ x 3⅜″	3⅝″ 3⅝″	2¼″ x 2¼″ 2¼″ x 2¹³⁄₁₆″	4.0	**8.60**
PC8405 **PM8405**	270-0-270	120	5.0	3.0	6.3 CT	3.5	3¼″ x 3½″ 3⅛″ x 3¾″	4″ 3½″	2½″ x 2³⁄₁₆″ 2½″ x 3⅛″	4.9	**9.50**

POWER TRANSFORMERS FOR USE WITH CHOKE INPUT FILTER, VR-TUBE REGULATED SUPPLY, SPEAKER FIELD IN FILTER, OR HIGHER VOLTAGE WITH CONDENSER INPUT FILTER

Type and Part No.	Plate Supply A.C. Volts	Plate Supply D.C. Ma.	Rectifier Fil. Volts	Rectifier Fil. Amps.	Other Windings Volts	Other Windings Amps.	Base Area	Overall Height	Mtg. Centers	Shpg. Wt. in Lbs.	List Price
PC8406 **PM8406**	325-0-325	40	5.0	2.0	6.3 CT	2.0	2⅝″ x 2¾″ 2½″ x 3″	3³⁄₁₆″ 2¾″	2″ x 1¹¹⁄₁₆″ 2″ x 2½″	2.4	**$ 6.25**
PC8407 **PM8407**	325-0-325	55	5.0	2.0	6.3 CT	2.0	2⅝″ x 3⅛″ 2½″ x 3″	3³⁄₁₆″ 3⅛″	2″ x 2¹⁄₁₆″ 2″ x 2½″	3.2	**6.90**
PC8408 **PM8408**	340-0-340	70	5.0	2.0	6.3 CT	2.5	3″ x 3⅜″ 2⅞″ x 3⅜″	3⅝″ 3½″	2¼″ x 2⅛″ 2¼″ x 2¹³⁄₁₆″	3.8	**7.95**
PC8409 **PM8409**	350-0-350	90	5.0	2.0	6.3 CT	3.0	3″ x 3⅝″ 2⅞″ x 3⅜″	3⅝″ 3¾″	2¼″ x 2⅜″ 2¼″ x 2¹³⁄₁₆″	4.5	**8.85**
PC8410 **PM8410**	360-0-360	120	5.0	3.0	6.3 CT	3.5	3¼″ x 3¾″ 3⅛″ x 3¾″	4″ 3¾″	2½″ x 2⁷⁄₁₆″ 2½″ x 3⅛″	5.5	**9.65**
PC8411 **PM8411**	375-0-375	150	5.0	3.0	6.3 CT	4.5	3⅝″ x 4″ 3½″ x 4⅛″	4⁵⁄₁₆″ 3⅞″	2¾″ x 2¹³⁄₁₆″ 2¾″ x 3⁷⁄₁₆″	5.8	**11.55**
PC8412 **PM8412**	400-0-400	200	5.0	3.0	6.3 CT	5.0	4″ x 4″ 3¾″ x 4½″	4¾″ 3⅞″	3″ x 2¹³⁄₁₆″ 3″ x 3¾″	8.2	**13.25**
PC8413	400-0-400	250	5.0	4.0	6.3 CT	5.0	4″ x 4½″	4¾″	3″ x 3⁵⁄₁₆″	10.0	**16.30**
PC8414	600-0-600	200	5.0	3.0	6.3 6.3	3.0 3.0	4″ x 4″	4¾″	3″ x 2¹³⁄₁₆″	8.3	**16.40**

POWER TRANSFORMERS FOR USE WITH 6AX5, 6X4, 6X5, OR SELENIUM RECTIFIERS

Type and Part No.	Plate Supply A.C. Volts	Plate Supply D.C. Ma.	Rectifier Fil. Volts	Rectifier Fil. Amps.	Other Windings Volts	Other Windings Amps.	Base Area	Overall Height	Mtg. Centers	Shpg. Wt. in Lbs.	List Price
PS8415	125 ½-wave	15	...	...	6.3	0.6	2⅜″ x 1⅜″	2″	2″	0.7	**$ 2.90**
PS8416	125-0-125	25	...	...	6.3	1.0	2⅞″ x 1¾″	2⁵⁄₁₆″	2⅜″	1.0	**3.60**
PC8417	220-0-220	50	6.3	0.6	25.2	0.5	2⅝″ x 2⅝″	3³⁄₁₆″	2″ x 1⁹⁄₁₆″	2.2	**6.70**
PC8418 **PM8418**	230-0-230	50	...	...	6.3	2.5	2⅝″ x 2⅝″ 2½″ x 3″	3³⁄₁₆″ 2⅝″	2″ x 1⁹⁄₁₆″ 2″ x 2½″	2.2	**5.95**
PC8419 **PM8419**	240-0-240	70	...	...	6.3	3.0	2⅝″ x 2⅞″ 2½″ x 3″	3³⁄₁₆″ 2⅞″	2″ x 1¹³⁄₁₆″ 2″ x 2½″	2.6	**6.80**
PC8420 **PM8420**	260-0-260	90	...	...	6.3	4.0	3″ x 3½″ 2⅞″ x 3⅜″	3½″ 3½″	2″ x 2¼″ 2¼″ x 2¹³⁄₁₆″	3.5	**7.60**

CATHODE RAY TUBE POWER TRANSFORMERS

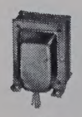
For use with type 2X2 rectifier tubes in a conventional half-wave voltage supply.

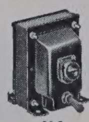
Part No.	Plate Supply A.C. Volts	Plate Supply D.C. Milliamperes	Rectifier Filament Volts	Rectifier Filament Amperes	Other Windings Volts	Other Windings Amperes	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
***P-8150**	1,550 half-wave	1.5	2.5	1.75	...	...	TD	3¹⁄₁₆″	3″ x 2½″	1.8	**$ 9.75**
***P-8151**	2,400 half-wave	5.0	2.5	2.0	2.5	2.0	C	4⁵⁄₁₆″	3⁹⁄₁₆″ x 3⅞″	6.4	**14.80**

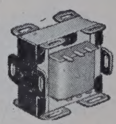
SPEAKER FIELD SUPPLY TRANSFORMER

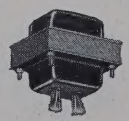
Part No.	Plate Supply A.C. Volts	Plate Supply D.C. Milliamperes	Rectifier Filament Volts	Rectifier Filament Amperes	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6146	120-0-120	250	5.0	3.0	C	4″	3¼″ x 3⅛″	4.2	**$10.40**

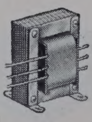
All Primary Windings for 117 V-60 cycle operation unless otherwise indicated. *New part number.

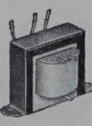

PC

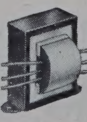

KA

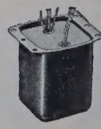

L

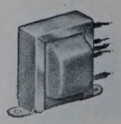

PM


N


Q


PS


TD


VE

POWER TRANSFORMERS

STANDARD TRANSFORMER CORPORATION

REPLACEMENT POWER TRANSFORMERS (Misc.)

Part No.	Plate Supply A.C. Volts	Plate Supply D.C. Ma.	Rectifier Filament Volts—Amperes	Other Windings Volts—Amperes	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6001	325-0-325	40	5.0 CT–2.0	2.5 CT–4.0	M	2¾″	2½″ x 3″	2.5	**$ 7.95**
‡P-6002	350-0-350	50	5.0 CT–2.0	2.5 CT–7.25	M	3⅛″	2½″ x 3″	3.0	**9.90**
P-6003	350-0-350	70	5.0 CT–2.0	2.5 CT–9.0	M	3⅛″	2⅞″ x 3⅜″	3.7	**11.30**
P-6005	350-0-350	70	5.0 CT–3.0	2.5 CT–9.0 2.5 CT–3.5	M	4¼″	2⅞″ x 3⅜″	4.8	**7.75**
‡P-6009	275-0-275	70	5.0 CT–3.0	2.5 CT–10.5 5.0 C.T.–0.5	M	3¼″	2⅞″ x 3⅜″	3.8	**11.85**
‡P-4042	350-0-350	70	5.0–3.0	2.5 CT–3.5 2.5–7.5	C	4″	3¼″ x 3″	3.8	**11.90**
‡P-4047	350-0-350	70	5.0–3.0	2.5 CT–9.0 6.3–3.0	C	4″	3¼″ x 3″	3.8	**11.20**
P-6004	350-0-350	90	5.0 CT–3.0	2.5 CT–12.5	M	3″	3⅛″ x 3¾″	4.2	**10.20**
‡P-4043	350-0-350	90	5.0–3.0	2.5 CT–3.5 2.5–9.0	C	4 5/16″	3⅝″ x 3⅜″	4.8	**13.05**
‡P-4048	350-0-350	90	5.0–3.0	2.5 CT–10.0 6.3–3.5	C	4 5/16″	3⅝″ x 3⅜″	5.2	**12.55**
P-6007	400-0-400	110	5.0 CT–3.0	2.5 CT–15.0 2.5 CT–3.5	M	3⅜″	3⅛″ x 3¾″	5.4	**12.50**
‡P-6290	350-0-350	120	18/24/50 v. † 5.0 CT–3.0	6.3 CT–4.7	M-2	3⅛″	3¾″ x 3⅜″	5.4	**13.60**
P-6006	350-0-350	120	5.0 CT–3.0	2.5 CT–12.5 2.5 CT–3.5	M	3⅝″	3⅛″ x 3⅝″	5.5	**13.20**
P3005#	360-0-360 80 v. Bias	125	5.0 CT–3.0 5.0 CT–2.0	2.5 CT–10.0 6.3 CT–4.0	C	4¾″	4″ · 3⅞″	8.0	**17.95**
P-6143	440-0-440	130	5.0–3.0	6.3 CT–3.5	C	4 5/16″	3⅝″ x 3⅞″	7.0	**13.50**
P-4004#	400-0-400 80 v. Bias	175	5.0 CT–3.0	2.5–1.75 6.3 CT–2.5 6.3 CT–2.5	C	4¾″	4″ x 3⅞″	8.3	**15.80**
P-5059#	337.5-0-337.5	200	5.0 CT–3.0	6.3 CT–5.0	C	4¾″	4″ x 4¼″	9.6	**15.35**
P-6315	370-0-370	275	5.0 CT–3.0	6.3 CT–7.0	M	4¼″	3¾″ x 4½″	9.3	**17.70**

VIBRATOR TRANSFORMERS WITH 6 VOLT D.C. PRIMARY

Part No.	Secondary A.C. Volts	Secondary Volts	D.C. to Filter Milliamperes	Recommended Buffer Cap.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6301	210-0-210	150	40	0.008 mfd.	S	2 5/16″	2⅞″ x 1¾″	1.2	**$4.60**
P-4060	240-0-240	225	40	0.008 mfd.	N	3⅛″	2½″ x 2⅝″	2.5	**5.95**
P-4061	290-0-290	250	50	0.006 mfd.	N	3⅛″	2½″ x 2⅝″	2.5	**5.90**
P-4062	300-0-300	260	65	0.006 mfd.	N	3⅛″	2½″ x 2⅝″	2.3	**6.50**
P-4063	320-0-320	285	75	0.006 mfd.	N	3⅛″	2½″ x 2¾″	2.8	**8.25**
P-6131	370-0-370	330	100	0.007 mfd.	N	3½″	2⅞″ x 2″⅞	3.5	**8.90**

VIBRATOR TRANSFORMER WITH 6 VOLT D.C. AND 117 VOLT A.C. PRIMARY

P-6166	350-0-350	—	135	C	4¾″	4″ x 3⅝″	6.9	**$14.90**

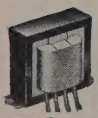
Filament—6.3 volts at 2.25 Amps.

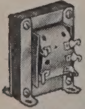
AUTO RADIO VIBRATOR TRANSFORMERS—EXACT DUPLICATE

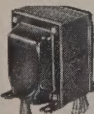
Exact duplicate of mounting type used in original equipment. For detailed drawings, see Howard W. Sams *Auto Radio Manual.*

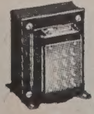
Part No.	Original Part No.	Trade Name	D.C. Volts at Filter Input	D.C. Ma.	Recommended Buffer Cap.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
***P-4064**	7240519	United Motors (Delco)	280	65	0.015–0.015 mfd.	3 9/16″	2 9/16″ x 2 9/16″	2.5	**$10.40**
***P-4065**	7255881	United Motors (Delco)	265	56	0.006 mfd.	4 1/16″	2⅜″ x 2 7/32″	2.6	**9.90**
***P-6470**	140-111	Regal (5-tube univ. series)	145	50	0.009 mfd.	2 11/16″	2 11/16″ x 2 3/16″	1.4	**6.75**
***P-6471**	25B472533	Motorola (408, 508, etc.)	235	70	0.006 mfd.	3″	3⅜″ x 2 3/16″	2.0	**6.90**
***P-6472**	D 71014 C 217020 C 71014 25B70950	Colonial-Detrola No. 8072 Colonial-Bendix M1 Colonial-Motorola Motorola (405, 505, etc.)	270	56	0.007 mfd.	2⅝″	2 27/32″ x 2 5/32″	2.0	**6.90**
***P-6473**	95-1073	Zenith	272	73	0.008 mfd.	3 1/32″	2⅜″ x 2½″	2.4	**7.85**
***P-6474**	95-1066	Zenith	240	52.5	0.008 mfd.	3 1/32″	2⅜″ x 2½″	2.2	**7.00**
***P-6476**	D 70267 C 70267	Colonial-Detrola No. 7070 Col.-Mot.-Det. No. 8030	220	53.5	0.008 mfd.	2⅝″	2 27/32″ x 2 5/32″	2.0	**7.10**

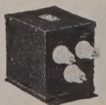
All Primary Windings for 117 V-60 cycle operation unless otherwise indicated. #Primary for 117/107 volts.
†Motor-tuner windings for intermittent duty. ‡Designates part number to be removed from next catalog. *New part number.

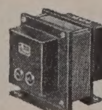

A

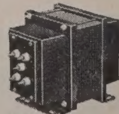

B

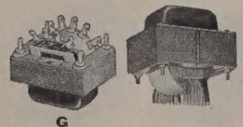

C


D


FA-FB


FK


FS


G

FILTER CHOKES

STANDARD TRANSFORMER CORPORATION

SMOOTHING CHOKES FOR D.C. POWER SUPPLIES.

Inductance varies with the amount of D.C. flowing through the coil, therefore these units have been tested under uniform conditions. They are rated at 10 volts, 60 cycles, with maximum D.C. in winding. Tolerance of plus 15% is maintained on all ratings.

Part No.	Rating Induc.	at	Ma. D.C.	D.C. Res. in Ohms	R.M.S. V. Insul.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
C-1515	20.0 hy.	at	15 ma.	900	1500	A	1⅝″	2⅞″ x 1½″	0.7	**$2.00**
C-1706	4.5 hy.	at	50 ma.	300	1500	A	1⅜″	2⅜″ x 1⅜″	0.4	**1.65**
C-1707	7.0 hy.	at	50 ma.	550	1500	A	1⅜″	2⅜″ x 1⅜″	0.4	**1.80**
C-1003	16.0 hy.	at	50 ma.	580	1500	A	2″	3¼″ x 1¾″	1.1	**2.25**
C-1708	13.0 hy.	at	65 ma.	500	1500	A	2″	3¼″ x 1¾″	1.0	**2.75**
C-1355	8.0 hy.	at	75 ma.	290	1500	L	2¹⁄₁₆″	2⁵⁄₁₆″ x 1¾″	1.0	**2.75**
C-1002	15.0 hy.	at	75 ma.	400	1500	A	2¼″	3¾″ x 2¼″	1.7	**3.00**
C-1420	16.0 hy.	at	80 ma.	360	1500	C	3³⁄₁₆″	2⅝″ x 2⅝″	2.5	**4.90**
C-1709	8.0 hy.	at	85 ma.	250	1500	A	2″	3¼″ x 2″	1.4	**3.10**
C-2305	5.0 hy.	at	100 ma.	300	1500	TD	2¹¹⁄₁₆″	2¾″ x 2³⁄₁₆″	1.5	**4.25**
C-1001	10.5 hy.	at	110 ma.	225	3000	A	2⅝″	4″ x 2¼″	2.3	**4.10**
C-2303	2.5 hy.	at	130 ma.	100	2000	A	2″	3¼″ x 1¾″	1.0	**2.80**
C-1421	7.0 hy.	at	140 ma.	165	3000	C	3³⁄₁₆″	2⅝″ x 2⅝″	2.5	**5.60**
C-2304	2.3 hy.	at	150 ma.	60	1500	A	2″	3¼″ x 1¾″	1.0	**2.90**
C-2309	3.0 hy.	at	150 ma.	90	2000	A	2¼″	3¾″ x 2¼″	1.7	**3.50**
C-1710	7.0 hy.	at	150 ma.	200	1500	A	2⅝″	4″ x 2¼″	2.2	**4.50**
C-1410	4.0 hy.	at	175 ma.	100	3000	C	3³⁄₁₆″	2⅝″ x 2⅝″	2.4	**5.70**
C-1646	5.0 hy.	at	200 ma.	90	5000	C	4″	3¼″ x 3⅜″	4.5	**8.15**
C-1411	4.5 hy.	at	200 ma.	80	3000	C	3⅝″	3″ x 3⅛″	3.5	**6.50**
C-1721	8.5 hy.	at	200 ma.	120	3000	N	3⅞″	3⅛″ x 3″	4.4	**7.45**
C-1703	4.0 hy.	at	250 ma.	60	3000	B	3½″	2⅞″ x 3⅛″	4.2	**8.25**
C-1412	4.0 hy.	at	250 ma.	60	3000	C	3⅝″	3″ x 3½″	4.3	**9.50**
C-1722	8.0 hy.	at	300 ma.	80	3000	N	4⅝″	3¾″ x 3½″	7.3	**12.00**
C-2308	8.0 hy.	at	300 ma.	80	3000	C	4¾″	4″ x 3⅞″	7.8	**12.50**
C-1413	8.0 hy.	at	300 ma.	80	5000	D	4¾″	4″ x 4⅛″	7.8	**12.15**
C-1414	7.5 hy.	at	400 ma.	60	5000	D	4¾″	4″ x 5⅛″	11.8	**17.50**
C-1415	6.0 hy.	at	500 ma.	75	7500	FS	7⅝″	6⅛″ x 7″	23.7	**40.50**

SWINGING CHOKES FOR INPUT SECTION OF D.C. POWER SUPPLIES.

Inductance varies with the amount of D.C. flowing through the coil, therefore these units have been tested under uniform conditions. Swinging chokes are rated at 10 volts, 60 cycles, from maximum to 10% of maximum D.C. in windings. Tolerance of plus 15% is maintained on all ratings.

Part No.	Min. Swg. Induc.	D.C. Res. in Ohms	Approx. Range of Induc.	at	D.C. Ma.	R.M.S. V. Insul.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
C-1718	10 hy.	130	13.5-3.5 hy.	at	15-150	2000	C	3³⁄₁₆″	2⅝″ x 2½″	2.3	**$5.60**
C-1400	10 hy.	100	12-2	at	17.5-175	3000	C	3³⁄₁₆″	2⅝″ x 2⅝″	2.4	**6.25**
C-1401	10 hy.	80	12-2	at	20-200	3000	C	3⅝″	3″ x 3⅛″	3.5	**7.15**
C-1645	10 hy.	90	12-2	at	20-200	5000	C	4″	3¼″ x 3⅜″	4.5	**8.25**
C-1702	10 hy.	60	12-2	at	25-250	3000	B	3½″	2⅞″ x 3⅛″	4.3	**8.25**
C-1402	10 hy.	60	12-2	at	25-250	3000	C	3⅝″	3″ x 3½″	4.3	**9.50**
C-1720	16 hy.	80	20-4	at	30-300	3000	N	4⅝″	3¾″ x 3½″	7.2	**11.75**
C-2307	16 hy.	80	20-4	at	30-300	3000	C	4¾″	4″ x 3⅞″	7.9	**13.75**
C-1403	16 hy.	80	20-4	at	30-300	5000	D	4¾″	4″ x 4⅛″	7.7	**11.95**
C-1404	14 hy.	60	17-3	at	40-400	5000	D	4¾″	4″ x 5⅛″	11.7	**17.50**
C-1405	12 hy.	75	16-4	at	50-500	7500	FS	7⅝″	6⅛″ x 7″	24.3	**36.00**

SMOOTHING CHOKES FOR USE IN A.C.-D.C. POWER SUPPLIES.

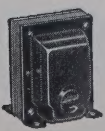
Inductance varies with the amount of D.C. flowing through the coil, therefore these units have been tested under uniform conditions. Filter chokes are rated at 10 volts, 60 cycles, with maximum D.C. in windings Tolerance of plus 15% is maintained on all ratings.

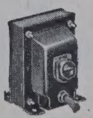
Part No.	Rating Induc.	at	Ma. D.C.	D.C. Res. in Ohms	R.M.S. V. Insul.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
C-1080	3.5 hy.	at	50 ma.	200	1500	A	1⅝″	2⅞″ x 1½″	0.7	**$1.95**
C-1325	5.0 hy.	at	50 ma.	250	1500	A	1⅝″	2⅞″ x 1½″	0.7	**2.10**
C-1277	7.0 hy.	at	50 ma.	300	1500	A	1⅝″	2⅞″ x 1½″	0.7	**2.25**
C-1723	4.5 hy.	at	50 ma.	325	1500	A	1⅜″	2⅜″ x 1⅜″	0.4	**1.75**
C-1227	7.0 hy.	at	50 ma.	350	1500	A	1⅝″	2⅞″ x 1½″	0.7	**2.25**
C-1279	8.5 hy.	at	50 ma.	400	1500	A	1⅝″	2⅞″ x 1½″	0.7	**2.00**
C-1333	8.0 hy.	at	50 ma.	450	1500	A	1⅝″	2⅞″ x 1½″	0.7	**2.00**
C-1215	9.0 hy.	at	50 ma.	500	1500	A	1⅝″	2⅞″ x 1½″	0.7	**1.85**

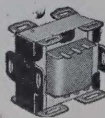
SPEAKER FIELD SUBSTITUTE CHOKE

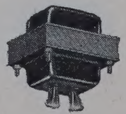
Part No.	D.C. Resistance	Max. Current	Height Overall	Base Area	Mtg.	Shpg. Wt. in Lbs.	List Price
C-2302	1750/1000/750/500 ohms 3000/2500/2250/2000/1500/500 ohms	60 ma. cont. or 75 ma. int. 40 ma. cont. or 55 ma. int.	3½″	2⅞″ x 2¼″	N	3.1	**$8.30**

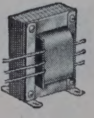
‡Designates part number to be removed from next catalog.

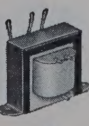

K

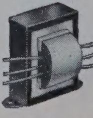

KA

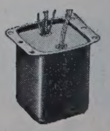

L

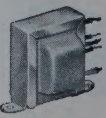

M


N


Q


S


TD


VE

MODULATION TRANSFORMERS

STANDARD TRANSFORMER CORPORATION

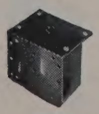
PLATE MODULATION

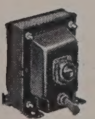
Part No.	Impedance in Ohms	Max. Ma. D.C./Tube Pri.	Sec.	Typical Output Tubes	Class	Audio Watts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-3812	Pri—10,000 CT Sec—4,000	32	50	Sgl.—37, 38, 41, 1G5, 6K6 Sgl.—19, 1G6, 1J6, 6E6, 6G6, 6Z7 P.P.—30, 49, 1H4	A B B	5	A	1⅝″	2⅞″ x 1½″	0.7	**$3.25**
A-3871	Pri—4,500 Sec—8,500 #Secondary used as primary.	60	50	Sgl.—6L6, HY69 #Sgl.—6B5, 6F6, 6N6	A A	10	TD	2 11/16″	2¾″ x 2 3/16″	1.4	**5.90**
‡A-3873	Pri—8,500 CT Sec—8,000	100	100	Sgl.—6B5, 6F6, 6N6 P.P.—6L6, RK56, HY60	A AB	25	C	3 3/16″	2⅝″ x 3⅝″	4.2	**9.60**
A-3845	Pri—10,000 CT Sec—8,000/6,500/5,000/3,000	100	100	Sgl. 53, 79, 6A6, 6N7, 6Y7 P.P.—42, 2A5, 6F6, 6V6	B AB2	25	C	3 3/16″	2⅝″ x 2¾″	2.8	**7.60**
A-3835	Pri—5,000/3,000 CT Sec—10,000/8,350/5,350	80	100	P.P.—45, 50, 2A3, 6A3, 6A5, 6B4, 6L6	AB	25	C	4″	3¼″ x 3⅛″	4.0	**10.25**
‡A-3868	Pri—6,600 CT Sec—12,000/10,000	100	70	P.P.—6L6	AB	35	C	3 3/16″	2⅝″ x 3⅝″	4.0	**9.95**
‡A-3843	Pri—6,600 CT Sec—14,500/7,500/5,000	150	150	P.P.—6L6, RK56, HY56	AB	40	D	4 5/16″	3⅝″ x 4⅞″	6.2	**14.15**
A-3808	Pri—3,800/3,300 CT Sec—10,000/7,500/5,000/4,000	260	170	P.P.—6L6, 807, HY61, RK41 P.P. Par—6L6	AB2 AB1	60	D	4¾″	4″ x 2⅞″	7.7	**16.60**
‡A-2907	Pri—8,000 CT Sec—12,500/9,000/6,800/5,000/3,300	200	150	P.P.—10, T20, TZ20, HY25, 46, 801, 825, 841	B	90	D	4¾″	4″ x 5¼″	9.7	**19.35**
‡A-2908	Pri—12,000/7,200 CT Sec—6,250/5,350/4,500/3,000	260	220	P.P.—RK18, T20, TZ20, HY25, RK31, 35T, 50T, 800, 801, 830B, 1623	B	120	D	4¾″	4″ x 5⅝″	9.7	**20.80**
A-3829	Pri—9,000/6,900 CT Sec—6,250/5,000/4,000/3,300	250	300	P.P.—RK12, HY25, 35T, HY40Z, T40, TZ40, 100TL, HK354, 756, 809, 830B	B	175	D	4¾″	4″ x 6⅛″	11.4	**21.00**

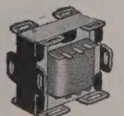
POLY-PEDANCE MODULATION MULTI-TAPPED UNITS TO PROPERLY MATCH THE OUTPUT OF THE MODULATOR STAGE TO THE MODULATED LOAD. WILL MATCH ALL COMMON IMPEDANCES OF CLASS "B" MODULATOR (2,000 to 20,000 OHMS) TO CLASS "C" LOAD IMPEDANCES OF 2,000 TO 20,000 OHMS.

The number of excellent transmitting tubes available is constantly increasing. R.F. applications, too, have increased and it is sometimes difficult to obtain the correct modulation transformer suitable for matching some given modulator tubes or R.F. load. These units give an almost unlimited range in power and impedance ratings to assure a correct impedance match in all cases.

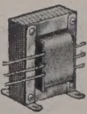
Part No.	Max. Watts	Max. D.C.	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
A-3891	15	Pri—100 ma. Sec—100 ma.	D	3 3/16″	2⅝″ x 2⅞″	2.5	**$12.00**
A-3892	30	Pri—150 ma. Sec—150 ma.	D	4″	3¼″ x 3⅝″	4.3	**15.20**
A-3893	60	Pri—180 ma. Sec—180 ma.	D	4″	3¼″ x 4⅛″	6.2	**14.75**
A-3894	125	Pri—225 ma. Sec—225 ma.	D	4¾″	4″ x 4⅝″	9.4	**19.90**
A-3898	300	Pri—260 ma. Sec—260 ma.	FS	7¾″	7⅜″ x 8⅛″	37.9	**62.50**
A-3899	600	Pri—500 ma. Sec—500 ma.	FS	11¼″	7⅜″ x 9″	70.0	**124.50**

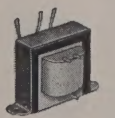

TW

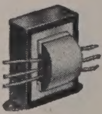

KA


L

M


N


Q


S

TD

W1-2

FILAMENT TRANSFORMERS

STANDARD TRANSFORMER CORPORATION

FILAMENT TRANSFORMERS WITH SINGLE SECONDARY

Part No.	Secondary Volts	Secondary Amperes	R.M.S. V. Insul.	Primary Volts#	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-4026	2.5	1.5	2,500	117	A	1⅝″	2⅞″ x 1½″	0.7	**$3.25**
P-4082	2.5 CT	2.5	2,500	117/107	TD	2 11/16″	2¾″ x 2 3/16″	1.5	**6.40**
P-6133	2.5 CT	5.0	7,500	117	S	2 11/16″	3 5/16″ x 2¼″	1.5	**5.15**
P-4083	2.5 CT	6.0	2,500	117/107	C	3 3/16″	2⅝″ x 2⅜″	2.2	**6.70**
P-3024	2.5 CT	10.0	2,500	117/107	C	3 3/16″	2⅝″ x 2⅝″	2.5	**6.80**
P-3060	2.5 CT	10.0	10,000	117	B	3½″	2⅞″ x 2½″	2.5	**6.25**
‡P-3025	2.5 CT	10.0	10,000	117/107	FA	5⅛″	4¼″ x 8½″	10.7	**19.75**
P-3026	5.0 CT	3.0	2,500	117/107	C	3 3/16″	2⅝″ x 2⅝″	2.4	**6.80**
P-4088	5.0 CT	3.0	2,500	117	B	3⅛″	2½″ x 2½″	1.8	**4.95**
P-3062	5.0 CT	6.0	2,500	117	B	3⅛″	2½″ x 2½″	2.3	**5.75**
P-5000	5.0 CT	6.0	2,500	117/107	C	3 3/16″	2⅝″ x 2⅞″	3.1	**7.90**
P-6135	5.0 CT	10.0	2,500	117	N	3⅛″	2½″ x 2⅞″	3.0	**6.40**
‡P-4086	5.0 CT	14.0	10,000	117/107	FA	5⅛″	4¼″ x 8½″	12.3	**22.50**
P-6302	5.0 CT	22.0	10,000	117/107	FA	5⅛″	4¼″ x 8½″	13.5	**24.60**
‡P-6305	5.0 CT	30.0	10,000	117/107	FB	5⅛″	4¼″ x 10″	18.3	**30.70**
P-6137	5.25 CT	13.0	2,500	117	N	3⅞″	3⅛″ x 3¼″	5.2	**10.25**
P-6134	6.3 CT	1.2	2,500	117	A	1⅝″	2⅞″ x 1⅝″	0.8	**2.70**
P-5014	6.3 CT	3.0	2,500	117	B	3⅛″	2½″ x 2½″	2.0	**4.75**
P-4019	6.3 CT	4.0	2,500	117/107	C	3 3/16″	2⅝″ x 2⅝″	2.7	**6.55**
P-3064	6.3 CT	6.0	2,500	117	B	3⅛″	2½″ x 2⅞″	2.4	**5.80**
P-4089	6.3 CT	6.0	2,500	117/107	C	3⅝″	3″ x 3⅛″	3.5	**7.50**
P-6308	6.3 CT	10.0	2,500	117/107	N	3½″	2⅞″ x 2¾″	3.4	**6.95**
P-6309	6.3 CT	20.0	2,500	117/107	N	4⅝″	3¾″ x 3″	6.7	**12.90**
P-6164	6.3/5/2.5	2.5	2,500	117	J	2 11/16″	3 5/16″ x 2¼″	1.7	**5.30**
P-5015	7.5 CT	4.0	2,500	117	B	3⅛″	2½″ x 2⅞″	2.7	**5.75**
P-4091	7.5 CT	5.0	2,500	117/107	C	3⅝″	3″ x 3″	3.4	**8.90**
P-6138	7.5 CT	8.0	2,500	117	N	3⅞″	3⅛″ x 2⅞″	4.7	**8.15**
P-4092	7.5 CT	8.0	2,500	117/107	C	4″	3¼″ x 3⅜″	4.7	**9.25**
P-5016	10.0 CT	4.0	2,500	117	B	3½″	2⅞″ x 2⅝″	3.3	**6.95**
P-4096	10.0 CT	5.0	2,500	117/107	C	4″	3¼″ x 3⅛″	4.0	**8.25**
P-6139	10.0 CT	8.0	2,500	117	N	3⅞″	3⅛″ x 3⅛″	4.9	**8.45**
P-4097	10.0 CT	8.0	2,500	117/107	C	4″	3¼″ x 3⅝″	5.2	**8.95**
P-5002	10.0 CT	12.0	7,500	117/107	FA	5⅛″	4¼″ x 8½″	14.7	**23.65**
P-3020	11.0 CT	10.0	2,500	117/107	C	4¾″	4″ x 3½″	7.7	**13.25**
***P-8130**	12.6 CT	2.0	1,500	117	A	2″	3¼″ x 2″	1.4	**4.65**
***P-6469**	25.2	1.0	1,500	117	A	2″	3¼″ x 2″	1.4	**4.50**

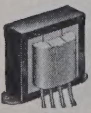
FILAMENT TRANSFORMERS WITH MULTIPLE SECONDARY

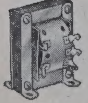
Part No.	Secondary Volts	Secondary Amperes	R.M.S. V. Insul.	Primary Volts#	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6144	2.5 CT 5.0 CT 6.3 CT	3.5 3.0 3.0	2,500 2,500 2,500	117	C	3⅝″	3″ x 3⅛″	3.7	**$10.35**
P-6338	2.5 5.0 5.0 CT 6.3 CT	3.0 3.0 2.0 3.0	2,500 2,500 2,500 2,500	117	N	3½″	2⅞″ x 2¾″	3.4	**9.80**
P-5009	5.0 CT 6.3 CT	3.0 6.0	2,500 2,500	117/107	C	4″	3¼″ x 3¼″	4.5	**11.80**
P-5008	5.0 CT 6.3 CT	4.0 3.6	2,500 2,500	117/107	C	3⅝″	3″ x 3¼″	3.8	**10.40**
P-4022	5.0 CT 6.3 CT	6.0 6.0	2,500 2,500	117/107	C	4″	3¼″ x 3⅜″	4.8	**11.40**
P-6333	5.0 5.0 6.3 CT 7.5/6.3 CT	3.0 3.0 4.0 3.0	2,500 2,500 2,500 2,500	117	B	3½″	2⅞″ x 3⅞″	4.7	**11.40**

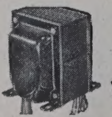
TUBE CHECKER MULTI-TAPPED FILAMENT TRANSFORMER

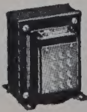
Part No.	Secondary Volts	Primary Volts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-1834-3	1.1/ 1.4/ 1.5/ 2.0/ 2.5/ 3.0/ 3.3/ 5.0/ 6.3/ 7.0/ 7.5/ 12/ 25/ 30/ 35/ 50/ 70/ 85/ 110/ 117	125/115/105	A	2⅝″	4″ x 2″	2.4	**$12.90**

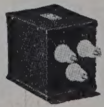
#All primary windings for 60 cycle operation. *New part number. ‡Designates part number to be removed from next catalog.


A

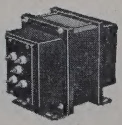

B

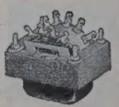

C


D


FA-FB

FK


FS


G

J

STANDARD TRANSFORMER CORPORATION

PLATE TRANSFORMERS

Part No.	D.C. Volts	Sec. A.C. Volts at Plate	D.C. Ma. CCS	D.C. Ma. ICAS	Pri. Volts	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-8040	400 40	500/40–0–500	300	375	115	C	4¾″	4″ x 4½″	9.8	**$16.85**
P-8041	500 400 40	615/520/40–0–520/615	250	310	115	C	4¾″	4″ x 5⅛″	13.6	**18.25**
P-8042	600 400 40	770/510/40–0–510/770	300	375	115	C	4¾″	4″ x 6⅜″	18.0	**26.95**
P-8043	750 600 40	950/750/40–0–750/950	300	375	115	FS	7⅝″	6⅛″ x 8″	29.0	**50.15**
‡P-8045	1000 750	1225/850–0–850/1225	250	310	115	FS	7⅝″	6⅛″ x 8″	28.5	**53.95**
‡P-8025	1000 750	1230/940–0–940/1230	400	500	115	FS	7⅝″	6⅛″ x 8¾″	35.0	**63.65**
‡P-8026	1250 1000	1475/1175–0–1175/1475	300	375	115	FS	7¾″	7⅜″ x 8¼″	36.5	**60.55**
‡P-8027	1250 1000	1510/1210–0–1210/1510	500	625	115	FS	7¾″	7⅜″ x 9″	45.2	**71.60**
‡P-8028	1500 1250	1740/1460–0–1460/1740	300	375	115	FS	7¾″	7⅜″ x 8½″	38.7	**64.10**
‡P-8029	1500 1250	1775/1500–0–1500/1775	500	625	115–230	FS	11¼″	7⅜″ x 8¾″	65.0	**99.40**
‡P-8030	1750 1500	2100/1800–0–1800/2100	300	375	115	FS	7¾″	7⅜″ x 9″	45.8	**70.70**
‡P-8031	1750 1500	2075/1775–0–1775/2075	500	625	115–230	FS	11¼″	7⅜″ x 8¾″	65.5	**97.85**
‡P-8032	2000 1750	2400/2100–0–2100/2400	300	375	115	FS	7¾″	7⅜″ x 9¼″	46.0	**83.65**
‡P-8033	2000 1750	2375/2065–0–2065/2375	500	625	115–230	FS	11¼″	7⅜″ x 9½″	77.0	**122.40**
‡P-8034	2500 2000	2900/2385–0–2385/2900	300	375	115–230	FS	11¼″	7⅜″ x 8¾″	62.8	**119.00**
‡P-8035	2500 2000	2950/2375–0–2375/2950	500	575	115–230	FS	11¼″	7⅜″ x 9¾″	80.0	**130.00**
‡P-9920	2500§ 2000	2980–0–2980 2450–0–2450	350 500	450 625	117	Y	9⅛″	11⅛″ x 9⅞″	122.0	**203.40**

PLATE TRANSFORMERS—NEW FUNCTIONAL UNITS

No exposed terminals. Insulated leads provide protected routing to circuits. Simplified design offers ease of mounting and neat, convenient circuit wiring. No difficult cutouts needed.

Each of these units is "all transformer," taking a minimum of chassis space. No bulky casing or protruding, "hot" terminals to increase mounting area.

D.C. output rated CCS at load terminals of single-section reactor-input filter, ICAS with single-section capacitor-input filter. Primaries for 117 volts, 60 cycles.

Type Part No.	Secondary A.C. Volts	D.C. Output Volts	D.C. Output Ma.	Type Filter	Rectifier	List Price
PC8301	415-0-415	300 425	200 160	Reactor Input Capacitor Input	5U4G 5U4G	**$10.65**
PC8302	515-0-515	385 500	235 200	Reactor Input Capacitor Input	5U4G 5R4GY	**13.65**
PC8303	665-0-665	500 750	250 200	Reactor Input Capacitor Input	5R4GY 5R4GY	**17.30**
PC8304	750-0-750	600 850	265 200	Reactor Input Capacitor Input	2-5R4GY 5R4GY	**19.35**
PC8305	920-0-920	750 1000	250 200	Reactor Input Capacitor Input	2-5R4GY 5R4GY	**20.20**
PC8306*	920-0-920	750 1100	150 125	Reactor Input Capacitor Input	5R4GY 5R4GY	**20.50**
	500-0-500	380 550	150 125	Reactor Input Capacitor Input	5U4G 5U4G	

D.C. output rated at load terminals of single-section, reactor-input filter with full-wave mercury-vapor rectification. Primaries for 117 volts, 60 cycles.

Type and Part No.	Secondary A.C. Volts	D.C. Volts	D.C. Ma. CCS	D.C. Ma. ICAS	List Price
PT8311	1200-0-1200	1000	225	280	**$22.30**
PT8312	1200-0-1200	1000	325	405	**36.90**
PT8313	1475-0-1475	1250	250	310	**36.30**
PT8314	1790-0-1790	1500	225	280	**41.50**
PT8315	2065-0-2065	1750	200	250	**41.15**

BIAS SUPPLY TRANSFORMERS

Part No.	High Voltage Supply A.C. Volts at D.C. Milliamps.	Rectifier Fil. Volts	Rectifier Fil. Amperes	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6317	200/170/130/90/0/90/130/170/200 @ 200 ma.	5.0	3.0	CD	4″	3¼″ x 3⅝″	4.9	**$15.20**
P-6318	450/400/350/250/0/250/350/400/450 @ 200 ma.	5.0	3.0	CD	4$\frac{5}{16}$″	3⅝″ x 4⅛″	7.0	**17.30**

All Primary Windings for 60 cycle operation. ‡Designates part number to be removed from next catalog.
§Output changed by means of tap on primary winding. Rating is for a single section choke input filter using a 6 mfd. condenser.

ISOLATION AND AUTOFORMERS

STANDARD TRANSFORMER CORPORATION

STRAIGHT ISOLATION—125/115/105 VOLTS TO 115 VOLTS.

Part No.	Wattage	Primary#	Secondary	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6160	100	125/115/105	115	KA	4¾"	4" x 3⅝"	7.0	**$17.25**
P-6161	250	125/115/105	115	KA	4¾"	4" x 5⅜"	14.2	**32.50**
P-6298	500	125/115/105	115	FK	7⅝"	6⅛" x 7⅛"	28.0	**49.50**
P-6125	1000	125/115/105	115	FK	7¾"	7⅜" x 6⅞"	34.8	**64.90**
P-6123	1500	125/115/105	115	FK	7¾"	7⅜" x 8½"	49.8	**80.95**

STEP-DOWN ISOLATION—250/230/210 VOLTS TO 115 VOLTS.

Part No.	Wattage	Primary#	Secondary	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6383	100	250/230/210	115	KA	4¾"	4" x 3⅝"	7.3	**$18.40**
P-6385	250	250/230/210	115	KA	4¾"	4" x 5⅜"	14.2	**29.80**
P-6387	500	250/230/210	115	FK	7⅝"	6⅛" x 7⅛"	29.5	**51.10**
P-6389	1000	250/230/210	115	FK	7¾"	7⅜" x 6⅞"	33.8	**65.85**
P-6390	1500	250/230/210	115	FK	7¾"	7⅜" x 8½"	50.3	**91.10**

ISOLATION TESTING TRANSFORMER

Part No.	Wattage	Primary#	Secondary	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6415	350	117	105/115/125	KC	5⅜"	4½" x 5¾"	17.0	**$27.50**

Large enough to handle almost any television or radio receiver on test. Has three standard receptacles, providing output voltages of 105, 115 and 125, with 117 volts, A.C., from the line for testing purposes or for correction of high or low line voltage. Has electrostatic shield.

AUTOFORMERS

Part No.	Wattage	Primary#	Secondary	Mtg.	Height Overall	Base Area	Shpg. Wt. in Lbs.	List Price
P-6287	40	230	115	—	4½"	3" Diam. can	2.7	**$ 8.40**
P-5062	80	230	115	K	3⅝"	3" x 3¼"	3.8	**9.00**
P-5063	100	230	115	K	4"	3¼" x 3¼"	4.5	**10.20**
P-5064	150	230	115	K	4 5/16"	3⅝" x 3⅝"	5.2	**11.80**
P-5065	300	230	115	K	4¾"	4" x 4⅛"	8.8	**16.00**
P-6141	500	230	115	K	4¾"	4" x 5⅛"	13.7	**21.00**
P-6124	1000	230	115	FK	7⅝"	6⅛" x 6½"	24.5	**44.50**
P-6299	150	115	150/140/130/120/110/100/90	KA	4"	3¼" x 4¾"	6.0	**16.85**

Testing Autoformer—Designed especially for various service and test application. Incorporates a convenient tap switch to permit variable voltages from 90 to 150 volts. It may be used to apply an overload voltage to amplifiers, radio receivers, or other electronic devices being serviced, which will indicate and cause suspected parts to break down. Primary equipped with 6 ft. approved cord and plug. Secondary connected to female receptacle.

LINE ADJUSTING AUTOFORMERS

Stancor Line Adjusters permit operation of electrical devices at 115 volts when the supplied voltage is 65, 75, 90, 100, 115, 130 or 145. They are also useful for altering a 115 volt line above or below that level. The line adjuster input is correctable in seven steps by means of a selector switch and is accurately indicated by an output voltmeter. The meter has a convenient red-line marker at 115 volts on a 150 volt scale.

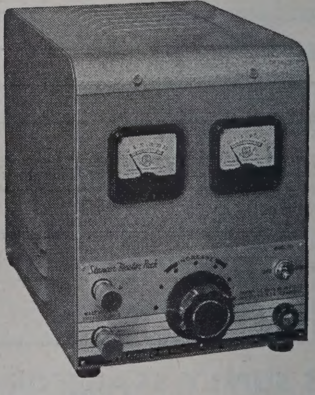
Type and Part No.	Va.*	Input Voltage 50-60 Cycle	Output Voltage	Height	Base Area	Shpg. Wt. in Lbs.	List Price
PV-6441	150	65/75/90/100/115/130/145	115	5½"	3⅞" x 5⅜"	6.4	**$19.95**
PV-6442	350	65/75/90/100/115/130/145	115	5½"	3⅞" x 6⅛"	10.5	**25.35**
PV-6443	500	65/75/90/100/115/130/145	115	5½"	3⅞" x 6⅞"	15.0	**31.60**
PV-6444	750	65/75/90/100/115/130/145	115	6 5/16"	4½" x 8⅛"	19.0	**46.35**

*Watts to pure resistive load. To other types of loads, multiply rating of line adjuster by power factor of load for actual wattage.
#All Primary Windings for 60 cycle operation.

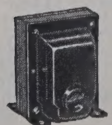
SIX VOLT DC POWER SUPPLY

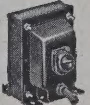
The Stancor Model 752 Master Pack replaces bothersome storage batteries, meeting the needs of the serviceman for a six volt power supply that is practical in design, convenient to use, and large enough to handle heavy-duty jobs.

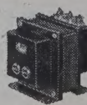
The Stancor Master Pack is conservatively rated to provide 6 volts D.C. at 12.5 amperes continuously from the standard 115 volt, 50–60 cycle source. An instantaneous rating of 25 amperes makes the Model 752 ideal for demonstrating or testing auto radios with push-button or floor-switch magnetic tuning. Reserve power permits simultaneous operation of two or more receivers. Separate voltmeter and ammeter afford a continuous, visual check of voltage and current delivered to load. Meter needles are damped to prevent annoying "wiggle." The extractor-type line fuse gives positive protection against damage from excessive overloads. Thorough filtering, less than 3% ripple through a choke-capacitor filter, allows use in applications where the hum from a poorly filtered power supply cannot be tolerated. Selenium rectifiers are used for dependability and cooler operation. Controls and terminals are conveniently located on the front panel. The sturdy steel case is finished in durable gray hammertone. No detail has been slighted in making the Stancor Model 752 Master Pack the outstanding power supply for the service bench. Size overall, 9½" high, 7⅜" wide, 12" long. Weight in carton, 30 pounds.

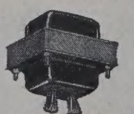


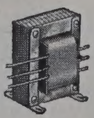
MODEL 752 MASTER PACK USERS NET............$43.90

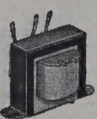

K

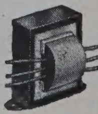

KA

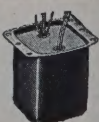

FK

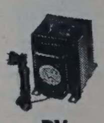

M


N


Q


S


TD


PV

"HS" (hermetically sealed) SERIES TRANSFORMERS

TRIAD "HS" Series Transformers are designed to meet MIL-T-27 specifications and hence have an immediate application for military use. Such transformers are also desirable for high quality commercial equipment where continuity of service and superior performance is paramount. "HS" Series Transformers feature:

DEPENDABILITY: Liberally designed and accurately wound transformers of low temperature rise; "Climatite" treated, poured with silica-filled asphalt of high heat conductivity, rigidly supported, and hermetically sealed, TRIAD leaves no step untaken to supply the best in quality transformers.

STRONG MECHANICAL CONSTRUCTION: Heavy steel cases with welded internal supports and TRIAD'S own hermetic seals, employing sturdy brass studs and low-loss molded plastics, minimize mechanical failures in production, service and storage.

ATTRACTIVE APPEARANCE: Sturdy deep-drawn steel cases, of smoothly matching lines, and finished in attractive TRIAD gray, add much to the appearance of the equipment in which "HS" Series Transformers are used.

STANDARD MIL-T-27 CASES: The standardized series of MIL-T-27 cases are used in all designs where magnetic shielding is not required. Current military procurement is specifying these cases.

"HS" Series Audio INPUT Transformers

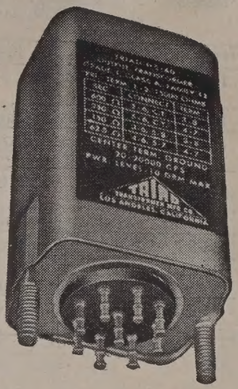
TRIAD Low-Level Audio Transformers have attained an enviable reputation wherever high-quality transformers are used. These transformers offer wide frequency range (20-20000 cycles), protection against stray fields (up to 95db), all in case sizes only a fraction of the size of pre-war designs. TRIAD low-level transformers are used by a great majority of manufacturers of high quality audio equipment.

Type No.	Application	Primary Impedance	Turn Ratio	Freq. Resp.	Max. Level VU	Shield-ing	Case No.	List Price
HS-1	Univ. line or mike to grid.	600*/250*/ 150/62.5	1:11.4	20-20000	10	P-5	GP-4	$38.50
HS-11	Same as above.					P-1	GP-2	26.40
HS-3	Univ. line or mike to p.p. class A grids.	600*/250*/ 150/62.5	1:14 overall	20-20000	10	P-5	GP-5	43.50
HS-4	Same as above.					P-3	GP-4	39.70
HS-14	Same as above.					P-1	GP-3	28.60
HS-5	Dynamic mike to grid—Hi-gain.	30-50	1:65.7	50-10000	0	P-5	GP-4	38.50
HS-8	Line to p.p. class A grids—Hi-level.	600*/250*/ 150/62.5	1:10 overall	20-20000	26	P-1	GP-4	38.50

*Balanced center tap available.

"HS" Series Audio INTERSTAGE Transformers

Type No.	Application	Primary Impedance	Turn Ratio	Freq. Resp.	Max. Level Pri. Volts	Shield-ing	Case No.	List Price
HS-23	Single plate to single grid.	15000	1:2.7	20-20000	15	P-3	GP-4	$26.40
HS-25	Single plate to p.p. class A grids.	15000	1:2.72 overall	20-20000	25	P-1	GP-4	28.60
HS-35	Single plate to p.p. class A grids.	15000	1:2.72 overall	20-20000	20	P-1	GP-2	21.80
HS-27	P.p. plates to p.p. class A grids.	20000/ 5000	1:1.72 overall	20-20000	50	P-1	GP-4	29.70
HS-29	Bridging-line to 1 or 2 grids.	20000/ 5000	1:2 overall	20-20000	20	P-5	GP-4	38.50
HSM-31	P.p. 6J5's or parallel-fed 6F6 triode to AB grids.	20000/ 5000	1:1 or 2:1	20-20000	240		FA	25.00



Only TRIAD transformers are

CLIMATITE TREATED

—the improved and exclusive vacuum impregnation process used on all TRIAD transformers.

"HS" Series LOW LEVEL OUTPUT, MIXING, MATCHING and BRIDGING Transformers

Type No.	Application	Impedance Primary	Impedance Secondary	Freq. Resp.	Max. Level VU	Shield-ing	Case No.	List Price
HS-50	Plate to universal line.	15000	600*/250*/ 150/62.5	20-20000	26	P-3	GP-4	$29.70
HS-60	Plate to universal line.	15000	600*/250*/ 150/62.5	20-20000	10	P-1	GP-2	21.80
HS-52	P.p. plates to universal line.	20000/ 5000	600*/250*/ 150/62.5	20-20000	26	P-1	GP-4	32.50
HS-54	Bridging, single or p.p. plates to univ. line.	20000/ 5000	600*/250*/ 150/62.5	20-20000	10	P-5	GP-4	38.50
HS-56	Universal line to universal line.	600*/250*/ 150/62.5	600*/250*/ 150/62.5	10-30000	20	P-3	GP-4	32.50
HS-66	Same as above.			10-30000	20	P-1	GP-3	27.50

*Balanced center tap available.

TRIAD TRANSFORMER MFG. CO.

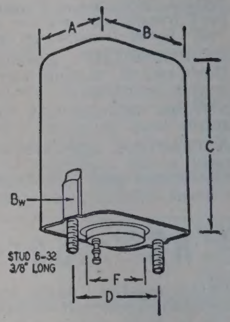
TRIAD "HS" (hermetically sealed) SERIES TRANSFORMERS

"HS" Series HIGH LEVEL OUTPUT Transformers
Tube to Line — Tube to Voice Coil — Line to Voice Coil

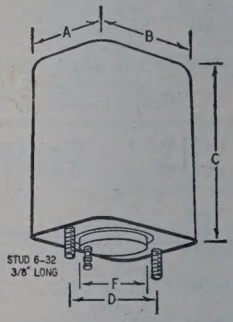
TRIAD "HS" Series Output Transformers represent the application of the most modern techniques in the design of fine audio equipment. Use of the very best core materials combined with interleaved coil structures, have resulted in an open circuit inductance to leakage inductance ratio of 10,000, representing a frequency response range of better than 13 octaves. These transformers will deliver full rated power output within 1 db. from 20-20000 cycles. Full DC plate current can be carried through the primary windings, but every effort should be made to balance the two plates in push-pull circuits to obtain optimum results at the extreme low frequencies.

Type No.	Application	Impedance Primary	Impedance Secondary	Freq. Response	Max. Level-Watts	Case No.	List Price
HSM-81	P.p. 6V6's, etc. to voice coil	8000 C.T.	16/8/4	7-50000	15	JB	$30.50
HSM-82	As above—to line	8000 C.T.	500/250/125	7-50000	15	JB	30.50
HSM-84	P.p. 2A3's, 6B4's, 6L6's, etc. to V.C.	5000 C.T.	16/8/4	7-50000	20	JB	30.50
HSM-85	As above—to line	5000 C.T.	500/250/125	7-50000	20	JB	30.50
*HSM-89	P.p. KT-66's, 807's, etc.—for Williamson circuit.	10000 C.T.	16/8/4	7-50000	25	KB	37.50
*HSM-90	As above—to line	10000 C.T.	500/250/125	7-50000	25	KB	37.50
HSM-87	AB, 6L6's, etc. to voice coil	9000 C.T.	16/8/4	7-50000	25	KB	35.80
HSM-88	As above—to line	9000 C.T.	500/250/125	7-50000	25	KB	35.80
HSM-91	P.p. parallel 2A3's, 6L6's, etc. to V.C.	2500 C.T.	16/8/4	7-50000	50	LA	49.50
HSM-94	P.p. par. 6L6's to voice coil	4500 C.T.	16/8/4	7-50000	55	LA	61.00
HSM-95	As above—to line	4500 C.T.	500/250/125	7-50000	55	LA	61.00
HS-97	P.p. 845's to line	6600 C.T.	50/250/125	10-30000	125	Spec.	115.00
HS-101	Line to parallel lines—autoformer.		500/250/167/125/100/88/71	10-30000	30	Spec.	35.80
HS-103	Line to V.C.—autoformer		500/16/8/4	10-30000	30	Spec.	30.50

*New item.



	GP-1	GP-2	GP-3
A	7/8	1 1/16	1 1/4
B	1 1/16	1 1/4	1 1/2
BW	1 1/8	1 11/32	1 9/16
C	1 11/16	2 1/4	2 3/8
D	1 3/32	1 3/16	1 1/2
F	3/4	3/4	7/8
Wt.	3 oz.	5 1/2 oz.	8 oz.



	GP-4	GP-5
A	1 7/16	1 5/8
B	1 3/4	2
C	2 1/2	2 3/4
D	1 1/2	1 1/2
F	7/8	7/8
Wt.	12 oz.	17 oz.

POWER Transformers, Combined Plate and Filament

All types electrostatically shielded

Primary 115 volts, 50-60 cycles

Type No.	Plate Supply AC Volts	Plate Supply DC Ma	Filaments	Case No.	List Price
HSM-201†	500 C.T.	20	6.3 C.T.-2A.	GA	$16.75
*HSM-203	600 C.T.	50	6.3 C.T.-2.5A. 5 -2A	JB	24.50
HSM-205	700 C.T.	70	6.3 C.T.-3A. 5 -3A.	JA	27.50
HSM-207	700 C.T.	120	6.3 C.T.-5A. 5 -3A.	KA	30.80
HSM-211	700 C.T.-70 v. bias tap.	150	6.3 C.T.-6A. 2.5 C.T.-5A. 5 -3A.	LA	33.00
HSM-215	800/700 C.T. 70 v. bias tap.	200	6.3 C.T.-6A. 2.5 C.T.-10A. 5 -6A.	MA	41.50
HS-217	800/700 C.T. 70 v. bias tap.	300	6.3 C.T.-8A. 2.5 C.T.-10A. 5 -6A.	Spec.	48.00

†Low flux density—for pre-amplifier service.
*New item.

SHIELDING AGAINST STRAY FIELDS AVAILABLE IN "HS" Series AUDIO TRANSFORMERS

P-1 — One nickel-alloy high permeability shield —45 db. reduction in pickup.

P-3 — Two nickel-alloy shields inter-leaved with one heavy copper shading ring — 70 db. reduction in pickup.

P-5 — Three nickel-alloy shields inter-leaved with two heavy copper shading rings—95 db. reduction in pickup.

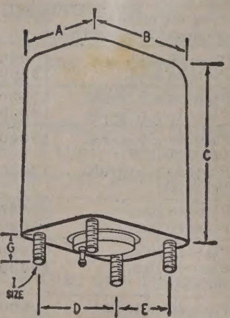
. . . For HIGHEST QUALITY EQUIPMENT

POWER Transformers, Combined Plate and Filament (Con't)

Primary 115 volts, 380-1500 cycles
Double filament windings to supply 6.3 or 12.6 volt tubes

Type No.	Plate Supply AC Volts	Plate Supply D C Ma.	Filaments	Case No.	List Price
HS-401	500 C.T.	40	6.3 C.T.-1A. 6.3-1A.	EB	$19.80
HS-405	600 C.T.	70	6.3 C.T.-2A. 6.3-2A. †6.3/5-2A.	GA	25.70
HS-407	600 C.T.	120	6.3 C.T.-3.5A. 6.3-3.5A. †6.3/5-3A.	JB	30.80
*HS-413	450 C.T.	200	6.3 C.T.-6A. 6.3-6A. †6.3/5-4A.	JA	42.00
HS-415	800/600 C.T.	200	6.3 C.T.-6A. 6.3-6A. †6.3/5-6A.	KB	42.00
HS-417	800/600 C.T.	300	6.3 C.T.-6A 6.3-6A. †6.3/5-6A.	LA	45.00

†Tapped for 5 volt rectifier use.
*New item.



FILAMENT Transformers

50-60 cycles

Type No.	Primary Volts	Secondary Volts	Secondary Amperes	Insulation Test Voltage	Case No.	List Price
*HSM-223	115	6.3	.6	1500	AJ	$10.25
HSM-225	105-115-125	6.3 C.T.	2	2500	EA	9.90
*HSM-227	105-115-125	6.3 C.T. 6.3	3 3	2500	GA	18.00
HSM-229	105-115-125	6.3 C.T.	8	2500	JB	16.50
*HSM-228	105-115-125	6.3 C.T. 6.3	6 6	2500	JA	27.60
HSM-231	105-115-125	6.3 C.T. 5 C.T.	5 3	2500	JB	17.60
HSM-235	105-115-125	2.5 C.T. 10 C.T.	10 10	7500 2500	MA	23.00

*New item.

380-1500 cycles

Type No.	Primary Volts	Secondary Volts	Secondary Amperes	Insulation Test Voltage	Case No.	List Price
HS-425	105-115-125	6.3 C.T.	2	1500	AJ	13.75
HS-427	105-115-125	6.3 C.T.	5	1500	EA	19.40
HS-433	105-115-125	*6.3 C.T. 6.3	5 5	2500	FA	21.20
HS-435	105-115-125	*6.3 C.T. 6.3 †6.3/5	3.5 3.5 3	2000	FA	22.50
HS-441	105-115-125	*5 C.T. 5 2.5 C.T.	10 10 10	2000 7500	HA	28.00

*Series or parallel connection. †5 volt tap for filament type rectifiers.

FILTER Reactors

Miniaturized for use with high-frequency power supplies

Type No.	Current DC Ma.	Inductance Henries	Resistance Ohms	Test Voltage	Case No.	List Price
HS-331	40	4	375	1500	AH	$11.00
HS-333	70	3	225	1500	AJ	11.50
HS-335	120	3	150	1500	EB	12.00
HS-339	200	3	105	2000	FB	13.60
HS-341	300	2	48	2000	GB	14.60

General purpose smoothing reactors

Type No.	Current DC Ma.	Inductance Henries	Resistance Ohms	Test Voltage	Case No.	List Price
HSM-301	20	30	1000	1500	EA	10.30
HSM-305	70	15	300	2500	GB	11.90
HSM-307	120	15	185	2500	JB	15.10
HSM-309	150	9	115	2500	JB	15.90
HSM-315	200	10	100	2500	JA	17.35
HSM-319	300	10	85	2500	LB	24.20

Standard MIL-T-27
Case Sizes

	EA	EB	FA	FB	GA	GB
A	1 13/16	1 13/16	2 1/16	2 1/16	2 ⅜	2 ⅜
B	1 15/16	1 15/16	2 5/16	2 5/16	2 ¾	2 ¾
C	2 ¾	2 7/16	3 ⅛	2 ½	3 13/16	2 13/16
D	1 ⅜	1 ⅜	1 11/16	1 11/16	2 ⅛	2 ⅛
E	1 ¼	1 ¼	1 7/16	1 7/16	1 ¾	1 ¾
G	⅜	⅜	⅜	⅜	⅜	⅜
I	6-32	6-32	6-32	6-32	6-32	6-32
Wt. Lbs.	1	15 oz.	1 ¾	1 ½	2	1 ¾

	HA	HB	JA	JB	KA	KB
A	2 ⅝	2 ⅝	3 1/16	3 1/16	3 ⅜	3 ⅜
B	3 1/16	3 1/16	3 9/16	3 9/16	3 15/16	3 15/16
C	4 ¼	3 3/16	4 ⅞	3 ⅞	5 ¼	4 5/16
D	2 9/16	2 19/64	2 ⅝	2 ⅝	3	3
E	1 55/64	1 55/64	2 ⅛	2 ⅛	2 7/16	2 7/16
G	⅜	⅜	⅜	⅜	½	½
I	8-32	8-32	8-32	8-32	10-32	10-32
Wt. Lbs.	2 ½	2 ¼	4 ½	4	7 ¾	7

	LA	LB	MA	MB	NA	NB
A	3 11/16	3 11/16	4	4	4 5/16	4 5/16
B	4 5/16	4 5/16	4 11/16	4 11/16	5 1/16	5 1/16
C	5 9/16	4 ½	6	4 15/16	6 13/16	5 ½
D	3 5/16	3 5/16	3 11/16	3 11/16	4 1/16	4 1/16
E	2 11/16	2 11/16	3	3	3 5/16	3 5/16
G	½	½	⅝	⅝	⅝	⅝
I	10-32	10-32	¼-20	¼-20	¼-20	¼-20
Wt. Lbs.	9 ¼	8 ½	13 ½	12 ½	18	16

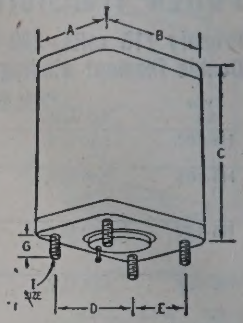
MINIATURE AUDIO TRANSFORMERS

Type No.	Application	Impedance Primary	Impedance Secondary	Max. Level-VU	Shielding db.	Freq. Resp.	Case No.	List Price
JO-1	Line or mike to grid.	600/250/50	50000	0	45	50-10000	JOA	$14.50
*JAF 1	Line or mike to grid.	600/250/50	50000	0	45	100-10000	AF	14.50
JO-2	Line or mike to grid. Hi-gain.	600/250/50	250000	0	45	300-3000	JOA	15.30
*JAF-2	Line or mike to grid. Hi-gain.	600/250/50	250000	0	45	300-3000	AF	15.30
JO-3	Line or mike to p.p. grids.	600/250/50	60000 C.T.	0	45	50-10000	JOA	15.30
*JAF-3	Line or mike to p.p. grids.	600/250/50	60000 C.T.	0	45	100-10000	AF	15.30
JO-5	Dynamic mike or speaker VC to grid.	30/12/4	50000	0	45	50-10000	JOA	14.50
JO-11	Plate to grid.	15000	50000	10	45	50-10000	JOB	13.60
*JAF-11	Plate to grid.	15000	50000	10	45	100-10000	AF	13.60
JO-12	Plate to p.p. grids.	15000	60000 C.T.	10	45	50-10000	JOB	14.50
*JAF-12	Plate to p.p. grids.	15000	60000 C.T.	10	45	100-10000	AF	14.50
JO-13	Plate to p.p. grids. DC in pri.	15000	95000 C.T.	10	45	300-3000	JOB	15.30
*JAF-13	Plate to p.p. grids. DC in pri.	15000	95000 C.T.	10	45	350-5000	AF	15.30
JO-21	Plate to line	15000	600/250/50	10	45	50-10000	JOB	14.50
*JAF-21	Plate to line.	15000	600/250/50	10	45	100-10000	AF	14.50
JO-22	Plate to line.	15000	600/250/50	10	45	300-3000	JOB	14.50
*JAF-22	Plate to line. DC in pri.	15000	600/250/50	10	45	350-5000	AF	14.50
JO-23	P.p. plates to line.	20000 C.T.	600/250/50	10	45	50-10000	JOB	15.30
*JAF-23	P.p. plates to line.	20000 C.T.	600/250/50	10	45	100-10000	AF	15.30
JO-31	Line to line.	600/250/50	600/250/50	10	45	50-10000	JOB	14.50
*JAF-31	Line to line.	600/250/50	600/250/50	10	45	100-10000	AF	14.50
JO-101	Coupling Reactor.	50 h.-2 Ma.			45		JOB	11.60
*JAF-101	Coupling Reactor.	50 h. -1 Ma.			45		AF	11.60
HS-71	Plate to line. DC in pri.	10000 (10 Ma.)	600/150	33		300-3000	AH	16.00
HS-73	Plate to line & VC-DC in pri.	5000 (40 Ma.)	4-8-16-250-500	37		300-3000	AJ	18.30
HS-75	P.p. plates to line & VC.	10000 C.T. (50 Ma. bal.)	4-8-16-250-500	40		300-3000	EB	20.40

*New item.

Dimensions of JO and MIL Standard Cases

	JOA	JOB
A	15/16 dia.	15/16 dia.
B	Round	Round
C	1 13/32	1 25/32
D	9/16	9/16
F	⅞	⅞
Wt.	1 ¼ oz.	1 ½ oz.



	AF	AG	AH	AJ
A	½	1	1 5/16	1 ⅝
B	¾	1	1 5/16	1 ⅝
C	1 ⅛	1 ⅜	1 ¾	3 ⅜
D	* 27/32	1 1/32	1 11/32	1 ⅝
F	⅝	¾	⅞	⅞
Wt.	1 oz.	2 ½ oz.	4 oz.	9 oz.

*Studs 4-40 in opposite corners of case.

Uncased "TRIJETS"

Type No.	Application	Primary Impedance	Secondary Impedance	List Price
T-1	Line or mike to grid.	600/250/50	50000	$ 4.85
T-5	Dynamic mike or speaker VC to grid.	30/12/4	50000	4.85
T-21	Plate to line.	30000	50	4.85
T-101	Coupling Reactor.	50 henries @ 1 Ma.		4.70

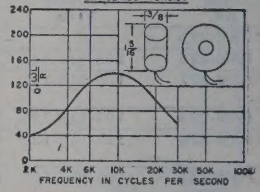
TOROIDS for wave filters

TRIAD toroids are supplied unmounted and can be readily trimmed for intermediate values of inductance. All types are supplied to the exact value of inductance shown within ±1%. If other exact values are desired they can be ordered from the factory at the price of the next higher value of inductance plus the following adders. Lots 1-9—20%. 10-24—10%. 25 and over—no adder. Coils can be supplied in hermetically sealed cases with one or more coils per case. Prices on application. We supply wave filters on special order and will be glad to quote on your design in any quantity.

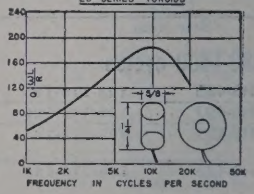
Inductance	Type No. EA Series	Type No. EC Series	Type No. EF Series	Type No. EH Series
5 mh.	EA-005	EC-005	EF-005	
15 mh.	EA-015	EC-015	EF-015	EH-105
40 mh.	EA-040	EC-040	EF-040	EH-040
100 mh.	EA-100	EC-100	EF-100	EH-100
250 mh.	EA-250	EC-250	EF-250	EH-250
600 mh.	EA-600	EC-600	EF-600	EH-600
1 h.	EA-1000			
1.5 h.		EC-1500	EF-1500	EH-1500
4.0 h.		EC-4000	EF-4000	EH-4000
6.0 h.			EF-6000	
10.0 h.				EH-10000
25.0 h.				EH-25000

All above are new items.

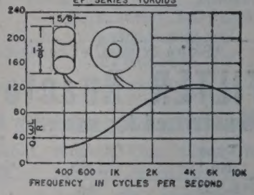
EA SERIES TOROIDS



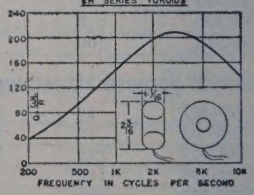
EC SERIES TOROIDS



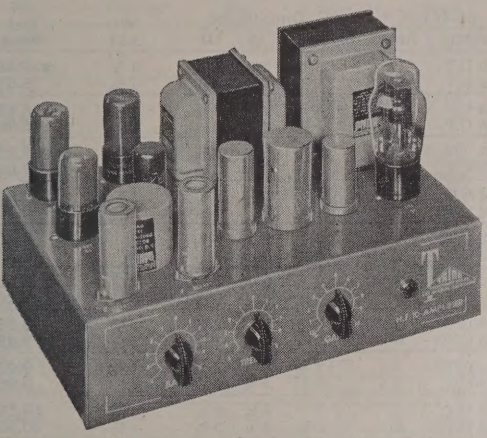
EF SERIES TOROIDS



EH SERIES TOROIDS



HF-10 HI-FIDELITY AMPLIFIER KIT . . .
WIDE RANGE REPRODUCTION FOR THE HOME



Lovers of good music have had a difficult time obtaining complete commercial equipment capable of doing justice to the fine musical material currently available from FM radio, AM radio, and recordings. Few, if any, of the commercial radio-phonographs include the quality of components which will permit transmission of a wide enough range of frequencies, with enough power, with low enough distortion to permit life-like musical reproductions. Fortunately there are available highly efficient speakers, well designed AM and FM tuners, wow-free turntables, good pickups, and exceptional amplifiers of high quality and output which may be combined to make a system comparable in quality to a fine grand piano.

The HF-10 Amplifier has been designed to fit into such a system. For those who like to build their own equipment, the HF-10 kit supplies the basic engineering and solves the most difficult mechanical layout problems.

KITS . . .

HF-10 Kit $43.00
Includes S-31A, R-14A, A-74J, and C-10X Triad transformers, chassis, prints, and assembly instructions.

HF-10A Kit $63.50
Same as above except for substitution of HSM-81 output transformer for S-31A.

HF-10B Kit $43.00
Same as HF-10 except for S-32A output transformer — 500/250/125 ohm secondary.

HF-10C Kit $63.50
Same as above except for substitution of HSM-82 output transformer for S-32A.

FEATURES . . .

Wide Frequency Response: HF-10A within one db. from 20-70,000 cycles.

Low Distortion: HF-10A less than .5% from 40-40,000 cycles at full 10 watts output. Less than .5% from 20-40,000 cycles at 5 watts.

Heavy Speaker Damping: Reflects less than 2 ohms to speaker from 16 ohm tap.

Equalization: Continuously variable to +12 db. or —30 db. at 50 or 8000 cycles.

High Gain: 74 db. from crystal microphone or radio receiver; 96 db. (equalized for magnetic pickup) through preamplifier.

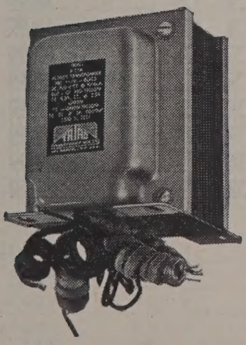
Low Noise: Hum and other noise 60 db. below maximum output. A-74J equalizing coil has 70 db. shielding.

Beautiful Appearance: Gray hammertone chassis with ivory silk-screened lettering, matched gray Triad transformers.

HIGH FIDELITY OUTPUT Transformers

The TRIAD high-fidelity transformers in the group at right afford a standard of performance exceeded only by the "HS" Series outputs.

Designed with plenty of the highest quality core material and with interleaved windings of low resistance, these coils have a frequency response linear within 1 db. from 30-15000 cycles and will deliver their full rated output within 3 db. over this entire range of frequencies. Their high open circuit reactance and low leakage reactance will permit their use within feedback loops employing as high as 30 db. of negative feedback.



CASE A

Type No.	Application	Impedance Primary	Impedance Secondary	Output Watts	Dimen.-Ins. H	Dimen.-Ins. W	Dimen.-Ins. D	Wt. Lbs.	List Price
S-31A	P.p. 6V6, 45, etc.	8000 C.T.	4-8-16	15	3⅛	2⅝	3⅜	3½	$10.50
S-32A	P.p. 6V6, 45, etc.	8000 C.T.	500/250/125	15	3⅛	2⅝	3⅜	3½	11.00
S-33A	P.p. 2A3, 6A5, 6B4, etc.	3000 C.T.	4-8-16	15	3⅛	2⅝	3⅜	3½	10.50
S-35A	P.p. 2A3, 6L6, etc.	5000 C.T.	4-8-16	20	3⅛	2⅝	3⅝	4	11.50
S-36A	P.p. 2A3, 6L6, etc.	5000 C.T.	500/250/125	20	3⅛	2⅝	3⅝	4	12.00
*S-48A	P.p. KT-66, 807, etc. triodes (for Williamson circuit)	10000 C.T.	4-8-16	25	3½	2⅞	4¼	5¾	24.50
S-38A	P.p. 6L6, class AB.	9000 C.T.	4-8-16	25	3½	2⅞	4¼	5¾	15.20
S-39A	P.p. 6L6, class AB.	9000 C.T.	500/250/125	25	3½	2⅞	4¼	5¾	16.00
S-40A	P.p. par. 2A3, 6L6, etc.	2500 C.T.	4-8-16	30	3½	2⅞	4¼	5¾	15.20
S-42A	P.p. par. 6L6, class A.	4500 C.T.	4-8-16	50	4¼	3½	4⅝	8¾	21.25
S-45Z	70 volt line. Autoformer.	4000/2000/ 1000/500	4-8	10	2⅝	3 5/16	2¼	2	5.80
S-46A	70 volt line. Autoformer.	2000/1000/ 500/250	4-8-16	20	3⅛	2⅝	3⅝	4	12.95

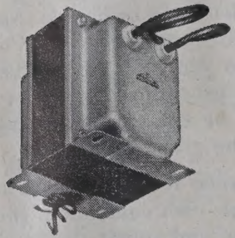
*New item.

POWER Transformers, Combined Plate and Filament

General Purpose

Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Rect. Fil. Volts	Rect. Fil. Amp.	Other Fil. Volts	Other Fil. Amp.	Dim.-Inches H	Dim.-Inches W	Dim.-Inches D	Wt. Lbs.	List Price
R-4A	500 C.T.	40			6.3 C.T.	2	2 3/4	2 3/8	2 3/4	1 3/4	$ 6.50
*R-4B	500 C.T.	40			6.3 C.T.	2	1 3/4	2 5/8	2 3/16	1 3/4	6.65
R-5A	600 C.T.	65			6.3 C.T.	2.7	3 3/16	2 5/8	2 5/8	2 3/4	6.65
*R-5B	600 C.T.	65			6.3 C.T.	2.7	1 7/8	3	2 1/2	2 3/4	6.90
*R-6A	480 C.T.	50	5	2	6.3 C.T.	2	3 3/16	2 5/8	2 5/8	2 3/4	7.15
*R-6B	480 C.T.	50	5	2	6.3 C.T.	2	1 7/8	3	2 1/2	2 3/4	7.05
R-7A	600 C.T.	50	5	2	6.3 C.T.	2	3 3/16	2 5/8	2 3/4	2 3/4	8.00
R-7B	600 C.T.	50	5	2	6.3 C.T.	2	1 7/8	3	2 1/2	2 3/4	7.70
*R-8A	500 C.T.	75	5	2	6.3 C.T.	2.5	3 3/16	2 5/8	3 1/8	3	8.45
*R-8B	500 C.T.	75	5	2	6.3 C.T.	2.5	2 3/8	3	2 1/2	3	8.35
R-9A	600 C.T.	75	5	2	6.3 C.T.	3	3 9/16	3	3 3/8	3 1/2	8.50
R-9B	600 C.T.	75	5	2	6.3 C.T.	3	2 11/32	3 3/8	2 13/16	3 1/2	8.20
*R-10A	525 C.T.	90	5	2	6.3 C.T.	5	3 9/16	3	3 7/8	3 1/2	9.55
*R-10B	525 C.T.	90	5	2	6.3 C.T.	5	2 3/4	3 3/8	2 13/16	3 1/2	9.45
R-11A	700 C.T.	90	5	3	6.3 C.T.	3.5	3 9/16	3	3 7/8	4 1/4	9.25
R-11B	700 C.T.	90	5	3	6.3 C.T.	3.5	2 27/32	3 3/8	2 13/16	4 1/4	8.90
*R-12A	550 C.T.	110	5	2	6.3 C.T.	5	4	3 1/4	3 7/16	4 1/4	10.50
*R-12B	550 C.T.	110	5	2	6.3 C.T.	5	2 7/8	3 3/4	3 1/8	4 1/4	10.35
R-14A	700 C.T.	125	5	3	6.3 C.T.	4.5	4	3 1/4	3 15/16	5	11.50
R-14B	700 C.T.	125	5	3	6.3 C.T.	4.5	2 7/8	3 3/4	3 1/8	5	11.10
R-16A	700 C.T.	160	5	3	6.3 C.T.	5	4	3 1/4	4 7/16	7	12.85
R-16B	700 C.T.	160	5	3	6.3 C.T.	5	3 3/8	3 3/4	3 1/8	7	12.50
R-17A	750 C.T. 80 Tap	160	5	3	6.3 C.T. 2.5 C.T.	5 5	4 5/16	3 5/8	4 3/8	7 1/4	15.10
*R-18A	750 C.T.	175	5	3	6.3 C.T.	8	4 5/16	3 5/8	4 1/2	12 1/2	16.90
*R-18B	750 C.T.	175	5	3	6.3 C.T.	8	3 3/16	4 1/8	3 7/16	12 1/2	16.60
R-19A	750 C.T. 80 Tap	200	5	3	6.3 C.T. 2.5 C.T.	6 10	4 3/4	3 7/8	4 1/2	9 1/4	19.40
*R-20A	700 C.T.	200	5	3	6.3 C.T.	8	4 5/16	3 5/8	4 5/16	9 1/4	15.00
*R-20B	700 C.T.	200	5	3	6.3 C.T.	8	3 1/8	4 1/8	3 7/16	9 1/4	14.75
R-21A	800 C.T.	200	5	3	6.3 C.T.	6	4 5/16	3 5/8	5	9 1/4	17.60
*R-21B	800 C.T.	200	5	3	6.3 C.T.	6	3 11/16	4 1/8	3 7/16	9 1/4	17.75
R-24A	800 C.T.	300	5	6	6.3 C.T.	6	4 3/4	3 7/8	5 3/4	14	24.60
*R-24B	800 C.T.	300	5	6	6.3 C.T.	6	5 1/8	4 1/2	3 3/4	14	23.25
*R-25A	800 C.T.	500	5	6	6.3 C.T. 6.3	3 7	5 3/8	4 7/16	5 3/4	20	42.00

*New item.



CASE A

Leads out side for 866 plates

ORDERING INSTRUCTIONS

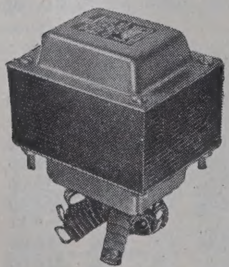
TRIAD transformer numbers are so arranged as to indicate the type of transformer and type of mounting. The prefix letter indicates the type of transformer. For example: **A**=Audio. Type of mounting is indicated by the suffix letter which refers to the illustration. For example: **A-1X**= Audio transformer in **X** case.

PLATE POWER Transformers

Type No.	Secondary Volts AC	Secondary Volts DC	Sec. D.C. Ma. CCS	Sec. D.C. Ma. ICAS	Rect. Fil.	Dim.-Inches H	Dim.-Inches W	Dim.-Inches D	Wt. Lbs.	List Price
P-1A	440/220 C.T.	180/90	160	190	5V-3A	3 9/16	3	3 3/8	4 1/2	$ 8.95
P-3A	600/300 C.T.	250/125	300	360	5V-4A	4	3 1/4	3 15/16	5 3/4	12.50
P-5A	1100 C.T.	400	250	310	5V-3A	4 3/4	3 7/8	4 1/4	7 1/2	16.50
P-7A	1235 C.T.	500	250	310	5V-3A	4 3/4	3 7/8	4 3/4	9 1/2	19.00
P-9A	1235 C.T.	500	500	600	5V-6A	5 5/16	4 1/2	5 7/8	20	33.00
P-11A	1455 C.T.	600	250	310		4 3/4	3 7/8	5	11 1/2	21.50
†P-13A	1780 C.T.	750	250	310		5 5/16	4 1/2	4 7/8	12	28.60
*‡P14-A	1780 C.T.	750/600	250	310		5 5/16	4 1/2	4 7/8	12	32.50
†P-15A	2340 C.T.	1000	250	310		5 5/16	4 1/2	5 3/8	15	32.00
†P-17A	2880 C.T.	1250	250	310		5 5/16	4 1/2	5 7/8	21	38.50

†Plate leads out side of case for 866 rectifiers. *New item.

‡Tapped Pri. to produce the lower D.C. voltage.



CASE B

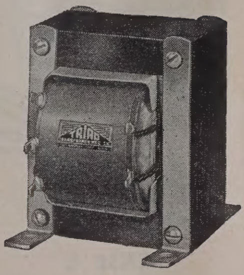
SWINGING Filter REACTORS

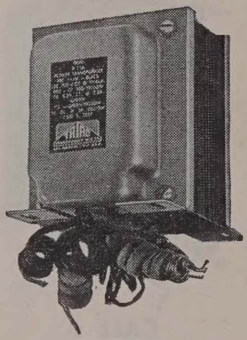
Type No.	Inductance Henries	Current Ma.	Resistance Ohms	Test Volts RMS	Dim.-Inches H	Dim.-Inches W	Dim.-Inches D	Wt. Lbs.	List Price
C-31A	25/5	20/200	150	2500	3 9/16	3	3 5/8	4	$ 7.25
C-33A	25/5	30/300	105	3000	4 5/16	3 5/8	4 1/4	7 1/4	11.25
C-35A	20/4	40/400	60	3000	4 3/4	3 7/8	4 1/2	9 1/2	16.00
C-39A	25/5	50/500	65	3000	5 5/16	4 1/2	5 3/8	16 1/2	22.70

SMOOTHING Filter REACTORS

Type No.	Inductance Henries	Current Ma.	Resistance Ohms	Test Volts RMS	Dim.-Inches H	W	D	Wt. Lbs.	List Price
*C-30X	50	15	3500	1500	1⅜	2⅜	1½	½	$ 2.95
*C-2X	2	15	70	1500	1 3/16	2⅛	1¼	¼	1.55
C-1X	15	20	1000	1500	1 3/16	2⅛	1¼	¼	1.60
C-3X	10	50	500	1500	1 11/16	2 13/16	1½	¾	1.80
*C-4X	4	50	360	1500	1⅜	2⅜	1½	¾	1.85
*C-6X	5	65	330	1500	1 11/16	2 13/16	1½	¾	1.80
C-5X	12	75	400	1500	1 15/16	3¼	1⅞	1	2.30
*C-8X	7	75	240	1500	1 15/16	3¼	1⅞	1	2.45
C-7X	10	90	270	1500	1 15/16	3¼	2	1¼	2.70
*C-9X	4	90	100	1500	1 15/16	3¼	1⅞	1¼	2.75
*C-11X	6	110	160	1500	2¼	3 13/16	2⅛	1½	3.25
C-10X	9	125	250	1500	2¼	3 13/16	2⅛	1½	3.30
C-12X	6	160	165	1500	2¼	3 13/16	2¼	1¾	3.60
*C-12A	6	160	165	1500	2¾	2⅜	2⅝	1¾	4.35
*C-13X	3	160	75	1500	2¼	3 13/16	2¼	1¾	3.30
C-14X	6	200	150	1500	2⅝	4 1/16	2½	2½	4.15
*C-14A	6	200	150	1500	3 3/16	2⅝	2⅝	2½	4.95
C-16A	10	200	150	2500	3 9/16	3	3⅝	4	7.25
*C-21X	1.5	225	65	1500	1 15/16	3¼	1⅞	1½	3.75
C-15X	4	250	100	1500	2⅝	4 1/16	2½	2½	4.05
*C-15A	4	250	100	1500	3 3/16	2⅝	2⅝	2½	4.90
*C-23X	1.2	260	45	1500	1 15/16	3¼	1⅞	1½	3.75
C-17X	1.5	300	40	1500	2¼	3 11/16	2⅛	1½	3.45
C-18A	8	300	90	2500	4	3¼	3 15/16	5½	9.15
C-19A	10	300	105	3000	4 5/16	3⅝	4¼	7¼	11.25
*C-25A	2.6	310	60	1500	3 3/16	2⅝	3⅛	3	4.95
C-20A	8	400	60	3000	4¾	3⅞	4½	9½	16.00
C-22A	10	500	65	3000	5 5/16	4½	5⅜	16½	22.70

*New item.


CASE U


CASE A

CASE X

FILAMENT Transformers, Single Secondary

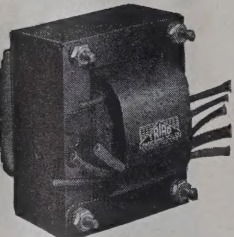
Type No.	Secondary Volts	Amperes	Test Volts	Dim.-Inches H	W	D	Wt. Lbs.	List Price
F-1X	2.5 C.T.	3	1500	1 11/16	2 13/16	1⅝	¾	$ 2.70
F-3X	2.5 C.T.	10	3000	2¼	3 13/16	2¼	1¾	3.95
F-5U	2.5 C.T.	10	7500	3	2½	2⅜	2	6.90
F-7X	5 C.T.	3	1500	1 15/16	3¼	2	1¼	3.60
†F-8X	5 C.T.	6	1500	2¼	3 11/16	2¼	1¾	5.50
F-9U	5.2 C.T.	13	1500	3⅜	2 13/16	3⅜	3½	7.80
F-11U	5.2 C.T.	24	1500	3¾	3⅛	4	5½	10.85
†F-13X	6.3	.6	1500	1⅜	2⅜	1½	½	2.75
F-14X	6.3 C.T.	1.2	1500	1 11/16	2 13/16	1⅝	¾	2.70
*†F-52X	6.3	1.2	5000	1 11/16	3¼	1⅞	1¼	3.55
*†F-51X	6.3/5	2	5000	1 15/16	3¼	2	1¼	3.95
F-16X	6.3 C.T.	3	1500	1 15/16	3¼	2	1¼	3.80
†F-18X	6.3 C.T.	6	1500	2½	4	2½	2¼	6.90
F-18A	6.3 C.T.	6	1500	3 3/16	2⅝	2⅝	2¼	6.90
F-21A	6.3 C.T.	10	1500	3 9/16	3	3¼	3½	8.70
†F-22A	6.3 C.T.	20	2000	4	3¼	4 3/16	6½	14.25
F-23U	10 C.T.	7	1500	3⅜	2 13/16	3⅜	4	7.65
†F-25X	12.6 C.T.	1.5	1500	1 15/16	3¼	1⅞	1¼	3.90
F-40X	24	1	1500	1 15/16	3¼	2	1¼	3.65
*†F-50X	Filament line transformer Pri. 6.3V/5 Sec 6.3/5V 2A			1 15/16	3¼	2	1¼	3.85

†New item. *Low capacity—High voltage test for damper tube operation.

TRIAD

FILAMENT Transformers, Multiple Secondary

Type No.	Secondary Volts	Secondary Amperes	Test Volts RMS	Dim.-Inches H	Dim.-Inches W	Dim.-Inches D	Wt. Lbs.	List Price
F-27U	10 C.T.-10A. 2.5 C.T.-10A.		1500 7500	4⅛	3 7/16	3½	7	$10.85
F-30A	5 C.T.-3A. 6.3 C.T.-8A.		1500	3 9/16	3	3⅜	3½	8.20
F-32A	6.3 C.T.-3A.	6.3 C.T.-3A.	1500	3 3/16	2⅝	2⅝	2½	8.20
F-34A	6.3 C.T.-1.75A. 6.3V.-1.75A.	6.3V-1.75A. 6.3V.-1.75A.	2500	3 3/16	2⅝	3	2¾	8.00
F-36A	6.3 C.T.-3.5A. 6.3V.-3.5A.	6.3V.-3.5A. 6.3V.-3.5A.	2500	4	3¼	3 9/16	4¾	11.60
F-38A	6.3 C.T.-5A. 6.3V.-1A. 5V.-4A.	6.3V.-5A. 5 C.T.-2A.	2500	4	3¼	3 13/16	5¼	13.20


CASE C

DRY DISK RECTIFIER Transformers

Type No.	Secondary Volts	Secondary Amperes	Test Volts	Dim.-Inches H	Dim.-Inches W	Dim.-Inches D	Wt. Lbs.	List Price
*F-47U	17-18	3	1500	3	2½	2⅞	2½	$ 8.25
*F-48U	17-18	6	1500	3¾	3⅛	2⅝	5¼	12.50
*F-49U	36 36	3 3	1500	4½	3¾	3	9¼	20.00

*New item.

POWER TRANSFORMERS

for Regulated Power Supplies

Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Filament Windings Volts and Amperes	Dim.-Inches H	Dim.-Inches W	Dim.-Inches D	Wt. Lbs.	List Price
R-26A	880-720 C.T.	200	6.3 C.T.-8A. 6.3V.-1A. 6.3V.-3A. 5V.-3A.	4¾	3⅞	4¾	10½	$20.40
R-28A	1250 C.T.	300	6.3 C.T.-8A. 6.3V.-3A. 6.3V.-3A. 5V.-6A.	5 5/16	4½	5⅞	21	32.50
*R-27A	1500 C.T.	400	5V.-6A. 6.3V.-3A. 6.3V.-8A.	5⅜	4 7/16	7¼	23½	56.25

*New item.

CASE A

for Cathode-ray Tubes

Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Filament Windings Volts and Amperes	Dim.-Inches H	Dim.-Inches W	Dim.-Inches D	Wt. Lbs.	List Price
R-41C	440-0-440-1250	125/5	‡6.3AV.-.6A. †2.5V.-1.75A. †2.5V.-1.75A. 5V.-3A.	3¼	4⅛	3½	7¼	$23.15
R-45C	400-0-400-800	30/5	‡6.3AV.-.6A. 6.3 C.T.-3A. †5V.-2A. 6.3V.-1A. 5V.-2A.	2½	3¾	3⅛	3½	16.90
*R-43C	1600 C.T.	3	‡6.3/5/2.5V.-1A. †6.3/5/2.5V.-3A.	2¼	2⅝	2 3/16	1½	13.80

‡Statically shielded and insulated for full plate voltage. †Insulated for full plate voltage. *New item.

CASE K

for Preamplifiers, VTVM, etc.

Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Filament Windings Volts and Amperes	Dim.-Inches H	Dim.-Inches W	Dim.-Inches D	Wt. Lbs.	List Price
R-2C	135	15	6.3V.-.9A.	1⅞	1⅞	1 9/16	1	$ 4.90
R-3A	500 C.T.	20	6.3 C.T.-2A.	2¾	2⅜	2⅝	1¾	6.05
R-29A	230 C.T.	40	6.3V.-1.5A.	2¾	2⅜	2½	1½	6.05
*R-30X	135	50	6.3V.-1.5A.	2¼	3 11/16	2⅛	1½	5.20

*New item.

for Vibrator Power Supplies

Type No.	Primary Volts	Secondary AC Volts	Secondary DC Ma.	Dim.-Inches H	Dim.-Inches W	Dim.-Inches D	Wt. Lbs.	List Price
V-1K	6-8	450 C.T.	40	3	2 3/16	2⅜	2¼	$ 8.25
V-3K	6-8	500 C.T.	50	3	2½	2⅜	2½	8.95
V-5A	6-8	600 C.T.	75	3 3/16	2⅝	2⅞	2½	9.15
V-7A	6-8	600 C.T.	100	3 9/16	3	3¼	3½	11.70

POWER Transformers (Con't)

for Auto Radio (Vibrator)

Type No.	Primary Volts	Secondary AC Volts	Secondary DC Ma.	Replacement	Dim.-Inches H	Dim.-Inches W	Dim.-Inches D	Wt. Lbs.	List Price
*V-11K	6-8	760 C.T.	65	Buick	3⅝	2⅜	2¾	2½	$ 9.55
*V-12K	6-8	550 C.T.	55	Cadillac, Chevrolet, Firestone, Ford, Hudson, Kaiser, Motorola, Nash, Oldsmobile, Packard, Philco, Studebaker, Truetone.	2⅝	2¾	2¼	2½	9.00
*V-13K	6-8	580 C.T.	70	Delco, Ford, Lincoln, Motorola, Philco, Pontiac.	3	2½	2⅜	3½	7.50
*V-16K	6-8	460 C.T.	50	Ford, Kaiser, MoPar, Philco. Truetone, Willys.	2⅝	2¾	2¼	2¼	8.25
*V-18X	6-8	580 C.T.	60	Chevrolet, MoPar, Oldsmobile, Pontiac, Silvertone.	2¼	3 11/16	2⅛	1¾	6.15
*V-19A	6-8	320 C.T.	40	Automatic, Coronado, Philco, Regal, Studebaker.	2¾	2⅜	2⅜	1½	5.65
*V-20K	6-8	560 C.T.	50	Motorola, Truetone.	3	2½	2⅜	2½	8.55

*New item.

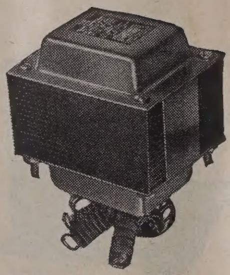
Combine Plate and Filament

for Television Replacements

Type No.	Plate Supply AC Volts	Plate Supply DC Ma.	Filaments Volts and Amperes		Dim. Inches H	Dim. Inches W	Dim. Inches D	Wt. Lbs.	List Price
R-31A	760 V.C.T.	320	5V.-6A. 5V.-2A.	12.6 C.T.-5A.	4¾	3⅞	6	15	$25.00
*R-31BC					4 11/16	4½	3¾	15	27.00
R-31A and R-31BC are designed for a great many of the 28 to 30 tube chassis where a 5V damper tube is used.									
R-32A	760 V.C.T.	320	5V.-6A.	12.6 V.C.T.-5A. 6.3V.-1.2A.	4¾	3⅞	6	15	25.00
R-32A is designed for 28 to 30 tube chassis where a 6.3V damper tube is used.									
*R-33A	775 V.C.T.	230	5V.-3A.	6.3V.-9A. 6.3V./5V.-2A.†	4¾	3⅞	5½	13	23.00
*R-33BC					3 7/16	4½	3¾	13	24.65
R-33A or R-33BC are designed to deliver 400V into an 80 m.f.d. condenser using 5U4G rectifier. 6.3V or 5V damper tube (low capacity).									
R-34A	750 V.C.T.	230	5V.-3A.	6.3V.-8.5A. 6.3V.-1.2A.	4¾	3⅞	4¾	10½	17.60
R-34A is designed to deliver 390V into an 80 m.f.d. condenser using 5U4G rectifier. 6.3V damper tube.									
*R-35A	725/340 V.C.T.	250	5V.-3A. 5V.-2A.	6.3V.-8A. 6.3V.-2.5A.	4¾	3⅞	5¼	12	23.35
*R-35BC					4⅞	4½	3¾	13	24.25
R-35A and R-35BC are designed to deliver 380V DC into an 80 m.f.d. condenser out of a 5U4G rectifier and simultaneously delivering 200V DC from the taps with a 5U4G rectifier, the accumulative current to be a maximum of 250 ma.									
R-36A	775 V.C.T.	275	5V.-6A.	6.3V.-8.5A. 6.3V.-1.2A†	4¾	3⅞	5¼	12	21.00
*R-36BC					3 15/16	4½	3¾	12	22.85
R-36A and R-36BC are designed to deliver 410V into 80 m.f.d. condenser, using 2 5U4G tubes as rectifiers. 6.3V damper tube (low capacity).									
*R-37BC	735 V.C.T.	275	5V.-6A.	6.3V.-8.5A. 6.3V./5V.-2A.†	3 11/16	4½	3¾	12	23.30
R-37BC is designed for 380V into filter condenser using 5U4G rectifier tubes. Either 6.3V or 5V damper tube (low capacity).									
*R38A	750 V.C.T.	225	5V.-3A.	6.3V.-10A. 6.3V.-1.2A.† 6.3V.-.9A.	4¾	3⅞	4¾	10½	18.55
R-38BC					3¾	4½	3¾	10½	20.40
R-38A and R-38BC are designed to deliver 395V into 80 m.f.d. condenser, using 5U4G rectifier. 6.3V damper tube (low capacity).									
R-39A	640 V.C.T.	225	5V.-3A.	6.3V.-10A. 6.3V.-1.2A.†	4¾	3⅞	4¾	10½	17.60
*R-39BC					3 7/16	4½	3¾	10½	19.65
R-39A and R-39BC are designed to deliver 335V into 60 m.f.d. condenser using 5U4G rectifier. 6.3V damper tube (low capacity).									
*R-40A	780/440 V.C.T.	300	5V.-3A. 5V.-3A. 5V.-2A.	6.3V.-8.5A. 6.3V.-3.5A.	4¾	3⅞	5¼	15	26.00
*R-40BC					3 15/16	4½	3¾	15	28.10
R-40A and R-40BC are designed to deliver 410V to 80 m.f.d. filter using 5U4G tube and simultaneously delivering 235V DC from the taps with suitable rectifier, and the V accumulative current to be a maximum of 300 Ma.									
*R-42A	675 V.C.T.	185	5V.-3A.	6.3V.-7A. 6.3V.-2A.†	4¾	3⅞	3⅞	10	21.30
*R-42BC					2 9/16	4½	3¾	10	22.80
R-42A and R-42BC are designed to deliver 350V DC to 80 m.f.d. filter using 5U4G rectifier. 6.3V damper tube (low capacity).									
*R-50A	790/650 V.C.T.	310	5V.-3A. 5V.-3A. 5V.-2A.	6.3V.-5A. 6.3V.-5A. 6.3V.-2.6A.	4¾	3⅞	6	20	27.15
*R-50BC					4 3/16	4½	3¾	20	29.00
R-50A and R-50BC are designed to deliver 415V to 80 m.f.d. filter using 5U4G rectifier tube and simultaneously delivery 340V DC from the taps with suitable rectifier, the accumulative current to be a maximum of 310 Ma.									

†Less than 100 m.m.f.d. capacity to ground and insulated for high voltage damper tube. *New item.
Height of transformers in BC cases is measured from chassis line to top of case. Copper shading ring on all BC cases to reduce external magnetic field.

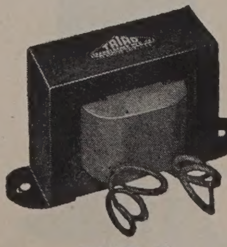
TRIAD



CASE BC

ORDERING INSTRUCTIONS

TRIAD transformer numbers are so arranged as to indicate the type of transformer and type of mounting. The prefix letter indicates the type of transformer. For example: **A**=Audio. Type of mounting is indicated by the suffix letter which refers to the illustration. For example: **A-1X**= Audio transformer in **X** case.



CASE X

STEPDOWN Autoformers

Type No.	V. A. Output	Input Volts	Output Volts	Dim.-Inches H	W	D	Wt. Lbs.	List Price
N-1X	50	230	115	2 ¼	3 11/16	2 ⅛	1 ½	$ 5.05
N-3M	85	230	115	3 9/16	3	2 ⅞	2 ¾	9.80
N-5M	250	230	115	4	3 ¼	4 3/16	4 ¾	14.30
N-7M	500	230	115	4 ¾	3 ⅞	5	11 ½	22.00
N-9M	1000	230	115	5 5/16	4 ½	6 ⅜	22	40.75
N-11M	2000	230	115	5 5/16	4 ½	8 ⅜	27	67.20
*N-34X	150	95-105-115-125-135	115	2 ½	4	2 ½	2	10.25
†*N-35M	250	90-100-110-115-125-135	115	4 5/16	3 ⅝	3 ½	4 ½	18.50

*New item. †M case with switch for primary voltage control.

CASE M

ISOLATION Transformers

Type No.	V. A. Output	Input Volts	Output Volts	Dim.-Inches H	W	D	Wt. Lbs.	List Price
N-51X	35	115	115	2 ¼	3 13/16	2 ¼	1 ¾	$ 5.95
N-53M	85	115	115	3 9/16	3	3 ⅝	4	12.00
N-55M	 250	115	115	4 ¾	3 ⅞	5	11 ½	25.30
N-57M	500	115	115	5 5/16	4 ½	6 ⅜	22	40.75
N-59M	1000	115	115	5 5/16	4 ½	8 ⅜	27	67.20
†N-60	2000	230/115	230/115	4 ¾	8 ½	13 ¼	53	115.00

†Special case.

VERTICAL OUTPUT Transformers

Type No.	Application	Ratio	Dim.-Inches H	W	D	Wt. Lbs.	List Price
A-99X	Output—to couple vertical output tube to deflection coil.	10:1	2 ¼	3 13/16	2 ⅛	1 ½	$ 4.90
A-101U	Same—different mounting.	10:1	3	2 ½	2 ¾	2	6.50
A-104X	Vertical output autoformer.	18:1	2 ¼	3 13/16	2 ⅛	1 ½	4.85
A-102X	Vertical output autoformer.	11.4:1	1 15/16	3 ¼	1 ⅞	1	3.80
A-103X	Vertical output transformer.	49:1	2 ¼	3 13/16	2 ⅛	1 ½	4.95
*A-105X	Vertical output transformer.	25:1	2 ¼	3 11/16	2 ⅛	1 ½	5.25
*A-107X	Vertical output transformer.	10:1	2 ⅝	4 1/16	2 ½	2 ½	6.50

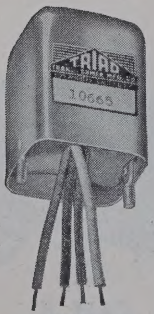
*New item.

CASE K

VERTICAL BLOCKING OSCILLATOR Transformers

Type No.	Application	Ratio	Dim.-Inches H	W	D	Wt. Lbs.	List Price
*A-96X	Dumont type. 3 windings	1:0.5 1:1	1 ⅝	2 ⅞	1 ⅝	½	$ 3.75
A-97X	Blocking oscillator transformer for vertical sweep.	1:4.14	1 3/16	2 ⅛	1 ¼	¼	2.65
A-97K	Same—Case K.	1:4.14	1 ¾	2 5/16	1 ½	½	3.50
A-97Y	Same—Case Y.	1:4.14	1 11/16	1 ¼	1 ⅛	½	3.15

*New item.



CASE Y

HORIZONTAL OUTPUT (Flyback) Transformers

Type No.	Application	Mtg. Type	Dim.-Inches H	W	D	Wt. Lbs.	List Price
D-1	Delivers 12,000-14,000 anode volts from single 6BG6 or 6BQ6 driver and single HV rectifier. Ample deflection for 70° tubes.	Q	4 ½	3 ½	3 ½	¾	$10.45
D-2	Autoformer type. Delivers 14,000 V. from 6BG6 or 6BQ6 driver and single HV rect. Sufficient for 70° tubes.	Q	4 ½	3 ½	3 ½	¾	10.45
*D-11	Delivers 9,000-10,000 V. from single 6BG6 tube, and single HV rect. 53° operation.	H	4 11/16	3 ¾	2 3/32	2	9.65
*D-14	Delivers 14,000 V. from 1 driver tube, replaces GE 77J1.	P	4 ½	3	2 ½	¾	11.50
*D-15	Delivers 14,000 V. from 1 driver tube. 2 tapped secondary windings for A.G.C. circuits.	P	4 ½	3	2 ½	¾	12.00
*D-19	Delivers 14,000 to 16,000 V. —Single driver—70°—17″ to 24″ tubes—replaces RCA 225T1.	P	4 ½	3	2 ½	¾	11.00
*DA-20	Delivers 13,000 to 14,000 V. Single driver—air core.	T	2 ⅝	3	3	½	7.50
*WC-11	Width control coil—15—30 mh. has sec. winding use for A.G.C.		2	¾	¾	¼	2.50

*New item.

HORIZONTAL BLOCKING OSCILLATOR Transformers

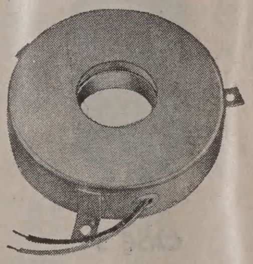
Type No.	Application	Dim.-Inches H	W	D	Wt. Lbs.	List Price
*A-98X	Generates 15750 pulse.	1 3/16	2⅛	1¼	¼	$ 2.75
*A-98K	Generates 15750 pulse.	1¾	2⅜	1½	½	3.75

*New item.

DEFLECTION YOKES

Type No.	Core	Construction	Inductance-mh. Horz.	Vert.	Defl.	Resistor & Leads	Dim.-Inches Dia.	L.	List Price
*Y-11	Iron	Semi-cosine	8.3	50	53°	Yes	3¼	3	$ 9.50
*Y-12	Ferrite	Cosine	8.3	50	70°	Yes	3¼	2⅝	11.25
*Y-17	Ferrite	Cosine	13.5	41.5	70°	Yes	3¼	2⅝	11.25
*Y-19	Ferrite	Cosine	23.	41.5	70°	No	3¼	2⅝	11.25
*Y-20	Ferrite	Cos-anast	30.	3.3	70°	No	3¼	2⅝	11.25

*New item.



R

FOCUS Coils

Type No.	Application	Case	Mtg.	Dim.-Inches H	W	D	Wt. Lbs.	List Price
B-160-S	160 ohm coil. Focuses tubes up to 70° deflection with 210† Ma.	Sq.	4-Bracket	3½	3½	1⅜	1½	$ 8.80
B-247-S	247 ohm coil. Focuses tubes up to 70° deflection with 170† Ma. Direct replacement for RCA 202-D1.	Sq.	2-Stud	3½	3½	1⅜	1½	8.25
*B-365-S	365 ohm coil. Focuses tubes up to 70° deflection with 150† Ma.	Sq.	2-Stud	3½	3½	1⅜	1½	8.70
B-470-R	470 ohm coil. Narrow cross section. For focusing tubes up to 70° deflection with 125† Ma.	Round	3-Bracket	4¾	4¾	1¼	1¼	10.45
B-1000-S	1000 ohm coil. Focuses tubes up to 70° deflection with 85† Ma.	Sq.	2-Bracket 1-Stud	3½	3½	1⅜	1½	8.80

†Max. current required for 70° tubes. *New item.

REPLACEMENT OUTPUT Transformers

Tube to Standard Voice Coil (3-4 ohms)

Type No.	Primary Tubes Used	Impedance	DC-Ma.	Audio Watts	Dim.-Inches H	W	D	Wt. Lbs.	List Price
S-1X	25L6, 50L6, 35A5, 50B5, 2A3, 6B4, etc.	2500	60	3	1⅜	2⅜	1⅜	½	$1.70
*S-2X	2A3, 6A3, 6B4, 6Y6, 7A5, 25B6, 50L6.	2000	55	4	1⅜	2⅜	1⅜	½	1.80
S-3X	6V6, 7C5, 6AQ5, 25A6, 71, etc.	5000	40	3	1⅜	2⅜	1⅜	½	1.80
*S-4X	2A3, 6B4, 6L6, 6U6, 12A5, 25L6, 50A5, 117N7.	3000	70	5	1 15/16	3¼	1⅞	1¼	2.80
S-5Z	6V6, 7C5, 6AQ5, 25A6, 71, etc.	5000	50	5	2¼	2⅞	1⅞	1¼	2.95
*S-5X	6V6, 7C5, 6AQ5, 25A6, 71, etc.	5000	50	5	1 15/16	3¼	1⅞	1¼	3.10
*S-6X	3B5, 6AQ5, 6AS5, 25A6, 25A7, 35L6, 43, 117L7.	5000	35	2	1 3/16	2⅛	1⅛	¼	2.00
S-7X	6K6, 7B5, 6F6, 1Q5, 31, 33, 41, 42, etc.	7500	40	3	1⅜	2⅜	1⅜	½	1.80
*S-8X	1C5, 1H4, 1Q5, 1S4, 3Q5, 3S4, 14A5, 25AC5.	8000	30	2	1 3/16	2⅛	1⅛	¼	2.00
S-9Z	6K6, 7B5, 6F6, 1Q5, 31, 33, 41, 42, etc.	7500	50	5	2¼	2⅞	1⅞	1¼	3.10
*S-9X	6K6, 7B5, 6F6, 1Q5, 31, 33, 41, 42, etc.	7500	50	5	1 15/16	3¼	1⅞	1¼	3.25
S-11X	1J6, 3Q4, 3V4, 6AK6, 6AG7, etc.	10000	30	2	1 3/16	2⅛	1¼	¼	1.85
S-13X	1A5, 1N6, 1LA4.	25000	10	2	1 3/16	2⅛	1¼	¼	1.85
S-15X	P.p.—6V6, 7C5, 6K6, 6F6, etc.	10000 C.T.	40	7	1 11/16	2 13/16	1½	¾	2.95
S-19Z	P.p.—6V6, 7C5, 6K6, 6F6, etc.	10000 C.T.	50	10	2¼	2⅞	2	1¼	3.75
S-21A	P.p.—6V6, 7C5, 45, 6L6, etc.	8000 C.T.	50	15	2¾	2⅜	2½	2¼	5.60
S-23X	Line to VC. autoformer.	50/3.2	0	3	1 3/16	2⅛	1¼	¼	2.20
S-25Z	70 volt line to VC. autoformer.	4000/2000/1000/500 to 4-8	0	10	2¼	2⅞	1⅞	1	3.80

*New item.

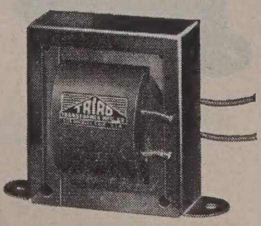
S

UNIVERSAL OUTPUT Transformers

Any Tube to Any Voice Coil

Type No.	Application	Pri. DC Ma.	Audio Watts	Dim.-Inches H	W	D	Wt. Lbs.	List Price
S-51X	Single or p.p. plates (4,000 to 14,000 ohms) to VC.	35	5	1⅜	2⅜	1⅜	½	$2.75
S-53X	Single or p.p. plates (4,000 to 14,000 ohms) to VC.	40	8	1 11/16	2 13/16	1½	¾	3.10
S-55Z	Push-pull plates (4,000 to 14,000 ohms) to VC.	40 ea. side	10	2¼	2⅞	1⅞	1¼	3.95
*S-55X	Push-pull plates (4,000 to 14,000 ohms) to VC.	40 ea. side	10	1 15/16	3¼	1⅞	1¼	4.15
S-57Z	Push-pull plates (4,000 to 14,000 ohms) to VC.	50 ea. side	15	2⅝	3 5/16	2⅛	1¾	5.15

*New item.



CASE Z

INPUT Transformers, Line or Microphone to Grid

Type No.	Application	Frequency Response	Primary Impedance Ohms	Turn Ratio	Dim.-Inches H	W	D	Wt. Lbs.	List Price
A-1X	Line or single button mike to grid.	300-3000	100	31.4	1 3/16	2⅛	1¼	¼	$ 2.40
A-3X	Line or d.b. mike to grid.	300-3000	400 C.T.	15.8	1 3/16	2⅛	1¼	¼	2.60
A-5X	Single button mike to p.p. grids—Hi-gain.	300-3000	100	84	1 11/16	2 13/16	1½	¾	3.80
A-7J	Speaker VC (3.2 ohms) to grid. 40 d.b. shielding.	300-3000	3.2	124	1	1⅛	1⅛	⅛	4.50
A-9J	Line or mike to grid. 60 d.b. shielding.	30-15000	600/250/50	12	1¾	1⅜	1⅜	¼	10.70

CASE J

Special TRANSCEIVER Transformers

(Voice Frequencies)

Type No.	Application	Impedance-ohms Primary	Secondary	Dim.-Inches H	W	D	Wt. Lbs.	List Price
A-21X*	SB mike and plate to grid (2 pri.)	100 10000	100000	1 3/16	2⅛	1¼	¼	$ 2.50
A-23X	Tube to line and hi-impedance phones.	10000	50 and 2000	1⅜	2⅜	1⅜	½	2.85

INTERSTAGE Transformers, Plate to Grid

Type No.	Application	Frequency Response	Impedance-ohms Primary	Secondary	Ratio	Dim.-Inches H	W	D	Wt. Lbs.	List Price
A-31X	Plate to single or p.p. grids.	300-3000	10000	90000	1:3	1⅜	2⅜	1⅜	½	$ 2.50
A-33X	Plate to single or p.p. grids.	70-7000	10000	90000	1:3	1 15/16	3¼	1⅞	1	3.80
A-35A	Plate to single or p.p. grids.	50-10000	10000	90000	1:3	2¾	2⅜	2½	1¾	5.85
A-39A	P.p. plates to p.p. grids.	50-10000	20000 C.T.	45000	1:1.5	2¾	2⅜	2½	1¾	6.15
A-40J	Parallel-fed 6J5 or 6SN7. Plate to p.p. grid. 60 db. shielding.	30-15000	15000	86000	1:2.76	1¾	1⅜	1⅜	¼	10.70

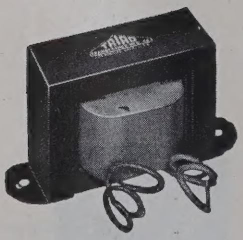
Only TRIAD transformers are

CLIMATITE TREATED

—the improved and exclusive vacuum impregnation process used on all TRIAD transfomers.

LOW LEVEL OUTPUT Transformers

Type No.	Application	Frequency Response	Primary Impedance	Ohms Secondary	Dim.-Inches H	W	D	Wt. Lbs.	List Price
A-51X	Tube to line.	300-3000	7000	50	1 3/16	2⅛	1¼	¼	$ 2.50
A-53X	Single or p.p. tubes to line.	70-7000	18000 C.T.	600/250/50	1 11/16	2 13/16	1½	¾	3.15
A-55J	Parallel-fed 6J5 or 6SN7 to line. 60 db. shielding.	30-15000	15000	600/250/50	1¾	1⅜	1⅜	¼	10.70
A-57J	Line to line. 60 db. shielding.	30-15000	600/250/50	600/250/50	1¾	1⅜	1⅜	¼	10.90



CASE X

EQUALIZING Reactors

Type No.	Application	Ind.	D.C. Ma.	Res. Ohms	Dim.-Inches H	W	D	Wt. Lbs.	List Price
*A-71K	Simple pentode equalizer—hi and low frequency	2 160	2 2	100 8000	3 3/16	3	2½	2	$ 9.75
*A-73J	Choke for cathode equalizer.	15	0	750	1¾	1⅝	1⅝	½	6.00
**A-74J	Choke for cathode equalizer.	15	0	750	1 13/16	1 13/16	1 13/16	¾	9.10
‡†A-75J	Choke for cathode equalizer.	15	0	300	2¾	1¾	1¾	¾	9.75

*40 db. alloy shielding. **70 db. alloy shielding.
†Humbucking and 45 db. shielding single hole mtg. ‡New item.

DRIVER Transformers

Type No.	Driver Tubes	Output Tubes	Frequency Response	Ratio Pri. ½ Sec.	Pri. D.C. Ma.	Dim.-Inches H	W	D	Wt. Lbs.	List Price
A-81X	30, 1H4, etc.	P.p. 19, 30's, 1J6, etc.	300-3000	2.66:1	15	1 3/16	2⅛	1¼	¼	$ 2.65
A-83X	6F6, 42, 45, etc.	P.p. 6L6, 6F6, 6V6, 807, etc.	70-7000	1.33:1	40	1 11/16	2 13/16	1½	¾	3.00
A-85X	6F6, 42, 45, etc.	P.p. 6L6, 6F6, 6V6, 807, etc.	50-10000	1.33:1	40	1 15/16	3¼	1⅞	1¼	3.50
A-89A	P.p. plates to class B or AB grids—Universal 15 watt.	Any class B or AB tubes. 100-500 watts output.	50-10000	3.1 or 2.2:1	100 per side	3 3/16	2⅝	2⅝	2¾	8.70
A-91A	P.p. plates to class B or AB grids—Universal 30 watt.	Any class B or AB tubes. 400-1500 watts output.	50-10000	3.1 or 2.2:1	160 per side	3 9/16	3	3½	3½	14.40

MODULATION Transformers, Tube to RF Load

Type No.	Primary	Frequency Response	Secondary Impedance	Secondary Ma.	Audio Watts	Dim.-Inches H	W	D	Wt. Lbs.	List Price
M-1X	10000 C.T. for 19, 1J6, 6N7, 6A6, etc.	300-3000	5000-8000-10000	50	5	1 3/16	2⅛	1¼	¼	$ 3.80
M-3X	10000 C.T. for 6N7, 6A6, 6F6's, etc.	300-3000	3000-5000-8000	100	20	2¼	3 11/16	2⅛	1½	5.20
M-7A	4250 C.T. for 807's	300-3000	3000-5000-8000	200	60	4 5/16	3⅝	4	6	15.20

REPLACEMENT OUTPUT Transformers

Single Tube to Voice Coil and Line

Type No.	Primary Tubes	Primary Impedance	Secondary Imp.	DC Pri.	Audio Watts	Dim.-Inches H	W	D	Wt. Lbs.	List Price
***S-27A**	2A3, 6A3, 6B4, 6L6, 6U6, 6Y6, 12A5, 25B6, 35B5, 50A5.	2500	4-8-16-500	80	8	2¾	2⅜	2½	2¼	$ 7.50
***S-28X**	2A5, 6AC5, 6B5, 6F6, 6K6, 7B5, 14A5, 25AC5,	7500	4-8-16-500	40	5	1 15/16	3¼	1⅞	1¼	4.50
***S-29X**	6AQ5, 6AS5, 6V6, 7C5, 25A6, 25B5, 25L6, 25N6, 35A5, 35L6.	5000	4-8-16-500	45	5	1 15/16	3¼	1⅞	1¼	4.50

*New item.

CASE A

ORDERING INSTRUCTIONS

TRIAD transformers numbers are so arranged as to indicate the type of transformer and type of mounting. The prefix letter indicates the type of transformer. For example: A=Audio. Type of mounting is indicated by the suffix letter which refers to the illustration. For example: A-1X= Audio transformers in X case.

Triad GEOPHYSICAL Transformers

Triad "Geoformers" are individually calibrated components for incorporation in 5-500 cycle measuring equipment of laboratory precision. Inductance is held within ±5% for the entire production and frequently within ±2% for any given shipment of transformers. "Geoformers" incorporate hum-bucking coils and multiple alloy shielding for minimum pick-up; are of minimum size and weight, and are vacuum-filled and hermetically sealed. Designs are based on years of specialization in this difficult field by pioneers in geophysical transformer design. Standard designs for use in the most used circuits are carried in stock at the factory and by Triad distributors. Complete specifications for "Geoformers" are given in Triad Catalog TR-52, available on request.

Triad HERMETIC TERMINALS for Transformers, Relays, etc.

The MIL-T-27 series of tests for transformers covers the range of from —55°C to +85°C in temperatiure and equally wide test ranges for humidity, corrosion and acceleration, while continually checking for a high degree of electrical performance. The most serious cause for failure is the terminal. Triad terminals have successfully passed these tests and, in addition, have been constructed in a manner which provides strength and mechanical stability greatly in excess of that demanded by MIL specifications. Constructed with sturdy, low resistance, turret type brass studs molded into low loss plastic, these terminals eliminate mechanical failures due to mistreatment and to temperature changes.

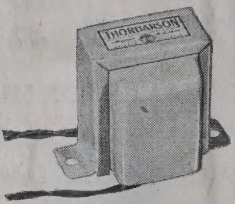
Three types of single terminals, varying in size and voltage rating, and eight types of multiple headers with up to sixteen legibly and permanently marked studs, are listed in Triad Catalog TH-52 describing these terminals. Free on request.

TRIAD TRANSFORMER MFG. CO.

THORDARSON

TRANSFORMER SPECIALISTS SINCE 1895

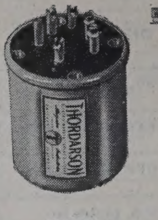
MT. CARMEL, ILL.



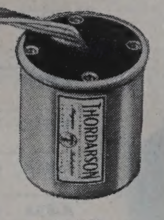
FGV

BAH

Z



RTV



RAV

GGV

AUDIO INPUT TRANSFORMERS

Type No.	List Price	Mtg.	Application	Ohms Impedance Primary	Ohms Impedance Secondary	Turns Ratio	Mtg. Centers	Dimensions W.	Dimensions D.	Dimensions H.	Wt Lbs.
T-20A00	**$3.50**	BAH	Line or mic to single or push-pull grids........	600 Ct. 200 Ct. 50	60,000 Ct. 20,000 Ct. 20,000 Ct.	1:10	2	2⅜	1¼	1¹¹⁄₃₂	½
T-20A01	**5.55**	FGV	Line or mic to single grid....................	600 Ct. 200 Ct. 50	240,000 80,000 80,000	1:20	2⅜	2⅞	1⅞	2⁵⁄₁₆	1¼
T-20A02	**5.40**	FGV	Line or mic to push-pull grids..............	600 Ct. 200 Ct. 50	240,000 Ct. 80,000 Ct. 80,000 Ct.	1:20	2⅜	2⅞	1⅞	2⁵⁄₁₆	1¼
T-20A03	**5.20**	BAH	Single plate and mic or line to grid..........	5,000 to 10,000 200	100,000 250,000	1:3.25	2⅜	2¹³⁄₁₆	1⅝	1⅝	¾
T-20A04	**3.50**	BAH	Voice coil or mic to grid.....................	3 to 6 50	38,400 320,000	1:80	2	2⅜	1¼	1¹¹⁄₃₂	½
T-20A05	**12.70**	RTV	Line or mic to single or push-pull grids........ (Hum-bucking coil and core—fully potted)	600 Ct. 200 Ct. 50	60,000 Ct. 20,000 Ct. 20,000 Ct.	1:10	1⁵⁄₁₆ x 1⁵⁄₁₆	1⁹⁄₁₆ Diam.		2	½
T-20A06	**12.70**	RTV	Line to Line................................... (Hum-bucking coil and core—fully potted)	600 Ct. 200 Ct. 50 Ct.	600 Ct. 200 Ct. 50 Ct.	1:1	1⁵⁄₁₆x1⁵⁄₁₆	1⁹⁄₁₆ Diam.		2	½
T-20A40	**30.00**	Z	Microphone cable input transformer..........	30 to 60	50,000	1:31.6		1 Diam.		2¹¹⁄₁₆	¾
T-20A41	**30.00**	Z	Microphone cable input transformer..........	200 to 250	50,000	1:14.2		1 Diam.		2¹¹⁄₁₆	¾

AUDIO INTERSTAGE TRANSFORMERS

Type No.	List Price	Mtg.	Application	Ohms Impedance Primary	Ohms Impedance Secondary	Turns Ratio	Pri. M.A.	Mtg. Centers	Dimensions W.	Dimensions D.	Dimensions H.	Wt Lbs.
T-20A16	**$3.00**	BAH	Single plate to single or push-pull grids........	10,000	40,000 Ct.	1:2	8	2	2⅜	1¼	1¹¹⁄₃₂	½
T-20A17	**5.10**	RAV	Single plate to single or push-pull grids........	10,000	40,000 Ct.	1:2	8	1⁷⁄₁₆	1⁹⁄₁₆ Diam.		2	½
T-20A19	**4.10**	BAH	Single or push-pull plates to single or push-pull grids	Universal		1:3	8	2⅜	2¹³⁄₁₆	1⅝	1⅝	¾
T-20A22	**5.10**	BAH	Single plate to single or push-pull grids........	10,000	90,000 Ct.	1:3	8	2⅞	3¼	2⅛	1¹⁵⁄₁₆	1¼
T-20A23	**5.90**	FGV	Single plate to single or push-pull grids........	10,000	90,000 Ct.	1:3	8	2⅜	2⅞	2¹⁄₁₆	2⁵⁄₁₆	1½
T-20A24	**6.00**	FGV	Push-pull plates to push-pull grids............	20,000 Ct.	180.000 Ct.	1:3	8 Bal.	2⅜	2⅞	2¹⁄₁₆	2⁵⁄₁₆	1½
T-20A25 **CHT**	**12.70**	RTV	Single or push-pull plates to single or push-pull grids (Hum-bucking coil and core—fully potted)	Universal		1:1.41	8 Bal.	1⁵⁄₁₆ x 1⁵⁄₁₆	1⁹⁄₁₆ Diam.		2	½
T-20A27	**12.70**	RTV	Single plate to single or push-pull grids........	10,000 2,500	40,000 20,000	1:2			2⅞ Diam.		3⁹⁄₁₆	2½

TUBE TO LINE TRANSFORMERS (Low Level)

Type No.	List Price	Mtg.	Application	Ohms Impedance Primary	Ohms Impedance Secondary	Turns Ratio	Pri. M.A.	Mtg. Centers	Dimensions W.	Dimensions D.	Dimensions H.	Wt Lbs.
T-22S90	**$5.40**	FGV	Single or push-pull plates to line..............	20,000 Ct.	500 Ct. or 125 to 200	..	8	2⅜	2²⁷⁄₃₂	1⅞	2⅜	1¼
T-22S92	**11.90**	RTV	Single or push-pull plates to line (Hum-bucking coil and core—fully potted)	20,000 Ct.	500 Ct. or 125 to 200	..	8	1⁵⁄₁₆ x 1⁵⁄₁₆	1⁹⁄₁₆ Diam.		2	½

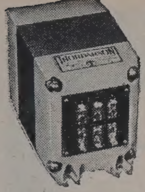
DRIVER TRANSFORMERS

Type No.	List Price	Mtg.	Application	Turns Ratio Pri.–½ Sec.	Pri. M.A.	Mtg. Centers	Dimensions W.	Dimensions D.	Dimensions H.	Wt. Lbs.
T-20D75	**$3.30**	BAH	Single plate to push-pull Class B grids.......... Primary 10,000 ohms—1H4-G or 30 to 19, etc.	2.4:1	5	2	2⅜	1¼	1⅜	½
T-20D76	**3.50**	BAH	Single plate to push-pull Class B grids.......... Primary single 6N7 to Class B 6N7, etc.	5.2:1	15	2	2⅜	1¼	1⅜	½
T-20D77	**5.20**	FGV	Primary single 6F6 to PP 6F6, etc..............	2.5:1	30	2⅜	2⅞	2¹⁄₁₆	2³⁄₁₆	1¼
T-20D78	**6.90**	GGV	Push-pull plates to push-pull grids.............. Primary 6F6 triode to PP 6L6, etc.	4:1	40	2 x 1¹¹⁄₁₆	2⁹⁄₁₆	2¹¹⁄₁₆	3⅛	2½
T-20D79	**5.90**	FGV	Parallel or P-P parallel 6N7 to P-P parallel 6N7, etc........	5.2:1	30	2⅜	2⅞	2¹⁄₁₆	2³⁄₁₆	1½
T-20D80	**8.20**	GGV	Push-pull 2A3 or 6A3 to 805-838, etc..............	3.2:1	100	2 x 1¹¹⁄₁₆	2⁹⁄₁₆	2¹¹⁄₁₆	3⅛	2½
T-20D81	**10.40**	GGV	Push-pull 845 to push-pull 805-833, etc.	5:1	100	2½ x 2³⁄₁₆	3³⁄₁₆	3⁷⁄₁₆	3⅞	4½
T-20D82	**9.00**	GGV	Push-pull plates to push-pull grids .... Push-pull 2A3-6F6, etc. to 805, etc.	5:1 4:1,3.2:1	100	2 x 1¹¹⁄₁₆	2⁹⁄₁₆	2¹¹⁄₁₆	3⅛	2½
T-20D83 **CHT**	**31.70**	PUV	20 Watt 500 Ohm line to class B grids.	1:.75,1:.85,1:1.25, 1:1.4,1:1.75,1:2,1:2.25, 1:2.5,1:2.75,1:3.		1¾ x 4⅜	3⅛	4¾	4	8
T-20D84	**17.40**	GGV*	20 Watt 500 Ohm line to class B grids............	1:.75, 1:.85, 1:1.25, 1:1.4, 1:1.75, 1:2, 1:2.25, 1:2.5, 1:2.75, 1:3		2¼ x 2	3	3½	3⅝	3½

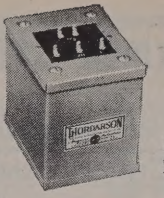
*Terminal Board with Solder Lugs on Both Shields 20 Watts Capacity.

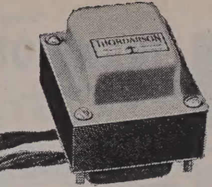
MODULATION TRANSFORMERS

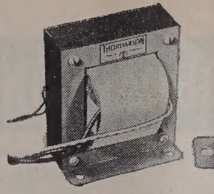
Type No.	List Price	Mtg.	Capacity Watts	Primary Imp. Ohms	Secondary Imp. Ohms	Secondary Volts	Secondary M.A.	Primary Application	Mtg. Centers	Dimensions W.	Dimensions D.	Dimensions H.	Wt. Lbs.
T-21M50	**$4.10**	BAH	3	10,000 Ct.	4500	135	30	19, etc.	2	2⅜	1⅜	1⅜	½
T-21M52	**5.90**	FGV	10	10,000 Ct.	4500/3750/3000	350	80	6N7, etc.	2⅜	2⅞	2¹⁄₁₆	2³⁄₁₆	1¼
T-21M54	**7.90**	GGV	25	6,600 Ct.	4000	400	100	PP 6L6, etc.	2 x 1¹⁵⁄₁₆	2⁹⁄₁₆	2¹⁵⁄₁₆	3⅛	2¾
T-21M56	**13.15**	GGV	75	10,000 Ct.	6600/3750	1250 Max.	200	TZ-20-809 etc.	2½ x 2¹⁵⁄₁₆	3³⁄₁₆	4³⁄₁₆	3⅞	6¾
T-21M58	**31.10**	KTV	100	15,000 Ct.	6250	1250 Max.	200	811-812, etc.	3½ x 4¹⁄₁₆	4⁹⁄₁₆	5¹¹⁄₁₆	5⅝	13

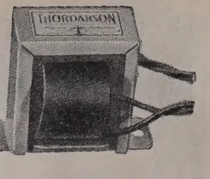

PUV

BHH


KTV


AGF


CAV


BAV

UNIVERSAL MULTI–MATCH MODULATION TRANSFORMERS

Type No.	List Price	Mtg.	Capacity Watts	Primary M.A. each side	Secondary Series	M.A. Parallel	Mtg. Centers	Dimensions W.	D.	H.	Wt. Lbs.
T-21M60	$21.45	KTV	15	50	50	100	2 1/16 x 2½	2 15/16	3 11/16	4	3¾
T-21M61	28.80	PUV	60	125	125	250	1¾ x 4⅝	3⅛	5¼	4	8¾
T-21M62	43.20	PUV	125	210	160	320	2 3/16 x 6⅛	4 1/16	6⅝	5 3/16	16¾
T-21M64	68.95	PUV	300	250	250	500	2 11/16 x 6⅞	4 11/16	7¾	6	20
T-21M65	115.10	PUV	500	320	320	640	3 1/16 x 10	5 5/16	11	6⅞	50
T-21M66	32.40	KTV	50	500 Ohm Line to R.F. Load—5000/6000/7000/ 8000/9000/10,000 Ohms—Max. Sec. D.C. 200 M.A.			3¼ x 3¾	4 3/16	5 3/16	5¼	11

VIBRATOR POWER TRANSFORMERS

Type No.	List Price	Mtg.	Primary	H.V. Secondary	Sec. No. 2	Mtg. Centers	Dimensions W.	D.	H.	Wt. Lbs.
T-22R25	$7.80	TTV‡	6-8 volts D.C.	150 volts D.C. at 40 M.A.		Exact Repl.	2⅜	2 3/16	3	2
T-22R27	8.40	TTV‡	6-8 volts D.C.	250 volts D.C. at 50 M.A.		Exact Repl.	2⅜	2 3/16	3	2
T-22R20	7.65	CAV	6-8 volts D.C.	250 volts D.C. at 50 M.A.		2 x 1¾	2½	2¼	3 1/16	2½
T-22R22	9.00	CAV]	6-8 volts D.C.	325 volts D.C. at 75 M.A.		2 x 2½	2½	3	3 1/16	3½
T-22R24	17.30	GGV	117V. 60 cycle or 6-8 volts D.C.	325 volts D.C. at 135 M.A.	6.3 volts Ct. at 4.75 A.	3 x 3 1/16	3 13/16	4 3/16	4 9/16	8¾

OUTPUT TRANSFORMERS

Type No.	List Price	Mtg.	Application	Primary Imp. Ohms	Max. Prim. Per Side	D.C. M.A. Unbal.	Secondary Imp. Ohms	Power Watts	Mtg. Centers	Dimensions W	D	H	Wt Lbs.
T-22S45	$2.45	BAH	Single plate to voice coil.....	1500 to 3000.......	..	55	3.2	3	2	2⅜	1¼	1⅜	½
T-22S46	2.80	BAH	Single plate to voice coil.....	3000 to 6000.......	..	35	3.2	3	2	2⅜	1¼	1⅜	½
T-22S47	3.35	BAH	Single or push-pull plates to voice coil	6000 to 12000 Ct...	35	35	3.2	3	2	2⅜	1¼	1⅜	½
T-22S48	3.40	BAH	Single or push-pull plates to voice coil	12000 to 25000 Ct..	10	8	3.2	3	2	2⅜	1¼	1⅜	½
T-22S56	5.00	BAH	Single or push-pull plates to voice coil	8000/10000 Ct.....	50	35	3.2 to 4/6 to 8	8	2 13/16	3¼	1¾	2	1¼
T-22S58	5.00	BAH	Single or push-pull plates to voice coil	5000/7000 Ct......	50	45	3.2 to 4/6 to 8	8	2 13/16	3¼	1¾	2	1¼
T-22S60	5.20	BAH	Single or push-pull plates to voice coil	2500/4000 Ct.......	60	60	3.2 to 4/6 to 8	8	2 13/16	3¼	1¾	2	1¼
T-22S64	8.70	GGV	Single or push-pull plates to voice coil	10000 Ct...........	50	30	3.2 to 4/6 to 8/15/250/500	25	2 x 1 11/16	2 17/32	2 11/16	3 3/32	2½
T-22S66	8.70	GGV	Single or push-pull plates to voice coil	8000 Ct............	50	30	3.2 to 4/6 to 8/15/250/500	25	2 x 1 11/16	2 17/32	2 11/16	3 3/32	2½
T-22S68	8.15	GGV	Single or push-pull plates to voice coil	6500 Ct............	70	40	3.2 to 4/6 to 8/15/250/500	25	2 x 1 11/16	2 17/32	2 11/16	3 3/32	2½
T-22S70	9.30	GGV	Single or push-pull plates to voice coil	5000 Ct............	80	45	3.2 to 4/6 to 8/15/250/500	25	2 x 1 11/16	2 17/32	2 11/16	3 3/32	2½
T-22S72	9.30	GGV	Single or push-pull plates to voice coil	3000 Ct............	90	50	3.2 to 4/6 to 8/15/250/500	25	2 x 1 11/16	2 17/32	2 11/16	3 3/32	2½
T-22S78	13.15	GGV	Single or push-pull plates to voice coil	3300 Ct..............	180	150	3.2 to 4/6 to 8/15/250/500	60	2½ x 2 7/16	3 5/32	3⅝	3 15/16	5¼
T-22S74	7.65	BHH	Universal single or push-pull tubes to voice coil	14000/10000/8000/ 6600/5000/3000/2500 Ct.	80	60	1 to 30	25	3 9/16	4	2½	2 9/16	2½
T-22S76	7.90	BHH	Universal single or push-pull tubes to line	14000/12000/10000/ 8000/5000/3000 Ct.	80	60	500	25	3 9/16	4	2½	2 9/16	2½
T-22S80	5.30	BHH	Single line to voice coil......	500 to 600	..	..	3.2 to 4/6 to 8/15	8	3⅛	3 11/16	2	2¼	1½
T-22S82	8.60	BHH	Multiple lines to voice coil...	2000/1500/1000/500	..	..	3.2 to 4/6 to 8/15	25	3 9/16	4	2¾	2 9/16	2¼
T-22S83	5.90	BAH	Multiple lines to voice coil...	2000/1500/1000/500	..	..	3.2 to 4/6 to 8/15	15	3⅛	3 11/16	2	2¼	1½
T-22S84	5.40	BAH	Multiple lines to voice coil.....	2000/1500/1000/500	..	..	3.2 to 4/6 to 8/15	5	2 13/16	3¼	1¾	2	1
T-22S85	4.90	BAH	Multiple lines to voice coil...	2000/1500/1000/500	..	..	3.2 to 4/6 to 8/15	3	2⅜	2⅞	1½	1⅝	¾
T-22S62	5.15	BHH	Universal single plate to voice coil	4000/3000/2500/ 2000/1500	..	50	.1 to 29	8	2 13/16	3¼	2	2	1¼
T-22S88	4.50	BAH	Universal single or push-pull plates to voice coil	14000 Ct./8000 Ct./ 3500/2000	50	10	3.2 to 4/6 to 8/15	8	2 13/16	3¼	1¾	2	1
T-22S87	4.15	BAH	Universal single or push-pull plates to voice coil	14000 Ct./8000 Ct./ 3500/2000	50	10	3.2 to 4/6 to 8	6	2⅜	2⅞	1½	1⅝	¾
T-22S86	3.80	BAH]	Universal single or push-pull plates to voice coil	14000 Ct./8000 Ct./ 3500/2000	50	10	3.2 to 4/6 to 8	3	2	2⅜	1¼	1⅜	½

Type No.	List Price	Mtg. Fig.	Typical Tube Applications	Class	Pri. Imp.	Pri. Ma.	Secondary Imp.Ohms	Max. Watts	Mtg. Centers	Dimensions W	D	H	Wt. Lbs.
TS-24S50	$1.65	BAH	2A3, 6A3, 6B4, 6W6, 7A5, 23ACS, 25B5, 25N6, 25L6, 35A5, 35L6, 35B5, 50A5, 50L6, 70L7, 48, etc.	A	2000	55	3–4	5	2	2⅜	1¼	1⅜	½
TS-24S51	1.70	BAH	31, 43, 45, 50, 59, 71A, 1S4, 2B6, 6A5G, 6V6, 7C5, 12A5, 25A5, 25A6, 25A7, 35L6, etc.	A	5000	40	3–4	5	2	2⅜	1¼	1⅜	½
TS-24S52	1.60	BAH	20, 31, 33, 41, 42, 46, 47, 59, 89, 1C5, 1G5, 1Q5, 1S4, 2A5, 3Q5, 6A4, 6AC5, 6B5, 6F6, 6K6, 6N6, 6V6, 7B5, etc.	A	7000	30	3–4	5	2	2⅜	1¼	1⅜	½
TS-24S54	1.80	BAH	38, 85, 1D8, 1E7, 1F4, 1F5, 1J5, 1T5, 6F6, 6V7, 6Y7, etc.	A!	15000 to 25000	10	3–4	5	2	2⅜	1¼	1⅜	½
TS-24S60	$2.90	BHH	Single or push-pull plates....................	A	4M, 7M, 8M, 10M, 14M C.T.	35	.1 to 29 ohms	4	2	2⅜	1¼	1⅜	½
TS-24S61	3.30	BHH	Single or push-pull plates....................	A	4M, 7M, 8M, 10M, 14M, C.T.	40	.1 to 29 ohms	8	2⅜	2⅞	1½	1⅝	1

TELEVISION REPLACEMENT & EXPERIMENTAL POWER TRANSFORMERS

Type No.	List Price	Case Style	Secondary No. 1 A.C. Volts	D.C. MA	Rect. Fil.	Fil. No. 2	Fil. No. 3	Mtg. Centers	Dimensions W	D	H	Wt. Lbs.
T-22R40	$18.00	GGV	1800	2	2.5V-1.8A	6.3V-.6A Tapped at 2.5V-2.1A		2½x2 7/16	3 5/32	3¾	3 13/16	4¾
TV-24R92	14.40	GGV	2400	10	2.5V-1.75A			2¾x2 11/16	3½	3⅞	4¼	5
TV-24R98	18.00	AGF	350-0-350	200	5V-2A 5V-3A	6.3V-7A	6.3V-.9A	3x3¾	3¾	4½	4⅛	10¼

THORDARSON

TRANSFORMER SPECIALISTS SINCE 1895

MT. CARMEL, ILL.

(SEE CATALOG FOR SPLATTER CHOKES, ETC.)

REPLACEMENT POWER TRANSFORMERS

Type No.	List Price	Mtg.	H.V. Secondary A.C. Volts	M.A. D.C.	Rct. Fil.	Fil. No. 2	Fil. No. 3	Pri. Volts 50/60 Cy.	Pri. VA.	Mtg. Centers	Dimensions W.	D.	H.	Wt. Lbs.
T-22R00	$8.30	AGF	250–0–250	40	5V.-2A.	6.3V. CT-2A.		117	45	2 x 2½	2½	3	1 11/16	1¾
T-22R01	8.40	AGF	275–0–275	50	5V.-2A.	6.3V. CT-2.5A.		117	55	2 x 2½	2½	3	1 13/16	2¼
T-22R02	10.00	AGF	300–0–300	70	5V.-2A.	6.3V. CT-3A.		117	65	2 x 2½	2½	3	2 3/16	2¾
T-22R04	10.25	AGF	300–0–300	90	5V.-2A.	6.3V. CT-3.5A.		117	80	2¼ x 2 13/16	2 13/16	3⅜	2 3/16	3
T-22R05	11.40	AGF	300–0–300	120	5V.-3A.	6.3V. CT-5A.		117	95	2½ x 3⅛	3⅛	3¾	2½	4¼
T-22R06	12.00	AGF	325–0–325	150	5V.-3A.	6.3V. CT-5A.		117	125	2½ x 3⅛	3⅛	3¾	3	5¾
T-22R07	14.90	AGF	350–0–350	200	5V.-3A.	6.3V. CT-6A.		117	165	3 x 3¾	3¾	4½	2 13/16	7¾
T-22R08	8.30	AGF	250–0–250	40	5V.-2A.	2.5V. CT-4A.		117	40	2 x 2½	2½	3	1 11/16	1¾
T-22R09	9.00	AGF	275–0–275	50	5V.-2A.	2.5V. CT-7.5A.		117	55	2 x 2½	2½	3	1 13/16	2¼
T-22R10	11.80	AGF	325–0–325	85	5V.-2A.	2.5V. CT-9A.	2.5V. CT-3.5A.	117	90	2½ x 3⅛	3⅛	3¾	2¼	3½
T-22R11	13.15	AGF	325–0–325	120	5V.-3A.	2.5V. CT-12.5A	2.5V. CT-5A	117	125	2½ x 3⅛	3⅛	3¾	3	5½
T-22R12	4.80	BAH	120V	75	6.3V-1.5A					3⅛	3 11/16	1 1/64	2 3/16	1
T-22R30	$10.05	GGV	275–0–275	50	5V.-2A.	6.3V. CT-2.5A.		117	55	2 x 2 3/16	2 17/32	3 3/16	3 3/32	3¼
T-22R31	11.40	GGV	360–0–360	80	5V.-2A.	6.3V. CT-2.5A.		117	76	2 x 2 11/16	2 17/32	3 11/16	3 3/32	4
T-22R32	13.55	GGV	350–0–350	110	5V.-2A.	6.3V. CT-3A.	6.3V. CT-3A.	117	107	2½ x 2 11/16	3 5/32	3 15/16	3⅞	5¾
T-22R33	14.50	GGV	375–0–375	160	5V.-3A.	6.3V. CT-5A.		117	145	3 x 3 9/16	3 25/32	2 15/16	4⅝	7¾
T-22R34	18.65	GGV	385–0–385	225	5V.-3A.	6.3V. CT-5A.		117	186	3 x 3 9/16	3 25/32	4 11/16	4⅝	10
T-22R35	19.80	GGV	400–0–400	340	5V.-6A.	6.3V. CT-7A.		117	290	3 x 4 1/16	3 25/32	5 3/16	4⅝	12½
T-22R36	15.00	GGV	600–0–600	200	5V.-3A.	6.3V. CT-5A.				3 x 3 5/16	3 13/16	4 7/16	4⅝	8½
TS-24R00	$5.90	AGF	240–0–240	40	5V.-2A	6.3V.CT-2A				2 x 2½	2½	3	1 13/16	1⅞
TS-24R01	6.20	AGF	325–0–325	40	5V.-2A	6.3V.CT-2A				2 x 2½	2½	3	1 15/16	2¼
TS-24R02	7.50	AGF	350–0–350	70	5V.-2A	6.3V.CT-2.5A				2¼ x 2 13/16	2 13/16	3⅜	2 9/16	3½
TS-24R04	8.10	AGF	350–0–350	90	5V.-3A	6.3V.CT-3.5A				2¼ x 2 13/16	2 13/16	3⅜	2 15/16	3¾
TS-24R05	9.20	AGF	350–0–350	120	5V.-3A	6.3V.CT-4.7A				2½ x 3⅛	3⅛	3¾	3	5
TS-24R06	10.85	AGF	375–0–375	150	5V.-3A	6.3V.CT-4.7A				2¾ x 3 7/16	3 7/16	4⅛	3⅞	5¾
TS-24R07	14.40	AGF	400–0–400	200	5V.-3A	6.3V.CT-5A				3 x 3¾	3¾	4½	3 5/16	8½

Voltage Changer—Auto Transformers

T-23V21	$ 9.00	GGV*	220–250	110–125†	100	2½ x 1 11/16	3 5/32	2 15/16	3⅞	5
T-23V22	13.20	GGV*	220–250	110–125†	150	2½ x 1 15/16	3 5/32	3 3/16	3⅞	6¼
T-23V23	15.60	GGV*	220–250	110–125†	250	3 x 2 5/16	3 13/16	3⅝	4 11/16	10¼
T-23V24	23.10	GGV*	220–250	110–125†	500	3 x 3 5/16	3 13/16	4⅝	4 11/16	13

PLATE TRANSFORMERS

Type No.	List Price	Mtg.	Pri. Volts 50–60 Cy.	Prim. ICAS	V.A. CCS	Secondary Volts A.C. R.M.S.	D.C. Volts	D.C.M.A. ICAS	CCS	Mtg. Centers	Dimensions W.	D.	H.	Wt. Lb.
T-21P75	$186.20	PUV	115/230	1900	1500	3000-2400-1500-0-1500-2400-3000	2500-2000-1250	650	500	4 9/32 x 12 5/16	7 9/16	13½	9 9/16	135
T-21P77	108.50	PUV	115/230	1250	900	3000-2450-0-2450-3000	2500-2000	425	300	3¼ x 10	6⅜	11	9	77
T-21P79	88.75	PUV	115/230	1000	750	1875-1560-0-1560-1875	1500-1250	550	400	3 1/16 x 10⅛	5 5/16	11	6⅞	60
T-21P81	82.75	PUV	115	630	480	1560-1265-0-1265-1560	1250-1000	425	300	3 1/16 x 10⅛	5 5/16	11	6⅞	57
T-21P82	82.75	PUV	115	820	600	2335-1700-0-1700-2335	2000-1500	300	220	3 1/16 x 9⅛	5 5/16	10	6⅞	43
T-21P83	43.20	PUV	115	440	300	1560-1250-0-1250-1560	1250-1000	300	200	2 11/16 x 7⅝	4 11/16	8½	6	33
T-21P85	35.20	PUV	115	370	260	850-730-0-730-850	600-500	425	300	2 3/16 x 6⅜	4 1/16	6⅞	5 3/16	19
T-21P87	20.70	GGV	115	250	185	835-656-0-656-835	650-500	300	220	3 x 3 5/16	3 25/32	4 7/16	4⅝	10
T-21P89	13.80	GGV	115	135	95	550-0-550	450	250	175	2½ x 2 15/16	3 3/16	4 3/16	3⅞	6½
T-21P91	47.95	PUV	115	375	280	1200-0-1200-900-0-900	1000 and 750†	200 150	150 110	2 3/16 x 6⅞	4 1/16	7⅜	5 3/16	22
T-21P93	19.30	GGV	115	210	160	1075-0-1075-500-0-500	1000 and 400†	110 150	95 125	3 x 3 9/16	3 25/32	4 11/16	4⅝	10

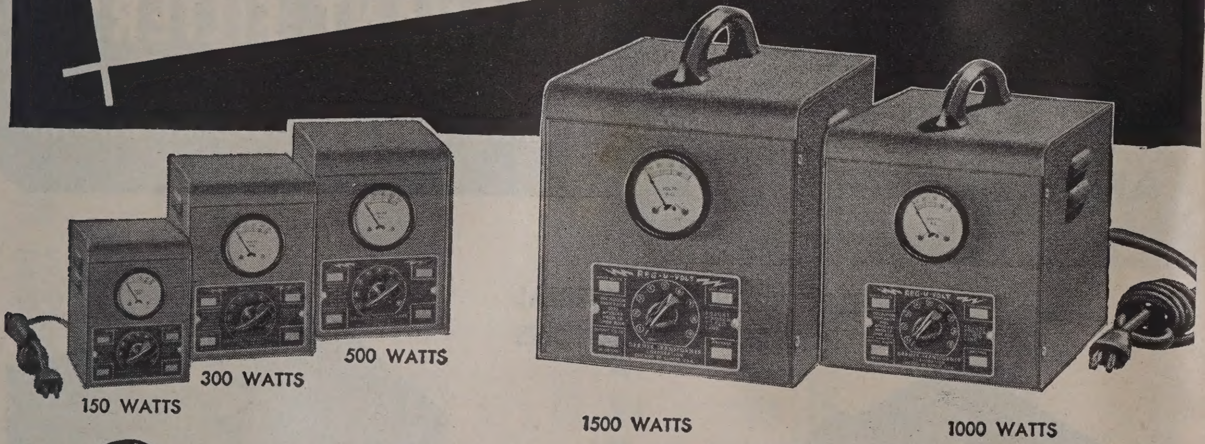
FILAMENT TRANSFORMERS

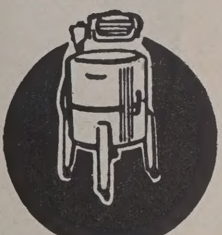
Type No.	List Price	Mtg.	Secondary Volts	Amps.	Ins. R.M.S.	Pri. Volts 50/60 Cy.	Mtg. Centers	Dimensions W	D	H	Wt. Lbs
T-21F00	$4.30	BAV	2.5 Ct.	@ 5	1600	117	2⅜	2⅞	1¾	2 5/16	1
T-21F01	5.85	BAV	2.5 Ct.	@ 10	1600	117	2 11/16	3 5/16	2	2 11/16	1½
T-21F02	7.45	CAV	2.5 Ct.	@ 10	7500	117	2 x 1¾	2½	2¼	3 1/16	2¼
T-21F03	5.00	BAV	5 Ct.	@ 3	1600	117	2⅜	2⅞	1¾	2 5/16	1
T-21F04	6.60	BAV	5 Ct.	@ 8	1600	117	2 11/16	3 5/16	2	2 11/16	1½
T-21F05	7.20	CAV	5 Ct.	@ 3	10,000	117	2 x 1¾	2½	2¼	3 1/16	2
T-21F06	7.65	CAV	5 Ct.	@ 13	1600	117	2 x 2	2½	2½	3 1/16	2¾
T-21F07	10.40	CAV	5 Ct.	@ 21	1600	117	2½ x 2¼	3⅛	3¼	3 13/16	5¼
T-21F08	3.80	BAV	6.3 Ct.	@ 1	1600	117	2	2⅜	1½	2	¾
T-21F10	5.00	BAH	6.3 Ct.	@ 3	1600	117	2¾	3¼	1¾	2	1
T-21F11	7.40	BAV	6.3 Ct.	@ 6	1600	117	2 11/16	3 5/16	2	2¾	1½
T-21F12	7.25	CAV	6.3 Ct.	@ 10	1600	117	2 x 2	2½	2¾	3 1/16	2¾
T-21F14	5.00	BAH	6.3-5-2.5	@ 2.5	1600	117	2¾	3¼	1¾	2	1
T-21F15	5.55	BAV	7.5 Ct.	@ 4	1600	117	2 11/16	3 5/16	2	2 11/16	1½
T-21F16	7.25	CAV	7.5 Ct.	@ 8	1600	117	2 x 2	2½	2¾	3 1/16	2¾
T-21F17	9.00	CAV	7.5 Ct.	@ 12	1600	117	2¼ x 2¼	2 13/16	3¼	3½	4
T-21F18	7.25	CAV	10 Ct.	@ 5	1600	117	2 x 1¾	2½	2¼	3 1/16	2¼
T-21F19	10.40	CAV	10 Ct. 11 Ct.	@ 12 or @ 11	1600	117	2½ x 2¼	3⅛	3¼	3 13/16	5¼

CHOKES—REACTORS—Universal Types—Swinging and Smoothing

Type No.	List Price	Mtg. Fig.	O D.C.	Henries Rated D.C.	Max. D.C.	Current in M.A. Rated D.C.	Max. D.C.	D.C. Res. Ohms	Test Volts R.M.S.	Mtg. Centers	Dimensions W.	D.	H.	Wt. Lbs.
T-20C50	$4.15	BAH	475	350	75	5	25	5500	2000	2⅞	3¼	2	2	1½
T-20C51	2.80	BAH	70	35	15	15	25	1850	1200	2	2⅜	1¼	1⅜	½
T-20C52	2.40	BAH	13	8	4	40	65	450	1200	2	2⅜	1¼	1⅜	½
T-20C59	2.90	BAH	14	7	5	55	65	200	1600	2⅜	2 3/16	1⅝	1⅝	¾
T-20C53	3.55	BAH	24	12	8	80	100	375	2000	2⅞	3¼	2	2	1¼
T-20C64	4.30	BAH	15	4	3	130	150	100	1600	3⅛	3 11/16	2⅝	2¼	1½
T-20C54	5.90	GGV	16	8	4	150	200	145	2700	2x1 11/16	2 17/32	2¾	3⅛	2½
T-20C54-P	12.00	CHT	16	8	4	150	200	145	2700	2 11/16x2 5/32	3	2¾	4	3¾
T-20C55	7.65	GGV	11	6	2	200	300	75	2700	2¼x2	2⅞	3¼	3½	3½
T-20C55-P	15.30	CHT	11	6	2	200	300	75	2700	2 25/32x2 11/32	3⅜	3	4 5/32	5
T-20C56	11.10	GGV	10	7	4	300	375	60	3500	2½x3	3 3/16	4 3/16	3⅞	6½
T-20C56-P	19.50	CHT	10	7	4	300	375	60	3500	3⅝x3⅛	4¼	3¾	4 13/16	8½
T-20C57	41.35	PUV	16	10	6	500	600	65	7500	2 11/16x7	4 11/16	7¾	6	26
T-20C58	2.75	BAH		.75		.5		30	1100	2⅜	2 13/16	1½	1⅝	½

Proved FOR BETTER VOLTAGE CONTROL GRAMER "REG-U-VOLTS"





Protect your electrical and radio apparatus, as well as television sets from damage by using the new Gramer Super "Reg-U-Volts". The correct operation of all your electrical appliances is insured by utilizing Gramer's voltage regulators, because Gramer Super "Reg-U-Volts" deliver the specific voltage required for the proper operation of your television sets, radios and electrical appliances. There is a Gramer Super "Reg-U-Volt" to deliver the correct voltage for any electrically powered equipment. Be sure to insist on Gramer Super "Reg-U-Volts". Accept no substitute.

LIST PRICES ON SUPER "REG-U-VOLTS" GRAMER PRICES EFFECTIVE NOVEMBER 15, 1950

UNIT NO.	INPUT VOLTAGE	OUTPUT VOLTAGE	WATTAGE	UNIT PRICE IN U. S. CURRENCY
CV- 150	55 to 135 V. in 10 V. steps	115 V.A.C.	150 Watts	$ 26.25
CV- 300	55 to 135 V. in 10 V. steps	115 V.A.C.	300 Watts	32.00
CV- 500	55 to 135 V. in 10 V. steps	115 V.A.C.	500 Watts	37.90
CV-1000	55 to 135 V. in 10 V. steps	115 V.A.C.	1000 Watts	79.50
CV-1500	55 to 135 V. in 10 V. steps	115 V.A.C.	1500 Watts	112.60
CV- 152	160 to 240 V. in 10 V. steps	220 V.A.C.	150 Watts	27.25
CV- 302	160 to 240 V. in 10 V. steps	220 V.A.C.	300 Watts	32.50
CV- 502	160 to 240 V. in 10 V. steps	220 V.A.C.	500 Watts	38.00
CV-1002	160 to 240 V. in 10 V. steps	220 V.A.C.	1000 Watts	81.50
CV-1502	160 to 240 V. in 10 V. steps	220 V.A.C.	1500 Watts	113.50

GRACOIL

GRAMER TRANSFORMER CORPORATION

2734 NORTH PULASKI ROAD • CHICAGO 39, ILLINOIS, U.S.A.
TELEPHONE EVERGLADE 4-4400

CONTROLLED QUALITY . . .

CUSTOM BUILT FOR GOVERNMENT AND INDUSTRY

TRANSFORMERS

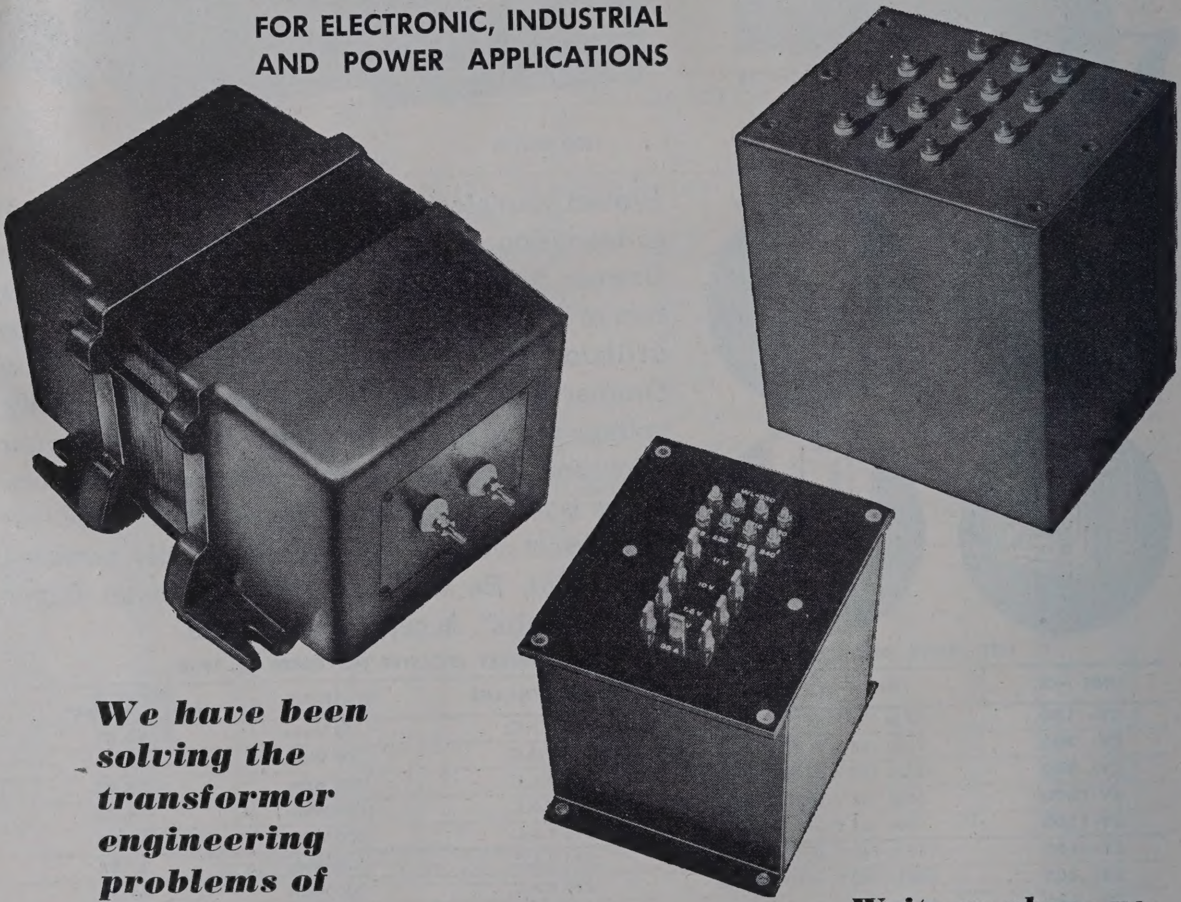
REACTORS

RESONANT FILTERS

●

Top Engineering and Workmanship

FOR ELECTRONIC, INDUSTRIAL AND POWER APPLICATIONS



We have been solving the transformer engineering problems of government and industry since 1938!

Write or phone us regarding your special requirements.

ELECTRONIC TRANSFORMER COMPANY, INC.
209 West 25th Street • WAtkins 4-0880 • New York 1, N. Y.

UNITED TRANSFORMER CO.

PRICE LIST

Type No.	List Price
A-10	$16.00
A-11	18.00
A-12	16.00
A-14	17.00
A-16	15.00
A-17	17.00
A-18	16.00
A-19	19.00
A-20	16.00
A-21	18.00
A-24	16.00
A-25	17.00
A-26	16.00
A-27	16.00
A-30	12.00
A-32	10.00
CG-1C	75.00
CG-1S	75.00
CG-2L6	20.00
CG-4L6	35.00
CG-15	13.00
CG-16	13.00
CG-19	13.00
CG-33	8.00
CG-34	13.00
CG-40	10.00
CG-41	10.00
CG-44	10.00
CG-45	10.00
CG-48C	10.00
CG-50	16.00
CG-51AX	13.00
CG-53AX	15.00
CG-59AX	15.00
CG-100	11.00
CG-101	11.00
CG-102	16.00
CG-103	16.00
CG-104	23.00
CG-105	23.00
CG-108	45.00
CG-109	45.00
CG-120	17.00
CG-121	25.00
CG-122	20.00
CG-124	22.00
CG-125	23.00
CG-126	37.00
CG-131	11.00
CG-132	12.00
CG-133	14.00
CG-134	14.00
CG-135	15.00
CG-136	15.00
CG-137	12.00
CG-140	12.00
CG-141	14.00
CG-233	13.00
CG-235	18.00
CG-238AX	35.00
CG-300	20.00
CG-301	30.00
CG-302	37.00
CG-303	50.00
CG-304	140.00
CG-305	75.00
CG-306	140.00
CG-307	125.00
CG-308	165.00
CG-309	300.00
CG-310	210.00
CG-311	75.00
CG-312	75.00
CG-315	20.00
CG-316	30.00
CG-333	14.00
CG-422	22.00
CG-428	30.00
CG-429	31.00
CG-431	45.00
CG-433	14.00
CG-512	35.00
CG-710	13.00
CGE-1A	30.00
CVA-1	14.00
CVA-2	17.00
CVA-3	22.00
CVA-4	32.00
CVA-5	45.00
CVL-1	10.00
CVL-2	13.50
CVL-3	20.00
CVL-10	10.00
CVL-11	13.50
CVL-12	20.00

Type No.	List Price
CVM-0	$10.00
CVM-1	15.00
CVM-2	23.00
CVM-3	33.00
CVM-4	55.00
CVM-5	130.00
CVP-1	11.00
CVP-2	16.00
CVP-3	25.00
CVP-4	35.00
CVP-5	60.00
FT-1	3.50
FT-2	3.20
FT-3	4.00
FT-4	4.25
FT-5	4.50
FT-6	4.50
FT-7	4.50
FT-8	6.00
FT-9	6.00
FT-10	7.00
H-1	16.50
H-2	16.00
H-3	13.50
H-4	13.50
H-5	15.50
H-6	16.00
H-7	16.50
H-8	15.50
H-9	16.50
H-10	15.00
H-11	12.00
H-20	20.00
H-21	23.00
H-22	21.00
H-23	20.00
H-24	15.00
H-30	13.00
H-31	13.00
H-32	13.00
H-33	13.00
H-34	13.00
H-35	11.00
HA-100	21.00
HA-100X	26.00
HA-101	24.00
HA-101X	29.00
HA-103A	25.00
HA-104	22.00
HA-105	16.00
HA-106	18.00
HA-107	26.00
HA-108	21.00
HA-108X	25.00
HA-111	22.00
HA-113	20.00
HA-114	22.00
HA-130X	30.00
HA-133	20.00
HA-134	25.00
HA-135	25.00
HA-137	22.00
HC-115	13.00
HC-116	20.00
HC-117	13.00
HP-122	15.00
HP-123	22.00

Type No.	* Net Price
HQA-1	7.00
HQA-2	7.00
HQA-3	7.50
HQA-4	7.50
HQA-5	8.00
HQA-6	8.00
HQA-7	9.00
HQA-8	9.00
HQA-9	10.00
HQA-10	10.00
HQA-11	10.00
HQA-12	11.00
HQA-13	11.00
HQA-14	13.00
HQA-15	14.00
HQA-16	15.00
HQA-17	16.00
HQA-18	17.00

Type No.	* Net Price
HQB-1	$16.00
HQB-2	16.00
HQB-3	16.00
HQB-4	17.00
HQB-5	17.00
HQB-6	18.00
HQB-7	19.00
HQB-8	20.00
HQB-9	21.00
HQB-10	22.00
HQB-11	23.00
HQB-12	24.00
HQC-1	13.00
HQC-2	13.00
HQC-3	13.00
HQC-4	13.00
HQC-5	13.00
HDQ-1	15.00
HQD-2	15.00
HQD-3	15.00
HQD-4	15.00
HQD-5	15.00
HQE-1	6.00
HQE-2	6.00
HQE-3	7.00
HQE-4	7.50
HQE-5	8.00

Type No.	List Price
LS-6L1	50.00
LS-6L3	35.00
LS-6L4	60.00
LS-5	50.00
LS-6	35.00
LS-7	40.00
LS-10	25.00
LS-10X	35.00
LS-12	28.00
LS-12X	35.00
LS-14	32.00
LS-14X	37.00
LS-15	32.00
LS-15X	37.00
LS-18	31.00
LS-19	26.00
LS-20	25.00
LS-21	26.00
LS-22	32.00
LS-25	32.00
LS-26	30.00
LS-27	26.00
LS-30	26.00
LS-30X	32.00
LS-31	32.00
LS-31X	39.00
LS-32	30.00
LS-33	30.00
LS-34	45.00
LS-38	40.00
LS-39	30.00
LS-40	26.00
LS-47	35.00
LS-48	60.00
LS-49	60.00
LS-50	26.00
LS-51	28.00
LS-52	35.00
LS-54	25.00
LS-55	35.00
LS-56	35.00
LS-57	25.00
LS-58	50.00
LS-60A	40.00
LS-61	35.00
LS-62A	35.00
LS-63	25.00
LS-66	110.00
LS-67	110.00
LS-70	40.00
LS-72	43.00
LS-74	40.00
LS-80	30.00
LS-82	32.00
LS-83	70.00
LS-84	30.00
LS-88	12.00
LS-89A	100.00
LS-90	15.00
LS-91	15.00
LS-92	25.00
LS-93	40.00
LS-94	15.00
LS-96	75.00
LS-98	40.00
LS-99	120.00
LS-102	80.00

Type No.	List Price
LS-103	$110.00
LS-104A	500.00
LS-105	120.00
LS-106	270.00
LS-120	50.00
LS-121Y	60.00
LS-140	35.00
LS-141	30.00
LS-142	35.00
LS-143	30.00
LS-150	30.00
LS-151	27.00
LS-180	20.00
LS-183	125.00
LS-184	200.00
LS-185	450.00
LS-190	30.00
LS-192	35.00
LS-691	400.00
LS-692	800.00
LS-950	15.00
LS-980	40.00
MA-1	15.00
MB-1	15.00
MC-1	15.00
MC-2	17.00
O-1	14.00
O-2	14.00
O-3	13.00
O-4	11.00
O-5	11.00
O-6	13.00
O-7	13.00
O-8	14.00
O-9	14.00
O-10	14.00
O-11	14.00
O-12	13.00
O-13	10.00
O-14	14.00
O-15	14.00
P-1	15.00
P-2	15.00
P-3	14.00
P-4	13.00
P-5	13.00
P-6	14.00
P-7	14.00
P-8	15.00
P-9	15.00
P-10	15.00
P-11	15.00
P-12	14.00
P-13	11.00
P-14	15.00
P-15	15.00
PF-1	12.00
PF-2	12.00
PF-3	5.00
PF-4	12.00
R-14	2.20
R-15	2.20
R-16	2.20
R-17	3.00
R-18	3.00
R-19	4.20
R-20	4.60
R-21	4.60
R-22	4.20
R-23	4.40
R-24	4.60
R-25	4.90
R-26	4.90
R-27	4.50
R-28	6.50
R-29	4.90
R-30	13.50
R-31	4.00
R-32	5.50
R-33	3.20
R-34	3.20
R-35	4.20
R-36	4.20
R-37	4.50
R-38A	3.30
R-39	4.20
R-40	6.00
R-41	9.50
R-42	10.50
R-43	12.00
R-44	14.50
R-45	21.00
R-46	45.00
R-47	12.00

Type No.	List Price
R-48	$15.00
R-53	4.00
R-55	2.00
R-56	4.00
R-57	6.50
R-58	3.30
R-59	4.00
R-60	4.10
R-64	80.00
R-72	9.50
R-73	14.00
R-74	25.00
R-75	40.00
R-76	65.00
R-77	110.00
R-78	20.00
R-79	25.00
R-80	35.00
R-81	70.00
R-83	20.00
R-84	25.00
R-85	35.00
R-86	70.00
R-90	3.30
R-91	7.50
R-92	7.50
R-93	15.00
R-94	20.00
R-95	17.00
R-101	7.50
R-102	9.00
R-103	9.50
R-104	10.50
R-105	13.00
R-106	7.50
R-107	9.00
R-108	10.50
R-109	16.00
R-110	7.50
R-111	9.00
R-112	10.50
R-113	16.00
SO-1	6.50
SO-2	6.50
SO-3	6.50
SO-4	6.50
SO-5	5.50
SO-6	6.50
SSO-1	6.50
SSO-2	6.50
SSO-3	6.50
SSO-4	6.50
SSO-5	5.50
SSO-6	6.50

Type No.	* Net Price
S-1	3.60
S-2	4.50
S-3	3.50
S-4	5.70
S-5	4.70
S-6	3.50
S-7	5.50
S-8	5.00
S-9	6.00
S-10	5.50
S-11	4.70
S-12	5.50
S-13	7.00
S-14	5.20
S-15	5.50
S-16	7.00
S-17	9.00
S-18	6.00
S-19	9.00
S-20	13.00
S-21	18.00
S-22	28.00
S-23	3.80
S-24	4.20
S-25	3.50
S-26	3.50
S-27	4.50
S-28	4.50
S-29	4.50
S-30	4.50
S-31	6.00
S-32	6.00
S-33	8.50
S-34	8.50
S-35	13.00
S-36	13.00
S-37	16.00
S-38	16.00
S-39	15.00
S-40	15.00
S-41	15.00

Type No.	* Net Price
S-42	$17.00
S-43	22.00
S-44	18.00
S-45	15.00
S-46	18.00
S-47	23.00
S-48	34.00
S-49	33.00
S-50	50.00
S-51	11.00
S-52	14.00
S-53	3.70
S-54	3.70
S-55	3.70
S-56	3.70
S-57	5.50
S-58	6.50
S-59	5.50
S-60	12.00
S-61	5.50
S-62	6.50
S-63	12.50
S-64	6.50
S-65	6.50
S-66	6.50
S-67	6.50
S-68	7.00
S-69	7.00
S-70	7.00
S-71	12.00
S-72	7.50
S-74	20.00
SC-1	3.00
SC-2	4.50
SC-3	5.00
SC-4	7.00
SC-5	13.00
V-0	13.00
V-0-B	17.00
V-1	20.00
V1-M	35.00
V-2	17.00
V-2-B	20.00
V-3	25.00
V-3-B	33.00
V-4	37.00

Type No.	List Price
V1-C1	11.00
V1-C2	11.00
V1-C3	11.00
V1-C4	11.00
V1-C5	11.00
V1-C6	11.00
V1-C7	14.00
V1-C8	14.00
V1-C9	14.00
V1-C10	14.00
V1-C11	14.00
V1-C12	14.00
V1-C13	14.00
V1-C14	14.00
V1-C15	16.50
V1-C16	16.50
V1-C17	16.50
V1-C18	16.50
V1-C19	16.50
V1-C20	16.50
V1-C21	17.50
V1-C22	18.50

FILTERS AND EQUALIZERS

Type No.	* Net Price
3A	150.00
3AX	240.00
4C	200.00
BMI	25.00
BML	25.00
HMI	25.00
HML	25.00
LMI	25.00
LML	25.00

AMPLIFIER KITS

Type No.	List Price
W-10	75.00
W-20	120.00

40 (*Net)

LINEAR STANDARD AUDIO TRANSFORMERS

LINEAR STANDARD AUDIO UNITS FEATURE:

UNIFORM FREQUENCY RESPONSE . . . at low frequencies, is effected through the use of HIPERM-ALLOY, a STABLE nickel iron alloy of very high initial permeability. Uniform high frequency response is the result of multiple section interleaved windings arranged in a semi-toroidal coil structure. This, plus special winding methods and insulations, assures a minimum of distributed capacity and leakage reactance.

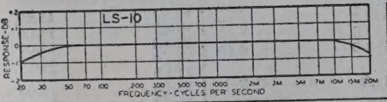
UTC LINEAR STANDARD transformers are the ONLY audio units with a **GUARANTEED** uniform response . . . ± 1 DB from 20 to 20,000 cycles.

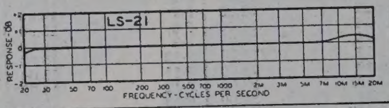
MINIMUM HUM PICKUP . . . is accomplished through the use of a hum balanced, semi-toroidal, coil structure which affords maximum neutralization of external fields. In addition, all units employ high conductivity outer case for maximum shielding. For very low level applications, units whose code numbers end in X employ multiple alloy shielding, making possible a transformer with extremely low inductive pickup.

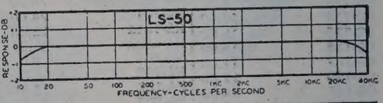
NEGLIGIBLE WAVE FORM DISTORTION . . . is a function of proper impedance matching, minimum phase shift, and low flux density. These elements have been given great attention in the design of Linear Standard units. It is interesting to note that an output transformer reasonably flat from 20 to 20,000 cycles may show serious distortion at 30 and 10,000 cycles. For this reason, UTC high level units have a frequency range better than guaranteed value, generally 10 cycles to 50,000 cycles (see page 6).

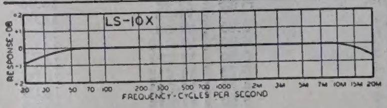
MULTIPLE TAP WINDINGS . . . make possible a wide combination of impedance terminations without impairing fidelity or efficiency. Precision winding methods result in winding accuracy of .1% . . . perfect balance of inductance and capacity . . . exact impedance reflection.

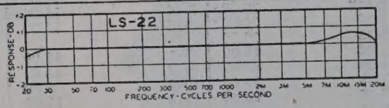
DEPENDABILITY . . . is a function of external and internal structure. Linear Standard units are housed in rugged die cast cases of precise dimension with reversible mounting to permit above chassis or subchassis wiring. The solid terminal posts on low absorption bakelite are arranged in a circular layout so that a round chassis hole will clear all terminals. Coils are vacuum baked and impregnated. **Semi-hermetic sealing** is accomplished through the use of a high adhesion compound poured through the large opening opposite the terminal board after controlled preheating of the unit for full compound penetration.

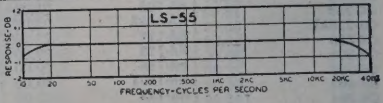


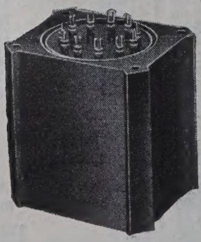












LS-1 CASE

Length	3⅛"
Width	2⅝"
Height	3¼"
Mounting	1 15/16" x 2 7/16"
Screws	6-32
Cutout	1⅞" dia.
Unit Weight	3 lbs.

LOW IMPEDANCE TO GRID TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 1 db from	Max.† Level	Relative * hum	Unbal. DC in prim'y	Case No.
LS-10	Low impedance mike, pickup, or multiple line to grid	50, 125/150, 200, 250, 333, 500/600 ohms	60,000 ohms in two sections	20-20,000	+10 DB	—74 DB	.5 MA	LS-1
LS-10X	As above	As above	50,000 ohms	20-20,000	+10 DB	—92 DB-Q	.5 MA	LS-1
LS-12	Low impedance mike, pickup, or multiple line to push pull grids	50, 125/150, 200, 250, 333, 500/600 ohms	120,000 ohms overall, in two sections	20-20,000	+10 DB	—74 DB	.5 MA	LS-1
LS-12X	As above	As above	80,000 ohms overall, split	20-20,000	+10 DB	—92 DB-Q	.5 MA	LS-1
LS-14	Low impedance mike, pickup, or parallel mixer to grid	2.5, 5.5, 10, 15, 22, 30, 38, 60 ohms	60,000 ohms in two sections	20-20,000	+10 DB	—74 DB	.5 MA	LS-1
LS-14X	As above	As above	50,000 ohms	20-20,000	+10 DB	—92 DB-Q	.5 MA	LS-1
LS-15	Three isolated lines or pads to one or two grids	30, 50, 200, 250 ohms each primary	60,000 ohms overall, in two sections	20-20,000	+10 DB	—74 DB	.5 MA	LS-1
LS-15X	As above	As above	As above	20-20,000	+10 DB	—92 DB-Q	.5 MA	LS-1
LS-18	High level multiple line to push pull grids	50, 125/150, 200, 250, 333, 500/600 ohms	50,000 ohms overall, in two sections	20-20,000	+20 DB	—50 DB	.5 MA	LS-2
LS-26	Bridging line to single or push pull grids	5,000 ohms	60,000 ohms in two sections	15-20,000	+15 DB	—74 DB	0 MA	LS-1

(Refer to Page N-35 for UTC Prices)

MIXING TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 1 db from	Max.† Level	Relative * hum	Unbal. DC in prim'y	Case No.
LS-30	Mixing, low impedance mike, pickup, or multiple line to multiple line	50, 125/150, 200, 250, 333, 500/600 ohms	50, 125/150, 200, 250, 333, 500/600 ohms	20-20,000	+15 DB	—74 DB	.5 MA	LS-1
LS-30X	As above	As above	As above	20-20,000	+15 DB	—92 DB-Q	.3 MA	LS-1
LS-31	Three isolated lines or pads to multiple line	30, 50, 200, 250 ohms each primary	50, 125/150, 200, 250, 333, 500/600 ohms	20-20,000	+15 DB	—74 DB	.5 MA	LS-1
LS-31X	As above	As above	As above	20-20,000	+14 DB	—92 DB-Q	.3 MA	LS-1
LS-32	Mixing, low impedance mike, pickup, or parallel mixer to multiple line	2.5, 5.5, 10, 15, 22, 30, 38, 60 ohms	50, 125/150, 200, 250, 333, 500/600 ohms	20-20,000	+15 DB	—74 DB	.5 MA	LS-1

INTERSTAGE AUDIO TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 1 db from	Max.† Level	Relative * hum	Unbal. DC in prim'y	Case No.
LS-19	Single plate to push pull grids like 2A3, 6L6, 300A. Split secondary	15,000 ohms	95,000 ohms; 1.25:1 each side	20-20,000	+12 DB	—50 DB	0 MA	LS-1
LS-20	Single plate to single grid	15,000 ohms	60,000 ohms; 2:1 turn ratio	20-20,000	+10 DB	—74 DB	0 MA	LS-1
LS-21	Single plate to push pull grids. Split pri. and sec.	15,000 ohms	135,000 ohms; 3:1 overall	20-20,000	+10 DB	—74 DB	0 MA	LS-1
LS-40	Single plate to push pull grids. Split secondary	15,000 ohms	135,000 ohms; 3:1 overall	30-20,000	+12 DB	—74 DB	8 MA	LS-1
LS-22	Push pull plates to push pull grids. Split primary and secondary	30,000 ohms plate to plate	80,000 ohms; turn ratio 1.6:1 overall	20-20,000	+18 DB	—50 DB	.25 MA	LS-2
LS-25	Push pull plates to push pull grids. Medium level. Split primary and sec.	30,000 ohms plate to plate	50,000 ohms; turn ratio 1.3:1 overall	20-20,000	+15 DB	—74 DB	1 MA	LS-1
LS-26	Bridging line to 1 or 2 grids	5000 ohms	60,000 in two sections	15-20,000	+15 DB	—74 DB	0 MA	LS-1

PLATE, CRYSTAL, PHOTOCELL, AND BRIDGING TO LINE TRANSFORMERS

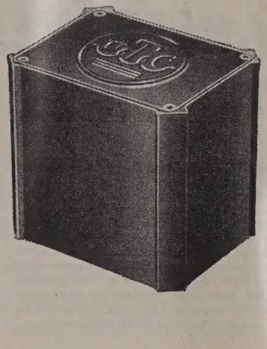
Type No.	Application	Primary Impedance	Secondary Imp. ohms	± 1 db from	Max.† Level	Relative * hum	Unbal. DC in prim'y	Case No
LS-27	Single plate to multiple line	15,000 ohms	50, 125/150, 200, 250, 333, 500/600	30-15,000 cycles	+15 DB	—74 DB	8 MA	LS-1
LS-50	Single plate to multiple line	15,000 ohms	50, 125/150, 200, 250, 333, 500/600	20-20,000	+15 DB	—74 DB	0 MA	LS-1
LS-51	Push pull low level plates to multiple line	30,000 ohms plate to plate	50, 125/150, 200, 250, 333, 500/600	20-20,000	+16 DB	—74 DB	1 MA	LS-1
LS-38	Crystal microphone or pickup to multiple line, with internal equalizer	100,000 ohms	50, 125/150, 200, 250, 333, 500/600	Equalized for crystal	+10 DB	—74 DB	0 MA	LS-1
LS-39	Photocell, high-mu triode, diode or overbiased detector to multiple line	100,000 ohms	50, 125/150, 200, 250, 333, 500/600	20-20,000	+10 DB	—74 DB	0 MA	LS-1
LS-150	Bridging from 50 to 500 ohm line to line	4,000 ohms, bridging	50, 125/150, 200, 250, 333, 500/600	15-30,000	+15 DB	—74 DB	1 MA	LS-1
LS-151	Bridging from 50 to 500 ohm line to line	16,000 ohms, bridging	50, 125/150, 200, 250, 333, 500/600	15-30,000	+18 DB	—74 DB	1 MA	LS-1

OUTPUT TRANSFORMERS TO HIGH IMPEDANCE (RF) LOAD

Type No.	Primary will match following typical tubes	Primary Impedance	Secondary Impedance	± .4 db. from	Max. Level	Case No.
LS-56	Push pull 2A3's, 6A5G's, 300A's, 275A's, 6A3's, 6AS7, 6L6	5,000 ohms plate to plate and 3,000 ohms plate to plate	6000, 5000, 4000, 1800, 1500, 1000, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	20 watts	LS-2
LS-66	Class B 203A, 838, ZB120, 805	9,000 ohms plate to plate	5000, 4200, 4100, 3500, 3300, 2650, 2500, 2100, 1250, 600	25-20,000	260 watts	*
LS-67	Class B 203A, 838, ZB120, 805	9,000 and 6,900 ohms plate to plate	10000, 2500	25-20,000	260 watts	*
LS-691	Class B 849, 833, 250TH	10,400 ohms plate to plate	4500, 4000, 3500, 2750, 2000	25-20,000	1000 watts	LS-6
LS-692	Class B push pull parallel 833's	4,750 ohms plate to plate	2500, 2000, 1750, 1500, 1250	25-20,000	2500 watts	LS-6

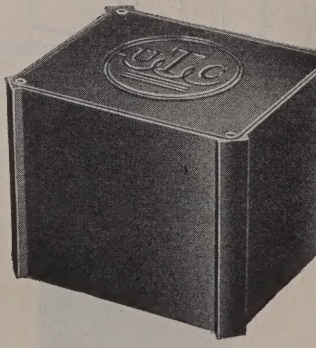
MODULATION REACTORS

Type No.	Application	Inductance	DC Current	DC Resistance	Insulation Test Voltage	Case No.
LS-102	Modulation reactor	50 hy	350 MA	250 ohms	5000	*
LS-103	Modulation reactor	50 hy	500 MA	175 ohms	7500	*
LS-104A	Modulation reactor	50 hy	1.3 amp	75 ohms	20000	LS-7
LS-106	Modulation reactor	50 hy	750 MA	120 ohms	10000	Spec.



LS-2 CASE

Length	4 7/16"
Width	3½"
Height	4 3/16"
Mounting	2 11/16" x 3 11/16"
Screws	8-32
Cutout	2¾" dia.
Unit Weight	7.5 lbs.



LS-3 CASE

Length	5 13/16"
Width	5"
Height	4 11/16"
Mounting	4 3/16" x 5 1/32"
Screws	10-24
Cutout	3¾" dia.
Unit Weight	15 lbs.

The values of unbalanced DC shown will effect approximately 1.5 DB loss at 30 cycles.

*** Comparison of hum balanced unit with shielding to normal uncased type.**

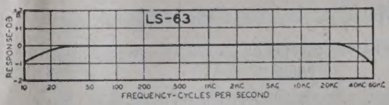
Q Multiple alloy magnetic shield.

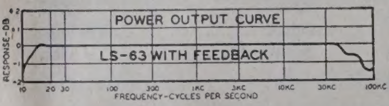
† 6MW as ODB reference.

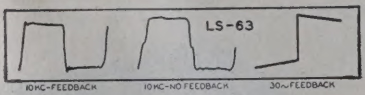
‡ See page N-39 for dimensions.

LS OUTPUT TRANSFORMERS THE FINEST

While the UTC Linear Standard line is generally designed for a flat response from 20 cycles to 20 Kc., a much wider response is required for output transformers. As is noted in the first curve below, typical UTC output transformers are down less than 1 BD at 10 cycles and less than 1 DB at 40 to 60 Kc. Because of this, a fine power output curve is possible. (Second curve.)
The third figure below illustrates square waves obtained with the LS-63 transformer in a "Williamson" Amplifier Circuit. Of particular interest is the short rise time, which is far superior for UTC transformers than any standard make which we have measured.







LS-6 CASE

Length	15¾"
Width	13"
Height	24"
Mounting Hole	⅜" dia.
Unit Weight	350 lbs.

LS-7 CASE

Length	20⅜"
Mounting	7⅜" x 14$\frac{5}{16}$"
Height	18½"
Mounting	11⅝" x 19⅜"
Mounting Hole	⅜" dia.
Unit Weight	500 lbs.
Width	17¾"

HYBRID AND REPEAT COILS

Type No.	Application	Pri. and Sec. Impedances	± 1 db from	Max. Level	Hum Reduction	Max. Unbal. DC in Pri.	Case No.
LS-140	Line to line for isolating balanced and unbalanced circuits; balanced for maximum reduction cross talk (70 DB)	500/600 ohms split 500/600 ohms split	30-20,000	+10 DB	—92 DB Quadruple alloy shield	0 MA	LS-1
LS-141	Three sets of balanced windings for hybrid service, centertapped	500/600 ohms 500/600 ohms	30-15,000	+10 DB	—74 DB	0 MA	LS-1
LS-142	Line to line and to push pull grids for hybrid service	500/600 ohms 500/600 ohms 60,000 ohms	30-15,000	+10 DB	—74 DB	0 MA	LS-1
LS-143	High efficiency ring and talk repeat coil, for low frequency ringing	500/600 ohms 500/600 ohms	Efficient 15/12,000 cycles	+25 DB	—74 DB	5 MA	LS-2

DRIVER TRANSFORMERS

Type No.	Application	Primary Impedance	Refl. Sec. Impedance	± 1 db from	Max. Level	Max. Unbal. Dc in Pri.	Case No.
LS-5	Driver, multiple line to class B 838's, 805's, ZB-120's, 203A's and similar tubes	50, 125, 200, 250, 333, 500/600 ohms	2,000 ohms; 1:2 overall turns ratio	20-20,000	+32 DB	5 MA	LS-2
LS-6	Driver, push pull 45's, 2A3's, 6A5G's, etc., to push pull 845 or 211D grids	5,000 ohms plate to plate	2.25 primary impedance; turns ratio 1.5:1 overall	20-20,000	+32 DB	5 MA	LS-2
LS-7	Push pull 6C5 or similar plates to A prime 45's, 6F6's, 2A3's, 6L6's	30,000 ohms plate to plate	.45 primary impedance turn ratio 1.5:1 Pri. to Sec.	20-20,000	+25 DB	1 MA	LS-2
LS-47	Driver from push pull 2A3's, 6A5G's, or 300A's to class B 838's, 203A's, 805's, or ZB120's	5,000 ohms plate to plate	.1 pri. impedance turns ratio, Pri./½ Sec. 3.2:1	20-20,000	+32 DB	5 MA	LS-2
LS-48	Driver transformer push pull 845's to 204 or 849 grids in class B	12,000 ohms plate to plate	.038 pri. impedance turns ratio, Pri./½ Sec. 5.1:1	20-20,000	+37 DB	15 MA	LS-3
LS-49	Push pull parallel 2A3, 6A5G, or 300A tubes to four 838, 203A, 805, or ZB120 tubes	2,500 ohms plate to plate	Ratio Pri./½ Sec. 4:1 and 2.5:1	20-20,000	+37 DB	10 MA	LS-3

OUTPUT TRANSFORMERS TO LINE AND VOICE COIL

Type No.	Primary will match following typical tubes	Primary Impedance	Secondary Impedance	± .2 db from	Max. Level	Case No.
LS-52	Push pull 245, 250, 6V6 or 245 A prime	8,000 ohms	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	15 watts	LS-2
LS-54	Same as above	8,000 ohms	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	15 watts	LS-2
LS-55	Push pull 2A3's, 6A5G's, 300A's, 275A's, 6A3's, 6L6's, 6AS7G	5,000 ohms plate to plate and 3,000 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	20 watts	LS-2
LS-57	Same as above	5,000 ohms plate to plate and 3,000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	20 watts	LS-2
LS-58	Push pull parallel 2A3's, 6A5G's, 300A's, 6A3's	2,500 ohms plate to plate and 1,500 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	40 watts	LS-3
LS-60A	Push pull 2A3's, 6A3's, 6B4G's fixed bias, cathode follower drive	4,600 ohms plate to plate	15, 10, 7.5, 5, 3.75, 2.5, 1.2	20-20,000	30 watts	LS-3
LS-62A	Same as above	As above	500, 125	20-20,000	30 watts	LS-3
LS-61	Push pull 6F6, class B 46's 6AS7G, 807-TR, 1614-TR	10,000 ohms plate to plate and 6,000 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	15 watts	LS-2
LS-63	Same as above	10,000 ohms plate to plate and 6,000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	15 watts	LS-2
LS-6L1	Push pull 6L6's self bias	9,000 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	30 watts	LS-3
LS-6L3	Same as above	9,000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	30 watts	LS-3
LS-6L4	Push pull 6L6's fixed bias or push pull parallel 6L6's self bias	3,800 ohms plate to plate and 4,500 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	55 watts	LS-3

HIGH LEVEL MATCHING TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± .2 db from	Max. Level	Case No.
LS-33	High level line matching	50, 125, 200, 250, 333, 500/600 ohms	1.2, 2.5, 5, 7.5 10, 15, 20, 30, 50, 125, 200, 250, 333, 500/600	20-20,000	15 watts	LS-2
LS-34	High level line matching	50, 125, 200, 250, 333, 500/600 ohms	1.2, 2.5, 5, 7.5, 10, 15, 20, 30, 50, 125, 200, 250, 333, 500/600	20-20,000	30 watts	LS-3

(Refer to Page N-35 for UTC Prices)

LINEAR STANDARD POWER EQUIPMENT

COMBINED PLATE AND FILAMENT TRANSFORMERS

Type No.	Typical Application	Pri. Volts 50/60 cycles	High Voltage	Filament Windings	Case No.
LS-180	For pre-amplifier service	110	225-0-225 15 MA	6.3 V.C.T.-2A 6.3 V.C.T.-6A	LS-1
LS-192	Power amplifier service	105, 115, 125	335-0-335 180 MA DC 60-0-60, 20 MA	5 V.-3A 6.3 V.C.T.-.75A 6.3 V.C.T.-5.25A	LS-3
LS-70	High power amplifier service	100, 105, 110, 115, 120, 125	425-375-0-375-425 200 MA 70-0-70 50 MA	5 V.C.T.-3A 5 V.C.T.-2A 2.5 V.C.T.-10A 6.3 V.C.T.-1A 6.3 V.C.T.-3A	LS-3
LS-72	For fixed or self bias 6L6's, 300A's	100, 105, 110, 115, 120, 125	525-450-0-450-525 250 MA 70-0-70 50 MA	5 V.C.T.-3A 2.5 V.C.T.-3A 2.5 V.C.T.-3A 6.3 V.C.T.-1A 6.3 V.C.T.-3A tapped at 5 V.C.T.-6A	LS-3
LS-74	For push pull parallel 6L6's, 2A3's, 6B4's	115	415-395-0-395-415 275 MA	5 V.-6A 6.3 V.C.T.-5A	LS-3

PLATE TRANSFORMERS*

Type No.	Application	Primary Voltage 50/60 cycles	High Voltage	Approximate DC Voltage Out of Filter	DC Current
LS-183	Class B 805 or push pull parallel 203A's, etc.	100, 110, 120, 220, 230, 240	1750-1500-0-1500-1750	1500-1250	400 MA
LS-184	Class B 204A, 849, HF200, HF300, 250TH, HK354, 100TH, etc.	100, 110, 120, 220, 230, 240	3500-3000-2500-0-2500-3000-3500	3000-2500-2100	500 MA
LS-185	For combined class B and class C stages as above	100, 110, 120, 220, 230, 240	3500-3000-2500-0-2500-3000-3500	3000-2500-2100	1.2 amp.

FILAMENT TRANSFORMERS

Type No.	Application	Pri. Volts 50/60 cycles	Secondary Voltage	Insulation Test Voltage	Case No.
LS-80	866 rectifiers	100, 110, 120, 220, 230, 240	2.5 V.C.T.-10A	10,000	LS-3
LS-82	872 rectifiers	100, 110, 120, 220, 230, 240	5 V.C.T.-20A	10,000	LS-3
LS-84	203A, 845, etc. HF200, HF300	100, 110, 120, 220, 230, 240	10 V.C.T.-8A	2,500	LS-3
LS-88	6.3 volt tubes	105, 115, 125	6.3 V.C.T.-2A	2,500	LS-1
LS-120	866 Bridge rectifier	100, 110, 120, 220, 230, 240	2.5 V.C.T.-10A 2.5 V.C.T.-5A 2.5 V.C.T.-5A	12,000	LS-3
LS-121Y	872 Bridge rectifier	100, 110, 120, 220, 230, 240	5 V.C.T.-20A 5 V.C.T.-10A 5 V.C.T.-10A	12,000	*
LS-83	872A, 575 or 869 rectifiers	100, 110, 120, 220, 230, 240	5 V.C.T.-20A	35,000	*
LS-89A	Three 869 rectifiers	100, 110, 120, 220, 230, 240	5 V.C.T.-60A	35,000	*

LINEAR STANDARD FILTER, SWINGING, AND AUDIO CHOKES

(Inductance values are at D.C. current shown)

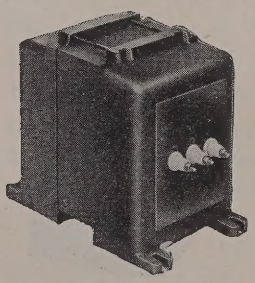
Type No.	Application	Inductance	DC Current	DC Resistance	Insulation Test Voltage	Case No.
LS-90	Filter choke with hum bucking tap	Series-50 hy Parallel-12.5 hy	50 MA 100 MA	450 ohms 110 ohms	2000	LS-2
LS-91	Filter choke with hum bucking tap	Series-14 hy Parallel-3.5 hy	125 MA 250 MA	200 ohms 50 ohms	2000	LS-2
LS-92	Filter choke with hum bucking tap	Series-16 hy Parallel-4 hy	175 MA 350 MA	88 ohms 22 ohms	2500	LS-3
LS-93	Filter choke with hum bucking tap	Series-26 hy Parallel-6.5 hy	200 MA 400 MA	120 ohms 30 ohms	3500	LS-3
LS-94	Parallel feed and filter choke	Series-320 hy Parallel-80 hy	3 MA 6 MA	6400 ohms 1600 ohms	1500	LS-1
LS-950	Filter choke with hum bucking tap	Series-100 hy Parallel-25 hy	35 MA 70 MA	1000 ohms 250 ohms	1500	LS-2
LS-96	Filter choke with hum bucking tap	Series-20 hy Parallel-5 hy	500 MA 1 amp	90 ohms 22.5 ohms	7500	*
LS-980	Filter choke with hum bucking tap	Series-14 hy Parallel-3.5 hy	400 MA 800 MA	100 ohms 25 ohms	5000	LS-3
LS-98	Swinging choke	8-40 hy	400 MA	125 ohms	5000	LS-3
LS-99	Filter choke with hum bucking tap	Series-20 hy Parallel-5 hy	1 amp 2 amp	50 ohms 12.5 ohms	10000	*
LS-105	Swinging choke	8-40 hy	1 amp	50 ohms	10000	*

* See dimension chart, this page.

In choosing power components for broadcast and commercial equipment, the first factor to be considered is dependability. Linear standard power components are very conservatively designed for maximum reliability. Designs provide for low temperature rise, 40°, and high insulation safety factors. Only the finest of materials and workmanship are used throughout.

The low power components of the Linear Standard series are housed in the familiar rectangular LS case with top or bottom mounting facilities. High power components are housed in end castings which completely protect the winding, while directly exposing the laminations for maximum heat transfer.

All units have a deep grey finish to obtain the highest heat radiation coefficient. Large components (up to 250 KVA) are housed in oil tanks.



DIMENSIONS

Type No.	L	W	H	Mtg.	Wt.
LS-66	9¾	4¾	6¾	3⅞x 9⅛	37
LS-67	9¾	4¾	6¾	3⅞x 9⅛	37
LS-73	9½	4¾	6¾	3⅞x 8⅞	34
LS-83	8¾	4¾	6¾	3⅞x 8⅛	25
LS-89A	9⅝	7	9	6 x 8⅝	68
LS-96	10¼	4¾	6¾	3⅞x 9⅝	40
LS-99	14⅛	8½	10¼	7¼x13⅛	80
LS-102	9¾	4¾	6¾	3⅞x 9⅛	37
LS-103	13⅛	8½	10¼	7¼x12⅛	58
LS-105	13⅛	8½	10¼	7¼x12⅛	58
LS-121Y	8¼	3¾	5⅛	3x7-13/16	23
LS-181	9¾	4¾	6¾	3⅞x 9⅛	37
LS-182	10¾	4¾	6¾	3⅞x10⅛	45
LS-183	15½	10	13¼	8½x14½	70
LS-184	17¼	10	13¼	8½x16¼	102
LS-185	23	10	13¼	8½x22	230

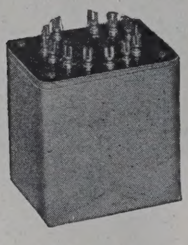
(Refer to Page N-35 for UTC Prices)

HIPERM ALLOY TRANSFORMERS

The UTC Hiperm alloy audio and power transformers are specifically designed for portable and compact service. While light in weight, neither dependability nor fidelity has been sacrificed. The frequency characteristic of the Hiperm alloy audio units is uniform from 30 to 20,000 cycles. They incorporate a Hiperm-alloy nickel iron core and hum balanced coil structure. The rugged die cast case is of high conductivity alloy finished in grey, arranged for mounting with the terminals either up or down. DC in Prim'y shown is maximum unbalanced.

TYPE H-1 CASE

Length	2⅜"
Width	1 15/16"
Height	3⅛"
Mounting	1⅜" x 1 13/16"
Screws	6-32
Cutout	1 13/16" dia.
Unit Weight	2 lbs.



TYPE H-2 CASE

Length	3 9/16"
Width	2 13/16"
Height	3½"
Mounting	2" x 2¾"
Screws	8-32
Cutout	2 11/16" dia.
Unit Weight	5 lbs.

LOW IMPEDANCE TO GRID AND MIXING TRANSFORMERS

Type No.	Application	Primary Imp. (ohms)	Secondary Impedance	± 1 db from	Max. Level	DC in Prim'y	Case No.
HA-100	Low impedance mike, pickup, or multiple line to grid	50, 125/150, 200, 250, 333, 500/600	60,000 ohms in two sections	30-20,000	+ 10DB	.5 MA	H-1
HA-100X	Same as above but with tri-alloy internal shield to effect very low hum pickup						H-1
HA-101	Low impedance mike, pickup, or multiple line to P.P. grids	50, 125/150, 200, 250, 333, 500/600	120,000 ohms overall, split	30-20,000	+ 10DB	.5 MA	H-1
HA-101X	As above but with tri-alloy internal shield to effect very low hum pickup		80,000 ohms overall, split				H-1
HA-103A	Low impedance mike, pickup, or parallel mixer to grid	2.5, 5.5, 10, 15, 22, 30, 38, 60	60,000 ohms in two sections	30-20,000	+ 10DB	.5 MA	H-1
HA-108	Mixing, low impedance mike, pickup, or multiple line	50, 125/150, 200, 250, 333, 500/600	50, 125/150, 200, 250, 333, 500/600	30-20,000	+ 10DB	.5 MA	H-1
HA-108X	Same as above but with tri-alloy internal shield to effect very low hum pickup						H-1
HA-130X	Three isolated lines or pads to one or two grids with tri-alloy internal shield	30, 50, 200, 250 each primary	60,000 ohms overall, in two sections	30-20,000	+ 10DB	.5 MA	H-1

INTERSTAGE AUDIO TRANSFORMERS

Type No.	Application	Primary Imp.	Secondary Impedance	± 1 db from	Max. Level	DC in Prim'y	Case No.
HA-104	Single plate to P.P. grids like 2A3, 6L6 (split secondary)	15,000 ohms	95,000 ohms 1.25:1	30-20,000	+12 DB	0 MA	H-1
HA-105	Single plate to single grid (split secondary)	15,000 ohms	60,000 ohms 2:1 turn ratio	30-20,000	+ 12 DB	0	H-1
HA-106	Single plate to push pull grids (split secondary)	15,000 ohms	135,000 ohms 3:1 ratio overall	30-20,000	+ 12 DB	0	H-1
HA-107	Push pull plates to push pull grids (split primary and secondary)	30,000 ohms plate to plate	80,000 ohms 1.6:1 turn ratio overall	30-20,000	+ 20 DB	.25 MA	H-2
HA-137	Push pull plates to push pull grids (split Pri. and Sec.)	30,000 ohms plate to plate	68,000 ohms 1.5:1 turn ratio	30-20,000	+ 12 DB	0	H-1

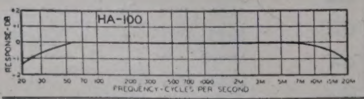
PLATE AND CRYSTAL TO LINE TRANSFORMERS

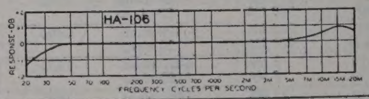
Type No.	Application	Primary Imp.	Secondary Imp. ohms	± 1 db from	Max. Level	DC in Prim'y	Case No.
HA-111	Crystal microphone or pickup, to multiple line	100,000 ohms	50, 125/150, 200, 250, 333, 500/600	30-20,000 measured with resistive source	+ 10 DB	0	H-1
HA-113	Single plate to multiple line	15,000 ohms	50, 125/150, 200, 250, 333, 500/600.	30-20,000	+ 12 DB	0 MA	H-1
HA-133	Single plate to multiple line (D.C. in Pri.)	15,000 ohms	50, 125/150, 200, 250, 333, 500/600	30-20,000	+ 15 DB	8 MA	H-1
HA-114	Push pull low level plates to multiple line	30,000 ohms plate to plate	50, 125/150, 200, 250, 333, 500/600	30-20,000	+ 16 DB	1 MA	H-1
HA-134	Push pull 6B4's, 6L6, or 2A3's to line	5000/9400 ohms plate to plate	50, 125/150, 200, 250, 333, 500/600	30-20,000	+ 32 DB	5 MA	H-2
HA-135	Push pull 2A3's, etc. to voice coil	3000/5000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	30-20,000	+ 34 DB	5 MA	H-2

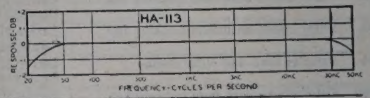
POWER TRANSFORMERS AND CHOKES

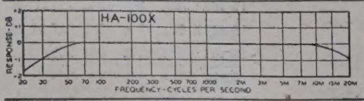
Type No.	Application	Primary Voltage 50/60 cycles	High Voltage	Filament Windings	Case No.
HP-122	Pre-amp. power supply using 6X4, 6X5 rectifier	115	220-0-220 15 MA	6.3 V.C.T.-.6A 6.3 V.C.T.-1.2A	H-1
HP-123	Pre-amp. or tuner power supply using 6X4, 6X5 rectifier	115	275-0-275 35 MA	6.3 V.C.T.-.6A 6.3 V.C.T.-2A	H-2

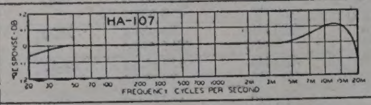
Type No.	Application	Inductance	DC Current	DC Resistance	Test Voltage	Case No.
HC-115	Parallel feed and filter choke	Series-400 hy Parallel-100 hy	2.5 MA 5 MA	6000 ohms 1500 ohms	1500	H-1
HC-116	Parallel feed and filter choke	Series-600 hy Parallel-150 hy	8 MA 16 MA	3400 ohms 850 ohms	1500	H-2
HC-117	Parallel feed and filter choke	Series-200 hy Parallel-50-hy	15 MA 30 MA	3200 ohms 800 ohms	1500	H-1

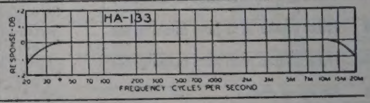


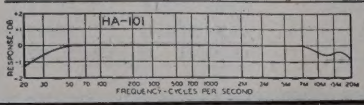


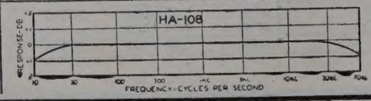


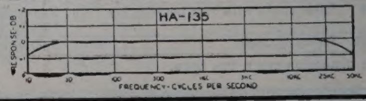












(Refer to Page N-35 for UTC Prices)

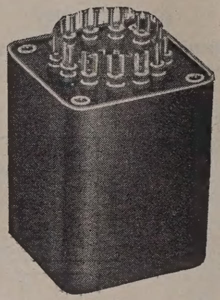
ULTRA COMPACT AUDIO UNITS

The **UTC Ultra compact** audio units are small and light in weight, ideally suited to remote amplifier and similar compact equipment. High fidelity is obtainable in all individual units, the frequency response being ± 2 DB from 30 to 20,000 cycles.

All units except those carrying DC in Primary employ a true hum balancing coil structure, which combined with a high conductivity outer case, effects good inductive shielding. The die-cast case provides for top or bottom mounting. Maximum operating level +7 DB.

LOW IMPEDANCE TO GRID AND MIXING TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 2 db from
A-10	Low impedance mike, pickup, or multiple line to grid	50, 125/150, 200/250, 333, 500/600 ohms	50,000 ohms	30-20,000
A-11	Low impedance mike, pickup, or line to 1 or 2 grids	50, 200, 500	50,000 ohms	50-20,000 multiple alloy shield for extremely low hum pickup
A-12	Low impedance mike, pickup, or multiple line to push pull grids	50, 125/150, 200/250, 333, 500/600 ohms	80,000 ohms overall, in two sections	30-20,000
A-14	Dynamic microphone to one or two grids	30 ohms	50,000 ohms overall, in two sections	30-20,000
A-20	Mixing, low impedance mike, pickup, or multiple line to multiple line	50, 125/150, 200/250, 333, 500/600 ohms	50, 125/150, 200/250, 333, 500/600 ohms	30-20,000
A-21	Mixing, low impedance mike, pickup, or line to line	50, 200/250, 500/600	50, 200/250, 500/600	50-20,000 multiple alloy shield for extremely low hum pickup



INTERSTAGE AUDIO TRANSFORMERS

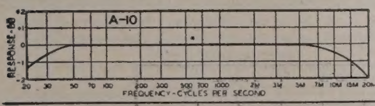
Type No.	Application	Primary Impedance	Secondary Impedance	± 2 db from
A-16	Single plate to single grid	15,000 ohms	60,000 ohms, 2:1 turn ratio	30-20,000
A-17	Single plate to single grid 8 MA unbalanced D.C.	As above	As above	50-20,000
A-18	Single plate to two grids. Split primary, can also be used for P.P. plates	15,000 ohms	80,000 ohms overall, 2.3:1 turn ratio over-all	30-20,000
A-19	Single plate to two grids 8 MA unbalanced D.C.	15,000 ohms	80,000 ohms overall, 2.3:1 turn ratio over-all	50-20,000

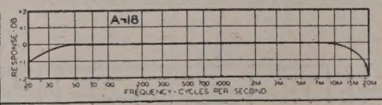
TYPE A CASE

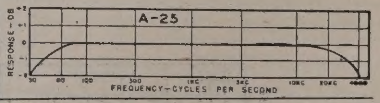
Length	1½"
Width	1½"
Height	2"
Mounting	1⁵⁄₃₂" sq.
Screws	4-40
Cutout	1⅜" dia.
Unit Weight	½ lb.

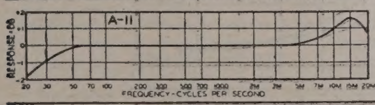
PLATE AND CRYSTAL TO LINE TRANSFORMERS

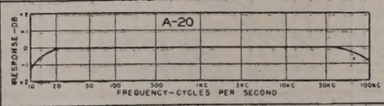
Type No.	Application	Primary Impedance	Secondary Impedance	± 2 db from
A-24	Single plate to multiple line	15,000 ohms	50, 125/150, 200/250, 333, 500/600 ohms	30-20,000
A-25	Single plate to multiple line 8 MA unbalanced D.C.	15,000 ohms	50, 125/150, 200/250, 333, 500/600 ohms	50-20,000
A-26	Push pull low level plates to multiple line	30,000 ohms plate to plate	50, 125/150, 200/250, 333, 500/600 ohms	30-20,000
A-27	Crystal microphone to multiple line	100,000 ohms	50, 125/150, 200/250, 333, 500/600 ohms	30-20,000 measured with non-inductive source
A-30	Audio choke, 250 henrys @ 5 MA 6000 ohms D.C., 65 henrys @ 10 MA 1500 ohms D.C. 450 henrys @ 0 MA			
A-32	Filter choke 60 henrys @ 15 MA 2000 ohms D.C., 15 henrys @ 30 MA 500 ohms D.C.			

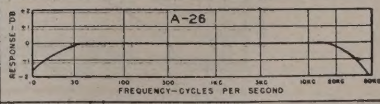


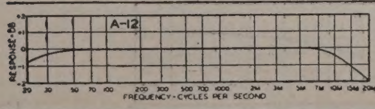


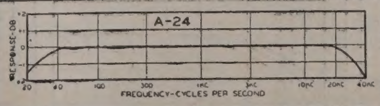


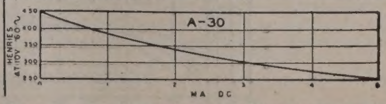










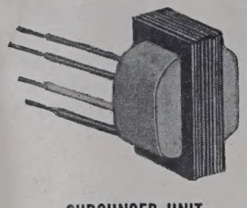


SUBOUNCER UNITS

FOR HEARING AIDS...VEST POCKET RADIOS...MIDGET DEVICES

UTC Sub-Ouncer units fulfill an essential requirement for miniaturized components having relatively high efficiency and wide frequency response. Through the use of special nickel iron core materials and winding methods, these miniature units have performance and dependability characteristics far superior to any other comparable items. They are ideal for hearing aids, miniature radios, and other types of miniature electronic equipment.

The coils employ automatic layer windings of double Formex wire . . . in a molded Nylon bobbin. All insulation is of cellulose acetate. Four inch color coded flexible leads are employed, securely anchored mechanically. No mounting facilities are provided, since this would preclude maximum flexibility in location. Units are vacuum impregnated and double (water proof) sealed. The curves below indicate the excellent frequency response available. Alternate curves are shown to indicate operating characteristics in various typical applications.



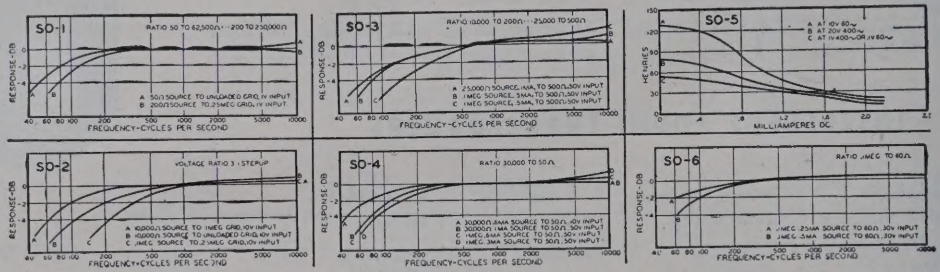
SUBOUNCER UNIT

Dimensions .... 9/16" x 5/8" x 7/8"

Weight ....03 lb.

Type	Application	Level	Pri. Imp.	D.C. in Pri.	Sec. Imp.	Pri. Res.	Sec. Res.
*SO-1	Input	+ 4 V.U.	200 50	0	250,000 62,500	16	2650
SO-2	Interstage/3:1	+ 4 V.U.	10,000	0	90,000	225	1850
*SO-3	Plate to Line	+ 20 V.U.	10,000 25,000	3 mil. 1.5 mil.	200 500	1300	30
SO-4	Output	+ 20 V.U.	30,000	1.0 mil.	50	1800	4.3
SO-5	Reactor 50 HY at 1 mil. D.C. 3000 ohms D.C. Res.						
SO-6	Output	+ 20 V.U.	100,000	.5 mil.	60	3250	3.8

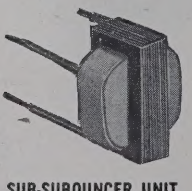
*Impedance ratio is fixed, 1250:1 for SO-1, 1:50 for SO-3. Any impedance between the values shown may be employed.



SUB-SUBOUNCER UNITS

FOR HEARING AIDS AND ULTRA-MINIATURE EQUIPMENT

UTC Sub-SubOuncer units have exceptionally high efficiency and frequency range in their ultra-miniature size. This has been effected through the use of specially selected Hiperm-Alloy core material and special winding methods. The constructional details are identical to those of the Sub-Ouncer units described above. The curves below show actual characteristics under typical conditions of application.



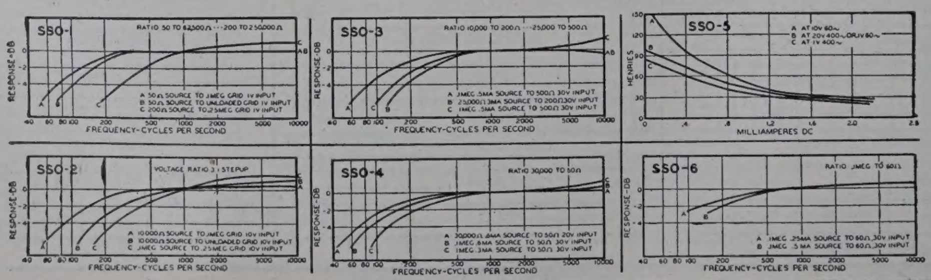
SUB-SUBOUNCER UNIT

Dimensions .... 7/16" x 3/4" x 5/8"

Weight ....02 lb.

Type	Application	Level	Pri. Imp.	D.C. in Pri.	Sec. Imp.	Pri. Res.	Sec. Res.
*SSO-1	Input	+ 4 V.U.	200 50	0	250,000 62,500	13.5	3700
SSO-2	Interstage/3:1	+ 4 V.U.	10,000	0	90,000	750	3250
*SSO-3	Plate to Line	+ 20 V.U.	10,000 25,000	3 mil. 1.5 mil.	200 500	2600	35
SSO-4	Output	+ 20 V.U.	30,000	1.0 mil.	50	2875	4.6
SSO-5	Reactor 50 HY at 1 mil. D.C. 4400 ohms D.C. Res.						
SSO-6	Output	+ 20 V.U.	100,000	.5 mil.	60	4700	3.3

*Impedance ratio is fixed, 1250:1 for SSO-1, 1:50 for SSO-3. Any impedance between the values shown may be employed.



(Refer to Page N-35 for UTC Prices)

OUNCER AUDIO UNITS

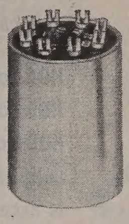
STANDARD AND PLUG-IN TYPES

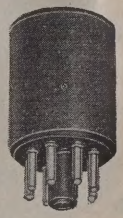
UTC OUNCER components represent the acme in compact quality transformers. These units, which weigh one ounce, are fully impregnated and sealed in a drawn aluminum housing 7/8" diameter . . . mounting opposite terminal board.

Ouncer items are ideal for portable broadcast, hearing aid, aircraft, concealed service, and similar applications. High fidelity characteristics are provided, uniform from 40 to 15,000 cycles, except for 0-14, 0-15, and units carrying DC which are intended for voice frequencies from 150 to 4,000 cycles. Maximum level 0 DB.

"P" series units are identical to the UTC OUNCER units but are sealed in bakelite housings with plug-in base to fit standard octal socket. While of submersion proof design, these units weigh but two ounces. Oversize pins in the base make it impossible to dislodge these units from their sockets.

OUNCER Type No.	Application	Pri. Imp.	Sec. Imp.	PLUG-IN Type No.
0-1	Mike, pickup or line to 1 grid	50, 200/250, 500/600	50,000	P-1
0-2	Mike, pickup or line to 2 grids	50, 200/250, 500/600	50,000	P-2
0-3	Dynamic mike to 1 grid	7.5/30	50,000	P-3
0-4	Single plate to 1 grid	15,000	60,000	P-4
0-5	Single plate to 1 grid, D.C. in Pri.	15,000	60,000	P-5
0-6	Single plate to 2 grids	15,000	95,000	P-6
0-7	Single plate to 2 grids, D.C. in Pri.	15,000	95,000	P-7
0-8	Single plate to line	15,000	50, 200/250, 500/600	P-8
0-9	Single plate to line, D.C. in Pri.	15,000	50, 200/250, 500/600	P-9
0-10	Push pull plates to line	30,000 ohms plate to plate	50, 200/250, 500/600	P-10
0-11	Crystal mike or pick-up to line	50,000	50, 200/250, 500/600	P-11
0-12	Mixing and matching	50, 200/250	50, 200/250, 500/600	P-12
0-13	Reactor, 300 Hys.—no D.C.; 50 Hys.—3 MA. D.C., 6000 ohms			P-13
0-14	50:1 mike or line to 1 grid	200	½ megohm	P-14
0-15	10:1 single plate to 1 grid	15,000	1 megohm	P-15



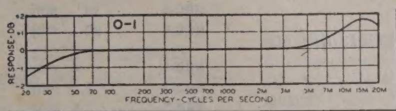


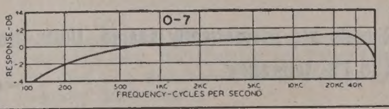
OUNCER CASE

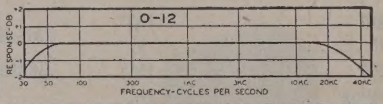
Dia. ....7/8"
Ht. ....1 3/16"
Mtg. ....11/16"
Scr. 2-56
Wt. ....1 oz.

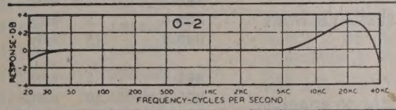
PLUG-IN CASE

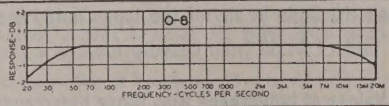
Dia. ....1 3/32"
Ht. ....1 15/32"
Skt. ....St. Oct.
Wt. ....2 oz.

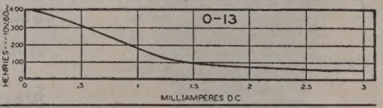


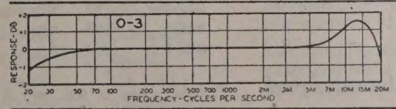


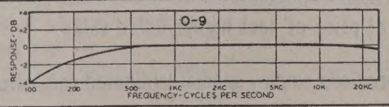


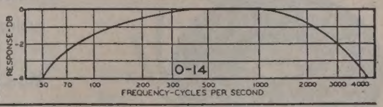


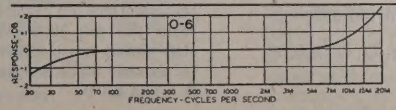


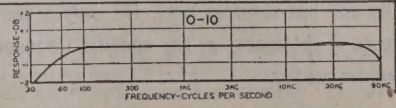


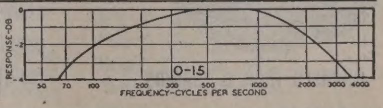






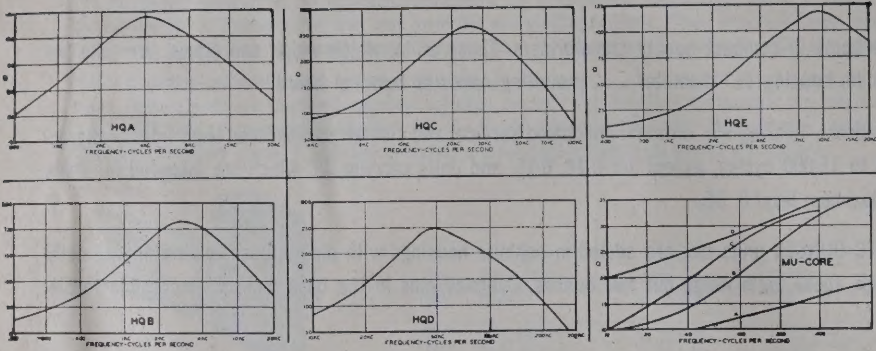


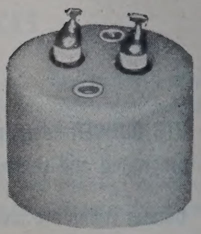




(Refer to Page N-35 for UTC Prices)

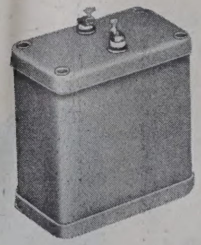
HIGH Q TOROID INDUCTORS





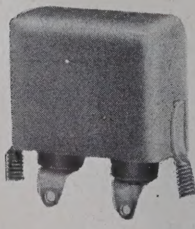
HQA, HQC, HQD CASE

Diameter	1 13/16"
Height	1 3/16"
Mounting	1 1/8"
Screws	6-32
Cutout	9/16" x 1 3/16"
Weight	5 oz.



HQB CASE

Length	2 5/8"
Width	1 5/8"
Height	2 5/8"
Mounting	1 11/64" x 2 11/64"
Screws	6-32
Cutout	9/16" x 1 1/8"
Unit Weight	14 oz.



HQE CASE

Length	1 5/16"
Width	1/2"
Height	1 3/16"
Mounting	1 3/16"
Screws	6/32"
Cutout	7/16" x 7/8"
Unit Weight	1.5 oz.

UNCASED HIGH Q TOROIDS

There are many applications in the audio, carrier, and supersonic fields requiring inductors of high Q and great stability. The HQ series of permalloy dust toroid units developed for these applications have remarkable characteristics.

HQA coils have maximum Q (100) at approximately 5,000 cycles. **HQB** coils have maximum Q (200) at approximately 4,000 cycles. **HQC** coils have maximum Q (200) at approximately 30 Kc. **HQD** coils have maximum Q (200) at approximately 60 Kc. The stability is excellent and types are available for all high Q applications from 300 cycles to 300 Kc.

Stability is excellent. For the HQA-7 coil illustrated inductance change is less than 1% for applied voltages from .1 to 25 volts. For the HQB-5 coil illustrated the inductance change is less than 1% for applied voltage from .1 to 50 volts. DC is permissible through the coil. Inductance is virtually independent of frequency, temperature, and vibration.

Hum pickup is extremely low due to the toroidal winding structure . . . 70 microvolts per gauss for the HQA, 140 microvolts per gauss for the HQB. The cased toroid structure permits close spacing of units, effecting a coupling attenuation of approximately 80 DB.

All HQ coils are **hermetically sealed.** Units are laboratory adjusted to **1% tolerance.**

Uncased HQ Coils in any of the types listed are available from stock. Deduct $1.50 from cased price.

Other Values of Inductance than those listed available on special order at price of next higher listed value.

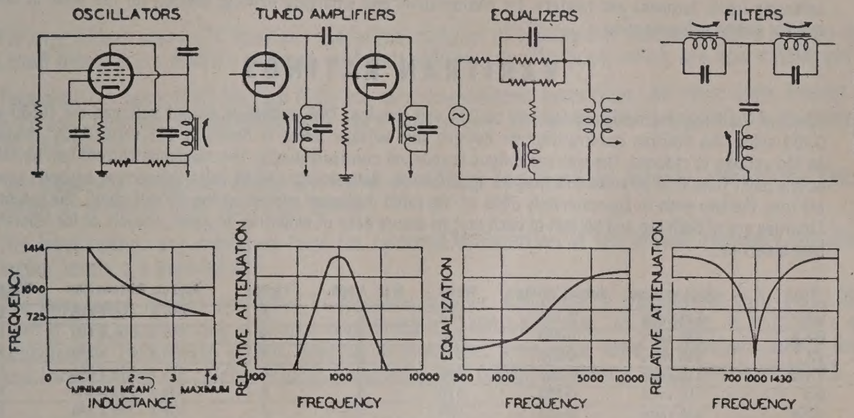
Mu-Core Coils employ special laminated core structures for good stability and low external field. The curves shown indicate approximate Q obtainable at any specific frequency by designing for that frequency.

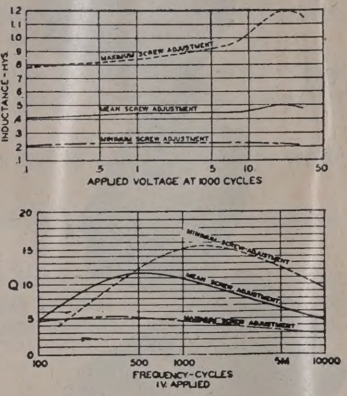
Type No.	Inductance Value	*DC MA Max.
HQA-1	5 mhy.	400
HQA-2	12.5 mhy.	260
HQA-3	20 mhy.	200
HQA-4	30 mhy.	160
HQA-5	50 mhy.	130
HQA-6	80 mhy.	100
HQA-7	125 mhy.	85
HQA-8	200 mhy.	65
HQA-9	300 mhy.	50
HQA-10	.5 hy.	40
HQA-11	.75 hy.	35
HQA-12	1.25 hy.	26
HQA-13	2. hy.	20
HQA-14	3. hy.	16
HQA-15	5. hy.	13
HQA-16	7.5 hy.	10
HQA-17	10. hy.	9
HQA-18	15. hy.	8
HQB-1	10 mhy.	410
HQB-2	30 mhy.	240
HQB-3	70 mhy.	170
HQB-4	120 mhy.	120
HQB-5	.5 hy.	60
HQB-6	1. hy.	41
HQB-7	2. hy.	30
HQB-8	3.5 hy.	22
HQB-9	7.5 hy.	16
HQB-10	12. hy.	11
HQB-11	18. hy.	9
HQB-12	25. hy.	8
HQC-1	1 mhy.	
HQC-2	2.5 mhy.	
HQC-3	5 mhy.	
HQC-4	10 mhy.	
HQC-5	20 mhy.	
HQD-1	.4 mhy.	
HQD-2	1. mhy.	
HQD-3	2.5 mhy.	
HQD-4	5 mhy.	
HQD-5	15 mhy.	
HQE-1	5 mhy.	
HQE-2	10 mhy.	
HQE-3	50 mhy.	
HQE-4	100 mhy.	
HQE-5	200 mhy.	

*This value of D.C. will drop the coil inductance 5%. Values of D.C. below this will show proportionately (linear) less inductance drop. For example HQA-8 will drop ½% in L with 6.5MA.

(Refer to Page N-35 for UTC Prices)

UTC VARIABLE INDUCTORS

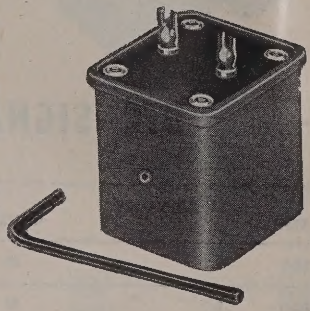




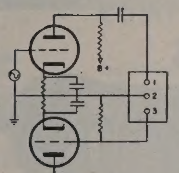
Type	Mean Hys.	Type	Mean Hys.
VI-C1	.0085	VI-C12	1.3
VI-C2	.013	VI-C13	2.2
VI-C3	.021	VI-C14	3.4
VI-C4	.034	VI-C15	5.4
VI-C5	.053	VI-C16	8.5
VI-C6	.084	VI-C17	13.
VI-C7	.13	VI-C18	21.
VI-C8	.21	VI-C19	33.
VI-C9	.34	VI-C20	52.
VI-C10	.54	VI-C21	83.
VI-C11	.85	VI-C22	130.

UTC type VIC variable inductors offer a revolutionary approach to the problem of tuned audio circuits. By adjusting a set screw in the side of the case, an inductance value of +90%, −50% from mean value is obtainable. Setting is positive. Effective Q for a wide frequency range and variation of inductance with applied AC voltage are shown on the illustrated curves, for a typical VIC unit.

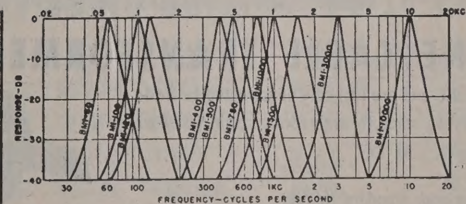
The VIC inductor is housed in a rugged die cast case 1¹¹⁄₃₂" long, 1¼" wide and 1⁷⁄₁₆" high with mounting centers on terminal board side 1¹³⁄₁₆" by ²⁹⁄₃₂". Weight is 5½ oz.

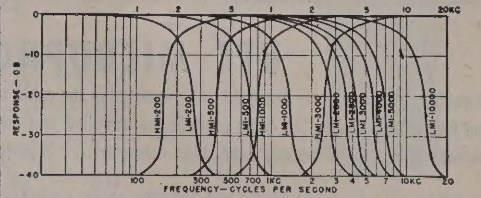


UTC INTERSTAGE AND LINE FILTERS



INTERSTAGE FILTER CONNECTIONS





STOCK FREQUENCIES

(Number after letters is frequency)

- BMI-60
- BMI-100
- BMI-120
- BMI-400
- BMI-500
- BMI-750
- BMI-1000
- BMI-1500
- BMI-3000
- BMI-10000
- HMI-200
- HMI-500
- HMI-1000
- HMI-3000
- LMI-200
- LMI-500
- LMI-1000
- LMI-2000
- LMI-3000
- LMI-5000
- LMI-10000
- BML-400
- BML-1000
- HML-200
- HML-500
- LML-1000
- LML-2500
- LML-4000
- LML-12000

UTC standardized filters have been designed to take care of many present day filter requirements through stock units. The interstage type filters have a nominal impedance of 10,000 ohms, and lend themselves to effecting gain simultaneously with their frequency discrimination.

BMI units (Band Pass) have 2:1 gain. They are sharply peaked, having approximately 2 DB attenuation at plus or minus 3% from center frequency and attenuation of 40 DB per octave as shown.

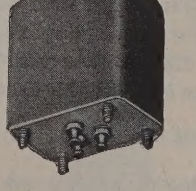
HMI units (High Pass) have a loss of less than 6 DB at cutoff frequency.

LMI units (Low Pass) have a loss of less than 6 DB at cutoff frequency, and an attenuation of 35 DB at 1.5 cutoff frequency.

BML (Band Pass), **HML** (High Pass), and **LML** (Low Pass) filters are similar to the interstage filters, in all characteristics, except that they are intended for an input and output impedance of 500/600 ohms.

All of the standard filters are housed in **hermetically sealed** cases, shielded to reduce hum pickup to 150 MV per gauss at 60 cycles.

In addition to the stock filters listed, any of the six types are available as **special units** for any frequency from 200 to 10,000 cycles. Order by type followed by frequency, as LMI-2500, designating low pass interstage filter—2500 cycles cutoff frequency. These special units are priced at $35.00 net.



FILTER CASE M

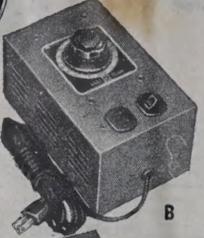
Base	1⁵⁄₁₆" x 1¹¹⁄₁₆"
Mtg.	¾" x 1¼"
Mtg. Screws	6-32
Cutout	⅞" dia.
Height, BMI, LMI, BML	1⅝"
Height, HMI, HML, LML	2½"
Weight	6 oz. and 9 oz.

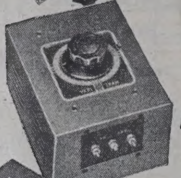
(Refer to Page N-35 for UTC Prices)

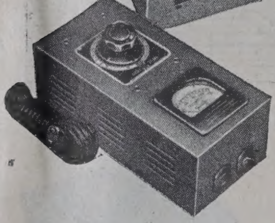
UTC VARITRAN CONTROL UNITS

For controlling: Rectifier output . . . motors . . . heaters . . . lights . . . line voltage

The UTC Varitran is a simple autotransformer whose turns are arranged on one layer with the insulation removed so that every exposed turn may be used as a tap of the winding. A special non-fusing contact can be moved to any position on the winding, permitting the exact voltage desired to be obtained. The regulation and efficiency are excellent and no distortion of wave form occurs. The output voltage is independent of load. In addition to its many laboratory uses, the Varitran is widely employed for controlling electric ovens, fans, soldering irons, furnaces and heaters, for photographic and enlarging lighting control, for life tests of lamps and for dimming illumination.


B


A


C

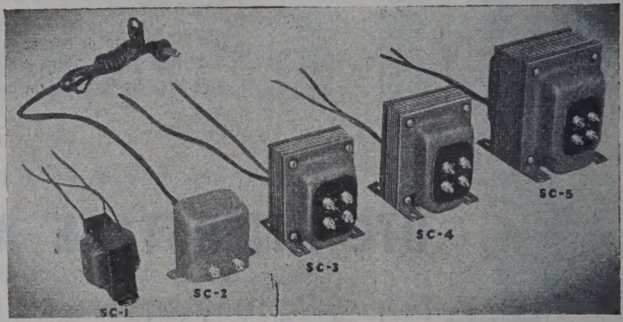
VARITRAN RATINGS

Standard Varitrans are designed for 115 or 230 volt service. The respective output voltages are 0-130 and 0-260 volts. The Varitran autotransformer current and wattage rating is based at 115 volts (115V. models). As the voltage is reduced, the wattage output is reduced correspondingly. The maximum current can be taken at any point from 0 to 20 volts and from 95 to 130 volts. Between 20 and 95 volts the current capacity tapers off from the two ends to approximately 60% of the rated maximum current at the 65 volt point. The mounting facilities are at both top and bottom of each unit to assure ease of mounting on panel, chassis or for laboratory bench service.

Type	Input Voltage	Output Voltage	Watts	Max. Amps.	Figure	Approx. Dimensions	Weight
V-0	115 volts	0-130	230	2	A	4¼ x 6½ x 4½	10
V-0-B	230 volts	0-260	230	1	A	4¼ x 6½ x 4½	11
V-1	115 volts	0-130	570	5	B	4⅞ x 8 x 3⅝	12
V-1-M	115 volts	0-130	570	5	C	4⅞ x 9⅞ x 3⅝	14
V-2	115 volts	0-130	570	5	A	4⅞ x 7½ x 3¾	13
V-2-B	230 volts	0-260	570	2.5	A	4⅞ x 7½ x 3¾	16
V-3	115 volts	0-130	850	7.5	A	4⅞ x 7½ x 3¾	16
V-3-B	230 volts	0-260	850	3.75	A	5½ x 7½ x 5½	20
V-4	115 volts	0-130	1250	11	A	6¼ x 10¾ x 5	34

UTC SIGNALLING AND CONTROL TRANSFORMERS

TYPE	SECONDARY VOLTS	WATTS	OVERALL DIMENSIONS	WEIGHT LBS.
SC-1	6.1	20	1⅞x3⅛x2	1½
SC-2	6.1	20	2½x3¼x2¼	1½
SC-3	4, 8, 12, 16, 20, 24	50	3 x3¾x3½	4
SC-4	4, 8, 12, 16, 20, 24	100	3¼x4½x4	5½
SC-5	4, 8, 12, 16, 20, 24	250	4 x5 x4¾	10½



UTC MICROPHONE CABLE TRANSFORMERS

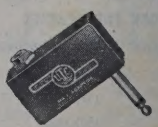
UTC cable transformers are designed to be inserted in the cable circuit, and are ruggedly constructed to withstand mechanical abuse. The cable connections (supplied less cable) are made through spring strain relief to terminal boards inside the end caps. 1½" diameter . . . 2½" long . . . ½ lb.

UTC MICROPHONE CABLE TRANSFORMERS

Type MC-1—primary tapped 30/50 and 200/250 ohms, secondary to grid, standard fidelity.

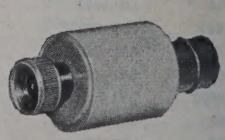
Type MC-2—primary tapped 30/50 and 200/250 ohms, secondary to grid, high fidelity.

UTC Telephone type MIKE/HIGH IMPEDANCE ADAPTOR is designed to match low impedance sources to an amplifier having high impedance input. Will match any source from 50 to 600 ohms, effecting a 15:1 step up ratio (225:1 impedance ratio). The plug on MA-1 goes into jack on amplifier . . . the plug from mike goes into jack on MA-1. Flat 40-10,000 cycles. Rugged die casting ⅞x1⅛x2⅛.


UTC Telephone type MIKE/HIGH IMPEDANCE ADAPTOR

Type MA-1—primary 50 to 500 ohms . . . 15:1 ratio . . . jack input . . . plug output.

UTC Amplifier type mike/high impedance adaptor is identical to MA-1 in electrical characteristics. The high impedance side employs a connector similar to Amphenol 75-MC1F. This single conductor connector screws unit on to corresponding male plug connector usually found on amplifiers. The low impedance side employs a connector similar to Amphenol 91-MC3M . . . the usual 3 contact recessed male connector to which standard quality microphone plugs will mate.


UTC AMPLIFIER TYPE MIKE/HIGH IMPEDANCE ADAPTOR

Type MB-1—Primary 50 to 500 ohms . . . 15:1 ratio.

(Refer to Page N-35 for UTC Prices)

HERMETICALLY SEALED COMPONENTS

For over fifteen years UTC has been the largest supplier of transformer components for military applications, to customer specifications. Listed below are a number of types, to latest military specifications, which are now catalogued as UTC stock items.

Terminals on items H-20 through H-24 are neoprene-ceramic assemblies. All other units employ glass bead headers. Items H-1 through H-11 can, however, be supplied with neoprene-ceramic terminals where required. To so order, specify the type number followed by NC (H-1 NC, etc.)

The **frequency response ratings** are based on military requirements. Actually, most of the units that do not carry DC are appreciably better in response than the range shown.

The **level ratings** are maximum level for reasonable distortion at the lowest frequency specified. For higher frequencies considerably higher levels are permissible.

The **impedance ratings** are listed in standard manner Obviously, a transformer with a 15,000 ohm primary impedance can operate from a tube representing a source impedance of 7700 ohms, etc. In addition, transformers can be used for applications differing considerably from those shown, keeping in mind that impedance ratio is constant. Lower source impedance will improve response and level ratings . . . higher source impedance will reduce frequency range and level rating.

MINIATURE AUDIO UNITS . . . RCOF CASE

Type No.	Application	MIL Type	Pri. Imp. Ohms	Sec. Imp. Ohms	DC in Pri., MA	Response ± 2db. (Cyc.)	Max. level dbm
H-1	Mike, pickup, line to grid	TF1A10YY	50,200 CT, 500 CT*	50,000	0	50-10,000	+ 5
H-2	Mike to grid	TF1A11YY	82	135,000	.50	250-8,000	+21
H-3	Single plate to single grid	TF1A15YY	15,000	60,000	0	50-10,000	+ 6
H-4	Single plate to single grid, DC in Pri.	TF1A15YY	15,000	60,000	4	200-10,000	+14
H-5	Single plate to P.P. grids	TF1A15YY	15,000	95,000 CT	0	50-10,000	+ 5
H-6	Single plate to P.P grids, DC in Pri.	TF1A15YY	15,000	95,000 split	4	200-10,000	+11
H-7	Single or P.P plates to line	TF1A13YY	20,000 CT	150/600	4	200-10,000	+21
H-8	Mixing and matching	TF1A16YY	150/600	600 CT	0	50-10,000	+ 8
H-9	82/41:1 input to grid	TF1A10YY	150/600	1 meg.	0	200-3,000 (4db.)	+10
H-10	10:1 single plate to single grid	TF1A15YY	10,000	1 meg.	0	200-3,000 (4db.)	+10
H-11	Reactor	TF1A20YY	300 Henries-0 DC, 50 Henries-3 Ma. DC, 6,000 Ohms.				

RCOF CASE

Length	1 25/64
Width	61/64
Height	1 13/32
Mounting	1 1/8
Screws	4-40 FIL
Cutout	7/8
Unit Weight	1.5 oz.

COMPACT AUDIO UNITS . . . RC-50 CASE

Type No.	Application	MIL Type	Pri. Imp. Ohms	Sec. Imp. Ohms	DC in Pri., MA	Response ± 2db. (Cyc.)	Max. level dbm
H-20	Single plate to 2 grids, can also be used for P.P. plates	TF1A15YY	15,000 split	80,000 split	0	30-20,000	+12
H-21	Single plate to P.P. grids, DC in Pri.	TF1A15YY	15,000	80,000 split	8	100-20,000	+23
H-22	Single plate to multiple line	TF1A13YY	15,000	50/200, 125/500**	8	50-20,000	+23
H-23	P.P plates to multiple line	TF1A13YY	30,000 split	50/200, 125/500**	0	30-20,000	+19
H-24	Reactor	TF1A20YY	450 Hys.-0 DC, 250 Hys.-5 Ma. DC, 6000 ohms . 65 Hys.-10 Ma. DC, 1500 ohms.				

RC-50 CASE

Length	1 5/8
Width	1 5/8
Height	2 1/4
Mounting	1 5/16
Screws	#6-32
Cutout	1 1/2
Unit Weight	8 oz.

SUBMINIATURE AUDIO UNITS . . . SM CASE

Type No.	Application	MIL Type	Pri. Imp. Ohms	Sec. Imp. Ohms	DC in Pri., MA	Response ± 2db. (Cyc.)	Max. level dbm
H-30	Input to grid	TF1A10YY	50***	62,500	0	150-10,000	+13
H-31	Single plate to single grid, 3:1	TF1A15YY	10,000	90,000	0	300-10,000	+13
H-32	Single plate to line	TF1A13YY	10,000****	200	3	300-10,000	+13
H-33	Single plate to low impedance	TF1A13YY	30,000	50	1	300-10,000	+15
H-34	Single plate to low impedance	TF1A13YY	100,000	60	.5	300-10,000	+ 6
H-35	Reactor	TF1A20YY	100 Henries-0 DC, 50 Henries-1 Ma. DC, 4,400 ohms.				

* 200 ohm termination can be used for 150 ohms or 250 ohms, 500 ohm termination can be used for 600 ohms

** 200 ohm termination can be used for 150 ohms or 250 ohms. 125/500 ohm termination can be used for 150/600 ohms.

*** can be used with higher source impedances, with corresponding reduction in frequency range With 200 ohm source, secondary impedance becomes 250,000 ohms . . . loaded response is—4 db. at 300 cycles.

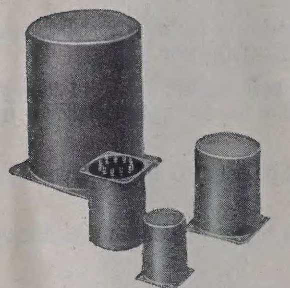
**** can be used for 500 ohm load . . . 25,000 ohm primary impedance . . . 1.5 Ma. DC

SM CASE

Length	11/16
Width	1/2
Height	29/32
Screw	4–40 FIL.
Unit Weight	80 oz.

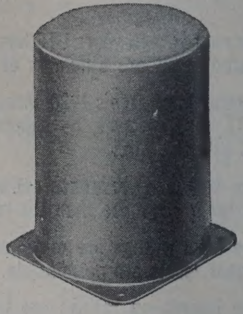
(Refer to Page N-35 for UTC Prices)

COMMERCIAL GRADE COMPONENTS



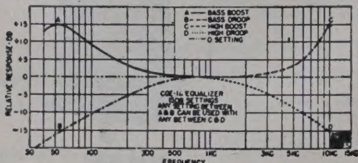
The commercial grade series of transformers incorporate conservative design and rugged construction to assure dependability under continuous service operation in industrial and commercial grade communication equipment. These units are mounted in uniform drawn cases finished in light grey enamel, and intended for chassis mounting. All items are poured with special sealing compound in addition to vacuum impregnation of coil structures. Type numbers are identical with the PA units except for the prefix "CG."

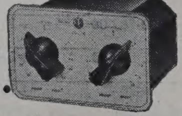
CG-134, 135 and 136 are of the hum-bucking type to assure low hum pick-up. All audio components are linear. ± 1½ DB from 40 to 10,000 cycles (no unbalanced D.C.), except CVL and CVM units . . . 40 to 6000 cycles. Parallel feed low level interstage units with 50,000 ohms and .25 mfd. 200 ohm windings on input transformers are balanced and may be used for 150 to 250 ohm circuits.



INPUT, INTERSTAGE, MIXING AND LOW LEVEL OUTPUT TRANSFORMERS

Type No.	Application	Primary Impedance Ohms	Secondary Impedance Ohms	Case No.
CG-131	1 plate to 1 grid	15,000	135,000 3:1 ratio	**RC-50**
CG-132	1 plate to 2 grids	15,000	135,000 centertapped 3:1 ratio overall	**RC-62**
CG-133	2 plates to 2 grids	30,000 P to P	80,000 overall 1.6:1 ratio overall	**RC-75**
CG-134	Line to 1 grid hum-bucking	50, 200, 500	80,000	**RC-50**
CG-135	Line to 2 grids hum-bucking	50, 200, 500	120,000 overall	**RC-50**
CG-235	Line to 1 or 2 grids, hum-bucking; multiple alloy shielded for low hum pickup	50, 200, 500 ohms	80,000 overall	**RC-75**
CG-136	Single plate and low impedance mike or line to 1 or 2 grids hum-bucking	15,000, 50, 200	80,000 overall	**RC-62**
CG-233	PP 6C5, 12AU7, similar triodes to AB 45's, 2A3's, 6L6's, etc.	30,000 P to P	25,000 overall .9:1 ratio overall	**RC-87**
CG-333	PP 6C5, 12AU7, similar triodes to fixed bias 6L6's	30,000 P to P	5,000 overall .4:1 ratio overall	**RC-87**
CG-433	PP 45, 2A3, similar tubes to fixed bias 2 or 4 6L6's	5,000 P to P	1,250 overall .5:1 ratio overall	**RC-100**
CG-137	Mixing	50, 200, 500	50, 200, 500	**RC-50**
CG-140	Triode plate to line	15,000	50, 200, 500	**RC-50**
CG-141	PP triode plates to line	30,000 P to P	50, 200, 500	**RC-50**





NEW UNIVERSAL INTERSTAGE EQUALIZER—CGE-1A

The UTC CGE-1A is the ideal device for any application where frequency response control is desired. Incorporating the latest developments in design and manufacture, this new unit provides the ultimate in control and flexibility. This equalizer is not a simple R-C tone control, but employs resonant circuits in a unique arrangement providing equalization characteristics unobtainable by conventional circuits. Designed to work from a low or medium impedance source (0 to 20,000 ohms) to a high impedance (500,000 ohms or open grid), the CGE-1A affords continuously variable equalization over a 30 DB range at either end of the spectrum, while introducing only 18 DB total insertion loss. (See curve above). Complete independence of high frequency and low frequency controls permits a wide variety of settings without affecting the over-all volume level. Because of its low insertion loss, this unit may be incorporated directly in many amplifiers. If existent gain is low, a single medium-mu triode stage will provide both proper gain and source impedance. (See circuit on centerfold, page C.) The mechanical construction permits mounting with case on panel directly behind controls, or with case separated from controls and panel. An etched, calibrated panel is provided.

CGE-1A Panel Dim. 2⅜" x 3½". Wt. 2 Lbs.

DYNAMIC NOISE SUPPRESSION-INDUCTOR

Incorporates two accurate High Q coils [.8 hy. and 2.4 hy.] for use in dynamic noise suppression circuits. Excellent circuit accompanies unit.

Type CG-50 RC-62 Case

COMMERCIAL GRADE CASE

Case No.	Base Dim. (Sq.)	Mounting Dim. (Sq.)	Height	Cutout Dia.	Unit Weight (Lbs.)
RC-50	1⅝	1-5/16	2¼	1½	½
RC-62	1-13/16	1½	2½	1½	1
RC-75	2-3/16	1-13/16	2⅞	1⅞	1½
RC-87	2-9/16	2-3/32	3¼	2	2½
RC-100	3	2⅜	3¾	2⅝	3½
RC-112	3-7/16	2-11/16	4⅛	2⅞	5
RC-125	3¾	3	4½	3	6½
RC-150	4½	3-9/16	5½	3¾	11
RC-152	5⅛	4⅛	5½	4	15½
RC-175	5¾	4⅞	7⅛	4	22

OUTPUT TRANSFORMERS

Secondary Impedances: 500, 200, 16, 8, 5, 3, 1.5 ohms

Type No.	Imped. P.P. Ohms, Overall	Typical Tubes	Max. Watts	Case No.
CG-15	8,000	45, 6F6 triode, 6V6	20	**RC-100**
CG-16	3,000/5,000	2A3, 6A3, 6B4, 6AS7G, 6L6	20	**RC-100**
CG-19	6,000/10,000	6N7, 6F6, 6V6	20	**RC-100**
CG-710	14,000/20,000	6K6, 7B5	20	**RC-100**
CG-2L6	9,000	6L6's, AB1	30	**RC-125**
CG-4L6	3,800/4,500	2-6L6's, AB2 or 4-6L6's AB1	55	**RC-150**

CG VARIMATCH OUTPUTS FOR P. A.

Universal units designed to match any tubes within the rated output power, to line or voice coil. Output impedance 500, 200, 50, 16, 8, 5, 3, 1.5 ohms. Primary impedance 3000, 5000, 6000, 7000, 8000, 10,000, 14,000 ohms.

Type No.	Audio Watts	Typical Tubes	Case No.
CVP-1	12	45, 2A3, 6F6, 25L6, 6V6, 6B4	**RC-100**
CVP-2	30	45, 2A3, 6L6, 6V6	**RC-125**
CVP-3	60	50's, 300A's, 6L6's, 801, 807, 1614	**RC-150**
CVP-4	125	800's, 801's, 807's, 4-6L6's, 845's, 4-1614's	**RC-152**
CVP-5	300	211, 242A's, 203A's, 838's, 4-845's, ZB-120's	**RC-175**

CG VARIMATCH LINE TO VOICE COIL TRANSFORMERS

The UTC VARIMATCH line to voice coil transformers will match any voice coil or group of voice coils to a 500 ohm line. More than 50 voice coil combinations can be obtained, as follows:

.2, .4, .5, .62, 1, 1.25, 1.5, 2, 2.5, 3, 3.3, 3.8, 4, 4.5,
5, 5.5, 6, 6.25, 6.6, 7, 7.5, 8, 9, 10, 11, 12, 14, 15,
16, 18, 20, 25, 28, 30, 31, 40, 47, 50, 63, 69, 75.

Where speakers are to be connected in groups to one transformer, it is preferable that parallel connection be used to eliminate the possibility of multiple resonance. If two speakers of different impedances are connected in parallel, the lower impedance speaker will develop greater power. If connected in series, the higher impedance speaker will develop greater power.

Type No.	Audio Watts	Primary Impedance	Secondary Impedance	Case No.
CVL-1	15	500 ohms	.2 to 75 ohms	**RC-87**
CVL-2	40	500 ohms	.2 to 75 ohms	**RC-125**
CVL-3	75	500 ohms	.2 to 75 ohms	**RC-150**

CG VARIMATCH LINE AUTOFORMERS

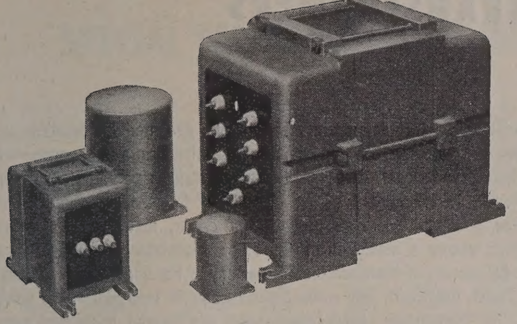
UTC Varimatch Line Autoformer will match one to ten 500 ohm lines or CVL windings to the 500 ohm output of an audio amplifier. The CVL-10 to 12 autoformers have impedances of 500, 250, 167, 125, 100, 83, 71, 62, 50 ohms.

Type No.	Audio Watts	Case No.
CVL-10	15	**RC-87**
CVL-11	30	**RC-125**
CVL-12	60	**RC-150**

(Refer to Page N-35 for UTC Prices)

COMMERCIAL GRADE COMPONENTS

UTC Special Series transformers are specifically designed for amateur and popular-priced PA service. The Special units are finished in a rich, commercial type medium gray enamel. A recessed terminal strip is provided permitting above chassis or breadboard wiring in addition to standard chassis type wiring. The universal windings provided on driver, matching and output transformers assure a maximum of flexibility. Modulator output units will carry the DC current of the class C stage for any of the impedances available and will match practically any audio tubes to any RF load within the power rating of the transformer. Large components are housed in formed cases



CG VARIMATCH MODULATION UNITS

Will match any modulator tubes to any RF load.

The ever increasing number of vacuum tubes available for audio and RF applications has increased the difficulty of obtaining transformers suitable for matching to the various correct tube loads. If a standard transformer having a limited impedance range is purchased and used for a specific purpose as the "nearest thing" available, comparatively high distortion is inevitable. While a 20% mismatch caused by such an occurrence does not represent a serious loss in power, it greatly reduces the undistorted power available from a class B modulator because optimum plate load is not reflected to the tubes. The UTC Varimatch transformer eliminates this difficulty through the use of a combination of tapped windings affording an extremely wide range in impedance matching. Designs provide that for any load impedance employed, full class C plate current can be carried by secondary winding.

Primary impedances from 500 to 20,000 ohms
Secondary impedances from 30,000 to 300 ohms

Type No.	Max. Audio Watts	Max. Class C Input	Typical Modulator Tubes	Case No.
CVM-0	12	25	2A3, 6B5	RC-100
CVM-1	30	60	6V6, 2A3, 6L6, 210	RC-125
CVM-2	60	125	801, 6L6, 809, 4-46, T-20, 1608	RC-150
CVM-3	125	250	800, 807, 845, TZ-20, RK-30, 35-T	RC-152
CVM-4	300	600	50-T, 203A, 805, 838, T-55, ZB-120	RC-175
CVM-5	600	1200	805, HF-300, 204A, HK-354, 250TH	7x12x9H 60 lbs.

CG VARIMATCH DRIVER TRANSFORMERS

Type No.	Primary	Typical Output Tubes	Case No.
CG-51AX	All single tubes like: 6C5, 6C4, 12AU7, 45, 2A3	2A3, 45, 6L6	RC-87
CG-53AX	P. P. tube like: 45, 2A3, 6L6, 6B4	46, 4-46, 841, 210, 801, RK-18, 800, 203A, 838, 805, 50T, 830B	RC-112
CG-59AX	50, 200, 500 ohm line	805, 838, 203A, ZB-120, 100TH, 800, 55T, RK-18	RC-112
CG-238AX	4-2A3, 4-45, 4-50, 2-211A, 2-845	4-805's, 4-838's, 4-203A's, 2-204's, 2-849's, 2-HF300's, 2-HF200's, 2-250TH's, 2-450TH's	RC-150
CG-512	50, 200, 500 ohm line	2-250TH, 2-450TH, 2-HF200, 2-HF300, 2-204A, 2-849	RC-150

VARIPOWER AUTO-FORMERS

Type No.	Watts Output	Case No.
CVA-1	150	RC-112
CVA-2	250	RC-125
CVA-3	500	RC-150
CVA-4	1000	RC-152
CVA-5	2000	RC-175

Designed for line voltage control, filament control and reduced power operation. Output voltage from 0 to 130 volts, 50/60 cycles. Varipower units permit control of filament voltage at the tube socket to within 2½% of desired value simultaneously with line voltage control and plate voltage control. Can be used to reduce or increase voltages on filament transformers. Taps at 25, 55, 75, 95, 100, 105, 110, 115, 120, 125 and 130 volts permit output voltages from 0 to 130 volts in 5 volt steps.

POWER AND BIAS TRANSFORMERS

Primary 115 volts 50/60 cycles

Type No.	High Voltage	DC MA.	Fil. 1	Fil. 2	Fil. 3	Fil. 4	Case No.
CG-422	435-365-0-365-435 125-0-125	125 25	5V-3A	5V-2A	6.3 VCT-3A	2.5 VCT-5A	RC-150
CG-428	500-0-500 80-0-80	250 100	5V-3A	5V-2A	6.3 VCT-4A	6.3 VCT-3A, tapped 2.5 VCT-3A	RC-152
CG-429	600-525-0-525-600	250	5V-3A	6.3 VCT-3-A	7.5 VCT-3A, tapped 6.3 VCT-4A		RC-152
CG-431	500-400-0-400-500 80-0-80	500 100	5V-6A	5V-2A	6.3 VCT-5A	6.3 VCT-3A	RC-175
CG-315	Tapped for any DC voltage from 15 to 100 volts within 6% — 250 MA						RC-125
CG-316	Tapped for any DC voltage from 75 to 400 volts within 6% — 250 MA						RC-152

CG PLATE TRANSFORMERS

Primaries for 105, 115, 220, 230 volts, 50/60 cycles. For reduced power, secondary voltages can be reduced to half by using 220V. Pri. on 110 volts. These transformers may be used on 25 to 43 cycles if 220V. Pri. is used on 110 volts. Secondary voltage is simultaneously halved.

Type No.	High Voltage	DC Voltage	DC MA	Case No.
CG-300	625-515-0-515-625	500/400	200	RC-150
CG-301	580-530-300-0-300-530-580	475/425/250	420	RC-152
CG-302	950-750-0-750-950	760/610	360	RC-175
CG-303	1500-1235-400-0-400-1235-1500	1250/1000 300	260* 175	RC-175

* 300MA, if used without load on low voltage winding.

TYPE EC CASE UNITS

Type No.	High Voltage	DC Voltage	DC MA	L	W	H	Wt. Lbs.
CG-304	1500-1235-0-1235-1500	1250/1000	800	15	8½	10⅜	100
CG-305	2400-1750-0-1750-2400	2000/1500	300	10½	4¾	6⅞	50
CG-306	2400-1750-0-1750-2400	2000/1500	500	15	8½	10⅜	100
CG-307	3500-3000-2400-0-2400-3000-3500	3000/2500 2000	300	14½	8½	10⅜	90
CG-308	3500-3000-2400-0 2400-3000-3500	3000/2500 2000	500	16½	8½	10⅜	125
CG-309	3500-3000-2400-0-2400-3000-3500	3000/2500 2000	1000	21	10	13¼	185
CG-310	4600-4050-3500-0-3500-4050-4600	4000/3500 3000	600	19	10	13¼	150
CG-311	1500-1235-0-1235-1500	1250/1000	500	10½	4¾	6⅞	50
CG-312	1800-1500-0-1500-1800	1500/1250	400	10½	4¾	6⅞	50

FILTER CHOKES

INDUCTANCE SHOWN IS AT RATED DC MA

Type No.	Inductance Henrys	DC MA	DC Res. Ohms	Test Volts	Case No.
CG-40	10	200	110	1750	RC-112
CG-41	4-20	200	110	1750	RC-112
CG-44	30	100	400	1750	RC-100
CG-45	250	15	5000	1750	RC-87
CG-48C	75	50	2200	1750	RC-87
CG-100	12	150	110	2500	RC-125
CG-102	12	250	100	3000	RC-150
CG-104	10	350	90	5000	RC-152
CG-108	10	500	52	7000	RC-175
CG-1S	10	1000	40	9000	11½x4¾x 6⅞ H, 60 lb.

SWINGING INPUT CHOKES

INDUCTANCE SHOWN IS FROM 100% TO 10% OF RATED DC MA

Type No.	Inductance Henrys	DC MA	DC Res. Ohms	Test Volts	Case No.
CG-101	5-25	150	110	2500	RC-125
CG-103	5-25	250	100	3000	RC-150
CG-105	5-25	350	90	5000	RC-152
CG-109	5-25	500	52	7000	RC-175
CG-1C	5-25	1000	40	9000	11½x4¾x 6⅞ H, 60 lb

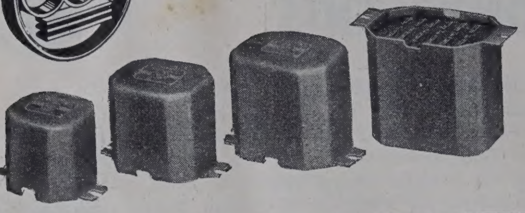
FILAMENT TRANSFORMERS

Primary for 105, 115, 220, 230 volts, 50/60 cycles. These transformers may be used on 25 to 43 cycles if 220 volt primary is used on 110 volts. Secondary voltage is simultaneously reduced to half. *Two Windings.

Type No.	Sec. Volts C. T.	Sec. Amps.	Working Voltage	Test Voltage	Case No.
CG-33	6.3	4	500	2000	RC-75
CG-34	2½	10	2500	6000	RC-112
CG-120	2½	10	5000	11000	RC-125
CG-121	5	25	5000	11000	RC-150
CG-122	7.5/6.3	10	1500	4000	RC-125
CG-124	10	10	1500	4000	RC-150
CG-125	14/12/11	10	1500	4000	RC-150
CG-126	*14/11/10 14/11/10	10 10	1500	4000	RC-152

(Refer to Page N-35 for UTC Prices)

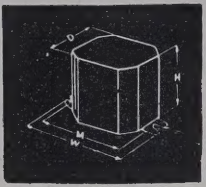
SPECIAL SERIES AUDIO TRANSFORMERS



UTC Special Series transformers are specifically designed for amateur and popular-priced PA service. The Special units are finished in a rich, commercial type medium gray enamel. A recessed terminal strip is provided permitting above chassis or breadboard wiring in addition to standard chassis type wiring. The universal windings provided on driver, matching and output transformers assure a maximum of flexibility. Modulator output units will carry the DC current of the class C stage for any of the impedances available and will match practically any audio tubes to any RF load within the power rating of the transformer. Large components are housed in formed cases with top or bottom mounting. All units are vacuum impregnated—compound filled.

CASE SIZES

Type No.	H	W	D	M	Wt. Lbs.
G-1	1⅞	2-13/16	1¾	2⅜	1
G-2	2-5/16	3⅜	1-15/16	2⅞	1½
G-3	2½	3¾	2-5/32	3¼	2
G-4	2-15/16	4⅛	2-5/16	3⅝	3



CLASS A INPUT TRANSFORMERS

Type No.	Application	Ratio	Case
S-1	1 plate* to 1 grid	3½:1	G-2
S-2	1 plate* to 2 grids	2:1 4:1	G-2
S-3	1 plate* to 1 or 2 grids compact type	2:1	G-1
S-4	1 plate* to 2 grids wide range response	1:1	G-3
S-5	Single or double button mike or line to 1 grid hum-bucking type	16:1	G-2
S-6	Single or double button mike or line to 1 grid, compact type	16:1	G-1
S-7	Single plate* and carbon mike to one or two grids	3:1 16:1	G-2

* Will match tubes like 6J5, 6C4, 12AU7, etc. Can be used with high mu triodes with loss in low frequencies.

UNIVERSAL DRIVER TRANSFORMERS

(See Modulator chart for tube types)

Type No.	Application	Case
S-8	Single driver plate to pushpull grids	G-3
S-9	Pushpull driver plates to grids of class B tubes up to 400 watts output	G-4
S-10	Pushpull 56, 6C6 triode, 6C5, or similar plates to 45's, 2A3's or 6L6's, self or fixed bias	G-3

MATCHING TRANSFORMERS

Type No.	Application	Pri. Ohms	Sec. Ohms	Case
S-11	Single 6J5, 6C4, 12AU7 or similar tube to line	15,000	200/500	G-2
S-12	Line to speaker 15 watts	500, 2000, 4000	2, 4, 8, 15	G-2
S-13	Line to speaker 30 watts	500, 2000, 4000	2, 4, 8, 15	G-4

UNIVERSAL OUTPUT TRANSFORMERS TO LINE AND VOICE COIL

(Secondary Impedances: 500, 15, 8, 2 ohms)

Type No. Max. Watts	Primary Impedance	Typical Tubes	Class	Case
	Single Tubes:			
	2500 ohms	2A3, 6A3, 6A5, 6B4, 6L6, 6Y6, 25L6, 35L6	A	G-2
S-14	4000 ohms	45, 6V6, 12A6	A	
10 W.	7000 ohms	42, 47, 2A5, 6AC5, 6F6, 6K6, 6N6, 7B5	A	
	10,000 ohms	37, 38, 41, 1G5, 3C5, 6A4, 6N7	A	
	P.P. Tubes:			G-2
	4000 ohms	6Y6, 25L6	AB	
S-15	5000 ohms	45, 2A3, 6A3, 6A5, 6B4, 6AS7	AB	
12 W.	10,000 ohms	1H4, 6AC5G, 6B5, 19, 6A6, 6N6, 6N7, 6Y7	AB B	
S-16	3000 ohms	45, 2A3, 6A3, 6A5, 6B4, 25L6	AB	G-4
30-W.	6000 ohms	2A5, 6F6 triodes, 6AS7, 46, 6A6, 6N7	AB B	
	9000/10000 ohms	45, 2A5, 6AC5, 6B5, 6F6, 6L6, 6V6, 807-triode	AB	
S-17	3800 ohms	6L6's	AB2	G-5
55 W.	4500/5000 ohms	4—6L6's	AB1	
		46, 1608, 809	B	

UNIVERSAL MODULATION TRANSFORMERS

Secondary carries class C current
Any modulator tubes to any RF load. (See chart)

Type No.	Audio Power	Case
S-18	12 watts	G-3
S-19	30 watts	G-4
S-20	55 watts	G-5
S-21	110 watts	G-7
S-22	250 watts	G-9

TYPICAL MODULATOR COMBINATIONS

S-18—12 WATTS MAX.

DRIVER TUBES: In the combinations shown below, typical suitable driver tubes are: 6C5, 6E6, 6N7, 6J5, 6C4, 12AU7, 6P5, 6J7-TR, 6SJ7-TR.

DRIVER		MODULATOR STAGE				
Transf.	Sec. Term.	P.P. Tubes	Watts Output	P.P. Load	Plate Volts	Bias Volts
S-2	G-G	6E6	1.6	14,000	250	27
S-8	G-G	19, 1J6G	2.1	10,000	135	0
S-8	G-G	49	3.5	12,000	180	0
S-2	G-G	25L6	4	4,000	110	7.5
S-8	G'-G'	6Z7G	4.2	12,000	180	0
S-2	G-G	6Y6G	7	4,000	135	13.5
S-8	G-G	6Y7G	8	14,000	250	0
S-8	G'-G'	6AC5G	8	10,000	250	0
S-8	G'-G'	6A6, 6N6, 6N7	10	10,000	300	0
S-2	G-G	2A3, 6A3, 6A5G, 6B4G	10	5,000	325	750 ohms
S-8	G-G	45	10	5,000	275	770 ohms
S-2	G-G	6AS7G	10	5,000	250	1,250 ohms
		SINGLE TUBES				Pri. Lead
S-1	F-G	43, 45, 71A, 25A6, 25A7 46, 6V6 42, 46, 47, 49, 2A5, 6F6, 6B5 10, 41, 32, 6G6, 6K6 38, 12A7				4,000 ohms 6,000 ohms 7,000 ohms 10,000 ohms 14,000 ohms

S-19—30 WATTS MAX.

(6J5, 6C4, 12AU7, etc. may be substituted for 6C5 tubes)

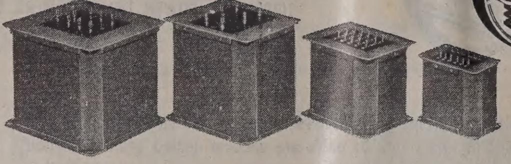
	DRIVER		MODULATOR STAGE				
Tube or Tubes	Transf.	Sec. Terms.	P.P. Tubes	Watts Output	P.P. Load	Plate Volts	Bias Volts
6C5	S-10	G-G	6V6	13	8,000	300	20
6C5	S-10	G-G	2A3, 6A3, 45, 6A5G, 6B4G	15	3,000	325	68
6C5	S-10	G-G	2A5, 6F6 Pentode AB	10	10,000	375	340 ohms
2A5	S-8	G-G	2A5, 6F6, triode AB	18	6,000	350	38
89	S-8	G'-G'	6A6, 6N6, 6N7	19	5,000	300	0
45	S-8	G-G	10, 1602	25	8,000	425	50
45	S-8	G'-G'	46	25	6,000	425	0
45	S-8	G'-G'	841	28	7,000	425	5
6C5	S-10	G-G	6L6 self bias	30	9,000	400	23

S-20—55 WATTS MAX.

	DRIVER		MODULATOR STAGE						
P.P. Tubes	Transf.	Sec. Terms.	P.P. Tubes	Watts O'tp't	P.P. Load	Plate Volts	Plate Tr'sf.	Bias Volts	Bias Trsf.
2A3	S-9	1-1	801	45	10000	600	S-45	75	S-51
2A3	S-9	3-3	1608	50	5000	425	S-44	15	S-51
2A3	S-9	1-1	T-20	50	8000	600	S-45	30	S-51
Single 45	S-8	G'-G'	4-46, 59	56	3000	425	S-44	0	
6C5	S-10	G-G	6L6, AB2	60	3800	400	S-39	25	S-51
6C5	S-10	G-G	4-6L6	60	4500	400	S-40	23	
2A3	S-9	3-3	809	60	5000	500	S-41	0	

(Refer to Page N-35 for UTC Prices)

SPECIAL SERIES POWER EQUIPMENT



UTC Special Series power supply components are designed specifically for amateur and popular-priced PA service. The ratings are based on such applications and recommended for ICAS intermittent use. For commercial application, GG or LS grade components should be employed. Tapped coil structures on power and bias supply transformers afford maximum flexibility, permitting a given transformer to be used with many circuits and types of tubes. Stand by service should not be obtained by interrupting high voltage center tap.

S-21—115 WATTS MAX.

P.P.-2A3 Driver S-9 Transf. Sec. Term.	P.P. Tubes	Watts Output	MODULATOR STAGE P.P. Load	Plate Volts	Plate Transf.	Bias Volts	Bias Trsf.
2-2	TZ-20	70	12000	800	S-46	0	
1-1	T-20	70	12000	800	S-46	40	S-51
*	845	75	4600	1000	S-47	175	S-52
1-1	807	80	6600	600	S-45	30	S-51
1-1	800, RK-30	100	12000	1000	S-47	55	S-51
3-3	809	100	8400	750	S-45	5	S-51
2-2	825	100	6600	850	S-46	30	S-51
2-2	TZ-40	100	6000	750	S-45	0	
2-2	T-756	100	7000	850	S-46	30	S-51
1-1	50-T	100	8000	1000	S-47	90	S-51
2-2	RK-18	100	12000	1000	S-47	50	S-51
1-1	HK-354	100	15000	1000	S-47	60	S-51
*	845	105	8800	1250	S-47	225	S-52
3-3	RK-31	110	14000	1000	S-47	0	
1-1	4-6L6	110	2000	400	S-44	25	S-51
2-2	35-T	115	11000	1000	S-47	30	S-51

* Reverse S-9 transformer using terminals 1-1 for plates and P.P. for grids.

S-22—250 WATTS MAX.

P.P.-2A3 Driver S-9 Transf. Sec. Term.	P.P. Tubes	Watts Output	MODULATOR STAGE P.P. Load	Plate Volts	Plate Transf.	Bias Volts	Bias Trsf.
3-3	RK-31	140	17000	1250	S-47	0	
*	50 T	250	20000	2000	S-50	180	S-52
*	50 T	160	17000	1500	S-49	140	S-52
2-2	TZ-40	175	6800	1000	S-47	0	
1-1	T-55	175	6900	1000	S-47	40	S-51
1-1	T-55	225	9400	1250	S-47	50	S-51
2-2	HF-100	250	12000	1500	S-49	52	S-51
2-2	100 TH	250	7200	1250	S-47	0	
§	100 TL	230	7200	1250	S-47	112	S-52
2-2	ZB-120	150	4800	750	S-45	0	
2-2	ZB-120	245	9000	1250	S-47	0	
*	HK-154	225	11400	1250	S-47	210	S-52
1-1	203 A	250	9000	1250	S-47	45	S-51
3-3	203 Z	200	6900	1000	S-47	0	
1-1	211	200	6900	1000	S-47	77	S-51
1-1	211	250	9000	1250	S-47	100	S-51
1-1	HK-354	220	15000	1500	S-49	100	S-51
2-2	808	190	12700	1250	S-47	15	S-51
2-2	830 B	175	7600	1000	S-47	35	S-51
2-2	838	250	9000	1250	S-47	0	

* Reverse S-9, using 2-2 for plates and P-P for grids.
§ Reverse S-9, using 1-1 for plates and P-P for grids.

FILAMENT TRANSFORMERS

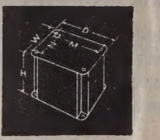
Primary Tapped 105, 115 Volts—50/60 Cycles

Type No.	Secondary Volts	Secondary Current	Insulation	Case No.
S-53	2.5 VCT	10 A.	1500 V.	G-3
S-54	5 VCT	4 A.	2500 V.	G-3
S-55	6.3 VCT	3 A.	1500 V.	G-3
S-56	7.5 VCT	3 A.	1500 V.	G-3
S-57	2.5 VCT	10 A.	10,000 V.	G-5
S-58	2.5 VCT	20 A.	10,000 V.	G-5
S-59	5 to 5.25 VCT	13 A.	5000 V.	G-5
S-60	5 to 5.25 VCT	22 A.	10,000 V.	G-7
S-61	7.5 VCT tapped 6.3 VCT	10 A.	3000 V.	G-5
S-62	10 VCT	10 A.	3000 V.	G-5
S-63	14 VCT tapped 12 Vct and 11 VCT	10 A.	5000 V.	G-7

Type No.	Fil. 1	Fil. 2	Fil. 3	Insulation	Case No.
S-64	2.5 VCT-5A	2.5 VCT-5A	5 VCT-6A	3000 V.	G-5
S-65	2.5 VCT-5A	5 VCT-4A	6.3 VCT-3A	3000 V.	G-5
S-66	2.5 VCT-10A	7.5 VCT-6.5A		3000 V.	G-5
S-67	5 VCT-6A	6.3 VCT-5A		3000 V.	G-5
S-68	5 VCT-3A	6.3 VCT-4A	7.5 VCT-5A	3000 V.	G-5
S-69	6.3 VCT-3A	7.5 VCT-6.5A		3000 V.	G-5
S-70	6.3 VCT-5A	6.3 VCT-5A		3000 V.	G-5
S-71	2.5 VCT-6A	2.5 VCT-6A	2.5 VCT-12A	10000 V.	G-7
S-72	5 VCT-3A	5 VCT-3A	5 VCT-6A	5000 V.	G-5

CASE SIZES

Type No.	H	W	D	M	N	Wt. Lbs.
G-5	3¾	3⅛	4½	3⅞	2-7/16	4½
G-7	4⅝	4⅝	5½	4-27/32	3-25/32	8
G-8	4⅝	5⅜	5⅜	4-25/32	4¾	12
G-9	5⅞	5⅜	6¾	6-3/32	4-19/32	21
G-10	5⅞	6⅛	6⅝	5-15/16	5-13/32	24
G-11	5⅞	6½	7⅜	6-21/32	5-29/32	31
G-12	10¼	7⅜	9¼	8½	6⅝	52



COMBINED PLATE AND FILAMENT UNITS

Primary 115 V.—50/60 Cycles

Type No.	Voltage	D.C. Voltages*	Rectifier Fil.	Fil. No. 1	Fil. No. 2	Case No.
S-39	490-400-0-400-490 175 Ma.	400/310	5 V.-3A	2.5 V.C.T.-6A	6.3 V.C.T. 4A	G-7
S-40	525-425-0-425-525 250 Ma.	400/310	5 V.-3A	6.3 V.C.T.-3A	6.3 V.C.T. 3A	G-7
S-41	600-0-600 200 Ma.	475	5 V.-3A	7.5 V. tapped 6.3 V.-3A	6.3 V.C.T. 2A	G-7
S-42	600-525-0-525-600 300 Ma.	480/400	5 V.-6A	7.5 V. tapped 6.3 V.-3A	6.3 V.C.T. 3A	G-8
S-43	525-0-525 450 Ma. 40-0-40, 200 Ma.	400	5 V.-3A 5 V.-6A	6.3 V.-3A -2A	6.3 V.C.T. 5A	G-9

* Based on two section filter, choke input.

PLATE TRANSFORMERS — BIAS TRANSFORMERS

Primary 115 V.—50/60 Cycles

Type No.	High Voltage	DC Voltages*	DC Current	Case No.
S-44	575-525-0-525-575	470/430	500 Ma.	G-9
S-45	900-750-0-750-900	750/620	200 Ma.	G-8
S-46	1000-750-0-750-1000	825/600	300 Ma.	G-9
S-74	1175-500-0-500-1175 Duplex rectifier	1000 400	†150 Ma. ‡150 Ma.	G-10
S-47	1500-1250-1000-0-1000-1250-1500	1275/1050/825	300 Ma.	G-10
S-48	1500-1250-1000-0-1000-1250-1500	1300/1075/850	500 Ma.	G-11
S-49	2100-1800-1500-0-1500-1800-2100	1815/1540/1275	300 Ma.	G-11
S-50	3000-2500-0-2500-3000	2625/2175	300 Ma.	G-12
S-51	Will supply any bias voltage from 15 to 100 volts DC within approximately 6% of desired value.		200 Ma.	G-5
S-52	Will supply any bias voltage from 75 to 400 volts DC within approximately 6% of desired value.		200 Ma.	G-7

* Based on two section filter for 200 Ma. and 300 Ma. units, single section filter for 500 Ma. units, both choke input.
† 200 Ma. if used alone ‡ 300 Ma. if used alone

FILTER, SWINGING, AND AUDIO CHOKES

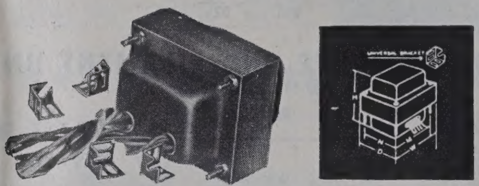
Type No.	Service	Inductance	Current	Resistance	Insulation	Case No.
S-23	Audio	450 Hy.	5 Ma.	5000 ohms	1500 V.	G-2
S-24	P.P. Choke	500 Hy. C.T.	3 Ma.	400 ohms	1500 V.	G-2
S-25	Filter	30 Hy.	30 Ma.	800 ohms	1500 V.	G-2
S-26	Filter	15 Hy.	60 Ma.	250 ohms	1500 V.	G-2
S-27	Filter	30 Hy.	75 Ma.	350 ohms	1500 V.	G-4
S-28	Filter	20 Hy.	100 Ma.	350 ohms	1500 V.	G-4
S-29	Filter	10 Hy.	175 Ma.	90 ohms	1500 V.	G-4
S-30	Swinging	5 25 Hy.	175 Ma.	90 ohms	1500 V.	G-4
S-31	Filter	20 Hy.	225 Ma.	100 ohms	2700 V.	G-5
S-32	Swinging	5/25 Hy.	225 Ma.	100 ohms	2700 V.	G-5
S-33	Filter	20 Hy.	300 Ma.	100 ohms	4000 V.	G-7
S-34	Swinging	5 25 Hy.	300 Ma.	100 ohms	4000 V.	G-7
S-35	Filter	20 Hy.	400 Ma.	60 ohms	5000 V.	G-8
S-36	Swinging	5 25 Hy.	400 Ma.	60 ohms	5000 V.	G-8
S-37	Filter	20 Hy.	550 Ma.	60 ohms	6000 V.	G-8
S-38	Swinging	5/25 Hy.	550 Ma.	60 ohms	6000 V.	G-8

REPLACEMENT TYPE COMPONENTS

(PREVIOUS POWER TRANSFORMERS TYPE R-1 THRU R-13 AND R-54 WILL BE AVAILABLE UNTIL 1951)

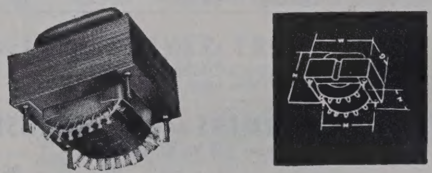
The UTC replacement type transformers represent the culmination of years of development in this field. All units are vacuum sealed against humidity with special impregnating materials to prevent corrosion and electrolysis. Shells and brackets are finished in attractive high lustre black enamel.

The UTC shells and universal brackets employed make possible a latitude in mounting dimensions never approached heretofore. A minimum number of transformers have been developed to cover any requirement in the replacement field. Pri. 117V. 50/60 cycles.



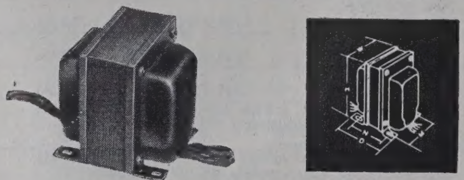
DOUBLE SHELL TYPE

The universal feet may be used for upright or horizontal mounting, or eliminated for flush mounting.



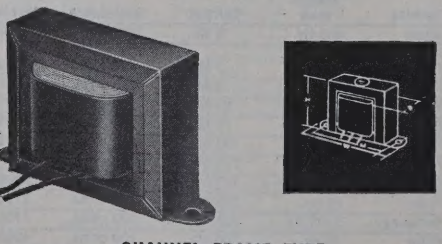
SINGLE SHELL TYPE

UTC flush type transformers are husky units designed for low temperature rise and good regulation. The rugged solder terminals permit ease of circuit change for the experimenter.



VERTICAL SHELL TYPE

UTC vertical power transformers are unusually attractive in appearance, having smooth drawn cases finished in high lustre black enamel.



CHANNEL FRAME TYPE

Channel frame chokes and audios are conservatively designed. Standard black enamel mounting channels are employed. Coils are tropic-sealed by vacuum-pressure method.

DOUBLE SHELL POWER TRANSFORMERS

Type No.	High V.	DC MA.	Rect. Fil.	Amp. Fil.	W	D	H	M	N	Wt. Lb.
R-101	275-0-275	50	5V-2A.	6.3V CT-2.7A	3	2½	2¾	2½	2-1/16	2½
R-102	350-0-350	70	5V-3A.	6.3V CT-3A.	3	2½	3⅜	2½	2-1/16	3½
R-103	350-0-350	90	5V-3A.	6.3V CT-3.5A.	3⅜	2⅞	3⅜	2-13/16	2¼	4½
R-104	350-0-350	120	5V-3A.	6.3V CT-5A.	3¾	3⅛	3⅜	3⅛	2½	5½
R-105	385-0-385	160	5V-3A.	6.3V CT-5A.	3¾	3⅛	3⅞	3⅛	2½	7

SINGLE SHELL POWER TRANSFORMERS

Type No.	High V.	DC MA.	Rect. Fil.	Amp. Fil.	W	D	H	M	N	Wt. Lb.
R-106	300-0-300	50	5V-2A.	6.3V CT-2.7A	3	2½	3	2½	2-1/16	2½
R-107	350-0-350	70	5V-3A.	6.3V CT-3A.	3	2½	3⅝	2½	2-1/16	3½
R-108	350-0-350	120	5V-3A.	6.3V CT-5A.	3¾	3⅛	3⅝	3⅛	2½	5½
R-109	400-0-400	200	5V-3A.	6.3V CT-6A.	4½	3¾	4	3¾	3	8

VERTICAL SHELL POWER TRANSFORMERS

Type No.	High V.	DC MA.	Rect. Fil.	Amp. Fil.	W	D	H	M	N	Wt. Lb.
R-110	300-0-300	50	5V-2A.	6.3V CT-2.7A	2½	2½	3¼	2	1¾	2½
R-111	350-0-350	70	5V-3A.	6.3V CT-3A.	2½	3⅛	3¼	2	2⅜	3½
R-112	350-0-350	120	5V-3A.	6.3V CT-5A.	3¼	3⅝	4	2½	2½	5½
R-113	400-0-400	200	5V-3A.	6.3V CT-6A.	3⅞	4¼	4⅝	3	3⅛	8

CHANNEL FRAME FILTER CHOKES

Inductance Shown Is at Rated D.C.M.A.—Insulation Test: 1750 Volts

Type No.	Induct. Hys.	Current	Resistance Ohms	Dimensions, Inc. W	D	H	M	Lbs.
R-55	6	40MA	300	2½	1⅜	1⅜	2	½
R-14	8	40MA	250	2⅞	1⅜	1-11/16	2⅜	¾
R-15	12	30MA	450	2⅞	1⅜	1-11/16	2⅜	¾
R-16	15	30MA	630	2⅞	1⅜	1-11/16	2⅜	¾
R-17	20	40MA	850	3-5/16	1⅝	2	2-13/16	1
R-18	8	80MA	250	3-5/16	1⅝	2	2-13/16	1
R-19	14	100MA	450	3¾	1¾	2-5/16	3⅛	1½
R-20	5	200MA	90	4⅛	2	2⅝	3-9/16	2½
R-21	3/15	200MA	90	4⅛	2	2⅝	3-9/16	2½
R-22	120	5MA	4000	3-5/16	1⅝	2	2-13/16	1

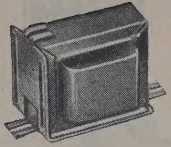
FILAMENT TRANSFORMERS

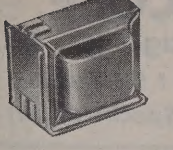
CHANNEL FRAME TYPE

Pri. 115 V. 50/60 Cycles—1500 V. Breakdown

Type No.	Secondary	Dimensions, Inches W	D	H	M	Wt. Lbs.
FT-1	2.5 V.C.T.-3A	2⅞	1⅜	1-11/16	2⅜	¾
FT-2	6.3 V.C.T.-1.2A	2⅞	1⅜	1-11/16	2⅜	¾
FT-3	2.5 V.C.T.-6A	3-5/16	1⅝	2	2-13/16	1
FT-4	6.3 V.C.T.-2.5A	3-5/16	1⅝	2	2-13/16	1
FT-5	2.5 V.C.T.-10A	3¾	1¾	2-5/16	3⅛	1½
FT-6	5 V.C.T.-3A	3¾	1¾	2-5/16	3⅛	1½
FT-7	7.5 V.C.T.-3A	3¾	1¾	2-5/16	3⅛	1½
FT-8	6.3 V.C.T.-6A	4⅛	2¼	2⅝	3-9/16	2½
FT-9	2.5V CT-10A. 10000V. Test	4⅛	2¼	2⅝	3-9/16	2½
FT-10	24V CT-2A. or 12V-4A.	4⅛	2¼	2⅝	3-9/16	2½

(Refer to Page N-35 for UTC Prices)



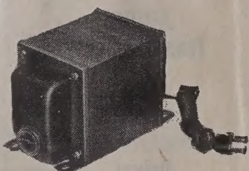


ISOLATION TRANSFORMERS

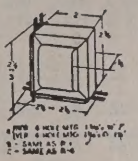
Ideal for isolating line noise, AC-DC sets, etc. Excellent electrostatic shielding. 1500 volt breakdown test. Six foot cord and female receptacle.

Primary 110-120 volts, 50/60 cycles—Secondary 110-120 volts

Type No.	Rating	Wgt. Lbs.
R-72	40 watts	4
R-73	100 watts	6
R-74	250 watts	12
R-75	600 watts	20
R-76	1200 watts	30
R-77	2500 watts (no-cord)	70



Varitap Duplicate audio units are extremely attractive, the double shells and universal mounting brackets being finished in high lustre black enamel. The figure A units use the UTC universal bracket. This bracket makes possible four hole horizontal or vertical mounting and two hole, channel type, horizontal or vertical mounting. The coils of these units, in addition to efficient design and mechanical shielding, are vacuum impregnated and sealed with a special compound to assure complete protection against adverse climatic conditions.



SHIELDED UNIVERSAL MOUNTING AUDIO TRANSFORMERS AND FILTER CHOKES

Type No.	Application	Description	Fig.	Wt. Lbs.
R-23	1 plate* to 1 grid	3½:1 ratio	A	1
R-24	1 plate* to 2 grids	2:1 ratio	A	1
R-25	2 plates* to 2 grids	1.5:1 stepup for class A triodes, 1.5:1 stepdown for 6L6's, 2A3's, 2A5's, etc.	A	1¼
R-26	Driver, 1 plate to 2 grids	Single 42, 2A5, 6F6, 45, 46	A	1¼
R-27	15 watt Universal Output	All tubes up to 15 watts to any voice coil from .1 to 30 ohms	A	1¼
R-28	35 watt Universal Output	All tubes up to 35 watts to any voice coil from .1 to 30 ohms	B	2½
R-29	Mike to grid	Single or double button mike or line to 1 grid	A	1¼
R-30	Filter choke	13 Hys—250 MA—100 ohms	C	7
R-31	Filter choke	10 Hys— 80 MA—250 ohms	A	2½
R-32	Filter choke	10 Hys—150 MA—100 ohms	B	2¼

* Will match tubes like 27, 37, 56, 6C6 triode, 6C5. Can be used with high mu triodes with loss in low frequencies.

CHANNEL FRAME AUDIO TRANSFORMERS

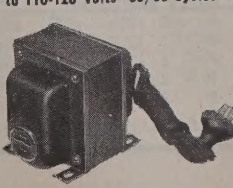
Type No.	Application	Description	Dimen., Ins. W	D	H	M	Wt. Lbs.
R-33	1 plate* to 1 grid	4:1 ratio	2⅞	1⅜	1-11/16	2⅜	¾
R-34	1 plate* to 2 grids	2:1 ratio	2⅞	1⅜	1-11/16	2⅜	¾
R-35	Mike to 1 grid	17:1 ratio Pri. C.T.	2⅞	1⅜	1-11/16	2⅜	¾
R-90	Intercomm. speaker to grid	4 ohm to 40,000 ohm grid	2½	1⅜	1⅜	2⅛	½
R-53	Plate & mike to grid	3:1 and 17:1 ratio	2⅞	1⅜	1-11/16	2⅜	¾
R-56	1 plate to 2 grids	2:1 ratio	3-5/16	1⅝	2	2-13/16	1
R-57	1 plate to 2 grids	2½:1 ratio	4⅛	2	2⅝	3-9/16	2½
R-36	Driver	30, 49, etc. to class B 19, 49, 79, 89 grids	2⅞	1⅜	1-11/16	2⅜	¾
R-37	R.F. Output	Class B 19, 49, 79, 89 plates to 3500 and 5,000 ohms	2⅞	1⅜	1-11/16	2⅜	¾
R-58	5 watt Universal output	Any single tube to any voice coil, .1 to 30 ohms	2½	1⅜	1⅜	2⅛	½
R-38A	6 watt Universal	Any tubes up to 6 watts to any voice coil, .1 to 30 ohms	2½	1⅜	1⅜	2⅛	½
R-59	10 watt Universal	Any tubes up to 10 watts to any voice coil, .1 to 30 ohms	2⅞	1⅜	1-11/16	2⅜	¾
R-60	15 watt Universal	Any tubes up to 15 watts to any voice coil, .1 to 30 ohms	3-5/16	1⅝	2	2-13/16	1
R-39	10 watt line Matching Transformer	250, 500, 1,500 ohms to 2, 8, 15 ohms	2⅞	1⅜	1-11/16	2⅜	¾
R-40	25 watt line Matching Transformer	250, 500, 1,500 ohms to 2, 8, 15 ohms	4⅛	2¼	2⅝	3-9/16	2½

* Will match tubes like 27, 37, 56, 6C6 triodes, 6C5. Can be used with high mu triodes with loss in low frequencies.

STEP DOWN AUTO-TRANSFORMERS

With 6 foot cord and female receptacle 220-240 to 110-120 Volts—50/60 Cycles

Type No.	Application	Wgt. Lbs.
R-41	85 watt capacity	4
R-42	125 watt capacity	5
R-43	175 watt capacity	5½
R-44	250 watt capacity	6½
R-45	500 watt capacity	12
R-46	1200 watt capacity	18
R-64	2500 watts, no cord	30



LINE VOLTAGE ADJUSTERS WITH METER

The perfect answer to abnormal or fluctuating line voltage. Adjust switch so that meter reads at red line and you know that your equipment is working at correct voltage.

These units combine a tapped auto-transformer with a switch and meter in a compact, rugged assembly. The nine tap switch provides for line voltages of 60 to 140 volts on 115 volt output models and 160 to 240 volts on 230 volt output models.

All units are designed for 50/60 cycle service and come complete with 6 foot input cord and plug and outlet receptacle.

Type No.	Primary Voltages	Sec. Volts	Watts	Wt. Lbs.
R-78	60, 70, 80, 90, 100, 110, 120, 130, 140	115	150	6
R-79	60, 70, 80, 90, 100, 110, 120, 130, 140	115	300	9
R-80	60, 70, 80, 90, 100, 110, 120, 130, 140	115	600	13
R-81	60, 70, 80, 90, 100, 110, 120, 130, 140	115	1200	21
R-83	160, 170, 180, 190, 200, 210, 220, 230, 240	230	150	6
R-84	160, 170, 180, 190, 200, 210, 220, 230, 240	230	300	9
R-85	160, 170, 180, 190, 200, 210, 220, 230, 240	230	600	13
R-86	160, 170, 180, 190, 200, 210, 220, 230, 240	230	1200	21

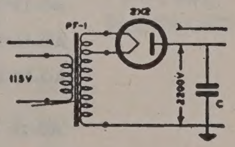
EXPORT VOLTAGE ADAPTER

Complete with cord and plug and special locking switch providing for line voltages of 105, 115, 125, 135, 150, 210, 230, 250 volts; 42 to 60 cycles. Output voltage 115. Similar in appearance to above but without meter.

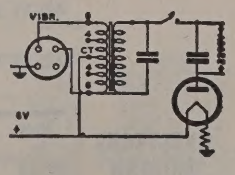
Type No.	Rating	Wgt. Lbs.
R-47	85 watts	4½
R-48	150 watts	5½

PHOTO FLASH TRANSFORMERS

Can be used for either standard (Amglo type) or trigger (Sylvania type) multiple flash bulbs. Circuit details included with transformer.



PF-1 Primary for 115 volts, 50/60 cycles. Secondaries for power supply delivering 2200 volts DC to condenser up to 100 Mfd. Compound sealed in G-3 case 2⅛ x 2¾ x 2½ inches high. Weight 2 Lbs.



PF-2 For portable service. Primary tapped for 4 volt or 6 volt battery (full wave vibrator). Secondary for power supply delivering 2200 volts DC to condenser up to 60 Mfd. Compound sealed in G-3 case. Weight 2 Lbs.

PF-3 Trigger Transformer 15 KV peak. ⅞ O.D. x 3" long. Weight 2 Oz.

PF-4 Dual Pri. for either 4V battery or 115V 50/60 cycles. Secondary for power supply delivering 900 volts DC to condenser up to 150 Mfd. G-3 case, 2 Lb.

TELEVISION TRANSFORMERS

These components are quality designs, vacuum impregnated and fully compound sealed in heavy steel cases affording a high degree of shielding.

Type No.	Application	Case	Wt. Lbs.
R-91	Horizontal oscillator (15750 cycles)	RC-50	1
R-92	Vertical oscillator (60 cycles)	RC-50	1
R-93	Vertical output, tapped for different tubes	RC-100	4
R-94	Horizontal output (special core), tapped for adjustment	RC-100	4
R-95	2800 vac (4000V-2MA DC) 2.5V-1.8A., 6.3V-.6A tapped 2.5V-2.1A. 7000 V test	RC-125	5

(Refer to Page N-35 for UTC Prices)

CREST TRANSFORMER CORP.

1830 W. North Ave., Chicago 22, Ill.

INDUSTRIAL and COMMERCIAL—MILITARY

(Hermetically sealed to MIL-T-27 and AN-E-19 Specification)

AUDIO Transformers

Driver

Stock No.	Driver Tubes	Output Tubes	Class	Ratio Pri. to ½ Sec.	Pri. M.A. D.C.	Mtg. Fig.	Mtg. Ctrs.	Dimensions H.	W.	D.	Wt. Lbs.	List Price
AD-1	1-30, 49, 6C5 1-1J6G	19, 2-30, 49	B	2.4:1	8	B	2"	2	2⅜	1⅝	0.6	$2.60
AD-2	1-33, 41, 42, 46, 59, 2A5, 6F6	P.P. 46, 59 6L6, 6F6	B AB2	2.2:1	32	K	2x1 11/16"	3 3/16	2⅝	2¾	2.4	4.40
AD-5	P.P. 45, 2A3, 6F6, 6L6	35T, 203A, 800, 806, T20, T55,	B	3.2:1 2:1	40	K	2x2 11/16"	3 3/16	2⅝	2¾	2.4	6.50
AD-6	P.P. 45, 6C5, 6F6, Tri. 59, 2A3, 4-2A3, 6L6	59, 805, 100TH, HY57, RK18, TZ40, P.P. 6L6,	A B	5:1 4:1 3.2:1	60	K	2x2 11/16"	3 3/16	2⅝	2¾	2.4	7.00

Input or Microphone Mike to Grid

Stock No.	Application	Ohms Impedance Pri.	Sec.	Turns Ratio	Mtg. Fig.	Mtg. Ctrs.	H.	W.	D.	Wt. Lbs.	List Price
AI-1	S.B. Mic. to Single or P.P. Grids	100	400000/C.T.	1:64	F	2	2	2⅜	1⅝	0.6	$3.50
AI-2	Voice Coil to Grid	3.2 CT	38,000	1:109	F	1¾	1¾	2	1⅜	0.6	2.25
AI-4	Low. Imp. Ribbon Mike to Grid	150-250 CT	53,000	1:14	F	2	2	2⅜	1⅝	1.0	2.60

Interstage

Stock No.	Ohms Impedance Pri.	Sec.	Turns Ratio	Pri. M.A.	Mtg. Fig.	Mtg. Ctrs.	Dimensions H.	W.	D.	Wt. Lbs.	List Price
AC-1	10000	90000	Sgl. 3:1	10	A	2	1⅜	2⅜	1⅜	0.4	$2.25
AC-3	10000	125000 CT	P.P. 3.5:1	10	A	2 13/16	2	3¼	1¾	1.2	3.00
AC-4	10000 CT	90000 CT	P.P. 3:1	10	A	2 13/16	2	3¼	1¾	1.2	3.25

Modulation

Stock No.	Typical Tube	Impedance Pri.	Sec.	Max. Pri. M.A.	D.C. Sec. M.A.	Class	Watts	Mtg. Fig.	Dimensions H.	W.	D.	Wt. Lbs.	List Price
AM-3	P.P. 6V6, 6F6, 1-53, 6A6, 6K6, 7C5, 6N7, 14C5	10000 CT	7500 5500 3500	60	60	A	12	F	2⅜	2⅞	2	1.4	$3.80
AM-4	P.P. 6L6, 45, 50, 2A3, 6A3, 6F6, 6V6	6000 CT 3000 CT	10000 7500 5000	100	100	AB	25	K	3 3/16	2⅝	3	2.6	6.50
AM-5	P.P. 6L6, 46, HY56, 807	6600 CT	12000 8000 4000	150	150	AB	40	L	4¼	3⅝	4 7/16	6.3	11.50

Output

Stock No.	Typical Tube	Class	Ohms Impedance Pri.	Sec.	Pri. M.A.	Max. Watts	Mtg. Fig.	Mtg. Ctrs.	Dimensions H.	W.	D.	Wt. Lbs.	List Price
AO-1	Sgl. 48, 2A3, 6A3, 6B4, 6Y6, 25AC5, 25B6, 25N6	A	2000	3.2	60	5	A	2	1⅜	2⅜	1⅜	0.4	$1.95
AO-2	P.P. 50L6, 25B5, 25AC5, 25L6, 6Y6, 6W6, 6V6	AB	4000	3.2	50	4	A	2	1⅜	2⅜	1⅜	0.3	1.70
AO-4	Sgl. 89, 95, 6F6, 6D5, 6B5, 12A6	A	7000	3-6	30	3	A	2	1⅜	2⅜	1⅜	0.4	1.70
AO-7	Sgl. 1C5G, 1Q5G, 3A4, 1S5, 1S4, 3S4, 3Q5	A	8000	3.2	20	5	A	2	1⅜	2⅜	1⅜	0.4	1.70
AO-9	P.P. 43, 6F6, 59B, 25A6, 6V6, 7C5, 71A	AB	10000	3.2	45	10	A	2 13/16	2	3¼	1¾	1.0	2.85
AO-10	P.P. 6F6, 6D5, 6AC5, 6K6, 6B5, 6AD7, 6N6, 7B5, 12A6, 18	AB	14000	3-6	42	10	A	2 13/16	2	3¼	1¾	1.0	3.00
AO-11	P.P. 1B8, 1E7, 1F4, 1T5, 6G6, 1299, 1602 Sgl. 6V7, 55, 85	A	25000	3.2	12	5	A	2	1⅜	2⅜	1⅜	0.4	2.15
AO-13*	P.P. Par 4-6L6, P.P. 2-6L6, 45, 6A3	AB1	3300	4/8/15 250/500	155	60	K	2½x2 5/16	3⅞	3¼	3 9/16	5.2	10.50
AO-16*	P.P. 6L6, 6F6, 6AL6	AB2	5500	4/8/15 250/500	90	40	K	2½x2 1/16	3⅞	3¼	3 5/16	4.4	9.00
AO-19	Universal Sgl. or P.P.	A	4000/7000 8000/10000 14000 Ct.	Adj. .1-29	30	4	C	2	1⅜	2⅜	1⅜	0.4	2.40
AO-20	Universal Sgl. or P.P.	A	4000/7000 8000/10000 14000 Ct.	Adj. .1-29	35	8	C	2⅜	1⅝	2 13/16	1½	0.6	2.70
AO-21	Universal Sgl. or P.P.	A	4000/7000 8000/10000 14000 Ct.	Adj. .1-29	40	12	D	2⅜	2⅜	2⅞	1¾	1.0	3.80
AO-22	Universal Sgl. or P.P.	A	4000/7000 8000/10000 14000 Ct.	Adj. .1-29	50	18	D	2 13/16	2⅞	3⅛	2	1.3	4.30

CRESTRANS "MODERN" SERIES

Stock No.	Plate Winding AC Volts	DC MA	Filament Windings No. 1	No. 2	Mtg. Fig.	Mtg. Ctrs.	Dimensions H.	W.	D.	Wt. Lbs.	List Price
PF-50	240-0-240	45	5.0V-2.0A	6.3V-2.0A	K	2 x1⅝	3⅛	2⅝	2⅝	2.2	$6.00
PF-51	250-0-250	60	5.0V-2.0A	6.3V-2.5A	K	2 x1¾	3⅛	2⅝	2⅞	2.3	6.65
PF-52	265-0-265	75	5.0V-2.0A	6.3V-2.5A	K	2 x2⅛	3⅛	2⅝	3¼	3.3	7.45
PF-53	280-0-280	90	5.0V-2.0A	6.3V-3.0A	K	2¼x2½	3⅝	3	3⅝	4.2	8.15
PF-54	300-0-300	120	5.0V-2.0A	6.3V-4.5A	K	2½x2½	4	3¼	3¾	5.2	9.65
			P-MOUNTING HORIZONTAL FULLY ENCLOSED								
PF-55	240-0-240	45	5.0V-2.0A	6.3V-2.0A	P	2 x2½	2¾	2½	3	2.2	6.00
PF-56	250-0-250	60	5.0V-2.0A	6.3V-2.5A	P	2 x2½	2⅞	2½	3	2.3	6.65
PF-57	265-0-265	75	5.0V-2.0A	6.3V-2.5A	P	2 x2½	3¼	2½	3	3.3	7.45
PF-58	280-0-280	90	5.0V-3.0A	6.3V-3.0A	P	2¼x2 13/16	3½	2⅞	3⅜	4.2	8.15
PF-59	300-0-300	120	5.0V-3.0A	6.3V-4.5A	P	2½x3⅛	3¾	3⅛	3¾	5.2	9.65

***HAVE 10% FEEDBACK WINDING**

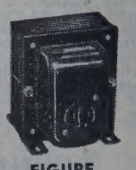


FIGURE J

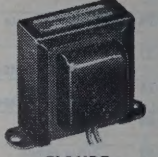


FIGURE F

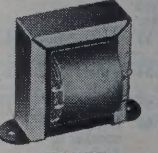


FIGURE D

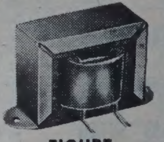


FIGURE A

TYPICAL HERMETICALLY SEALED TYPES

CHOKES

Filter

Stock No.	Inductance Henries at Rated DC	Current Rating M.A.	D.C. Res. Ohms	Volts Insul.	Mtg. Fig.	Mtg. Dimensions H.	W.	D.	Wt. Lbs.	List Price
CF-1	25	15	950	1600	A	1⅜	2⅜	1⅜	0.3	**$1.60**
CF-2	13.5	35	850	1600	A	2	3¼	1¾	1.0	**2.30**
CF-3	6.5	40	530	1600	A	1⅜	2⅜	1⅜	0.5	**1.90**
CF-4	7.0	60	200	1600	A	2	3¼	1¾	1.0	**2.40**
CF-5	16	75	400	1600	A	2¼	$3\frac{11}{16}$	2	1.5	**2.80**
CF-7	7.5	80	250	1600	A	2	3¼	1⅝	1.3	**2.50**
CF-9	5.8	100	160	1600	A	2¼	$3\frac{11}{16}$	2	1.5	**2.80**
CF-12	3.4	130	100	2000	A	2	3¼	1¾	1.0	**2.40**
CF-13	10	150	231	1600	K	3½	3	3⅛	2.4	**5.00**
CF-15	4.2	215	80	3000	K	3½	3	3⅛	2.4	**6.00**
CF-16	7.3	250	121	3000	K	4½	3⅝	$3\frac{15}{16}$	6.2	**7.50**
CF-19	4.8	450	60	5000	L	4⅝	3	$5\frac{1}{16}$	12.3	**15.25**

FIGURE G

Swinging

Stock No.	Inductance Henries	D.C. M.A. Range	D.C. Res. Ohms	Volts Insul.	Mounting Fig.	Dimensions H.	W.	D.	Wt. Lbs.	List Price
CS-1	20-5	15-150	215	3000	K	3⅜	2⅞	$2\frac{1}{16}$	2.8	**$4.80**
CS-5	20-5	50-500	70	5000	L	5⅜	4½	4¾	13.0	**19.00**

FILAMENT Transformers

Stock No.	Pri. Volts	Sec. Volts	Sec. Amps	Volts Insul.	Mtg. Fig.	Dimensions H.	W.	D.	Wt. Lbs.	List Price
FL-1	117	2.5 c.t.	5.25	1800	B	2⅜	2⅞	1¾	1.2	**$3.25**
FL-3	117	2.5 c.t.	10	7500	R	3⅜	$2\frac{13}{16}$	2¼	2.4	**5.10**
FL-5	117	5.0 c.t.	5	1800	B	2⅝	4	2⅛	2.2	**4.50**
FL-7	117	5.0 c.t.	12	10000	R	4⅛	$3\frac{7}{16}$	3	7.0	**10.50**
FL-8	117	6.3 c.t.	1.5	1800	B	2	2⅜	1⅝	0.6	**2.40**
FL-9	117	6.3 c.t.	3	1800	B	2⅜	2⅞	2	1.3	**3.25**
FL-13	117	7.5 c.t.	5	2500	R	3	2½	2¼	2.5	**4.25**
FL-14	117	7.5 c.t.	8	1800	R	3⅜	$2\frac{13}{16}$	2⅜	4.0	**6.00**
FL-16	117	10.0 c.t.	5	3000	R	3⅜	$2\frac{13}{16}$	2½	4.4	**6.00**
FL-17	117	10.0 c.t.	8	3000	R	3¾	3⅛	2¾	4.5	**6.85**
FL-19	117	12.6 c.t.	2.	1800	B	2⅞	3⅛	2	1.5	**4.50**

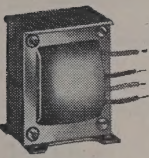


FIGURE E

POWER Transformers Primary 117V 20 Cycles

Stock No.	H.V. A.C. Load Volts	Secondary D.C. M.A.	Filament Windings Fil. No. 1	Fil. No. 2		Mtg. Fig.	Mtg. Ctrs.	Mtg. Dimensions H.	W.	D.	Wt. Lbs.	List Price
PF-1	325-325	40	5V-2A	6.3V-2A	C.T.	K	2 x$1\frac{7}{16}$	$3\frac{3}{16}$	2⅝	2½	2.4	**$6.00**
PF-2	325-325	50	5V-2A	6.3V-3A	C.T.	K	2 x$1\frac{15}{16}$	$3\frac{3}{16}$	2⅝	3	2.7	**6.25**
PF-3	350-350	70	5V-3A	6.3V-3A	C.T.	K	2½x2	3⅞	3¼	3¼	4.5	**8.00**
PF-4	350-350	90	5V-3A	6.3V-4A	C.T.	K	2½x$2\frac{15}{16}$	3⅞	3¼	$3\frac{9}{16}$	5.2	**8.60**
PF-5	350-350	120	5V-3A	6.3V-5A	C.T.	K	2½x$2\frac{9}{16}$	3⅞	3¼	$3\frac{13}{16}$	5.6	**9.25**
PF-6	400-400	200	5V-4A	6.3V-6A	C.T.	K	3 x$2\frac{13}{16}$	4⅝	3⅞	$3\frac{15}{16}$	8.0	**12.80**
PF-7	430-430	325	5V-6A	6.3V-8A	C.T.	K	3 x$4\frac{9}{16}$	4⅝	3⅞	$5\frac{11}{16}$	15.0	**18.00**

TELEVISION Transformers

Stock No.	Type	Electrical Equivalent	Mtg. Fig.	Dimensions H.	W.	D.	Wt. Lbs.	List Price
TVB-1	Vertical Blocking Oscillator	R.C.A. 208T2 Potted	G	1¾	$2\frac{5}{16}$	1½	0.4	**$2.95**
THB-1	Horizontal Blocking Oscillator	R.C.A. 208T1 Potted	G	1¾	$2\frac{5}{16}$	1½	0.5	**3.60**

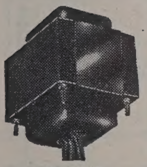


FIGURE PS

Vertical Outputs

Stock No.	Turns Ratio	Pri. Ind.	Primary Res. Approx.	Secondary Res. Approx.	Type Mtg.	Wt. Lbs.	List Price
TVO-1	10-1	60 H—13 Ma. DC	590 Ohms	6.9 Ohms	E	2.3	**$5.40**
TVO-2	10-1	47 H—10 Ma. DC	520 Ohms	6.9 Ohms	E	2.2	**4.40**
TVO-3	11.4-1	45 H—18 Ma. DC	1200 Ohms	11 Ohms	A	1.2	**3.30**

T-V Power Transformers

Stock No.	Primary	Plates		Fil. #1	Fil. #2	Fil. #3	Fil. #4	Type Mtg.	Weight	List Price
TPF-1	117V 60 Cy	362-362V .295 Amp		12.6 V CT 5.0 Amp	5.0 V 6.0 A	5.0 V 2.0 A	— —	P	16 lbs.	**$24.50**
		Plates AC								
TPF-2	117V 60 Cy	360-360V .250 Amp		6.3 V 8.0 A	6.3 V 0.6 A	5.0 V 3.0 A	5.0 V 2.0 A	P	12.3 lbs.	**18.90**
TPF-3	117V 60 Cy	365-365V .260 Amp		5.0 V 6.0 A	6.3 V 1.5 A	6.3 V 9.0 A	— —	P	12 lbs.	**18.50**
		Plates	Plates				Motor Winding			
TPF-4	117V 60 Cy	380-380V .230 Amp.	160-160V .140 Amp	6.3 V 9.5 A	5.0 V 3.0 A	5.0 V 2.0 A	25 V 0.6 A	K	13 lbs.	**26.25**
TPF-5	117V 60 Cy	375-375V .210 Amp		6.3 V 8.0 A	6.3 V 2.5 A	5.0 V 5.0 A	— —	K	10 lbs.	**16.60**
TPF-6	117V 60 Cy	415-415V .230 Amp		5.0 V 6.0 A	6.3 V 3.5 A	6.3 V 10.0 A	— —	K	13.4 lbs.	**21.50**
TPF-7	117V 60 Cy	385-385 V .180 Amp		5.0 V 3.0 A	6.3 V 1.2 A	6.3 V 7.5 A	5.0 V 2.0 A	K	11 lbs.	**16.60**
TPF-8	117V 60 Cy	400-400V .205 Amp		6.3 V 6.4 A	5.0 V 3.0 A	6.3 V 3.1 A	6.3 V 1.2 A	P	12.3 lbs.	**18.40**

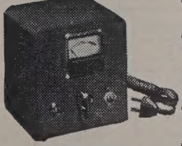


FIGURE CT-1

LINE REGULATORS

STEP UP OR STEP DOWN 50-60 CYCLE ISOLATION TRANSFORMERS

50-60 CYCLE AUTOFORMERS STEP UP OR STEP DOWN 50-60 CYCLE

Stock No.	Input Volts	Output Volts	Max. Watts	Mtg. Fig.	Mtg. Ctrs.	Dimensions H.	W.	D.	Wt. Lbs.	List Price
PI-3	220-250	110-125	100	J	2¾x$2\frac{11}{16}$	4¼	3⅝	$3\frac{13}{16}$	6.3	**$15.50**
PI-4	220-250	110-125	150	J	2¾x$3\frac{5}{16}$	4¼	3⅝	$4\frac{7}{16}$	6.0	**17.00**
PI-5	220-250	110-125	250	J	3 x$4\frac{5}{16}$	4⅝	3⅞	$5\frac{7}{16}$	14.0	**25.50**
PI-11	110-125	110-125	250	J	3 x$4\frac{5}{16}$	4⅝	3⅞	$5\frac{7}{16}$	14.0	**25.50**
PI-12	110-125	110-125	500	J	5¾x3⅛	6¼	5¾	4⅝	28.0	**35.00**
PA-4	220-250	110-125	150	J	2¾x$2\frac{5}{16}$	4¼	3⅝	$3\frac{7}{16}$	4.5	**10.50**
PA-5	220-250	110-125	250	J	2¾x$3\frac{1}{16}$	4¼	3⅝	$4\frac{3}{16}$	7.4	**12.25**
PA-6	220-250	110-125	500	J	3 x$3\frac{9}{16}$	4⅝	3⅞	$4\frac{11}{16}$	9.0	**19.50**

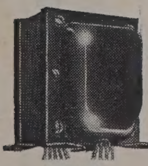


FIGURE K

CRESTROL SERIES

LINE VOLTAGE REGULATORS

Stock No.	Primary Voltage	Secondary Voltage	Maximum Wattage	Type Mtg.	Dimensions H	W	D	Wt. Lbs.	List Price
CT-1	90-140	117	350	Crestrol	5¾	5	4½	4.4	**$28.50**
CT-2	90-140	117	660	Crestrol	5¾	6	5½	6.4	**48.75**

WRITE FOR LATEST CATALOG SHOWING COMPLETE LINE ——— CREST TRANSFORMER CORP., CHICAGO 22, ILLINOIS

SNC

QUALITY TRANSFORMERS Give OUTSTANDING PERFORMANCE!

Style AL Mtg.
Style CL Mtg.
Style BL Mtg.
Style DL Mtg.
Style ET Mtg.
Style FL Mtg.

Skillful Engineering, latest production techniques and highest quality materials . . . backed by careful workmanship, exacting step-by-step inspection and rigorous final testing . . . are combined in every SNC transformer to provide a quality product that gives MORE in dollar value.

AUDIO TRANSFORMERS—THE "ONE" SERIES

AUDIO INPUT

Type Number	Application	Impedance		Pri. Mils (D.C.)	Max. Turns Ratio	Frequency Characteristics—c. p. s.					Mtg. Style	Dimensions				Net Wt.	List Price
		Primary	Secondary			50	200	1M	5M	10M		A	B	C	D		
1P121	P.M. Speaker to Grid	4	100,000	0	1:158	−4.0	−1.0	0	0	0	BL	1-7/8	1-9/16	1-1/2	2	.5	3.50
1P124	S.B. Mic. to Sgl. or P.P. Grids	100	400,000 C.T.	50	1:63		−6.0	0	−2.0	−6.0	BL	1-7/8	1-9/16	1-1/2	2	.5	3.70
1P125	Low Z to Sgl. or P.P. Grids	50	100,000 C.T.	0	1:45		−3.0	0	0	0	BL	1-7/8	1-9/16	1-1/2	2	.5	3.40
1P128	Sgl. or D.B. Mic. or Line to Sgl. or P.P. Grids	200*/50	100,000 C.T.	50	1:45	−2.0	−0.3	0	−0.7	−2.0	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.3	5.40
1P136	Line to Sgl. or P.P. Grids	500*/125	100,000 C.T.	0	1:28	−3.0	−0.4	0	−0.4	−1.5	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.4	5.40
1P145	Sgl. or P.P. Plates to Line	20,000 C.T.	500*/125	8	12.6:1	−3.5	−1.0	0	0	0	DL	2-1/4	1-7/8	1-13/16	2-3/8	.9	4.45
1P152	Sgl. or P.P. Plates to Line	20,000 C.T.	200*/50	8	20:1	−4.0	−1.0	0	0	0	DL	2-1/4	1-7/8	1-13/16	2-3/8	.9	4.45
1P161	Line to Line	500	500*/125	0	2:1	−0.4	−0.1	0	−0.4	−1.0	DL	2-1/4	1-7/8	1-13/16	2-3/8	.9	4.80

*Indicates Balanced Center Tap

AUDIO INTERSTAGE

1P323	Sgl. Plate to Sgl. Grid	10,000	90,000	8	1:3	−5.0	−1.5	0	0	0	BL	1-7/8	1-9/16	1-1/2	2	.5	3.25
1P331	Sgl. Plate to P.P. Grids	10,000	90,000 C.T.	8	1:3	−6.0	−2.0	0	0	−1.0	BL	1-7/8	1-9/16	1-1/2	2	.5	3.50
1P339	Sgl. Plate to P.P. Grids	10,000	90,000 C.T.	8	1:3	−3.0	−0.5	0	+0.1	+0.5	BL	2-1/4	1-7/8	1-13/16	2-3/8	.9	3.90
1P342	Sgl. Plate to P.P. Grids	10,000	90,000 C.T.	8	1:3	−2.5	−0.5	0	0	0	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	5.05
1P346	P.P. Plates to P.P. Grids	20,000 C.T.	45,000 C.T.	10	1:1.5	−1.0	−0.2	0	0	0	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	5.20
1P351	Universal	Universal		8	1:3	−2.0	−0.4	0	0	0	BL	2-1/4	1-7/8	1-13/16	2-3/8	.9	4.15
3P363	Sgl. Type 30 to 19, 1J5 or P.P. 30 Class B	10,000	7,000 C.T.	8	2.4:1	−0.5	0	0	−0.2	−1.0	BL	1-7/8	1-9/16	1-1/2	2	.5	2.80

TELEVISION REPLACEMENT (VERTICAL BLOCKING OSCILLATOR)

Type Number	Primary Inductance	Leakage Inductance	Turns Ratio	Mounting Style	Mounting	Dimensions				Net Wt.	List Price
						H	W	D	Ctrs.		
1P412	1.15 Hy. ±20%	.008 Hy. ±25 −15%	1:42	Comp. Filled Case	Flange	1-7/8	2-5/16	1-1/2	1-15/16	.5	3.60
1P416	1.15 Hy. ±20%	.008 Hy. ±25 −15%	1:42	Comp. Filled Case	Studs	1-5/8	1-3/16	1-3/16	1-13/64	.4	3.35

CHOKES AND REACTORS—THE "TWO" SERIES

AUDIO REACTORS

Type Number	D.C. Mils		Inductance				Insul. Test Voltage	D.C. Res.	Mtg. Style	Dimensions					Net Weight	List Price
	Nom.	Max.	0-D.C.	50% Nom. D.C.	Nom. D.C.	Max. D.C.				A	B	C	D	E		
2P123	5-0.5	15	550	–	300-500	80	2000	5500	AL	1-7/8	2-1/4	1-5/8	2-13/16		.9	3.50
2P124	5-0.5	15	550	–	300-500	80	2000	5500	CL	1-7/8	2-1/4	1-3/4	2-13/16		.9	3.90
2P126	35-15	45	65	–	25-35	20	2000	800	AL	1-7/8	2-1/4	1-5/8	2-13/16		.9	2.75
2P127	35-15	45	65	–	25-35	20	2000	800	CL	1-7/8	2-1/4	1-3/4	2-13/16		.9	3.29

FILTER AND SWINGING CHOKES

2P132	40	50	22	13	8	6	2000	450	AL	1-5/16	1-5/8	1-1/8	2		.3	1.80
2P135	65	80	18	11	8	7	2000	300	AL	1-9/16	1-7/8	1-3/8	2-3/8		.5	2.15
2P138	85	100	30	16	8	7	2000	350	AL	1-7/8	2-1/4	1-7/8	2-13/16		1.2	2.80
2P141	110	135	20	10.5	8	7	2000	200	BL	2-5/8	2-3/16	1-7/8	2-13/16		1.5	3.70
2P142	110	135	20	10.5	8	7	2000	200	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	3.90
2P144	150	180	26	13	8	5.5	2000	190	BL	3	2-1/2	2-1/8	3-1/8		2.1	3.70
2P145	150	180	26	13	8	5.5	2000	190	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.2	5.05
2P147	200	250	16	10	8	6.5	3500	110	GL	3-1/2	2-7/8	3-1/8	2-1/4	2	3.2	6.50
2P148	200-20	–	–	–	3-15	–	3500	110	GL	3-1/2	2-7/8	3-1/8	2-1/4	2	3.2	6.50
2P151	300	350	18	11	8	7	5000	75	GL	4-5/8	3-3/4	3-7/8	3	2-13/16	7.5	11.10
2P152	300-30	–	–	–	3-15	–	5000	75	GL	4-5/8	3-3/4	3-7/8	3	2-13/16	7.5	11.10
2P155	500	600	16	10	8	5.5	5000	55	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	22.8	31.20
2P156	500-50	–	–	–	3-15	–	5000	55	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	22.8	31.20

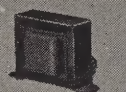
DRIVER TRANSFORMERS—THE "THREE" SERIES

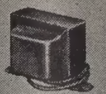
Type Number	Primary Impedance	Watts	Ratio, Pri. to 1/2 Sec. or Sec. Z	Pri. D.C. Mils	Frequency Characteristics—c. p. s.					Mtg. Style	Dimensions					Net Wt.	List Price
					50	200	1M	5M	10M		A	B	C	D	E		
3P323	6,000 C.T. to 10,000 C.T.	25	6, 5.5, 5:1	60	−0.5	0	0	0	−0.3	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.30
3P328	3,000 C.T. to 5,000 C.T.	25	6, 5.5, 5:1	60	−0.4	0	0	0	−0.1	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.30
3P334	6,000 C.T. to 10,000 C.T.	25	4.5, 4, 3.5:1	60	−1.0	−0.3	0	+0.1	+0.6	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.15
3P338	3,000 C.T. to 5,000 C.T.	25	4.5, 4, 3.5:1	60	−1.7	−0.5	0	0	0	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.35
3P342	6,000 C.T. to 10,000 C.T.	25	3, 2, 1:1	60	−0.7	−0.1	0	+0.1	+0.4	CL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.75
3P347	3,000 C.T. to 5,000 C.T.	25	3, 2, 1:1	60	−0.8	0	0	0	−0.3	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.60
3P353	6,000 C.T. to 10,000 C.T.	25	500 Ohms	60	−1.1	−0.3	0	0	+0.3	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.40
3P358	3,000 C.T. to 5,000 C.T.	25	500 Ohms	60	−0.9	−0.1	0	−0.4	−1.0	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	11.40
3P363	10,000	5	2.4:1	10	−0.5	0	0	−0.2	−1.0	BL	1-7/8	1-9/16	1-1/2	2		.5	2.80

See Page N-57 for Dimensional Illustrations.

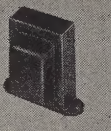
SNC

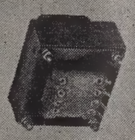
QUALITY TRANSFORMERS Give OUTSTANDING PERFORMANCE!

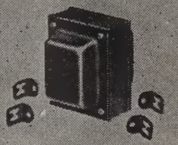

Style AL Mtg.


Style CL Mtg.

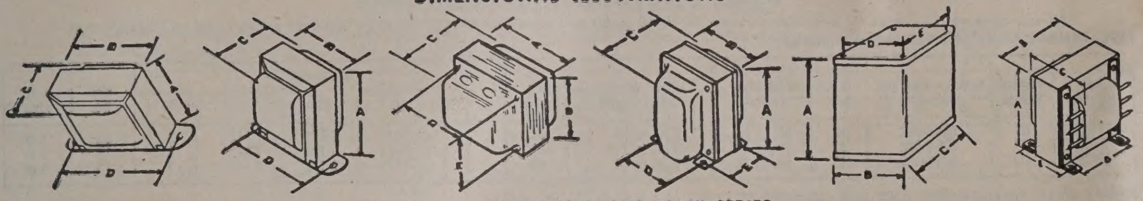
Style BL Mtg.


Style DL Mtg.


Style ET Mtg.


Style FL Mtg.

DIMENSIONAL ILLUSTRATIONS



OUTPUT TRANSFORMERS—THE "SIX" SERIES

SPECIFIC DUTY REPLACEMENT TYPES—TUBE TO VOICE COIL

Type Number	Primary Imp.—Ohms		Pri. D.C. Mils	Sec. Z—Ohms	Watts	Mtg. Style	Dimensions				Net Wt.	List Price
							A	B	C	D		
6P300	Single	2,000 Plate	50	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	1.80
6P306	Single	4,000 Plate	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	1.80
6P312	Single or P.P.	7,500 Plates	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.40
6P316	Single or P.P.	10,000 Plates	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.40
6P319	Push-Pull	15,000 Plates	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.45
6P321	Push-Pull	20,000 Plates	30	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.45
6P325	Push-Pull	25,000 Plates	20	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.45

UNIVERSAL REPLACEMENT TYPES—TUBE TO VOICE COIL—TUBE TO LINE—LINE TO VOICE COIL

Type Number	Primary Imp.—Ohms	Pri. D.C. Mils	Sec. Z—Ohms	Watts	Mtg. Style	Dimensions				Net Wt.	List Price
						A	B	C	D		
6P165	Sgl. or P.P. 4M to 14M Plates	40	1.1 to 14	4	ATL	1-5/16	1-5/8	1-3/8	2	.3	2.88
6P166	Sgl. or P.P. 4M to 14M Plates	50	1.1 to 14	8	ATL	1-9/16	1-7/8	1-5/8	2-3/8	.5	2.80
6P167	Sgl. or P.P. 3M to 10M Plates	50	1.2 to 13	15	BTL	1-7/8	1-9/16	1-3/4	2	.5	3.50
6P169	Sgl. 1500 to 7M Plate	55	.8 to 19	10	ATL	1-9/16	1-7/8	1-5/8	2-3/8	.5	2.80
6P172	P.P. 3500 to 12M Plates	60	1.3 to 14	20	BTL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	5.10
6P701	Single 2500 to 7500 Plate	45	165 to 1500	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	4.45
6P710	P.P. 7500 to 15M Plates	45	250 to 1000	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	5.05
6P714	Sgl. or P.P. 2500 to 12M Plates	45	150 to 2400	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	5.30
6P717	125 to 500 Line	0	1 to 32	35	BTL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	5.40
6P722	500 to 3M Line in 500-Ohm Steps	0	1.3 to 48	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	5.10

AMPLIFIER AND EQUIPMENT TYPES—TUBE TO LINE AND VOICE COIL

Type Number	Primary Imp.—Ohms		Pri. D.C. Mils	Secondary Imp.—Ohms	Watts	Frequency Characteristics—c. p. s.					Mtg. Style	Dimensions					Net Wt.	List Price
						50	200	1M	5M	10M		A	B	C	D	E		
6P726	P.P. 3300 or 3800 Plates		90	4-8-16-250-500	60	−0.3	0	0	+0.1	+0.5	GL	3-3/4	3-1/16	3-3/8	2-1/2	2-3/16	4.4	10.70
6P731	P.P. 4500 or 6800 Plates		90	4-8-16-250-500	60	−0.3	0	0	+0.2	0	GL	3-3/4	3-1/16	3-3/8	2-1/2	2-3/16	4.4	10.70
6P736	P.P. 5000	Plates	70	4-8-16-250-500	25	−0.9	−0.2	0	+0.2	+0.5	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	7.20
6P740	P.P. 4300	Plates	70	4-8-16-250-500	25	−0.9	−0.3	0	+0.3	+0.5	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	7.20
6P743	P.P. 6600	Plates	70	4-8-16-250-500	25	−0.7	−0.1	0	+0.2	+0.5	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	7.20
6P746	P.P. 8000	Plates	70	4-8-16-250-500	25	−0.7	−0.1	0	+0.1	+0.3	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	7.20
6P749	P.P. 10,000	Plates	60	4-8-16-250-500	25	−0.4	−0.1	0	+0.2	+0.3	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	7.55
6P752	Sgl. 2500	Plate	60	4-8-16-250-500	10	−3.0	−0.4	0	+0.3	+0.5	DL	2-1/4	1-7/8	2-1/8	2-3/8		1.0	5.70

TELEVISION REPLACEMENT (VERTICAL DEFLECTION)

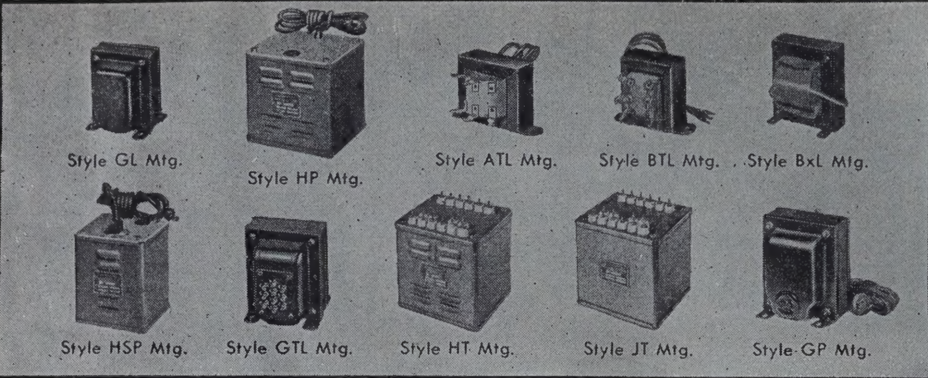
Type Number	Ratio Pri. to Sec.	Primary Imp.—Ohms	Leakage Inductance	Mounting Style	Dimensions					Net Wt.	List Price
					A	B	C	D	E		
6P860	10:1	19,000 Min.	0.33 Hy. Max.	B x L	3-3/16	2-3/4	2-9/16	1-19/32	2	2.2	6.70

MODULATION TRANSFORMERS—THE "FIVE" SERIES

SNC universal modulation transformers are specifically designed to provide maximum application possibilities per type. All units are provided with two indentical secondary windings, permitting series or parallel operation. Changes in the ratio can be readily accomplished, when desired, without removing the unit from the chassis. Most units available in either air cooled or compound filled cases.

UNIVERSAL TYPES

Type Number	Watts	Primary Current Mils	Secondary Characteristics				Primary Impedance Ohms	Mtg. Style	Dimensions					Net Weight	List Price
			Series Sec.		Parallel Sec.										
			Impedance	Mils	Impedance	Mils			A	B	C	D	E		
5P341	15	60		50		100	3M to 8M	DL	2-5/8	2-3/16	2-3/8	2-13/16		1.5	9.00
5P346	50	80	2M to 18M	75	500 to 4500	150	3M to 15M	GTL	3-7/8	3-1/8	3-3/8	2-1/2	2-3/16	4	14.10
5P352	100	120	2M to 18M	100	500 to 4500	200	3M to 15M	GTL	4-5/8	3-3/4	3-7/8	3	2-13/16	9.7	22.50
5P354 5P355	200	200	2M to 18M	150	500 to 4500	300	3M to 15M	HT JT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	24 32	51.60 56.40
5P357 5P358	300	250	2M to 18M	250	500 to 4500	500	3M to 15M	HT JT	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	33 41	62.40 67.20
5P363 5P364	500	300	2M to 18M	300	500 to 4500	600	3M to 15M	HT JT	10-3/4	6-1/2	7-1/4	5-3/8	6-1/8	51 64	126.00 138.00



NOTE

Basic mounting types are classified as "A," "B," "C," "D," "E," "F," "G," "H," "J," and Bx.

Explanation of Suffix Symbols
L = Leads
T = Lugs
P = Cord and Plug
SP = Switch, Cord and Plug

POWER TRANSFORMERS—THE "EIGHT" SERIES

All units conservatively rated for operation on either 50 or 60 cycles and contain an electrostatic shield between primary and all other windings

REPLACEMENT TYPES (6.3 Volt Heater Winding)

Type Number	Primary Voltage	R.M.S.—High Volt. Secondary	Pri. D.C. Mils	Rectifier Filament	Heater Winding Center Tapped	Mtg. Style	Dimensions					Net Wt.	List Price
							A	B	C	D	E		
8P040	117	265-0-265	40	5V. @ 2A.	6.3V. @ 2A.	FL	3	2-1/2	2-3/4	2-1/2	2	2.3	5.40
8P055	117	300-0-300	55	5V. @ 2A.	6.3V. @ 2.5A.	FL	3	2-1/2	3-1/8	2-1/2	2	2.8	5.45
8P070	117	325-0-325	70	5V. @ 2A.	6.3V. @ 3A.	FL	3	2-1/2	3-1/2	2-1/2	2	3.2	6.90

HEAVY DUTY REPLACEMENT AND NEW EQUIPMENT TYPES (6.3 Volt Heater Winding)

Type Number	Primary Voltage	R.M.S.—High Volt. Secondary	Pri. D.C. Mils	Rectifier Filament	Heater Winding Center Tapped	Mtg. Style	Dimensions					Net Wt.	List Price
							A	B	C	D	E		
8P180 8P180G	117	265-0-265	40	5V. @ 2A.	6.3V. @ 2A.	FL GL	3 3-1/16	2-1/2 2-7/32	3-1/4 3-1/8	2-1/2 2	2 2-3/16	3.2	7.40
8P183 8P183G	117	300-0-300	50	5V. @ 2A.	6.3V. @ 2A.	FL GL	3-3/8 3-7/16	2-13/16 2-27/32	3-7/16 3-1/4	2-13/16 2-1/4	2-1/4 2-1/8	3.5	7.80
8P186 8P186G	117	325-0-325	60	5V. @ 2A.	6.3V. @ 3A.	FL GL	3-3/8 3-7/16	2-13/16 2-27/32	3-11/16 3-1/2	2-13/16 2-1/4	2-1/4 2-3/8	4.0	8.20
8P189 8P189G	117	350-0-350	70	5V. @ 3A.	6.3V. @ 3.5A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	3-3/4 3-5/8	3-1/8 2-1/2	2-1/2 2-7/16	5.0	9.00
8P192 8P192G	117	350-0-350	90	5V. @ 3A.	6.3V. @ 4A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	4 3-7/8	3-1/8 2-1/2	2-1/2 2-11/16	5.7	9.90
8P194 8P194G	117	375-0-375	110	5V. @ 3A.	6.3V. @ 4A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	4-1/8 4	3-1/8 2-1/2	2-1/2 2-13/16	6.0	11.10
8P196 8P196G	117	350-0-350	150	5V. @ 3A.	6.3V. @ 4.8A.	FL GL	4-1/8 4-3/16	3-7/16 3-15/32	4-3/8 4-3/8	3-7/16 2-3/4	2-3/4 3-5/16	7.7	11.70
8P199 8P199G	117	400-0-400	70	5V. @ 3A.	6.3V. @ 3.5A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	4 3-7/8	3-1/8 2-1/2	2-1/2 2-11/16	5.8	10.50
8P202 8P202G	117	450-0-450	200	5V. @ 3A.	6.3V. @ 5A.	FL GL	4-1/2 4-9/16	3-3/4 3-25/32	4-3/4 4-3/8	3-3/4 3	3 3-11/16	10.7	15.00
8P205	117	450-0-450	325	5V. @ 6A.	6.3V. @ 8A.	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	22.3	40.80
8P208	117	550-0-550	275	5V. @ 6A.	6.3V. @ 6A.	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	40.80

REPLACEMENT TYPES (2.5 Volt Heater Winding)

8P287	117	350-0-350	70	5V. @ 3A.	2.5V. @ 6A.	FL	3-3/4	3-1/8	3-3/4	3-1/8	2-1/2	5.0	9.00
8P293	117	350-0-350	90	5V. @ 3A.	2.5V. @ 8A.	FL	3-3/4	3-1/8	4	3-1/8	2-1/2	5.6	9.80
8P295	117	350-0-350	150	5V. @ 3A.	2.5V. @ 12A.	FL	4-1/8	3-7/16	4-3/8	3-7/16	2-3/4	7.3	11.70

REPLACEMENT TYPES (Two 2.5 Volt Heater Windings)

8P487 8P487G	117	350-0-350	70	5V. @ 3A.	No. 1=2.5V. @ 3.5A. No. 2=2.5V. @ 8A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	4 3-7/8	3-1/8 2-1/2	2-1/2 2-11/16	5.8	10.80
8P494 8P494G	117	375-0-375	110	5V. @ 3A.	No. 1=2.5V. @ 3.5A. No. 2=2.5V. @ 10A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	4-1/4 4-1/8	3-1/8 2-1/2	2-1/2 2-15/16	6.2	11.80

GENERAL PURPOSE TYPES WITH CONVENIENT LUG TERMINALS (6.3 Volt Heater Winding)

Type Number	Primary Voltage	R.M.S.—High Volt. Secondary	Pri. D.C. Mils	Rectifier Filament	Heater Winding Center Tapped	Mtg. Style	Dimensions					Net Wt.	List Price
							A	B	C	D	E		
8P382	117	300-0-300	50	5V. @ 2A.	6.3V. @ 2A.	ET	3-3/8	2-13/16	3-7/16	2-13/16	2-1/4	3.2	7.10
8P385	117	325-0-325	60	5V. @ 2A.	6.3V. @ 3A.	ET	3-3/8	2-13/16	3-11/16	2-13/16	2-1/4	4.0	7.60
8P388	117	350-0-350	70	5V. @ 3A.	6.3V. @ 3.5A.	ET	3-3/4	3-1/8	3-3/4	3-1/8	2-1/2	4.7	8.30

BIAS TYPES

8P510	117	40-0-40	25	5V. @ 2A.		CL	1-7/8	2-1/4	1-3/4	2-13/16		1.0	4.50
8P511	117	0-90-150-200-250	50	5V. @ 2A.		GL	3-1/16	2-7/32	2-5/8	2	1-11/16	2.0	6.55

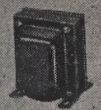
VIBRATOR TYPES

8P610	6	225-0-225	40			AL	2-3/16	2-5/8	2	3-1/8	....	1.3	5.10
8P611	6	320-0-320	40			GL	3-1/16	2-7/32	2-1/2	2	1-9/16	2.1	6.10
8P612	6	390-0-390	60			GL	3-7/16	2-27/32	3-5/16	2-1/4	2-3/16	3.7	6.90

TELEVISION REPLACEMENT TYPES

9P803	117	375-0-375	210	5V.@ 3A.	No. 1-5V.@ 2A. No. 2-6.3V.@ 5.6A.	FL	4-1/2	3-3/4	4-3/4	3-3/4	3	10.7	17.75
8P805	117	235-0-235	90	5V.@ 2A.	6.3V.@ 5.5A.	FL	3-3/8	2-13/16	4	2-13/16	2-1/4	5.1	10.20
8P807	117	365-0-365	300	5V.@ 6A.	No. 1-12.6V.@ 5A. No. 2-5V.@ 2A.	FL	4-23/32	3-27/32	6-3/4	4-1/16	3-3/16	16.0	30.60

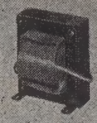
See Page N-57 for Dimensional Illustrations.


Style GL Mtg.

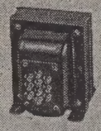
Style HP Mtg.

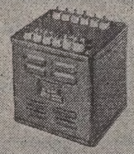
Style ATL Mtg.

Style BTL Mtg.


Style BxL Mtg.

Style HSP Mtg.


Style GTL Mtg.


Style HT Mtg.

Style JT Mtg.

Style GP Mtg.

NOTE

Basic mounting types are classified as "A," "B," "C," "D," "E," "F," "G," "H," "J," and Bx.

Explanation of Suffix Symbols

L = Leads
T = Lugs
P = Cord and Plug
SP = Switch, Cord and Plug

PLATE TRANSFORMERS—THE "SEVEN" SERIES

All SNC plate transformers have dual secondary ratings. Most units available in either air cooled or compound filled cases. All units contain electrostatic shields between primary and high voltage windings.

Type Number	Primary Voltage	Pri. V.A.	Secondary R.M.S. Voltage	D.C. Voltage From Filter*	D.C. Current	Mtg. Style	Dimensions					Net Wt.	List Price
							A	B	C	D	E		
7P530	115–230	220	920–0–920 or 740–0–740	750 or 600	200MA	GL	4-3/4	3-3/4	5-1/8	3	4-1/16	12	18.00
7P535 7P536	115–230	320	930–0–930 or 750–0–750	750 or 600	300MA	HT JT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	22 30	42.00 48.00
7P542 7P543	115–230	530	1470–0–1470 or 1220–0–1220	1250 or 1000	300MA	HT JT	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	33 41	50.40 55.20
7P551 7P552	115–230	750	2050–0–2050 or 1740–0–1740	1750 or 1500	300MA	HT JT	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	43 51	54.00 66.00
7P557 7P558	115–230	1060	2880–0–2880 or 2350–0–2350	2500 or 2000	300MA	HT JT	10-3/4	6-1/2	7-1/4	5-3/8	6-1/8	53 69	74.40 80.40
7P563 7P564	115–230	1760	2900–0–2900 or 2370–0–2370	2500 or 2000	500MA	HT JT	10-3/4	9	7-1/4	7	5-13/16	96 126	108.00 150.00

*All units may be operated with simultaneous loads—provided the total D.C. current of the two loads does not exceed the rating listed.

FILAMENT TRANSFORMERS—THE "FOUR" SERIES

Most SNC Filament Transformers are constructed to provide two identical center tapped secondary windings and offer a minimum of three applications. They provide three-fold the number of possible applications of ordinary filament types. A few are single secondary units and are so designated. All have 117 V. 50/60 cycle primary.

Type Number	Applications			Test Voltage	Mtg. Style	Dimensions					Net Wt.	List Price
	Parallel Secondaries	Series Secondaries	Independent Identical Secondaries			A	B	C	D	E		
4P222	2.5V. C.T. @ 5 A.	5 V. C.T. @ 2.5 A.	Two of 2.5V. C.T. @ 2.5 A.	2000	BL	2-1/4	1-7/8	1-3/4	2-3/8		1.0	3.55
4P226*	2.5V. C.T. @ 10 A.*			7500	BL	3	2-1/2	2-3/8	3-1/8		2.0	5.50
4P227	2.5V. C.T. @ 10 A.	5 V. C.T. @ 5 A.	Two of 2.5V. C.T. @ 5 A.	2000	BL	2-5/8	2-3/16	2	2-13/16		1.5	4.80
4P234	2.5V. C.T. @ 15 A.	5 V. C.T. @ 7.5 A.	Two of 2.5V. C.T. @ 7.5 A.	2000	BL	3	2-1/2	2-1/4	3-1/8		2.2	5.70
4P239	5 V. C.T. @ 6.5A.	10 V. C.T. @ 3.25A.	Two of 5 V. C.T. @ 3.25A.	2000	BL	3	2-1/2	2-1/4	3-1/8		2.2	5.10
4P242*	5 V. C.T. @ 20 A.*			10000	BxL	4-1/8	3-7/16	2-3/4	2-3/4	2-1/8	4.6	10.20
4P243	5 V. C.T. @ 20 A.	10 V. C.T. @ 10 A.	Two of 5 V. C.T. @ 10 A.	2000	BxL	3-3/4	3-1/8	2-3/4	2-1/2	2-1/4	4.3	9.00
4P244*	6.3V. C.T. @ 0.6A.*			2000	BL	1-7/8	1-9/16	1-1/2	2		.6	3.50
4P245*	6.3V. C.T. @ 1.2A.*			2000	BL	1-7/8	1-9/16	1-5/8	2		.7	3.80
4P246	6.3V. C.T. @ 2 A.	12.6V. C.T. @ 1 A.	Two of 6.3V. C.T. @ 1 A.	2000	BL	2-1/4	1-7/8	1-3/4	2-3/8		1.0	4.20
4P251	6.3V. C.T. @ 6 A.	12.6V. C.T. @ 3 A.	Two of 6.3V. C.T. @ 3 A.	2000	BL	3	2-1/2	2-1/4	3-1/8		2.0	4.85
4P256	6.3V. C.T. @ 10 A.	12.6V. C.T. @ 5 A.	Two of 6.3V. C.T. @ 5 A.	2000	BxL	3-3/8	2-13/16	2-1/2	2-1/4	2-1/8	2.9	6.30
4P260	7.5V. C.T. @ 3 A.	15 V. C.T. @ 1.5 A.	Two of 7.5V. C.T. @ 1.5 A.	2000	BL	2-5/8	2-3/16	2	2-13/16		1.5	5.10
4P267	7.5V. C.T. @ 4.5A.	15 V. C.T. @ 2.3 A.	Two of 7.5V. C.T. @ 2.3 A.	2000	BL	3	2-1/2	2-1/4	3-1/8		2.0	6.30
4P272	11 V. C.T. @ 10 A.	22 V. C.T. @ 5 A.	Two of 11 V. C.T. @ 5 A.	2000	BxL	3-3/4	3-1/8	2-3/4	2-1/2	2-1/4	4.1	9.00

*Single secondary units

VOLTAGE CHANGER AND ISOLATION—THE "NINE" SERIES

All Units Have Primary Cord and Secondary Plug and Are For 50/60 Cycle Operation

VOLTAGE CHANGER (ISOLATION)

Type Number	Primary Voltage	Secondary Voltage	Capacity in V. A.	Mtg. Style	Dimensions					Net Wt.	List Price
					A	B	C	D	E		
9P707	220–250	110–125	75	GP	3-13/16	3-5/32	3-1/8	2-1/2	1-15/16	3.9	9.30
9P713	220–250	110–125	150	GP	4-9/16	3-25/32	3-7/8	3	2-13/16	8.0	13.80
9P718	220–250	110–125	350	HP	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	36.00

ISOLATION TYPES

Type Number	Primary Voltage	Secondary Voltage	Capacity in V. A.	Mtg. Style	A	B	C	D	E	Net Wt.	List Price
9P721	110–250	110–250	150	GP	4-9/16	3-25/32	4-5/8	3	3-9/16	12.1	18.00
9P725	110–250	110–250	250	HP	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	29.40
9P728	110–250	110–250	500	HP	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	34.8	41.40

VOLTAGE ADJUSTMENT TYPES WITH TAP CHANGE SWITCH

Type Number	Primary Voltage	Secondary Voltage	Capacity in V. A.	Mtg. Style	A	B	C	D	E	Net Wt.	List Price
9P732	95–130 in 5V. Steps	115	150	HSP	4-7/8	3-7/8	3-7/8	3-1/8	3-1/8	4.7	25.80
9P737	95–130 in 5V. Steps	115	250	HSP	5-3/8	4-3/8	4-1/4	3-5/8	3-1/2	8.0	33.00
9P739	80–130 in 5V. Steps	115	500	HSP	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	49.20

All list prices given are subject to regular trade discounts and may be changed without notice.

S N C MANUFACTURING CO., INC., OSHKOSH, WISCONSIN

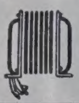
See Page N-57 for Dimensional Illustrations.

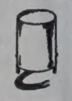
PEERLESS
ELECTRICAL PRODUCTS

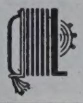
DIVISION
ALTEC
LANSING CORPORATION

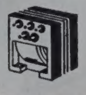
161 Sixth Avenue
New York 13, N.Y.

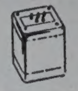
9356 Santa Monica Blvd.
Beverly Hills, Calif.

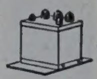

CASE A

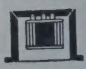

CASE D


CASE E


CASE K


CASE Q


CASE S


CASE X

The Peerless standard commercial line includes power, filament, plate, input, interstage, bridging, output, impedance matching transformers, reactors, and power chokes. Power transformers rated for maximum heat rise of 55°C. Output transformers deliver full rated power ±3 db 30-10,000 cps.

Unsurpassed 20-20 line audio transformers include input, interstage, bridging, output and impedance matching. Frequency response is flat within 1 db. 20-20,000 cps, with good transmission up to 50 KC. Output transformers deliver rated power ±3 db. 20-20,000 cps.

- * Suffix letter on Type Number indicates case style.
- † Low flux-density core for pre-amplifiers.
- ‡ All Primaries are 117 v 60 cycles. All transformers in R group are supplied with electro-static shield.
- ● Secondary impedance is total of two separate windings.
- ▲ Maximum operating level, 6 mw reference.
- ■ All low-impedance secondary windings of high-level output transformers may be worked into loads within 20% of the rated impedance.
- ★ For RMA standardized 70 volt line.

COMBINATION PLATE AND FILAMENT TRANSFORMERS ‡

Type Number*	High Voltage Secondary AC Volts	High Voltage Secondary DC MA.	Filament Current, Amperes 5 V.	Filament Current, Amperes 6.3 V. C.T.	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	List Price
R-080-A†	275-0-275	20		2.	3⅛	2⅞	2 9/16	2¼	$9.00
R-320-A	325-0-325	70	3.	3.	3½	3⅝	2⅞	4	9.40
R-400-A	350-0-350	90	3.	4.	4 3/16	3⅝	3¾	6¼	10.40
R-480-A	350-0-350	120	3.	5.	4	3½	3¼	6¾	11.80
R-480-Q	350-0-350	120	3.	5.	5	4⅜	4 1/16	8	21.00
R-482-A	350-0-350	120	3.	3. - 3.	4	3½	3¼	4	12.50
R-560-A	400-0-400	200	3.	6.	5	4⅞	4⅜	11¾	16.90
R-800-A	400-0-400	300	4.	4. - 5.	5	6¼	4⅜	16½	24.00

SMOOTHING CHOKES

Type Number*	Current D.C. MA.	Inductance Henrys	Resistance Ohms	Test Volts R.M.S.	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	List Price
C-305-X	90	10	285	1500	2⅛	3¼	2¼	1½	$3.20
C-315-X	225	3	80	1500	2⅜	2¾	2½	1¾	3.65
C-325-A	120	10	240	1500	3⅛	2⅞	2 9/16	2¼	5.50
C-390-A	200	10	150	1500	3⅝	3½	3⅛	5½	7.60
C-455-A	250	10	110	2500	4 3/16	3¾	3¾	6½	10.70

PLATE TRANSFORMERS

Type Number*	Secondary AC Volts	DC Volts Choke Input	DC MA. Chope Input ICAS	DC MA. Chope Input CCS	Primary Choke 50-60 Cycle	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	List Price
P-330-K	1175-880-0-880-1175	750-1000	425	300	117	7	8½	5¾	27	$47.50

FILAMENT TRANSFORMERS

Type Number*	Secondary Current, Amperes 2.5 V. C.T.	Secondary Current, Amperes 6.3 V. C.T.	Secondary Current, Amperes 10 V. C.T.	Test Volts R.M.C.	Primary Volts 50-60 Cycle	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	List Price
F-012-X		1.		2000	117	1⅝	2⅞	1⅝	½	$2.80
F-072-X		3.6		2000	117	2⅜	3¾	2¼	1½	4.60
F-096-X	10.			7500	117	2⅝	4¼	2½	2⅛	5.95
F-139-E		8.		2000	117	3½	3⅛	2⅞	3½	8.00
F-140-E			5.	2000	117	3½	3⅛	2⅞	3½	8.00

REPLACEMENT OUTPUT TRANSFORMERS

Type Number*	Application	Impedance, Ohms Primary	Impedance, Ohms Secondary	Max. Pri. M. DC	Audio Watts	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	List Price
X-412-X	1-6F6, 6V6, 41, 6K6, 6G6, 6A4, 25A6, etc.	10,000-7000 5000-3500	6 to .2	40	5	1 7/16	2½	1½	⅛	$3.40
X-424-X	1 or 2-41, 42, 6K6, 6V6, etc.	10, 000-7000 5000-3500 C.T.	6 to 1.04	40	7	1⅝	2⅞	1⅝	½	3.50
X-428-X	Universal 1or 2 tubes	14,000-10,000 7000-5000-4000C.T.	16 to .13	50	10	2	3½	2	1	4.25
X-432-X	2-6F6, 6V6, 6K6, 42, 2A5, 45, 71, 50, 6L6	10,000 8000 C.T.	10-6 4-2½	50	15	2⅜	3¾	2¼	1½	4.90

PEERLESS
ELECTRICAL PRODUCTS

DIVISION
ALTEC
LANSING CORPORATION

161 Sixth Avenue
New York 13, N.Y.

9356 Santa Monica Blvd.
Beverly Hills, Calif.

20-20 OUTPUT TRANSFORMERS

20-20 Type Number	Descriptive Data	Impedance, Ohms Primary	Impedance, Ohms Secondary	Max. Level ▲	Primary DC MA. Max.	Primary DC MA. Unbal.	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	List Price
S-220-Q	Primary may be used single ended or in Push-Pull — two secondaries with balanced capacitance to ground—parallel feed recommended. 60 db magnetic shield.	12,500 3125 or 15,000 3750	500, 250 125, 62½ or 600, 300 150, 75	+15 db 6 mw ref.	15 Per Winding Push-Pull Only	0	4⅛	3 3/16	3 1/16	2⅛	$45.00
S-230-Q ■	Secondary may be operated with one end grounded.	6600 C.T.	16, 8, 4, 2	20 watts +35 db	70	7	4⅝	3⅝	3½	6	26.00
S-240-Q ■	Same as S-230-Q.	5000 C.T.	16, 8, 4, 2	20 watts	90	9	4⅝	3⅝	3½	6	26.00
S-242-Q ★	Secondary should be operated balanced to ground.	5000 C.T.	500, 250 125, 62½	20 watts +35 db	90	9	4⅝	3⅝	3½	6	26.50
S-245-Q ■	Same as S-230-Q.	3000 C.T.	16, 8, 4, 2	20 watts	110	11	4⅝	3⅝	3½	6	26.00
S-265-Q ■	Two center-tapped primaries may be used in series or parallel. Secondary may be operated with one end grounded.	10,000 C.T. 2500 C.T.	16, 8, 4, 2	40 watts 38 db	110 220	11 22	5	4 5/16	4 1/16	10	45.00
S-270-Q ★	Same as S-265-Q except secondary should be operated balanced to ground.	10,000 C.T. 2500 C.T.	500, 250 125, 62½	40 watts +38 db	110 220	11 22	5	4 5/16	4 1/16	10	45.00
S-275-S ■	For operation from triodes. Load impedances may be varied over range of 3 to 1. May be operated at 100 watts in restricted freq. range 25-16,000 cps.	4000 C.T. to 12,000 C.T.	16, 8, 4, 2 to 48, 24, 12, 6	80 watts +41 db See Data	120	12	6	6	5⅜	24	80.00

20-20 INPUT TRANSFORMERS

20-20 Type Number	Descriptive Data	Impedance, Ohms Primary	Impedance, Ohms Secondary ●	Max. Level ▲	Primary DC MA. Max.	Primary DC MA. Unbal.	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	List Price
K-221-Q	Secondary used single ended or Push-Pull — has two winding with balanced capacitance to ground. Static shield between primary and secondary. 90 db magnetic shield.	500, 250 30 or 600, 300 36	70,000 or 84,000	—20 db	0	—	3½	2⅜	2½	1⅝	$36.50
K-221-D	Same data as K-221-Q except has only 30 db electro-magnetic shielding.	500, 250 30 or 600, 300 36	70,000 or 84,000	—20 db	0	—	2⅞	1¾	1¾	1⅛	30.00
K-251-Q	Same as K-221-Q except has 30 db electro-magnetic shielding.	500, 250 125, 62½ or 600, 300 150, 75	40,000 or 48,000	+15 db	0	—	4⅛	3 3/16	3 1/16	2⅜	45.00
K-281-Q	For Push-Pull only—two secondaries with balanced capacitance to ground.	500, 220 125, 56, 14 or 600, 265 150, 67, 17	30,000 or 36,000	+30 db	0	—	4⅝	3⅝	3½	5½	52.50

20-20 INTERSTAGE TRANSFORMERS

20-20 Type Number	Descriptive Data	Impedance, Ohms Primary	Impedance, Ohms Secondary	Max. Level ▲	Primary DC MA. Max.	Primary DC MA. Unbal.	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	List Price
G-212-Q	Both primary and secondary may be used single-ended or in Push-Pull—has two secondary windings with balanced capacitance to ground—static shield between primary and secondary—parallel feed recommended. 90 db magnetic shield.	10,000 2500	40,000 10,000	—20 db	5 Per Winding Push-Pull Only	0	3½	2⅛	2½	1⅝	$36.50
G-252-Q	Same as G-212-Q except has 30 db electro-magnetic shield.	10,000 2500	40,000 10,000	+15 db	10	1.0	4⅛	3 1/16	3 1/16	2⅜	45.00

20-20 MATCHING TRANSFORMERS

20-20 Type Number	Descriptive Data	Impedance, Ohms Primary	Impedance, Ohms Secondary ■	Max. Level ▲	Primary DC MA. Max.	Primary DC MA. Unbal.	Dimensions, Inches Height	Dimensions, Inches Depth	Dimensions, Inches Width	Weight Lbs.	List Price
E-243-Q ★	Line to speaker. Primary impedances designed to conform with RMA 70v line. Insertion loss less than ¾ db. Flanged mounting plate furnished.	1000 C.T. 750, 500 C.T. 250, 125	16, 12, 8, 4, 2	+35 db (20 watts)	5, 6⅔ 10, 20	—	6	4⅝	3⅝	3½	$27.00

20-20 TRIODE AMPLIFIER KIT

No. 10722

Kit to build Peerless A-100-A, 15 Watt, Triode Amplifier: Consists of one each; R-480-Q, S-240-Q, X-432-X, L-370-D, 10581 Terminal Board, 10723 Chassis, 10726 Chassis Bottom. (1) 10725 Wiring Diagram and two 10724 Part, schematic (1 cemented on 10726 plate). Condensers, resistors, sockets, etc., not included. Procure from your parts supplier.
Specifications of completed amplifier: **Power:** Rated, 15 watts —at 5% harmonics (100 and 5000 cps.), 18 watts—at 8% IM (40-2000 cps.), 17 watts. **Frequency Response:** Within 1 db, 20-20,000 cps. Note: Phono input equalized for variable reluctance pickup. **Gain,** 1000 cps.: Radio input 84 db—Phono input 107 db. **Impedances:** Input, 500,000 ohms each—Output, 16 ohms (can be connected for 8, 4, or 2 ohms). **Tubes:** 2-6J7, 1-6J5, 2-6SN7, 2-6A5G, 1-5V4G. **Controls:** 1-gain, 1-low frequency boost (continuously variable), 1-high frequency droop (4 step pi type), 1-channel selector, 1-A.C. switch. **Chassis:** 14″ x 10″ x 3″ high (8″ overall). **Shipping Weight:** 32 pounds.

List Price
$78.00

PEERLESS
ELECTRICAL PRODUCTS

DIVISION
ALTEC
LANSING CORPORATION

161 Sixth Avenue
New York 13, N.Y.

9356 Santa Monica Blvd.
Beverly Hills, Calif.

STANDARD OUTPUT TRANSFORMERS

Type Number*	Application	Freq. Range ±1 db	Impedance, Ohms		Pri.	DC MA.	Audio	Dimensions, Inches			Weight	List
			Primary	Secondary	Max.	Unbal.	Watts	Height	Depth	Width	Lbs.	Price
S-448-Q ▲	Single or push-pull plates to line. 30 db hum bucking.	20 20,000	20,000 C.T. 12,500 C.T. 5000 3125	500 C.T. 200 C.T. 333-250 125-50	15	2	+ 10 db	3½	2⅜	2½	1½	$24.75
S-464-X	Single or push-pull plates to line.	100 5000	18,000 C.T.	500-200 50	10	2	5	1⅝	2⅞	1⅝	½	4.15
S-508-A	P.-P. plates to VC.	30-15,000	8000 C.T.	16-12-8-4	45	5	10	2 13/16	2 13/16	2¼	1¾	9.25
S-516-A	P.-P. plates to VC.	30-15,000	6600 C.T.	16-12-8-4	70	7	20	3⅛	3	2 9/16	2½	11.75
S-524-A	P.-P. plates to VC or line.	30-15,000	6600 C.T. 5000 C.T.	500 C.T. 125 16-12-8-4	70	7	20	3½	3¼	2⅞	3	13.75
S-530-A	P.-P. plates to speaker or line.	30-15,000	5000 C.T. 3000 C.T.	500 C.T. 125 16-12-8-4	90	9	20	3½	3¼	2⅞	3	13.75
S-532-A	P.-P. plates to VC.	30-15,000	5000 C.T. 3000 C.T.	16-12-8-4	90	9	20	3⅛	3	2 9/16	2½	13.00
S-552-A ★	P.-P. plates to speaker or line.	30-15,000	3800 C.T. 3200 C.T.	330, 82½ 16-12-8-4-2	250	25	60	4¾	4⅝	3⅞	9	29.00

STANDARD IMPEDANCE MATCHING TRANSFORMERS

Type Number*	Application	Impedance, Ohms		Radio	Freq.	Dimensions, Inches			Weight	List
		Primary	Secondary	Watts	Range	Height	Depth	Width	Lbs.	Price
E-372-Q ▲	Mic. or Line to Line—Static Shield Btwn. Pri. & Sec. 60 db. Mag. Shield.	500 C.T. 333-250 200 C.T. 125-50	500 C.T. 333-250 200 C.T. 125-50	+10 db	20-20,000	3½	2⅜	2½	1½	$27.00
E-374-X ★	Line to Speaker—RMA Standardized line for Sound Distribution. Insertion Loss 0.6 db—¼ watt tap for lines of 500 or less ohms.	10,000 C.T. 7,500 5000 C.T. 2500-1250	16-12-8-4-2	4	30-15,000	2⅜	3¾	2¼	1¾	10.50
E-377-X	Line to Speaker.	500	16-8	5	40-10,000	2	3½	2	1	4.75
E-386-E ★	Line to Speaker—RMA Standardized line for Sound Distribution. Insertion Loss 0.6 db Max.	1600 C.T. 1200 800 C.T. 400-200	16-12-8-4-2	24	30-15,000	3⅞	3	3¼	4¼	18.50
E-392-E ★	Same Data as E-386-E.	625 C.8.-470 312 C.T. 156-78	16-12-8-4-2	64	30-15,000	4¾	4⅞	3⅞	9	28.00

STANDARD INPUT TRANSFORMERS

Type Number*	Application	Impedance, Ohms		Freq. Range ±1 db	Dimensions, Inches			Weight	List
		Primary	Secondary		Height	Depth	Width	Lbs.	Price
K-049-D ▲	Line, Mixer or Microphone to Singl Grid. Maximum Level = Odb. 30 db Magnetic Shielding.	500 C.T.-330-250 200 C.T.-125-50	60,000	20-20,000	2⅞	1¾	1¾	1	$17.50
K-049-Q	Same as K-049-D except has 90 db Magnetic Shielding.	500 C.T.-333-250 200 C.T.-125-50	60,000	20-20,000	3½	2⅜	2½	1½	25.50
K-054-Q ▲	Line, Mixer, or Microphone to 2 Grids Max. Level = +10 db Hum-bucking.	500 C.T.-333-250 200 C.T.-125-50	70,000	20-20,000	3½	2⅜	2½	1½	25.50
K-063-A-▲	Line to Push-Pull Grids Max. Level = 34 db.	500 C.T.-125	12,500	30-15,000	3⅛	3	2 9/16	2½	12.00

STANDARD INTERSTAGE TRANSFORMERS

Type Number*	Application	Freq. Range ±1 db	Impedance, Ohms		Turns Ratio	Dimensions, Inches			Weight	List
			Primary	Secondary		Height	Depth	Width	Lbs.	Price
G-306-X	Single Plate to 1 or 2 Grids.	100 5000	10,000	96,000 C.T.	1:3.1	1⅝	2⅞	1⅝	½	$ 4.00
G-318-D ▲	Single Plate to Single Grid. Maximum Level = 0 db, 30 db. Magnetic Shielding.	20-20,000	10,000	60,000		2⅞	1¾	1¾	1	16.00

STANDARD EQUALIZING REACTORS

Type Number*	Application	Res. Ohms	Ind. Henrys	DC MA.		Dimensions, Inches			Weight	List
				Normal	Max.	Height	Depth	Width	Lbs.	Price
L-360-D	Tone Control (Cathode Circuit).	220	23	0	0	2⅞	1⅝	Round	½	$ 4.80
L-370-D	Low Pass Filter	725	4	0	10	1¾	1⅝	Round	⅜	10.00

Staco
STANDARD ELECTRICAL PRODUCTS CO.
A QUALITY PRODUCT
DAYTON, O.
U.S.A.

TRANSFORMERS

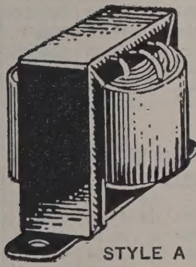
SPECIAL PURPOSE AND OPERATION OF WAR SURPLUS EQUIPMENTS

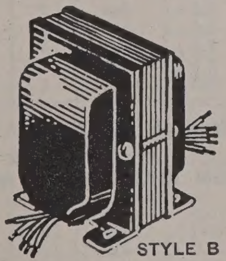
MULTI-USE FILAMENT TRANSFORMERS

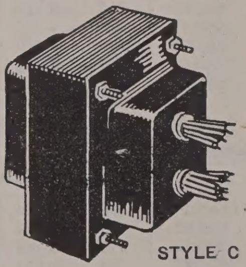
For Amplifier, Amateur, Industrial Use. Pri.: 115 Volts, 60 Cycles.
All windings center tapped except those marked*

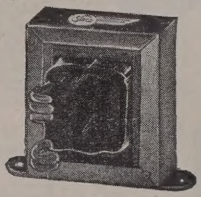
Type No.	Use #1	Use #2	Use #3	Volt Insul.	Style Mtg.	Mtg. Dimensions H.	W.	D.	Ship. Wt.	Net Price
F5049	Two Sec. of 2.5 V. @ 2.5 A	5 V. @ 2.5 A	2.5 V. @ 5 A	2000	D	2 5/16"	2"	1 7/8"	3	$3.00
F5050	Two Sec. of 2.5 V. @ 5 A	5 V. @ 2.5 A	2.5 V. @ 10 A	10000	E	3 1/8"	2 1/2"	3 1/4"	3	5.16
F5051	Two Sec. of 2.5 V. @ 5 A	5 V. @ 5 A	2.5 V. @ 10 A	2000	E	3 1/8"	2 1/2"	2 3/8"	3	3.90
F5052	Two Sec. of 2.5 V. @ 7.5 A	5 V. @ 7.5 A	2.5 V. @ 15 A	2000	D	3 1/16"	2 17/32"	2 1/2"	5	4.20
F5053	Two Sec. of 5 V. @ 3.25 A	10 V. @ 3.25 A	5 V. @ 6.5 A	2000	D	3 1/16"	2 17/32"	2 1/2"	5	4.05
F5054	Two Sec. of 5 V. @ 10 A	10 V. @ 10 A	5 V. @ 20 A	10000	E	4 3/16"	3 7/16"	3 7/16"	7	6.45
F5055	Two Sec. of 5 V. @ 10 A	10 V. @ 10 A	5 V. @ 20 A	2000	E	4 13/16"	3 1/8"	3 3/8"	7	6.00
F5056			6.3 V. @ .6 A	2000	D	1 5/8"	1 3/8"	1 1/2"	2	3.00
F5057			6.3 V. @ 1.2 A	2000	D	1 7/8"	1 5/8"	1 11/16"	2	3.30
F5007			6.3 V. @ 3 A	2000	D	2 5/16"	2"	1 7/8"	3	3.90
F5058	Two Sec. of 6.3 V. @ 1 A	12.6 V. @ 1 A	6.3 V. @ 2 A	2000	D	2 5/16"	2"	1 7/8"	3	3.60
**F5006	Two Sec. of 6.3 V. @ 3 A	12.6 V. @ 3 A	6.3 V. @ 6 A	2000	D	3 1/16"	2 17/32"	2 1/2"	5	4.50
**F5004	Two Sec. of 6.3 V. @ 6.5 A	12.6 V. @ 6.5 A	6.3 V. @ 13 A	2000	E	3 13/16"	3 1/8"	2 1/2"	6	5.82
F5059	Two Sec. of 7.5 V. @ 1.5 A	15 V. @ 1.5 A	7.5 V. @ 3 A	2000	D	2 3/4"	2 5/16"	2 3/16"	3	4.05
F5060	Two Sec. of 7.5 V. @ 2.3 A	15 V. @ 2.3 A	7.5 V. @ 4.6 A	2000	D	3 1/16"	2 17/32"	2 1/2"	5	4.65
F5061	Two Sec. of 11 V. @ 5 A	22 V. @ 5 A	11 V. @ 10 A	2000	E	3 13/16"	3 1/8"	3 1/4"	7	6.00
**F5005*	Two Sec. of 12 V. @ 4 A	24 V. @ 4 A	12 V. @ 8 A	2000	E	3 13/16"	3 1/8"	2 1/2"	6	5.67
**F5069*	One Sec. of 24 V. @ 3 A	War Surplus Equipment		2000	E	3 1/8"	3 3/4"	2 5/8"	2 1/2	4.80
**F5075*	One Sec. of 24 V. @ 1 A	War Surplus Equipment		2000	D	2 3/4"	3 1/4"	2"	1 1/4	3.90

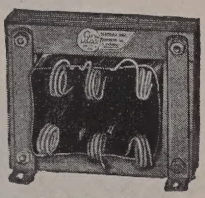
** Types F5004, F5005, F5006, F5069, and F5075 designed for operation of 12 and 24 volt War Surplus Equipment.


STYLE A


STYLE B


STYLE C


STYLE D


STYLE E

SPECIALS TO YOUR ORDER

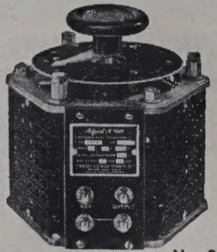
- **Special transformers can be manufactured to your order in the styles illustrated above on a job-lot basis. Small industrial users need not purchase so-called "stock" transformers and compromise their designs. Our prices are reasonable and delivery is good. Your inquiries on "specials" are solicited—give us complete information and we will quote on your requirements.**

AUTO-TRANSFORMERS • ISOLATED PRIMARY TRANSFORMERS • METERED TRANSFORMERS

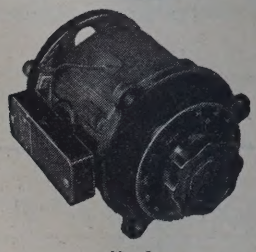
Staco
STANDARD ELECTRICAL PRODUCTS CO.
DAYTON, O. U.S.A.
A QUALITY PRODUCT

Adjust-A-Volt
VARIABLE TRANSFORMER

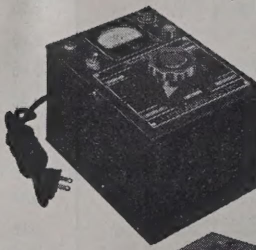
No. 4

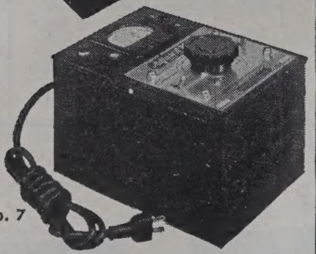

No. 3

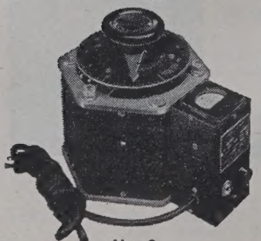
No. 2


No. 1

No. 5


No. 6


No. 7


No. 8

AUTO-TRANSFORMER MODELS

Type	Code Word	Input Voltage	Output Voltage	Amperes Max.	Maximum Rating (V.A.)	Figure	Shipping Weight (one Unit)	Net Prices	Type
300BU	TREED	115	0-135	3.0	400	1	6 lbs.	$ 12.50	300BU
500BU	FIVED	115	0-135	7.5	1000	1	11 lbs.	19.00	500BU
500B	FEDEN	115	0-135	7.5	1000	2	12 lbs.	23.00	500B
1500B	TOODE	115	0-135	15.0	2000	3	23 lbs.	46.00	1500B
3000B	THIRT	115	0-135	30.0	4000	2	27 lbs.	55.00	3000B
5000B	SIXEN	115	0-135	50.0	6100	3	80 lbs.	118.00	5000B
CA-5	CADDY	115	0-280	3.5	430	4	30 lbs.	27.50	CA-5
CA-10	CAMMY	115	0-280	7.5	860	4	40 lbs.	52.50	CA-10
520BU	BRANY	230	0-270	3.0	810	1	11 lbs.	20.00	520BU
520B	CRANY	230	0-270	3.0	810	2	12 lbs.	26.00	520B
1520B	DANNY	230	0-270	9.0	2400	3	27 lbs.	46.00	1520B
3020B	RANNY	230	0-270	18.0	4850	2	27 lbs.	55.00	3020B
5020B	TANNY	230	0-270	28.0	7500	3	80 lbs.	126.00	5020B
NA-5	NADDY	230	0-140	7.5	860	4	27 lbs.	28.50	NA-5
NA-10	NAMMY	230	0-140	15.0	1500	4	40 lbs.	55.50	NA-10

Electro-Statically Shielded
Television-Servicing Servicing—Radio & Laboratory

ISOLATION TRANSFORMER MODELS

Type	Code Word	Input Voltage	Output Voltage	Amperes Max.	Maximum Rating (V.A.)	Figure	Shipping Weight (one Unit)	Net Prices	Type
LR-5	LARKE	115	70-140	5.0	500	5	27 lbs.	$ 29.50	LR-5
LR-10	LAMBE	115	70-140	10.0	1000	5	40 lbs.	57.50	LR-10
LR-22	LOOSE	230	70-140	5.0	500	5	27 lbs.	31.50	LR-22
LR-24	LOOKE	230	70-140	10.0	1000	5	40 lbs.	61.50	LR-24

METERED AUTO-TRANSFORMER MODELS

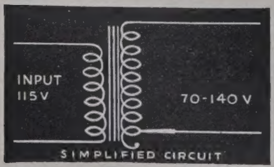
Type	Code Word	Input Voltage	Output Voltage	Amperes Max.	Maximum Rating (V.A.)	Figure	Shipping Weight (one Unit)	Net Prices	Type
PAL-7	PADDE	115	0-135	7.5	1000	6	15 lbs.	$ 40.50	PAL-7
1500-BD	LATTE	115	0-135	15.0	2000	8	35 lbs.	64.00	1500-BD
CAL-5	MALLE	115	0-280	3.5	430	7	32 lbs.	38.50	CAL-5
CAL-10	NALLE	115	0-280	7.5	860	7	42 lbs.	64.50	CAL-10
MAL-7	QUALM	230	0-270	3.0	810	6	15 lbs.	49.50	MAL-7
1520-BD	RALEN	230	0-270	9.0	2400	8	35 lbs.	64.00	1520-BD
NAL-5	TALLE	230	0-140	7.5	860	7	27 lbs.	40.50	NAL-5
NAL-10	SALLE	230	0-140	15.0	1500	7	40 lbs.	67.50	NAL-10

Electro-Statically Shielded
Television-Servicing Servicing—Radios & Laboratory

METERED ISOLATION TRANSFORMER MODELS

Type	Code Word	Input Voltage	Output Voltage	Amperes Max.	Maximum Rating (V.A.)	Figure	Shipping Weight (one Unit)	Net Prices	Type
LRL-5	BARKE	115	0-140	5.0	500	7	29 lbs.	$ 41.50	LRL-5
LRL-10	BAMBE	115	0-140	10.0	1000	7	42 lbs.	69.50	LRL-10
LRL-22	BOOSE	230	0-140	5.0	500	7	29 lbs.	43.50	LRL-22
LRL-24	BOOKE	230	0-140	10.0	1000	7	42 lbs.	73.50	LRL-24

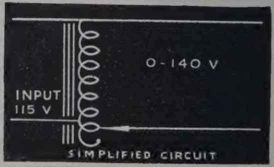
ISOLATION TRANSFORMER



ADJUST-A-VOLT FEATURES:

- Smooth Continuous Control
- No Waveform Distortion
- High Efficiency
- Rugged Construction
- Excellent Regulation
- Conservatively Rated
- 50/60 Cycle Operation
- Standard Mountings

AUTO-TRANSFORMER



The Adjust-A-Volt combines the ease of control of the Rheostat with the high efficiency of the transformer and provides smooth, continuous control of voltage for the control of AC lines, Power, Heat, Light and Speed.

Other models available. Ask for complete catalog.

MANUFACTURED UNDER U. S. PATENT 2,009,013 AND OTHER PATENTS PENDING

Staco
STANDARD ELECTRICAL PRODUCTS CO.
DAYTON, O. U.S.A.
A QUALITY PRODUCT

TRANSFORMERS

STEP DOWN

STEP UP

ISOLATION AND LINE CORRECTION

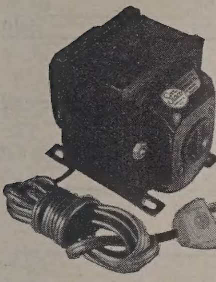


FIG. 1

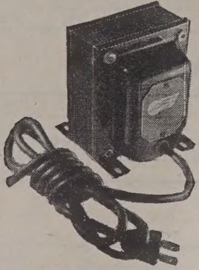


FIG. 2

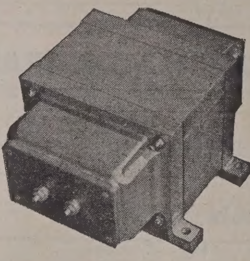


FIG. 3

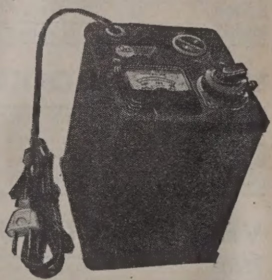


FIG. 4

STEP-DOWN AUTOTRANSFORMERS

Input 220-240 V. 60 cy. Output 115 V. Pri. Cord and Plug Sec. Receptacle

Cat. No.	Code	Mount Fig. No.	Cap. in Watts	Input, Volts	Output, Volts	Cycles	Dimensions in Inches H.	Dimensions in Inches W.	Dimensions in Inches D.	Net Wt. in Lbs.	Net Price	Cat. No.
SB-0075	STEBA	1	75	200/240	115	50/60	3⅛″	2⅝″	3¾″	3½	$ 5.40	SB-0075
SB-0150	STECA	1	150	200/240	115	50/60	3⅞″	3¼″	3⅝″	4½	7.35	SB-0150
SB-0250	STEDA	1	250	200/240*	115	50/60	4¾″	3⅞″	4⅜″	8½	9.60	SB-0250
SB-0500	STEFA	1	500	200/240*	115	50/60	4¾″	3⅞″	6⅛″	12½	15.60	SB-0500
SB-1000	STEGA	3	1000	200/240*	115	50/60	4⅞″	7¼″	9″	22½	28.50	SB-1000
SB-2000	STELA	3	2000	200/240*	115	50/60	5¼″	8⅝″	11¼″	40¼	47.40	SB-2000

* These models have primary taps of 200–220–240 Volts. Simply remove cover plate (see Figure 2) and connect to required taps.

TELEVISION LINE CORRECTION STEP-UP AUTOTRANSFORMERS

Models SU 100/105Volt. Input. Models RU 200/210 Volt Input
All SU Models Boost Input 10 Volts. All RU Models Boost Input 20 Volts

SU-0100	SUBAT	1	100	100/110	110/120	50/60	3⅛″	2⅝″	2⅞″	2¾	$ 5.15	SU-0100
SU-0250	SUCAT	1	250	100/110	110/120	50/60	3⅛″	2⅝″	3¾″	3½	7.35	SU-0250
SU-0500	SUDAT	1	500	100/110	110/120	50/60	3⅞″	3¼″	3¼″	4½	8.85	SU-0500
SU-1000	SUFAT	1	1000	100/110	110/120	50/60	4⅝″	3⅞″	4⅛″	8½	17.65	SU-1000
SU-2000	SUGAT	1	2000	100/110	110/120	50/60	4⅝″	3⅞″	5⅝″	14½	35.40	SU-2000
RU-0100	SREBA	1	100	200/210	220/230	50/60	3⅛″	2⅝″	2⅞″	2¾	5.15	RU-0100
RU-0250	SRECA	1	250	200/210	220/230	50/60	3⅛″	2⅝″	3¾″	3½	7.35	RU-0250
RU-0500	SREDA	1	500	200/210	220/230	50/60	3⅞″	3¼″	3¼″	4½	8.85	RU-0500
RU-1000	SREFA	1	1000	200/210	220/230	50/60	4⅝″	3⅞″	4⅛″	8½	17.65	RU-1000
RU-2000	SREGA	1	2000	200/210	220/230	50/60	4⅝″	3⅞″	5⅝″	14½	35.40	RU-2000

RADIO — ISOLATION TRANSFORMERS — TELEVISION

All Models 115 V. Input. 115 V. Output. Electrostatically Shielded.

SI-050	SICAR	1	50	115	115	50/60	3 17/32″	2⅞″	3″	4½	$ 6.00	SI-050
SI-100	SICER	1	100	115	115	50/60	3 29/32″	3 5/32″	3⅝″	7¼	11.70	SI-100
SI-250	SICOR	1	250	115	115	50/60	4¾″	3⅞″	5⅛″	14½	21.00	SI-250

TELEVISION LINE VOLTAGE ADJUSTORS, METERED

8 Position Rotary Switch Corrects Low or High Line to 115 V. from 85-95-105-115-125-135 V-AUTOTRANSFORMER

LC-150	LABAD	4	150	85–135	115	50/60	6½″	4⅜″	5″	7¾	$17.40	LC-150
LC-350	LAFAD	4	350	85–135	115	50/60	6½″	4⅜″	5″	10¾	21.00	LC-350
LC-500	LAJAD	4	500	85_135	115	50/60	6½″	4⅜″	5″	11½	25.50	LC-500

STACO Transformers are compact and modern in design. Only the highest quality silicon lamination steel is used which assures cool operating transformers. Each coil is layer wound with the best quality enameled wires, each layer is insulated with heavy insulating material, each coil is varnished impregnated and high temperature baked. High Voltage Breakdown Test is performed on each coil and transformer in accordance with existing RMA Specs. This combination of high quality materials plus the finest workmanship is assurance of better and lasting performance at highest operating efficiency, yet costs no more than average.

Finishes: Mount type #1, Black baked enamel, Mount type #2, Black baked enamel, Mount type #3, Natural Buffed Aluminum, Mount type #4, Black Wrinkle baked enamel.

Halldorson TELEVISION COMPONENTS

HORIZONTAL BLOCKING-OSCILLATOR TRANSFORMERS

Item Number	Application	Dimensions H	W	D	Mtg. Type	Weight Lbs.	List Price
B6600	Equivalent to R.C.A. 208T3	1½	2½	1½	D4	½	$2.75
B6601	Equivalent to R.C.A. 208T1	1¾	2 5/16	1½	N4	½	3.40

VERTICAL BLOCKING-OSCILLATOR TRANSFORMERS

B6700	Turns Ratio 1:4.2	1⅜	2⅜	1¼	D4	½	$2.50
B6701	Equivalent to R.C.A. 208T9—Turns Ratio 1:4.2	1¼	1⅛	1⅛	N5	½	3.25
B6702	Similar to B6701 except Mtg. Type—Turns Ratio 1:4.2	1⅛	2⅛	⅞	K4	½	2.50
B6703	Equivalent to R.C.A. 208T2—Turns Ratio 1:4.2	1¾	2 5/16	1½	N4	½	3.20

VERTICAL OUTPUT TRANSFORMERS

Z1800	Equivalent to R.C.A. 204T2—T/R 10:1	3	2½	2 9/16	J	2¾	$6.00
Z1801	Equivalent to R.C.A. 204T9—T/R 10:1	3	2½	2¼	J	2½	5.35
Z1802	Equivalent to Motorola 25C790151—T/R 10:1	2¼	3 9/16	1 3/16	C4	2	4.00
Z1803	General Application—T/R 10:1	2	3¼	1¾	B4	1	4.00
Z1804	Equivalent to R.C.A. 222T1—T/R 11.4:1 Autoformer	2	3¼	1¾	B4	2	4.00
Z1805	Equivalent to R.C.A. 74950—T/R 44:1	3	2½	2½	J	2½	6.20

DEFLECTION YOKES

Item Number	Application	Horizontal MH.	Vertical MH.	Mtg. Type	Weight Lbs.	List Price
DF600	For 50° Deflection Kinescopes	8.3	50	Q	1¼	$7.50
DF601	70° Cosine Deflection, Ferrite Core	8.5	50	Q1	1	10.75
DF602	70° Cosine Deflection, Ferrite Core	13.5	50	Q1	1	10.75
DF603	70° Cosine Deflection, Ferrite Core	30.0	3.5	Q1	1	10.75

FOCUS COILS

Item Number	Application	Resistance	Mtg. Type	Weight Lbs.	List Price
EM700	Equivalent to R.C.A. 202D1	247 Ohms	T	2	$7.50
EM701	Equivalent to R.C.A. 202D2	470 Ohms	T1	3¼	10.75

AUDIO OUTPUT TRANSFORMERS

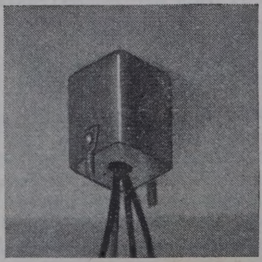
Item Number	Primary	Secondary	Primary Ma.	Audio Watts	Dimensions H	W	D	Mtg. Type	Weight Lbs.	List Price
Z1100	1500	2-4-6	55	5	1⅜	2⅜	1¼	D4	½	$2.65
Z1102	2000	3 to 6	50	5	1⅜	2⅜	1¼	D4	½	1.75
Z1103	2000 with 10 Ohm Tap	3 to 6	50	5	1⅜	2⅜	1¼	D4	½	2.20
Z1107	4500	3 to 6	35	5	1⅜	2⅜	1⅜	D4	½	1.80
Z1113	7000	4	30	5	1⅜	2⅜	1¼	D4	½	1.80
Z1112	7000	4-8-15	40	10	1⅞	3¼	1¾	B4	1	3.30
Z1115	7600	3.2	35	5	1⅜	2⅜	1⅜	D4	½	2.00
Z1406	14,000 P.P.	4-8-15	30	15	2⅜	2⅞	1¾	B5	1	3.50
Z1000	S. or P.P.-4000-14000	1 to 30	35	4	1⅜	2⅜	1⅜	D2	½	2.50
S3501	500-1000-1500-2000	3.2, 6-8	60	8	1⅝	2¾	1⅝	A2	¾	2.80

FILAMENT TRANSFORMERS

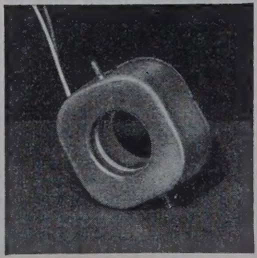
F5511	Primary 117 Volts—Sec. 6.3 Volts C.T. @ 1.2 A.	1⅝	2⅞	1⅝	A4	¾	$2.80
F5512	Primary 117 Volts—Sec. 6.3 Volts C.T. @ 3.0 A.	2⅜	3¼	1¾	B5	1	4.10
F5516	Primary 117 Volts—Sec. 6.3 Volts C.T. @ 10.0 Amps.	3½	2¾	2⅞	U5	3½	7.00

Q1

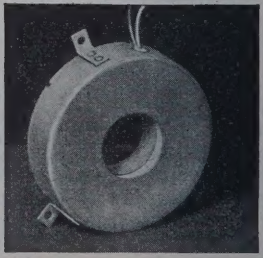
N5



T



T1



TELEVISION COMPONENTS Halldorson

HORIZONTAL DEFLECTION AND H. V. FLYBACK TRANSFORMERS

Item Number	Application	Dimensions H	Dimensions W	Dimensions D	Mtg. Type	Weight Lbs.	List Price
FB400	9 to 10 K.V. for R.C.A. 211T1 and 211T3	4⅜	3¾	2¼	F	1¾	$8.90
FB401	10-14 K.V. for G.E. 77J1 Type Units	4⅛	2⅞	2¼	F2	1	11.00
FB402	13 to 14 K.V. for R.C.A. 211T5 in doubler circuits	4⅜	3¾	2¼	F	1¾	10.50
FB403	12 to 13 K.V.—65° to 70° Picture Tubes	4⅜	3¾	2¼	F	1¾	11.00
FB404	11-13 K.V. for R.C.A. 74951 in direct-drive circuits	2⅝	3½	3	F1	½	7.00

TV POWER TRANSFORMERS—All Primaries 117 Volts, 60 Cycles

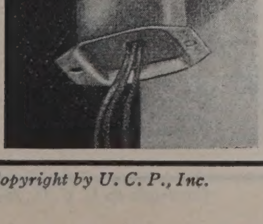
Item Number	Plate A.C. Load Volts	D.C. Ma.	Fil. No. 1		Fil. No. 2		Fil. No. 3		Dimensions			Mtg. Type	Weight Lbs.	List Price
			Volt	Amp.	Volt	Amp.	Volt	Amp.	H	W	D			
P9701	225-0-225	90	5	2	6.3	5.15			3¾	2¾	3⅜	L	4½	$9.80
P9702	335-0-335	175	5	2	6.3	7	6.3	1.2	4⅝	3⅞	3¾	S	8	16.50
P9703	380-0-380	180	5 C.T.	3	6.3	9	Rect. Tube Socket		5½	4⅛	3½	L2	9	18.00
P9705	360-0-360	200	5	3	6.3	7.75	6.3	1.2	5½	3¾	4¾	L	11	21.90
P9707	375-0-375	205	5	3	5	2	6.3	5.6	4¼	3¾	4½	L	9¼	18.15
P9708	378-0-378	205	5	3	6.3	9.5	6.3	1.2	4⅝	3⅞	4½	S	10	17.50
P9709	390-0-390	230	5	3	5	2	6.3	9	5¼	3¾	4¾	L	12	24.00
P9711	360-0-360	250	5	3	5	2	6.3 6.3	9 2.7	5⅛	3¾	4½	L	14	25.00
P9713	360-0-360	250	5	3	5	2	6.3 6.3	8 .6	5¼	3⅞	4¾	L	10	21.95
P9715	332-0-332 207-0-207	180 70	5	3	6.3	1.2	6.3 Rect. Tube Socket	9	5½	3¾	4½	L2	12	27.00
P9717	360-0-360 167-0-167	185 65	5	3	6.45	12			4¼	3¾	4½	L	9⅝	18.40
P9719	350-0-350	270	5	2	5	6	6.6 6.3	7.8 1.6	4¼	3¾	4½	L	13	23.00
P9721	365-0-365	295	5	6	5	2	12.6 C.T.	5	6½	3¾	4¾	L	16½	27.00
P9723	375-0-375 325-0-325	170 130	5 5	3 3	6.3 5	2.6 2	12.6 C.T.	5	5⅜	3¾	4½	L	11	25.00
P9725	385-0-385 235-0-235	195 105	5 5	3 2	5	2	6.3 6.3	7.65 .6	4¾	3¾	4½	L	11¼	23.00
P9727	400-0-400 212-0-212	220 90	5 5	3 3	5	2	6.3 6.3	10 2.6	5⅜	3¾	4½	L	10	25.00
P9728	405-0-405 325-0-325	240 200	5 5	3 3	5 6.3	3 2.6	6.3 6.3	6 6	5 15/16	4 7/16	5⅝	S	18	40.00
P9918	1500	10	2.5	1.75	2.5	2.1			4	3¼	3¼	S	4½	11.90
P9916	2400	5	2.5	2	2.5	2			4¼	3¼	3¾	S	6	14.00

ADDITIONAL POWER TRANSFORMERS ARE LISTED ON PAGES N-106 and N-107

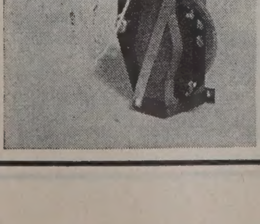
TELEVISION FILTER CHOKES

Item Number	Inductance Hys.	Ma. D.C.	D.C. Res.	Insulation	Dimensions H	Dimensions W	Dimensions D	Mtg. Type	Weight Lbs.	List Price
C5019	8	85	250	2000	2¼	3¾	2¼	C4	1½	$3.10
C5024	2.5	130	100	2000	2	3¼	1¾	B4	1	2.90
C5026	2.3	150	60	1500	2	3¼	1¾	B4	1	2.90
C5029	4	175	100	3000	3¼	2⅝	3	S	2½	6.00
C5030	2	200	60	1500	2¼	3¾	2¼	C4	1¾	3.50
C5036	4	250	60	3000	3⅝	3	3½	S	4½	9.10
C5037	1	300	45	1500	2¼	3¾	2¼	C4	1¾	3.40

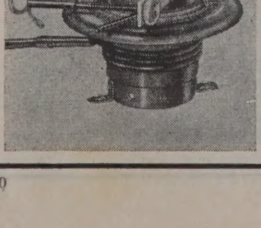
N4



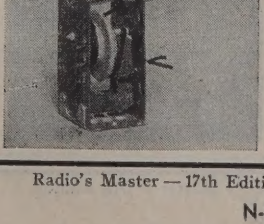
F



F1



F2



Halldorson QUALITY *Transformers* SINCE 1913

AUDIO INTERSTAGE—SINGLE PLATE TO SINGLE GRID

Item Number	Application	Impedance Primary	Impedance Secondary	Turns Ratio	Primary D.C. Ma.	Dimensions H	Dimensions W	Dimensions D	Mtg. Type	Weight Lbs.	List Price
A2500	Single Plate to Single Grid	10,000	90,000	1:3	10	2⅛	2¾	2⅜	B4	1½	$3.40
A2501	Single Plate to Single Grid	10,000	90,000	1:3	10	1⅝	2⅜	1½	D4	½	2.50
A2502	Single Plate to Single Grid	10,000	90,000	1:3	10	1⅝	2⅞	1½	A4	¾	3.15
A2503	Single Plate to Single Grid	10,000	90,000	1:3	10	1⅝	2⅞	1½	A4	¾	3.00
A2504	Single Plate to Single Grid	10,000	40,000	1:2	10	1⅝	2⅞	1½	A4	¾	3.00

SINGLE PLATE TO PUSH-PULL GRIDS

Item Number	Application	Impedance Primary	Impedance Secondary	Turns Ratio	Primary D.C. Ma.	Dimensions H	Dimensions W	Dimensions D	Mtg. Type	Weight Lbs.	List Price
A2600	Single Plate to P.P. Grids	10,000 to	160,000	1:4	10	3	2⅝	2⅜	S	2½	$7.70
A2601	Single Plate to P.P. Grids	10,000 to	160,000	1:4	10	2	3¼	1¾	B4	1	3.65
A2602	Single Plate to P.P. Grids	10,000 to	122,500	1:3.5	10	1⅝	2⅞	1½	A4	¾	3.00
A2603	Single Plate to P.P. Grids	10,000 to	90,000	1:3	10	1⅝	2⅞	1½	A4	¾	2.70
A2604	Single Plate to P.P. Grids	10,000 to	90,000	1:3	10	2	3¼	2	B4	1	3.45

PUSH-PULL PLATES TO PUSH-PULL GRIDS

Item Number	Application	Impedance Primary	Impedance Secondary	Turns Ratio	Primary D.C. Ma.	Dimensions H	Dimensions W	Dimensions D	Mtg. Type	Weight Lbs.	List Price
A2700	Single or P.P. to Single or P.P.			1:1, 1:3, 1:6	10	2	3¼	2	B4	1½	$4.75
A2701	P.P. Plate to P.P. Grids	20,000	45,000	1:1.5	10	2	3¼	2⅜	B4	1	4.55

UNIVERSAL P.P. INPUT—C.T. PRI.—SPLIT SEC.

Item Number	Application	Impedance Primary	Impedance Secondary	Turns Ratio	Primary D.C. Ma.	Dimensions H	Dimensions W	Dimensions D	Mtg. Type	Weight Lbs.	List Price
A2710	P.P. Plates to P.P. Grids	10,000	90,000	1:3	10	2⅜	2⅞	1¾	B4	1	$4.75
A2711	P.P. Plates to P.P. Grids	10,000	90,000	1:3	10	2¼	3¾	2⅝	C4	2	5.55

DRIVER

Item Number	From	To	Class	Ratio Primary ½ Sec.	Primary D.C. MA.	Dimensions H	Dimensions W	Dimensions D	Mtg. Type	Weight Lbs.	List Price
D6000	30	19 or 2-30	B	2.5:1	15	1⅝	2⅞	1½	A4	¾	$2.80
D6001	6C5	P.P. 6F6	AB	2:1	15	1⅝	2⅞	1½	A4	¾	3.15
D6002	6C5, 6R7, TRI-6F6	P.P. 6L6	AB	2.5:1	40	3¼	2⅝	2¾	S	2½	6.65
D6003	41	P.P. 6A6	B	4:1	15	1⅝	2⅞	1½	A4	⅝	3.60
D6004	6C5, 6R7, or 6F6Tri.	P.P. 6L6	AB	5:1	30	2	3¼	1⅞	B8	1	4.85
D6005	6A6 or 53 Par.	P.P. 6N7	B	3:1	30	2½	2⅞	1⅞	B7	1	4.55
D6006	Tri. 89, 46 or 59	1-79, 2-46 or 2-59	B	2.2:1	30	2½	2⅞	1⅞	B7	1	4.35
D6100	20,000 P.P.	P.P. Grids	B	3:1	10	1⅝	2⅞	1½	A4	⅝	3.20
D6101	20,000 P.P.	30,000 P.P.	B	2.8:1	15	3⅛	2⅝	2⅝	E4	2½	6.95
D6102	P.P. 2A3, 45, 6L6 P.P. Par. 2A3, 6L6	P.P. 849, T240 P.P. B12, 211	A B	2:1	90	3½	2⅞	3¼	S	3¾	8.50
D6103	2A3-45-46 42	PP-6L6-6V6-6F6 P.P. Par. 6L6	AB2 AB1	5:1	80	3⅛	2⅝	2⅝	S	2¾	7.15

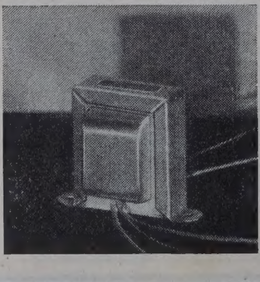
DRIVER—Universal Type

D6200	1:.75-1:.85-1:1-1:1.25-1:1.45-1:1.175 1:2-1:2.25-1:2.5-1:2.75-1:3.15	Pri.-150 MA. Sec.-100 MA.	3⅛	2⅝	3⅝	G	3¼	$15.25
D6201	1:1-1.5:1-2:1	35	2	3⅜	1¾	B4	1	4.65

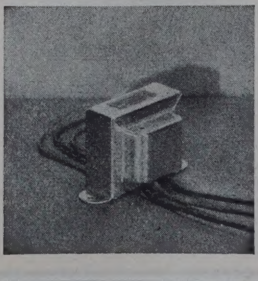
A4, B4, C4, D4, or K4

HALLDORSON
Vacuum Sealed
TRANSFORMER
B4-816

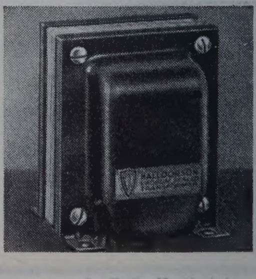
A7, B7, C7, or D7



A8, B8, C8, or D8



S



QUALITY *Transformers* SINCE 1913 **Halldorson**

AUDIO OUTPUT—Single Plate to Voice Coil and Line

Item Number	Typical Output Tubes	Primary Impedance	Secondary Impedance	Primary Ma.	Watts	Dimensions H	Dimensions W	Dimensions D	Mtg. Type	Weight Lbs.	List Price
Z1100	50L6, 25L6, 25B6, 48	1500	2-4-6	55	5	1⅜	2⅜	1⅜	D4	½	$2.65
Z1101	50L6, 35A5, 25B6	2000	3.2 ..	50	3	$1\tfrac{3}{16}$	2⅛	1	K4	½	1.45
Z1102	50L6, 35A6, 25L6, 2A3	2000	3 to 6	50	5	1⅜	2⅜	1¼	D4	½	1.75
Z1103	25L6, 10 Ohm Tap	2000	3 to 6	50	5	1⅜	2⅜	1¼	D4	½	2.20
Z1104	35L6, 2A3	2500	4-8-15	60	10	1⅞	3¼	1¾	B4	1	3.35
Z1105	50L6, 35B5, 7A5 (3% Tap)	3000	3 to 4	50	5	1⅜	2⅜	1¼	D4	½	2.20
Z1106	71A, 45, 25A6, 12A5	4000	4-8-15	40	10	1⅞	3¼	1¾	B4	1	3.30
Z1107	43, 25A6, 2A6	4500	3 to 6 ..	35	5	1⅜	2⅜	1⅜	D4	½	1.80
Z1108	45, 25A6, 6L6, 6V6	5000	4-8-15-500	55	20	3⅛	2⅝	2⅝	S	2½	7.40
Z1109	50, 31, 25A7G, 6V6	5000	4-8-15	50	8	1⅞	3¼	1¾	B4	1	3.40
Z1110	1S4, 3S4	6000	3 to 6	10	3	1⅛	2⅛	⅞	K4	⅓	1.65
Z1111	50B5, 50L6, 35A5	2000 or 6000	3.2	60 or 10	5	1⅜	2⅜	1¼	D4	½	2.20
Z1112	6AC5, 6B5, 6F6, 6N7	7000	4-8-15	40	10	1⅞	3¼	1¾	B4	1	3.30
Z1113	7B5, 6K6, 6F6, 42	7000	4	30	5	1⅜	2⅜	1¼	D4	½	1.80
Z1114		2500-4000-5000-6000-7000	500	60	10	2¾	3⅛	2¼	C3	7½	6.75
Z1115	6F6, 6K6, 6N6, 7B5	7600	3.2	35	5	1⅜	2⅜	1⅜	D4	½	2.00
Z1116	3Q4 Hum Reducing Tap	9000	3 to 6	10	4	1⅜	2⅜	1¼	D4	½	2.15
Z1117	6N7, 3C5, 1J6	10,000	4	30	5	1⅜	2⅜	1¼	D4	½	1.80
Z1118	12A7, 6Y7, 6V7, 1T5	15,000	4	10	5	1⅜	2⅜	1¼	D4	½	1.90
Z1119	1N6, 1LA4, 1D8, 1A5	25,000	4	5	5	1⅜	2⅜	1¼	D4	½	2.45

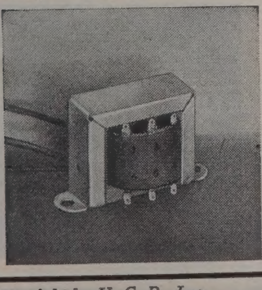
AUDIO OUTPUT—Push-Pull Plates to Voice Coil and Line

Item Number	Typical Output Tubes	Primary Impedance	Secondary Impedance	Primary Ma.	Watts	Dimensions H	Dimensions W	Dimensions D	Mtg. Type	Weight Lbs.	List Price
Z1400	P.P. Par. 6L6, 45	3800 & 3300	4-8-250-500	250	75	4¾	3⅞	3⅞	S	8	$12.75
Z1401	P.P. 6L6 (10% F.B. Winding)	4400	4-8-15-250-500	70	30	3⅝	3	3¼	S	3½	9.50
Z1402	P.P. 2A3, 6A3 (Fixed Bias)	5000	4-8-15	80	15	2⅜	2⅞	1¾	B5	1	3.60
Z1403	P.P. 6L6 (F.B. Winding)	6600	4-8-15-500	150	35	4	3¼	3⅜	S	4¾	10.45
Z1404	P.P. 6V6, 6F6, 2A5	10,000	4-8-15	30	12	2⅜	2⅞	1¾	B5	1	3.15
Z1405	P.P. 45, 6V6, 6AC5	10,000-7000	4-8-15-500	60	25	3⅛	2⅝	2¾	S	2½	8.50
Z1406	P.P. 89, 47, 7B5, 6K6	14,000	4-8-15	30	15	2⅜	2⅞	1¾	B5	1	3.50
Z1407		8,000-10,000-12,000-14,000	500	55	10	2¾	3⅛	2¼	C3	1¾	6.85
Z1408	P.P. 6Z7, 6K6, 1S6	20,000	4-8-15	25	15	2⅜	2⅞	1¾	B5	1	3.75
Z1409		5,000-10,000-20,000	50-125-333-500	15	1	2	3¼	1¾	B2	1	4.50
Z1410	P.P. 1F4, 1J5, 1T5, 6G6	25,000	4	10	5	1⅜	2⅜	1⅜	D4	½	2.30
Z1411	P.P. 1A5-1N6	50,000	3.5	10	5	1⅜	2⅜	1¼	D4	½	2.50
Z1412	P.P. 1A5G, 1E7G, 1N7G, 6V7G	50,000	3 to 6	20	8	1⅝	2⅞	1½	A4	⅝	3.40

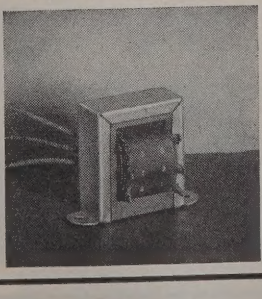
UNIVERSAL AUDIO OUTPUT

Item Number	Application	Secondary Impedance	Primary Ma.	Watts	Dimensions H	Dimensions W	Dimensions D	Mtg. Type	Weight Lbs.	List Price
Z1000	Single or P.P. Plates (4,000-14,000)	1 to 30	35	4	1⅜	2⅜	1¼	D2	½	$2.50
Z1001	Single or P.P. Plates (2,500-15,000)	2, 4, 6, 8, 15	50	4	1⅜	2⅜	1⅜	D2	⅝	2.80
Z1002	Single or P.P. Plates (4,000-14,000)	1 to 30	40	8	1⅝	2⅞	1½	A2	¾	2.70
Z1003	Single Plate (4000, 7000, 10,000)	3 to 8	40	8	1⅝	2⅞	1½	A2	¾	3.15
Z1004	Single or P.P. Plates (4,000-20,000)	3 to 6	50	8	2	2⅜	1½	A3	¾	3.25
Z1005	Single or P.P. Plates (2,500-13,000)	2, 4, 6, 8, 15	70	8	2	2½	2⅛	A3	¾	3.30
Z1006	Single Plate (1500 to 10,000)	1 to 20	55	10	1⅝	2⅞	1½	A2	¾	2.90
Z1007	Single or P.P. Plates (2,500-14,000)	1 to 30	50	10	2⅜	2⅞	1½	B3	1	3.85
Z1008	Single or P.P. Plates (2,500-14,000)	1 to 30	50	10	2⅜	2⅞	1¾	B6	1	3.85
Z1009	P.P. Plates (3,500-14,000)	.5 to 30	40	15	2⅜	2⅞	2	B3	1⅓	3.65
Z1010	P.P. Plates (2,500-13,000)	2, 4, 6, 8, 15	70	15	2⅜	2⅞	2⅜	B3	1½	4.75
Z1011	P.P. Plates (4,000-14,000)	1 to 30	50	18	2	3¼	2	B2	1¼	4.70
Z1012	P.P. Plates (8,000-10,000-12,000-14,000)	4-8-15-500	60	18	3⅛	3½	2½	S	2¼	8.30
Z1013	Single or P.P. Plates (4,000-13,500)	1 to 30	60	20	3⅛	3⅝	2½	C3	3	5.25

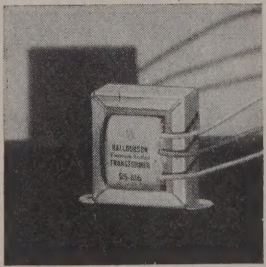
A2, B2, C2, D2, or E2



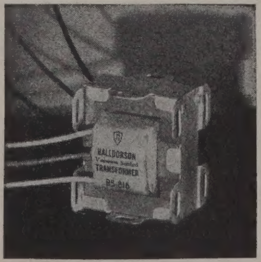
A3, B3, C3, D3, or E3



A5, B5, C5, D5, or E5



B6



Halldorson QUALITY *Transformers* SINCE 1913

HIGH FIDELITY TRANSFORMERS

BRIDGING, REPEAT, INPUT, INTERSTAGE and OUTPUT HIGH FIDELITY TRANSFORMERS

These Haldorson High Fidelity Transformers are single to quadruple alloy-shielded with high permeability nickel-iron cores. Finish is grey enamel and mounting is by means of a strap-clamp which allows the units to be rotated. The frequency response of these units is within 1 DB from 30 to 20,000 cycles. They can be used as replacements in the most expensive broadcast equipment or for original components in amplifying systems designed for the best reproductive tone quality. Their performance has been proved in innumerable instances. The world's largest distributor of wired music has adopted them as standard components for his amplifiers, after exhaustive tests against the best in the field.

Item Number	Application	Primary Impedance	Secondary Impedance	±1 DB	Max. DB Level	Max. Unbal. D.C. Primary	Mtg. Type	Weight Lbs.	List Price
H4000	Interstage	8,000 to 15,000	60,000 C.T.	30 to 20,000	+20	3 Ma.	Y	½	$22.90
H4001	Output to Line	8,000 to 15,000 in Two Sections	50-125-200 250-333-500	30 to 20,000	+10	1 Ma.	Y	½	25.85
H4002	Input	500-333-250 200-125-50	50,000 in Two Sections	30 to 20,000	0	3 Ma.	Y	½	25.85
H4003	Bridging	20,000	50,000	30 to 20,000	+20	3 Ma.	Y	½	21.45
H4004	Repeat Coil	500/600	500/600	30 to 20,000	+20	0	Y	½	23.45

HIGH FIDELITY OUTPUT TRANSFORMERS ±1 DB 20-20,000 CPS

FOR USE IN MUSIC LOVERS, POPULAR AMPLIFIER CIRCUITS

Item Number	Primary Impedance	Secondary Impedance	Max. Watts	Max. Pri. D.C. Per Half	Dimensions H	W	D	Mtg. Type	Weight Lbs.	List Price
H4100	3000	8-16	50	175 Ma.	4¼	3½	4¼	S	5	$18.50
H4101	5000	8-16	50	150 Ma.	4¼	3½	4¼	S	5	18.50
H4102	9000	8-16	50	100 Ma.	4¼	3½	4¼	S	5	18.50

LINE, MICROPHONE, INTERCOM., TRANSCEIVER INPUT TO GRID

Item Number	Application	Impedance Primary	Secondary	Dimensions H	W	D	Mtg. Type	Weight Lbs.	List Price
G2000	Single Button to Single Grid	100	60,000	1⅜	2⅜	1½	D4	½	$2.95
G2001	Single Button to P.P. Grids	100	400,000	2 5/16	2⅞	1¾	B5	1¼	4.15
G2002	Single Button to Single Grid	200-70	80,000	1⅜	2⅜	1⅜	D4	½	2.95
G2003	Double Button to Single Grid	200 C.T.	125,000	1⅞	3¼	1⅝	B5	1	3.85
G2005	Single or Double to P.P. Grids	500-333-200-125-50	100,000	1⅞	3¼	1⅝	B7	1¼	5.25
G2006	Mic. Line or Mixer to Single Grid	†500 C.T.-†200 C.T. 250-50	50,000	3	2⅝	2⅜	S	2½	8.35
G2007	Transceiver Micr. & Plate to Grid	200-5000	60,000	1⅝	2⅞	1½	A4	¾	3.60
G2008	Intercommunicator Input	4	25,000	1⅜	2⅜	1½	D8	½	2.60

LINE TO LINE

L2400	Line to Line	500-333-200-125-50	500-333-200-125-50	2	3¼	1¾	B2	1	$6.00
L2401	Line to Line or Line to V.C.	†500 C.T.-†200 C.T. 250-50	4-8-15-500	3	2⅝	2⅜	S	2½	9.10

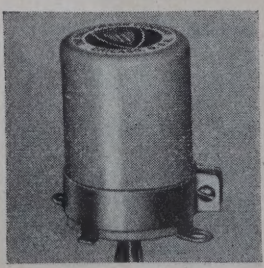
†Inductive and capacitative balance to center tap.

SPEAKER MATCHING

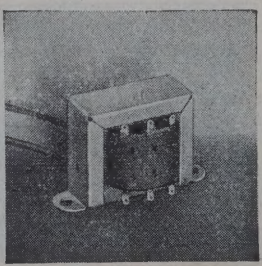
Item Number	Impedance Primary	Secondary	Watts	Dimensions H	W	D	Mtg. Type	Weight Lbs.	List Price
S3500	500	3.2, 6-8	5	1⅜	2⅜	1⅜	D2	½	$2.00
S3501	2000-1500-1000-500	3.2, 6-8	8	1⅝	2¾	1⅝	A2	¾	2.80
S3502	2000-1500-1000-500	3.2, 6-8	12	2⅜	2⅞	1¾	B3	1⅛	3.90
S3504	8000-6000-4000-2500	6-8	12	2⅜	2⅞	1¾	B5	1⅛	4.50
S3503	2000-1500-1000-500	3.2, 6-8	18	2⅜	2⅞	1¾	B3	1¾	4.55
S3505	500	8, 4, 2.65, 2.35, 2, 1.5, .7, .5, .3, .2, .1, .05	15	2¼	2⅞	2	B3	1½	4.55
S3506	1500-1000-500	4-8-15	25	3⅛	3⅝	2¼	E3	2½	5.10
S3507*	10,000-5000-2500-1250-625	4-8-15	8	2	2½	1⅝	A3	¾	3.90
S3508*	10,000-5000-2500-1250-625-312.5	4-8-15	16	2¾	3¼	2¼	C3	1½	5.10

*70.7 volt line-to-voice coil application. Power level adjustable in 3 db steps.

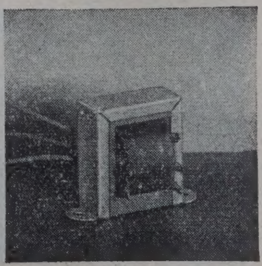
Y



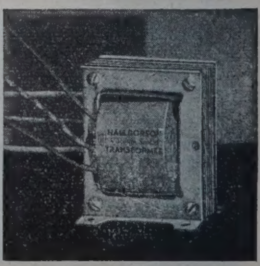
A2, B2, C2, D2, K2



A3, B3, C3, D3, E3



J



QUALITY *Transformers* SINCE 1913 **Halldorson**

PLATE SUPPLY

Showing continuous service D.C. Ma. using choke-input filter. For intermittent duty, current drain may be increased 25% above rated value. With capacitor-input filter, current drain should be decreased by 25%.

Item Number	Secondary A.C. Voltage	D.C. Ma.	Primary Volts	Dimensions H	W	D	Mtg. Type	Weight Lbs.	List Price
T3000	415-0-415	200	117	4	3¼	3½	S	5	$10.75
T3001	515-0-515	235	117	4⅜	3⅝	4⅛	S	7	13.75
T3002	600-500-0-500-600	250	117	4¾	4	4	S	9½	13.90
T3003	665-0-665	250	117	4¾	4	4⅜	S	9⅝	17.50
T3004	750-0-750	265	117	4¾	4	4⅞	S	11½	19.50
T3005	920-0-920	250	117	4¾	4	5	S	12	20.50
T3100	1200-0-1200	225	117	4¾	4	5⅛	S3	13	22.50
T3101	1200-0-1200	325	117	5⅜	4⅝	6⅝	S3	22¼	37.00
T3102	1475-0-1475	250	117	5⅜	4⅝	6½	S3	22⅓	36.50
T3103	1790-0-1790	225	117	6	4½	6¾	S3	25	42.00
T3104	2065-0-2065	200	117	6	4½	6¾	S3	25	41.75

MODULATION TRANSFORMERS—Specific Type

Item Number	Inductance in Ohms Primary	Secondary	Pri. Ma.	Sec. Ma.	Watts	Dimensions H	W	D	Mtg. Type	Weight Lbs.	List Price
M6300	10,000 C.T.	4000	32	50	5	1⅝	2⅞	1½	A4	¾	$3.30
M6301	4500	8500	60	50	10	2	3¼	2	B4	1¼	4.85
M6302	10,000 C.T.	8000, 6500 5000, 3000	100	100	25	3¼	2⅝	2¾	S	2¾	7.60
M6303	900, 6900 C.T.	6250, 5000 4000, 3300	250	300	175	4¾	4	6¼	G	11½	21.00

MODULATION TRANSFORMERS—Universal Type

Item Number	Adjustable Impedance	Primary D.C. Ma.	Secondary D.C. Ma.	Watts	Dimensions H	W	D	Mtg. Type	Weight Lbs.	List Price
M6500	2,000-20,000 ohms	100	100	15	3⅛	2⅝	2⅞	G	2½	$12.95
M6501	2,000-20,000 ohms	150	150	30	4	3¼	3½	G	4¼	13.95
M6502	2,000-20,000 ohms	180	180	60	4	3¼	4¼	G	6⅛	14.95
M6503	2,000-20,000 ohms	225	225	125	4¾	4	4½	G	9½	22.30

6 VOLT VIBRATOR TRANSFORMERS—AUTO RADIO

Item Number	Secondary D.C. Volts to Filter	Secondary Ma.	Dimensions H	W	D	Mounting Type	Weight Lbs.	List Price
V3800	150	40	2⅝	3⅛	2⅜	C5	1¼	$5.20
V3801	225	40	2⅝	3⅛	2⅜	C5	1½	5.95
V3802	250	50	3⅛	2½	2⅜	J	2¼	6.05
V3803	250	50	3 1/16	2⅜	2½	N3	3	7.50
V3804	265	55	3¼	2⅝	2½	N6 with Hash Filter	2½	6.90
V3805	250	60	2⅛	2½	2⅜	J	2	6.95
V3806	270	60	2⅝	2¼	2¾	N3	2¼	6.90
V3807	280	65	3 1/16	2⅜	2½	N3	2¼	7.50
V3808	285	75	3⅛	2½	2¼	J	2¾	7.90

6 VOLT VIBRATOR OR 115 V. A.C. PRIMARY

Item Number	Secondary D.C. Volts to Filter	Secondary Ma.	Dimensions H	W	D	Mounting Type	Weight Lbs.	List Price
V3815	350 Fil. 6.3 V., C.T.	135- 4.75A	4¾	3⅞	4¼	S	10	$14.90

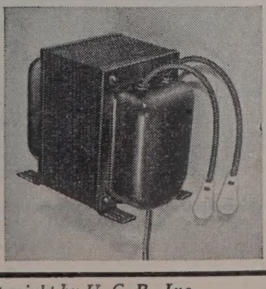
STEP-DOWN AUTOFORMERS

Item Number	Primary Voltage	Secondary Voltage	Watts	Dimensions H	W	D	Mounting Type	Weight Lbs.	List Price
J4300	220	110	65	3⅛	2⅝	2¾	S2	2½	$8.90
J4301	220	110	100	4	3¼	3	S2	3½	10.50
J4302	220	110	160	4	3¼	3¼	S2	5	12.90
J4303	220	110	250	4¼	3½	4	S2	7½	16.90
J4304	220	110	500	4¾	4	5	S2	12	21.35
J4305	220	110	1000	5¼	4⅜	6¾	S2	25	45.00

ISOLATION TRANSFORMERS

Item Number	Primary Voltage	Secondary Voltage	Watts	Dimensions H	W	D	Mounting Type	Weight Lbs.	List Price
K4600	115	115	50	4	3¼	3¼	S2	6	$10.30
K4601	115	115	100	4¾	3⅞	3⅜	S2	7½	18.50
K4602	115	115	150	4¾	3⅞	3⅞	S2	8½	19.95
K4603	115	115	250	4¾	3⅞	5⅛	S2	13½	35.00

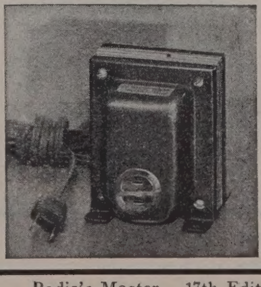
S3



G

N3

S2



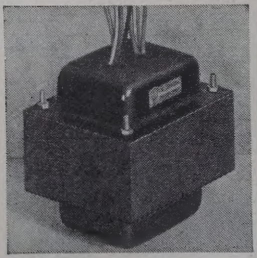
Halldorson QUALITY *Transformers* SINCE 1913

POWER—Plate and Filament

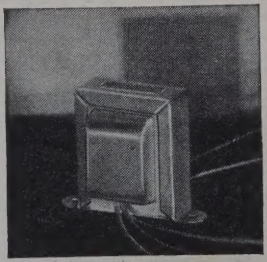
Item Number	Plate A.C. Load Volts	D.C. Ma.	Fil. No. 1 Volt	Fil. No. 1 Amp.	Fil. No. 2 Volt	Fil. No. 2 Amp.	Dimensions H	Dimensions W	Dimensions D	Mtg. Type	Weight Lbs.	List Price
P9200	235-0-235	40	5	2	6.3 C.T.	2	3⅛	2⅝	2⅝	S	2¼	$6.00
P9201	235-0-235	40	5	2	6.3 C.T.	2	2⅝	2½	3	L	2¼	6.00
P9202	240-0-240	55	5	2	6.3 C.T.	2	3⅛	2⅝	2¾	S	2½	6.25
P9203	240-0-240	55	5	2	6.3 C.T.	2	2¾	2½	3	L	2½	6.25
P9204	250-0-250	70	5	2	6.3 C.T.	2.5	3⅛	2⅝	3⅛	S	3¼	7.70
P9205	250-0-250	70	5	2	6.3 C.T.	2.5	3⅛	2½	3	L	3¼	7.70
P9206	260-0-260	90	5	2	6.3 C.T.	3	3⅝	3	3½	S	4	8.50
P9207	260-0-260	90	5	2	6.3 C.T.	3	3⅝	2⅞	3½	L	4	8.50
P9208	270-0-270	120	5	3	6.3 C.T.	3.5	4	3¼	3½	S	5	9.25
P9209	270-0-270	120	5	3	6.3 C.T.	3.5	3½	3⅛	3¾	L	5	9.25
P9300	325-0-325	40	5	2	6.3 C.T.	2	3⅛	2⅝	2¾	S	2½	6.25
P9301	325-0-325	40	5	2	6.3 C.T.	2	2¾	2½	3	L	2½	6.25
P9302	325-0-325	55	5	2	6.3 C.T.	2	3⅛	2⅝	3⅛	S	3¼	7.00
P9303	325-0-325	55	5	2	6.3 C.T.	2	3⅛	2½	3	L	3¼	7.00
P9304	300-0-300	70	5	3	6.3 C.T.	3	3½	3	3¼	S	4	7.90
P9305	300-0-300	70	5	3	6.3 C.T.	3	3¼	3	3½	L	4	7.90
P9306	340-0-340	70	5	2	6.3 C.T.	2.5	3⅝	3	3⅜	S	3⅞	7.90
P9307	340-0-340	70	5	2	6.3 C.T.	2.5	3½	3	3⅜	L	3⅞	7.90
P9310	350-0-350	90	5	2	6.3 C.T.	3	3⅝	3	3⅝	S	4½	8.50
P9311	350-0-350	90	5	2	6.3 C.T.	3	3¾	2⅞	3⅝	L	4½	8.50
P9312	300-0-300	120	5	3	6.3 C.T.	5	3⅞	3¼	3¾	S	5½	9.75
P9313	300-0-300	120	5	3	6.3 C.T.	5	3¾	3¼	3⅞	L	5½	9.75
P9314	360-0-360	120	5	3	6.3 C.T.	3.5	4	3¼	3¾	S	5½	9.75
P9315	360-0-360	120	5	3	6.3 C.T.	3.5	3¾	3¼	3¾	L	5½	9.75
P9316	375-0-375	150	5	3	6.3 C.T.	4.5	4¼	3½	4	S	6	11.60
P9317	375-0-375	150	5	3	6.3 C.T.	4.5	3¾	3½	4¼	L	6	11.60
P9318	335-0-335	200	5 C.T.	3	6.3 C.T.	5	4¾	4	4¼	S	9½	14.55
P9321	370-0-370	275	5 C.T.	3	6.3 C.T.	7	4¼	3¾	4½	L	9½	17.50
P9400	440-0-440	130	5	3	6.3 C.T.	3.5	4¼	3⅝	3⅛	S	7	13.50
P9402	400-0-400	175	5	3	6.3 C.T.	4.5	4¾	4	4	S	8	13.50
P9403	400-0-400	175	5	3	6.3 C.T.	4.5	3⅞	3¾	4½	L	8	13.50
P9404	400-0-400	200	5	3	6.3 C.T.	5	4¾	4	4	S	8¼	13.75
P9405	400-0-400	200	5	3	6.3 C.T.	5	3⅞	3¾	4½	L	8¼	13.75
P9406	400-0-400	250	5	4	6.3 C.T.	5	4¾	4	4½	S	10	16.25
P9600	600-0-600	200	5	3	6.3 6.3	3 3	4¾	4	4¾	S	8½	17.00

PRIMARIES FOR 117 VOLT, 60 CYCLE OPERATION

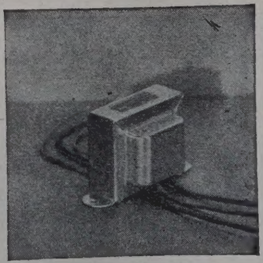
L



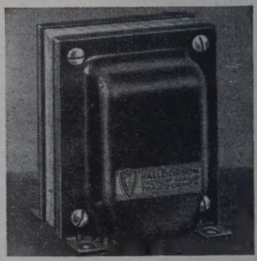
A7, B7, C7, or D7



A8, B8, C8, or D8



S



QUALITY *Transformers* SINCE 1913 Halldorson

POWER—FOR USE WITH 6AX5, 6X4, 6X5 OR SELENIUM RECTIFIERS

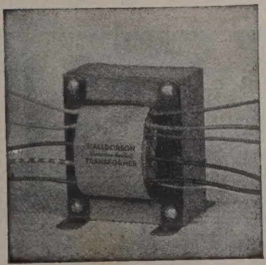
Item Number	Plate A.C. Load Volts	D.C. Ma.	Fil. No. 1 Volt	Fil. No. 1 Amp.	Dimensions H	Dimensions W	Dimensions D	Mtg. Type	Weight Lbs.	List Price
P9100	125 ½ Wave	15	6.3	0.6	2	2⅜	1⅜	A5	¾	$2.90
P9101	125-0-125	25	6.3	1.0	2⅜	2⅞	1¾	B5	1	3.60
P9102	125 ½ Wave	50	6.3	2.0	2¼	3¾	2⅛	C4	1½	4.75
P9210	230-0-230	50	6.3	2.5	3⅛	2⅝	2⅝	S	2¼	5.75
P9211	230-0-230	50	6.3	2.5	2⅝	2½	3	L	2¼	5.75
P9212	240-0-240	70	6.3	3.0	3⅛	2⅝	2⅞	S	2⅝	6.50
P9213	240-0-240	70	6.3	3.0	2⅞	2½	3	L	2⅝	6.50
P9214	260-0-260	90	6.3	4.0	3½	3	3½	S	3½	7.25
P9215	260-0-260	90	6.3	4.0	3½	2⅞	3⅜	L	3½	7.25

MULTIPLE FILAMENT AND MISCELLANEOUS TYPES

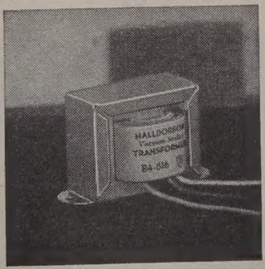
Item Number	Plate A.C. Load Volts	D.C. Ma.	Fil. No. 1 Volt	Fil. No. 1 Amp.	Fil No. 2 Volt	Fil No. 2 Amp.	Fil. No. 3 Volt	Fil. No. 3 Amp.	Dimensions H	Dimensions W	Dimensions D	Mtg. Type	Weight Lbs.	List Price
P9901	280-0-280	50	5	2	6.3	1.5	6.3	.6	3	3	2½	L	3½	$8.00
P9903	350-0-350	70	5 C.T.	2	2.5 C.T.	9			3⅜	2⅞	3⅛	L	3¾	9.80
P9905	350-0-350	90	5 C.T.	3	2.5 C.T.	12.5			3	3⅛	3¾	L	4¼	10.10
P9907	400-0-400	110	5 C.T.	3	2.5 C.T.	3.5	2.5 C.T.	15	3⅜	3⅛	3¾	L	5½	12.50
P9909	350-0-350	120	5 C.T.	3	2.5 C.T.	3.5	2.5 C.T.	12.5	3⅝	3⅛	3⅝	L	5½	12.70
P9908	320-0-320	150	5	3	6.3	3	6.3 6.3	8.0 1	4¾	4	4	S	9½	17.55
P9910	400-0-400 80 Volt Tap	175	5 C.T.	3	2.5	1.75	6.3 C.T. 6.3 C.T.	2.5 2.5	4¾	4	3⅞	S	8¼	15.90
P9911	400-0-400	200	5	3	6.3 C.T.	5.3	50-24-18V, 25W		4⅛	4⅛	3⅝	L	7¾	17.65
P9912	1600	2	2.0 1.25 Tap	1.75	6.3	.3	6.3	.3	4	3⅛	3	S	3	17.55
P9914	2700	2	2.0 1.25 Tap	1.75	6.3	.3	6.3	.3	4	3⅛	3	S	3	19.15

PRIMARIES FOR 117 VOLT, 60 CYCLE OPERATION

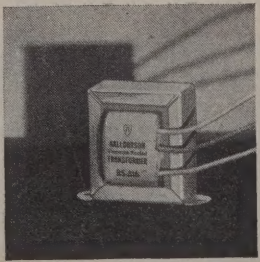
U5



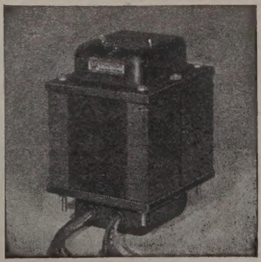
A4, B4, C4, D4, or E4



A5, B5, C5, D5, or E5



L2



Halldorson QUALITY *Transformers* SINCE 1913

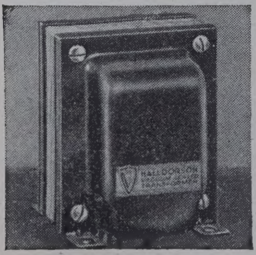
FILTER CHOKES—Smoothing

Item Number	Inductance Hys.	Ma. D.C.	D.C. Res.	Insulation	Dimensions			Mtg. Type	Weight Lbs.	List Price
					H	W	D			
C5000	300	5	5000	2000	1⅝	2⅞	1½	A4	1	$2.80
C5001	20	15	900	1500	1⅝	2⅞	1½	A4	¾	2.00
C5002	12	30	400	2000	1⅜	2⅜	1⅜	D4	½	2.05
C5003	30	35	700	2000	2	3¼	1¾	B4	1	3.05
C5004	12	40	400	2000	1⅝	2⅞	1½	A4	¾	2.05
C5005	15	40	400	2000	2	3¼	1¾	B4	1	2.65
C5006	3.5	50	200	1500	1⅝	2⅞	1½	A4	¾	1.95
C5007	4.5	50	300	1500	1⅜	2⅜	1⅜	D4	½	1.65
C5008	6	50	300	1500	1⅝	2⅞	1½	A4	¾	1.75
C5009	7	50	550	1500	1⅜	2⅜	1⅜	D4	½	1.80
C5010	8.5	50	400	1500	1⅝	2⅞	1½	A4	¾	2.00
C5011	16	50	575	1500	2	3¼	1¾	B4	1⅛	2.25
C5012	6	60	200	2000	1⅝	2⅞	1½	A4	¾	1.75
C5013	10	60	275	2000	2	3¼	1¾	B4	1	2.65
C5014	13	65	500	1500	2	3¼	1¾	B4	1	2.75
C5015	8	75	290	2000	2	3¼	1¾	B4	1	3.00
C5016	15	75	400	1500	2¼	3¾	2¼	C4	1¾	3.00
C5017	16	80	350	1500	3¼	2⅝	2⅝	S	2½	4.90
C5018	20	80	350	2000	2¼	3¾	2¼	C4	1½	3.55
C5019	8	85	250	2000	2¼	3¾	2¼	C4	1½	3.10
C5020	5	100	300	3000	2	3¼	1¾	B4	1	3.00
C5021	12	110	250	2000	2⅝	4	3	E4	2¼	4.25
C5022	12	110	250	2000	3¼	2⅝	3	S	2½	4.65
C5023	8	120	350	2000	2⅝	4	2⅛	E4	2½	5.25
C5024	2.5	130	100	2000	2	3¼	1¾	B4	1	2.90
C5025	8	130	100	2000	3¼	2⅝	3	S	2½	5.60
C5026	2.3	150	60	1500	2	3¼	1¾	B4	1	2.90
C5027	7	150	200	1500	2⅝	4	2¼	E4	2¼	4.50
C5028	7.5	150	160	2000	3¼	2⅝	3	S	2½	5.55
C5029	4	175	100	3000	3¼	2⅝	3	S	2½	6.00
C5030	2	200	60	1500	2¼	3¾	2¼	C4	1¾	3.50
C5031	4.5	200	80	3000	3⅝	3	3⅛	S	3½	6.50
C5032	8	200	125	3000	3½	2⅞	3	S	3¾	7.65
C5033	8.5	200	120	3000	3⅞	3⅛	3	U5	4½	7.50
C5034	15	200	150	5000	3½	3⅞	3½	S	5½	9.45
C5035	4	250	60	3000	3½	2⅞	3⅛	U3	4¼	8.25
C5036	4	250	60	3000	3⅝	3	3½	S	4½	9.10
C5037	1	300	45	1500	2¼	3¾	2¼	C4	1¾	3.40
C5038	8	300	80	3000	4¾	4	3⅞	S	8	12.50
C5039	15	350	150	5000	4¾	4	4½	S	11	16.75

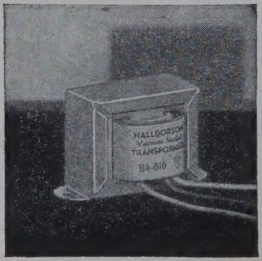
FILTER CHOKES—Swinging

C5400	4-14	150	130	2000	3⅛	2⅝	2½	S	2½	$5.65
C5401	2-12	175	100	3000	3⅛	2⅝	2⅝	S	2½	6.25
C5402	2-12	200	80	3000	3⅝	3	3⅛	S	3½	7.15
C5403	2-12	250	60	3000	3⅝	3	3½	S	4¼	8.85
C5404	4-20	300	80	3000	4¾	4	3⅞	S	8	11.40
C5405	5-15	350	100	5000	4¾	4	4	S	9½	12.00

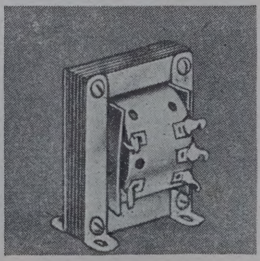
S



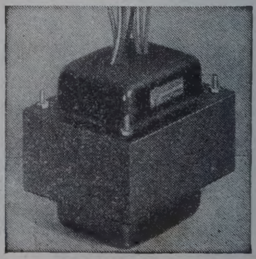
A4, B4, C4, D4, or E4



U3



L



QUALITY *Transformers* SINCE 1913 **Halldorson**

FILAMENT—Single Secondary

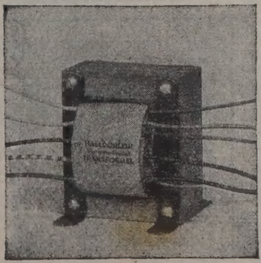
Item Number	Primary	Secondary Volts	Secondary Amp.	Insulation	Dimensions H	Dimensions W	Dimensions D	Mtg. Type	Weight Lbs.	List Price
F5500	117	2.5	1.5	2500	1⅝	2⅞	1½	A4	¾	$3.25
F5501	117	2.5 C.T.	2.5	2000	1⅝	2⅞	1½	A4	⅞	3.60
F5502	117	2.5 C.T.	5	7500	2⅝	3⅛	2¼	C5	1½	5.25
F5503	107-117	2.5 C.T.	10	2500	3⅛	2⅝	2⅝	S	2½	6.75
F5504	117	2.5 C.T.	10	10,000	3½	2⅞	2½	U3	2½	6.40
F5505	117	5.0 C.T.	3	5000	3	2½	2½	S	2½	6.65
F5506	117	5.0 C.T.	3	2000	2⅜	2⅞	1¾	B5	1	4.25
F5507	117	5.0 C.T.	6	2500	3⅛	2½	1¾	U3	2¼	4.90
F5508	117	5.0 C.T.	10	2500	3⅛	2½	2⅞	U5	3	6.50
F5509	107-117	5.0 C.T.	14	10,000	5⅛	4¼	8½	N	12½	22.40
F5510	107-117	5.0 C.T.	22	10,000	5⅛	4¼	8½	N	13½	23.75
F5511	117	6.3 C.T.	1.2	3000	1⅝	2⅞	1⅝	A4	¾	2.80
F5512	117	6.3 C.T.	3	2000	2⅜	2⅞	1¾	B5	1	4.10
F5513	107-117	6.3 C.T.	4	2500	3⅛	2⅝	2⅝	S	2¾	6.50
F5514	117	6.3 C.T.	6	2500	3⅛	2½	2⅞	U3	2½	5.80
F5515	107-117	6.3 C.T.	6	2500	3⅝	3	3⅛	S	3½	7.50
F5516	107-117	6.3 C.T.	10	2500	3½	2⅞	2¾	U5	3½	7.00
F5517	117	7.5 C.T.	2.5	2000	2⅜	2⅞	1¾	B5	1	3.75
F5518	117	7.5 C.T.	4	2500	3⅛	2½	2⅞	U3	2¾	5.75
F5519	117	7.5 C.T.	8	2500	3⅞	3⅛	2⅞	U5	4¾	8.15
F5520	107-117	7.5 C.T.	8	2500	4	3¼	3⅜	S	4¾	9.25
F5521	117	10.0 C.T.	4	2500	3½	2⅞	2⅝	U3	3¼	7.00
F5522	107-117	10.0 C.T.	5	2500	4	3¼	3⅛	S	4	8.25
F5523	107-117	10.0 C.T.	8	2500	4	3¼	3⅝	S	5¼	5.10
F5524	107-117	10.0 C.T.	12	7500	5⅛	4¼	8½	N	14¾	24.20
F5525	107-117	11.0 C.T.	10	7500	5⅛	4¼	8½	N	13	23.70
F5526	117	12.6 C.T.	3	2000	3	2½	2⅞	U5	3½	6.65
F5527	117	25.2	1	1500	2	3¼	2	B4	1½	4.50
F5528	117	12.6 or 25.2	7 3.5	2500	8⅛	2⅝	3½	S	5	10.00

FILAMENT—Multiple Secondary

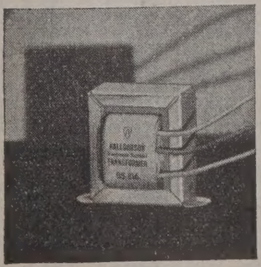
2000 VOLT INSULATION

Item Number	Primary	Fil. No. 1 Volts	Fil. No. 1 Amp.	Fil. No. 2 Volts	Fil. No. 2 Amp.	Dimensions H	Dimensions W	Dimensions D	Mtg. Type	Weight Lbs.	List Price
F5900	117	2.5 C.T.	6	5.0 C.T.	3	3½	2½	2½	U5	2½	$7.40
F5901	117	5.0 C.T.	3	5.0 C.T.	3	2¾	3⅛	2½	C5	1¾	6.90
F5902	117	5.0 C.T.	3	6.3 C.T.	6	4⅛	3¼	3⅜	S	3½	9.60
F5903	107-117	5.0 C.T.	6	6.3 C.T.	6	4⅛	3¼	3¾	S	4¾	11.50
F5904	117	5.0 C.T.	3	7.5 C.T.	3.25	4⅛	3¼	3¼	S	3	8.25
F5905	117	6.3 C.T.	3	6.3 C.T.	3	3	3⅝	2¼	E5	2¼	6.90

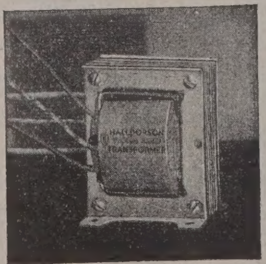
U5



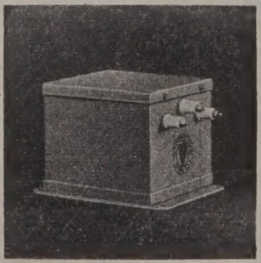
A5, B5, C5, D5, E5



J



N



CHICAGO

NEW EQUIPMENT

POWER TRANSFORMERS FILTER REACTORS

CHICAGO TRANSFORMER DIVISION * ESSEX WIRE CORPORATION

POWER TRANSFORMERS—PLATE AND FILAMENT SUPPLY

For CAPACITOR INPUT SYSTEMS—Primary 117 Volts, 50-60 Cycles

High Voltage Secondary Volts A-C-	Ma. D-C	Output V.D-C	Filaments Rectifier Volts	Rectifier Amps.	Others Volts	Others Amps.	Wt. Lbs.	H-Type Cat. No.	H-Type Case No.	H-Type List Price	S-Type Cat. No.	S-Type Case No.	S-Type List Price	C-Type Cat. No.	C-Type Case No.	C-Type List Price
250-0-250	10	320	6.3	1.2	6.3	0.6	1¼	PHC-10	14	$23.35	......			......		
250-0-250	20	300	6.3	1.2	6.3	0.6	1¾	PHC-20	15	23.90	......			......		
225-0-225	40	210	5	2	6.3CT	2	3¼	PHC-40	17	19.75	PSC-40	17	$ 9.20	PCC-40	16	$ 6.50
270-0-270	55	260	5	2	6.3CT	2	3½	PHC-55	17	21.65	PSC-55	17	10.85	PCC-55	16	7.05
300-0-300	60	285	5	2	6.3CT	3	4½	PHC-60	19	22.60	PSC-60	19	11.40	PCC-60	18	8.10
335-0-335	70	320	5	2	6.3CT	3	4½	PHC-70	19	23.45	PSC-70	19	12.45	PCC-70	18	8.65
330-0-330	85	320	5	2	6.3CT	3	6	PHC-85	20	25.15	PSC-85	20	14.35	PCC-85	20	10.00
345-0-345	105	320	5	2	6.3CT	3.5	6½	PHC-105	21	27.70	PSC-105	21	15.20	PCC-105	20	10.85
375-0-375	120	380	5	3	6.3CT	4	9½	PHC-120	21	29.30	PSC-120	22	16.00	PCC-120	22	12.20
370-0-370	150	390	5	3	6.3CT	4										
					6.3CT	1	11½	PHC-150	22	36.30	PSC-150	22	21.15	PCC-150	22	16.30
385-0-385	200	390	5	3	6.3CT	4.5										
					6.3CT	1	12¼	PHC-200	22	38.20	PSC-200	22	22.50	PCC-200	22	17.60
400-80-0-	250	410	5	6	6.3CT	7										
80-400					5	2	15	PHC-250	24	45.60	PSC-250	24	26.05	PCC-250	24	21.70

For REACTOR INPUT SYSTEMS—Primary 117 Volts, 50-60 Cycles

High Voltage Secondary Volts A-C-	Ma. D-C	Output V.D-C	Filaments Rectifier Volts	Rectifier Amps.	Others Volts	Others Amps.	Wt. Lbs.	H-Type Cat. No.	H-Type Case No.	H-Type List Price	S-Type Cat. No.	S-Type Case No.	S-Type List Price	C-Type Cat. No.	C-Type Case No.	C-Type List Price
350-0-350	55	260	5	2	6.3CT	2	3¼	PHR-55	17	$21.65	PSR-55	17	$11.10	PCR-55	16	$ 7.85
425-0-425	70	320	5	2	6.3CT	3	4½	PHR-70	19	23.45	PSR-70	19	12.70	PCR-70	18	8.90
440-0-440	85	325	5	2	6.3CT	3	6	PHR-85	20	25.15	PSR-85	20	14.65	PCR-85	20	10.30
450-0-450	105	320	5	2	6.3CT	3.5	6½	PHR-105	21	27.70	PSR-105	21	15.45	PCR-105	20	11.10
500-0-500	120	390	5	3	6.3CT	4	9½	PHR-120	21	29.30	PSR-120	22	16.30	PCR-120	22	12.45
510-0-510	150	395	5	3	6.3CT	4										
					6.3CT	1	11½	PHR-150	22	36.30	PSR-150	22	21.40	PCR-150	22	16.50
520-0-520	200	390	5	3	6.3CT	4.5										
					6.3CT	1	12¼	PHR-200	22	38.20	PSR-200	22	22.80	PCR-200	22	17.90
550-370-75-	300	420	5	6	6.3CT	1										
0-75-370-550					6.3CT	5	17½	PHR-300	24	52.15	PSR-300	24	32.60	PCR-300	24	25.50

For REGULATED POWER SUPPLIES, CAPACITOR INPUT—Primary 117 Volts, 50-60 Cycles

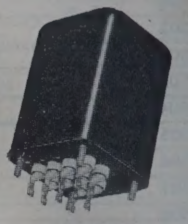
High Voltage Secondary Volts A-C	Ma. D-C	Output V.D-C-	Filaments Rectifier Volts	Rectifier Amps.	Others Volts	Others Amps.	Others Volts	Others Amps	Wt. Lbs.	H-Type Cat. No.	H-Type Case No.	H-Type List Price	S-Type Cat. No.	S-Type Case No.	S-Type List Price
440-0-440	165	430	5	3	6.3	7.5	6.3	3	12	PHC-165	22	$45.90	PSC-165	22	$30.60
					6.3	0.6	6.3	3							
450-0-450	200	442	5	2	6.3	4	6.3	0.6	12	PHC-200A	22	42.95	PSC-205	22	29.00
					6.3	4									

FILTER REACTORS

Inductance in Henries	Max. Current Ma. D-C	D-C Resistance in Ohms	Insulation Test Volts	Wt. Lbs.	H-Type Cat. No.	H-Type Case No.	H-Type List Price	S-Type Cat. No.	S-Type Case No.	S-Type List Price	C-Type Cat. No.	C-Type Case No.	C-Type List Price
15	10	680	1,000	1	RH-1510	8	$9.75	......			......		
15	20	680	1,000	1	RH-1520	8	10.30	......			......		
15	40	475	2,500	1½	RH-1540	12	10.40	RS-1540	12	$ 4.55	RC-1540	12	$ 3.25
15	55	385	2,500	2	RH-1555	13	10.75	RS-1555	13	5.40	RC-1555	12	4.00
15	85	270	2,500	2¾	RH-1585	14	11.40	RS-1585	15	6.50	RC-1585	14	4.85
12	105	170	2,500	4	RH-12105	17	13.35	RS-12105	17	7.05	RC-12105	16	5.65
12	150	150	2,500	5½	RH-12150	19	15.30	RS-12150	19	9.45	RC-12150	18	7.85
12	200	140	2,500	7	RH-12200	20	18.00	RS-12200	21	11.10	RC-12200	20	9.45
10	55	222	2,500	1¾	RH-1055	13	10.75	RS-1055	13	5.10	RC-1055	12	3.80
10	85	175	2,500	2½	RH-1085	14	11.40	RS-1085	15	6.20	RC-1085	14	4.55
8	105	103	2,500	3¾	RH-8105	17	13.35	RS-8105	17	6.75	RC-8105	16	5.40
8	150	100	2,500	5¼	RH-8150	18	15.30	RS-8150	19	9.20	RC-8150	18	7.60
8	200	85	2,500	7	RH-8200	20	18.00	RS-8200	21	10.85	RC-8200	20	9.20
8	250	90	2,500	10½	RH-8250	22	21.70	RS-8250	22	13.55	RC-8250	22	11.95
8	300	70	2,500	12½	RH-8300	22	25.85	RS-8300	22	16.80	RC-8300	22	14.65

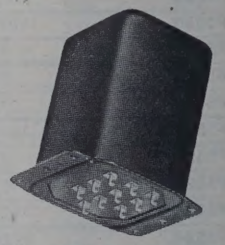
FILAMENT TRANSFORMERS—Primary 115-230 Volts, 50-60 Cycles

Secondary Volts	Secondary Amps.	Insulation Test Volts	Wt. Lbs.	H-Type Cat. No.	H-Type Case No.	H-Type List Price	S-Type Cat. No.	S-Type Case No.	S-Type List Price
2.5CT	5.25	3,500	2	FH-25	15	$15.45	F-25	14	$ 8.10
2.5CT	10.0	5,000	3	FH-210	15	22.15	F-210	17	11.65
2.5CT	10.0	9,000	4	FH-210H	19	25.75	F-210H	19	13.55
2.5CT	15.0	9,000	6	FH-215H	21	30.95	F-215H	20	16.30
5CT	4.0	2,500	2¼	FH-54	15	16.10	F-54	15	8.35
5CT	10.0	2,500	3½	FH-58	17	22.15	F-58	17	11.65
5CT	10	8,000	6	FH-510H	21	33.00	F-510H	21	17.35
5CT	20.0	2,500	6½	FH-516	21	32.00	F-516	21	16.80
5CT	20	10,000	13	FH-520HB	22	41.25	F-520HB	22	21.70
5CT	30	2,500	10½	FH-530	22	41.25	F-530	22	21.70
6.3CT	5.5	2,500	3	FH-65	16	18.55	F-65	17	9.75
6.3CT	10.0	2,500	5	FH-610	19	26.25	F-610	19	13.80
7.5CT	5.0	2,500	3¼	......			F-75	17	9.45
7.5CT	12	2,500	6½	......			F-712	21	16.30
7.5CT	25.0	2,500	12	......			F-725	22	21.75
10CT	4.0	2,500	3¼	FH-104	17	19.05	F-104	17	10.00
10CT	6.5	2,500	5	FH-106	19	26.25	F-106	19	13.80
10CT	10.0	2,500	6½	FH-1010	21	30.95	F-1010	21	16.25
11CT	10.0	2,500	9½	......			F-1110	22	17.35

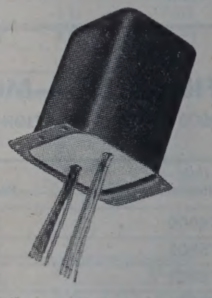


MEETS MIL-T-27 SPECS

H-Type. Steel base cover deep-seal soldered into case. Terminals hermetically sealed. Ceramic bushings. Stud-mounted unit.



S-Type. Steel base cover fitted with phenolic terminal board. Convenient numbered solder lug terminals. Flange-mounted unit.



C-Type. With 10" color-coded stripped and tinned leads brought out through fibre board base cover. Flange-mounted unit.

CASE DIMENSIONS

Case No.	Depth	Width	Height
12	2¼	2⅛	2 11/16
13	2¼	2⅛	2 15/16
14	2½	2⅜	3 1/16
15	2½	2⅜	3 5/16
16	2⅞	2 11/16	3½
17	2⅞	2 11/16	3¾
18	3¼	3	3⅞
19	3¼	3	4¼
20	3 11/16	3 5/16	4 5/16
21	3 11/16	3 5/16	4 11/16
22	4 9/16	4⅛	5 5/16
24	5 5/16	4 13/16	6 1/16

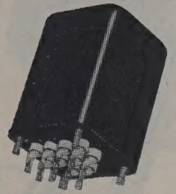
CHICAGO

NEW EQUIPMENT

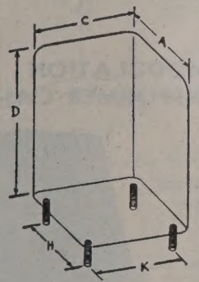
AUDIO TRANSFORMERS

CHICAGO TRANSFORMER DIVISION * ESSEX WIRE CORPORATION

B-TYPE
MOUNTING



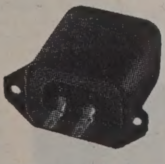
H-TYPE
MOUNTING



H & B TYPE MTG. DIMENSIONS

Case Size	Dimensions in Inches				
	A	C	D	H	K
8	1½	1½	1 15/16	1	1
9	1½	1½	2⅛	1	1
12	2¼	2⅛	2 11/16	1 9/16	1⅜
13	2¼	2⅛	2 15/16	1 9/16	1⅜
14	2½	2⅜	3 1/16	1 13/16	1 11/16
15	2½	2⅜	3 5/16	1 13/16	1 11/16
16	2⅞	2 11/16	3½	2	1⅞
17	2⅞	2 11/16	3¾	2	1⅞
18	3¼	3	3⅞	2⅜	2⅛
19	3¼	3	4¼	2⅜	2⅛
20	3 11/16	3 5/16	4 5/16	2⅝	2⅜
21	3 11/16	3 5/16	4 11/16	2⅝	2⅜
22	4 9/16	4⅛	5 5/16	3⅜	3
24	5 5/16	4 13/16	6 1/16	3⅜	3

HIGH Q CHOKES



For Dynamic Noise Suppression Circuits (S-Type Mounting)

Two efficient reactors, inductance values .8 and 2.4 henrys respectively, are designed for noise suppression circuits, but can be used in any tuned circuit requiring the given inductances. Inductance values accurate within −5% with up to 15 ma. d-c. Minimum Q of 20. Mounted in identical drawn steel cases.

Cat. No.	Inductance	List Price
NSI-1	.8 hy.	$8.10
NSI-2	2.4 hy.	8.10

FULL FREQUENCY RANGE AUDIO TRANSFORMERS

Frequency Response within ±½ db, 30 to 15,000 Cycles

INPUT TRANSFORMERS

H-Type (Cat. No. BIH) and B-Type (Cat. No. BI) Mountings

Application	Impedance Primary—Secondary	Max. Power Level	Hum Shielding	Case Size	Wt. Lbs.	Cat. No.	List Price
Line to Single or P-P Grids	*Pri: 600/150 ohms CT *Sec: 50,000 ohms CT	+15 dbm.	−70 dbm.	13	1½	BIH-1 BI-1	$45.40 23.90
Line to Single or P-P Grids	*Pri: 600/150 ohms CT *Sec: 50,000 ohms CT	+15 dbm.	−90 dbm.	13	1½	BIH-2 BI-2	59.85 31.50
Line bridging to P-P Grids	*Pri: 8,000/6,000 ohms CT *Sec: 50,000 ohms CT	+15 dbm.	−70 dbm.	13	1½	BIH-3 BI-3	47.45 24.95
Line to Line	Pri: 600/150 ohms CT Sec: 600/150 ohms CT	+15 dbm.	−70 dbm.	13	1½	BIH-4 BI-4	43.35 22.80
Line to Line	*Pri: 600/150 ohms CT *Sec: 600/150 ohms CT	+30 dbm.	−90 dbm.	18	3¼	BIH-5 BI-5	61.95 32.60
Interstage: P-P Plates to Sgl. or P-P Grids	*Pri: 20,000 ohms CT *Sec: 50,000 ohms CT	+15 dbm.	−70 dbm.	13	1½	BIH-6 BI-6	45.40 23.90
Low Imped. Mike, Pickup, or Multiple Line to Grid	Pri: 50/150/250/600 *Sec: 50,000 ohms CT	+15 dbm.	−70 dbm.	13	1½	BIH-7 BI-7	47.45 24.95
Single Plate to Push-Pull Grids	Pri: 10,000 ohms *Sec: 50,000 ohms CT	+15 dbm.	−70 dbm.	13	1½	BIH-8 BI-8	45.40 23.90
Single Plate to Push-Pull Grids**	Pri: 10,000 ohms *Sec: 50,000 ohms CT	+15 dbm.	−70 dbm.	18	3¼	BIH-9 BI-9	53.70 28.25

OUTPUT TRANSFORMERS

H-Type (Cat. No. BOH) and B-Type (Cat. No. BO) Mountings

Application	Impedance Primary—Secondary	Max. Power Level	Case Size	Wt. Lbs.	Cat. No.	List Price
Single Plate to Line	†Pri: 15,000 ohms *Sec: 600/150 ohms CT	+15 dbm.	14	2¼	BOH-1 BO-1	$26.80 14.10
P-P Plates to Line	*Pri: 20,000 ohms CT *Sec: 600/150 ohms CT	+30 dbm.	16	3	BOH-2 BO-2	39.20 20.60
P-P Plates to Line	Pri: 5,000 ohms CT *Sec: 600/150 ohms CT	+40 dbm.	20	5¾	BOH-3 BO-3	35.10 18.45
P-P Plates to Line	Pri: 7,500 ohms CT *Sec: 600/150 ohms CT‡	+43 dbm.	20	6	BOH-4 BO-4	37.10 19.55
P-P Plates to Line or Voice Coil	*Pri: 10,000 ohms CT *Sec: 600/16/8 ohms CT and 150/4 ohms	+37 dbm.	18	4	BOH-5 BO-5	49.50 26.05
P-P Plates to Voice Coil	Pri: 7,500 ohms CT Sec: 8/20 ohms‡	+43 dbm.	20	6	BOH-6 BO-6	47.45 24.95
Line to Voice Coil	Pri: 600/150 ohms Sec: 8/20 ohms	+45 dbm.	20	6½	BOH-7 BO-7	45.40 23.90
P-P Parallel Pl. to Line or Voice Coil	Pri: 1500 ohms CT *Sec: 600/16/8 ohms CT and 150/4 ohms	+45 dbm.	21	6½	BOH-8 BO-8	61.95 32.60
P-P Plates to Line or Voice Coil	*Pri: 5000/3000 ohms CT *Sec: 600/16/8 ohms CT and 150/4 ohms	+42 dbm.	20	6	BOH-9 BO-9	45.40 23.90
P-P Low Level Plates to Line	Pri: 20,000 ohms CT *Sec: 600/150 ohms CT	+15 dbm.	13	1½	BOH-10 BO-10	43.35 22.80
P-P Plates to Line or Voice Coil	*Pri: 3000/2500 ohms CT *Sec: 600/16/8 ohms CT and 150/4 ohms	+46 dbm.	22	9½	BO-11	41.45

*Split and balanced windings. †0 to 10 ma. D.C.
‡Has tertiary winding to provide 15% inverse feedback.
**Has D.C. in primary; frequency response ±2 db, 30–15,000 cycles.

DETAILS OF NEW EQUIPMENT LINE MOUNTINGS

H-TYPE MOUNTING—Hermetic sealing meets all MIL-T-27 specifications. Steel base cover is bonded into the case by deep-seal soldering. Terminals are hermetically sealed by unique rubber gasket—ceramic bushing construction. Units are stud mounted.

C-TYPE MOUNTING—Moisture-resistant compound surrounds coil and core. Ten-inch, RMA-color-coded leads, ends stripped and tinned for easy soldering. Flange-mounted drawn steel cases.

S-TYPE MOUNTING—Precision-fitted steel base-covers and terminal boards, plus compound filling, keep moisture out. Solder-lug terminals are clearly identified, easy to use. Drawn steel cases are flange-mounted.

B-TYPE MOUNTING—Steel bases are bonded into the drawn steel cases by deep-seal soldering to make units completely moisture proof. Stud-mounted cases take minimum chassis space. Convenient, compact, pin-type terminals.

BIAS TRANSFORMERS—Combination Plate and Filament—Primary 50-60 Cycles

Primary Volts	High Voltage Secondary AC Volts CT	High Voltage Secondary DC Ma.	Rect. Volts	Fila. Amps.	H-Type Mounting Cat. No.	H-Type Case No.	H-Type List Price	S-Type Mounting Cat. No.	S-Type Case No.	S-Type List Price	C-Type Mounting Cat. No.	C-Type Case No.	C-Type List Price
115	180-160-140-120	150	5.0	3.0	1BH-150	19	$26.80	1BS-150	19	$14.10	1BC-150	18	$8.90
230	180-160-140-120	150	5.0	3.0	2BH-150	19	26.25	2BS-150	19	13.80	2BC-150	18	8.65

CHICAGO PUBLIC ADDRESS RANGE AUDIO TRANSFORMERS

Frequency Response within ±1 db, 50 to 10,000 Cycles

Driver and output transformers in this CHICAGO series are designed for three general power levels to fit a wide range of application. Up-to-date secondary impedances match 600 or 150-ohm lines, 16, 8, and 4-ohm speakers. (16/8/4-ohm taps also suitable for 20/6/3.2-ohm speakers.) Output transformers have tertiary windings for 10% inverse feedback that minimizes distortion and provides extra audio watts without loss of fidelity.

DRIVER TRANSFORMERS

H-Type (Cat. No. PHD), S-Type (Cat. No. PSD) and C-Type (Cat. No. PCD) Mountings

Application	Primary Impedance	Max. D.C. Pri.	Ratio, Pri. to ½ Sec.	Case Size	Wt. Lbs.	Cat. No.	List Price
P-P Plates to P-P Grids	20,000 ohms (Pri. CT)	10 ma.	3:1	14	2¼	PHD-10 PSD-10 PCD-10	$15.00 7.85 5.40
P-P Plates to P-P Grids	20,000 ohms (Pri. CT)	25 ma.	3:1	15	2¼	PHD-25 PSD-25 PCD-25	14.45 7.60 5.10
P-P Plates to P-P Grids	5,000/10,000 ohms (Pri. CT)	100 ma.	5:1	18	4½	PHD-100 PSD-100 PCD-100	24.75 13.00 9.20

OUTPUT TRANSFORMERS

H-Type (Cat. No. PHO), S-Type (Cat. No. PSO) and C-Type (Cat. No. PCO) Mountings

Application	Impedances	Typical Output Tubes	Class	Max. Audio Watts	Max. D.C. Pri. CT	Case Size Wt.	Cat. No.	List Price
P-P Plates to Line or Voice Coil	Primary: 5,000 ohms, CT Secondary: * 600/150/16/8/4 ohms	6B4G, 6L6, 6V6, etc.	A_1 AB	20	120 ma.	20: 6½ lbs.	PHO-80 PSO-80 PCO-80	$30.95 16.30 11.95
P-P Plates to Line or Voice Coil	Primary: 10,000 ohms, CT Secondary: * 600/150/16/8/4 ohms	6V6, 6F6, 6K6, etc.	AB, AB_1	15	200 ma.	19: 5 lbs.	PHO-150 PSO-150 PCO-150	27.85 14.65 10.30
P-P Plates to Line or Voice Coil	Primary: 6,000 ohms, CT Secondary: * 600/150/16/8/4 ohms	Two 6L6's, Four 6V6's, or similar	B, AB_2†	30	250 ma.	22: 9 lbs.	PHO-200 PSO-200 PCO-200	34.60 17.90 13.55

*Has tertiary winding to provide 10% inverse feedback.
†For low distortion, use fixed bias.

COMMUNICATIONS RANGE AUDIO TRANSFORMERS

Frequency Response within ±1 db, 200 to 3,500 Cycles

These transformers are specifically designed for use in receiving and transmitting equipment such as amateur, police, railroad, and aircraft types, where clear voice reproduction is desired.

INPUT TRANSFORMERS

H-Type (Cat. No. CIH), S-Type (Cat. No. CIS) and C-Type (Cat. No. CIC) Mountings

Application	Impedances: Primary—Secondary	Case Size	Wt. Lbs.	Cat. No.	List Price
Low Level Line to Single or Push-Pull Grids	Pri: 600/150 ohms CT *Sec: 100,000 ohms CT	9	¾	CIH-1 CIS-1 CIC-1	$21.65 11.40 8.15
Low Level S. B. or D. B. Mike to Sgl. or P-P Grids	Pri: 125/50 ohms @ 80 ma. Sec. 125,000 ohms CT	9	¾	CIH-2 CIS-2 CIC-2	12.35 6.50 4.00

*Split and balanced windings: may be used singly or push:pull.

OUTPUT TRANSFORMERS

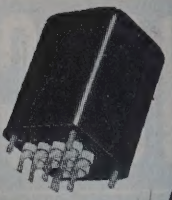
H-Type (Cat. No. COH), S-Type (Cat. No. COS) and C-Type (Cat. No. COC) Mountings

Application	Impedances: Pri.—Sec.	Typical Audio Tubes	Pri. Class	Max. Case Watts	Max. Pri. D.C.	Case Size	Wt. Lbs.	Cat. No.	List Price
Sgl. P. to Line or Speaker	Pri.: 5000 ohms Sec. ohms: 600/150/16/8/4	6L6, 6V6, 25A6	A	5	55 ma.	14	2¼	COH-1 COS-1 COC-1	$15.45 8.10 5.10
Sgl. Pl. to Line or Speaker	Pri: 8000 ohms Sec. ohms: 600/150/16/8/4	6F6, 6V6, 6K6	A	5	55 ma.	14	2¼	COH-2 COS-2 COC-2	16.00 8.35 5.40

DRIVER TRANSFORMER

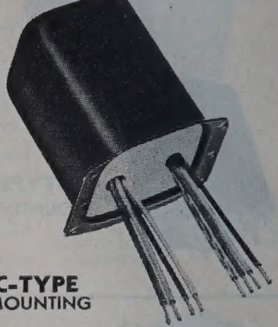
H-Type (Cat. No. CDH), S-Type (Cat. No. CDS) and C-Type (Cat. No. CDC) Mountings

Application	Primary Impedance	Max. D.C. Pri. CT	Ratio, Pri. to ½ Sec.	Case Size	Wt. Lbs.	Cat. No.	List Price
P-P Plates (2A3's, etc.) to P-P Grids	5,000 ohms (Pri. CT)	100 ma.	3:1	17	3½	CDH-1 CDS-1 CDC-1	$17.00 8.90 6.20



H-TYPE MOUNTING

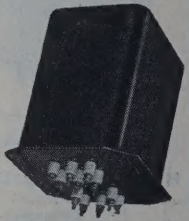
S-TYPE MOUNTING



C-TYPE MOUNTING

MODULATION TRANSFORMER CMS-1

for Communications Transmitters



Freq. Range, 200 to 3,500 Cycles

Chicago's No. CMS-1 Modulation Transformer and matching Driver Transformer No. CDS-1, at left, are ideally suited for use in ham and commerical speech transmitters. No. CMS-1 will deliver 250-350 watts of Class B audio power from P-P 203A's, 211's, 805's, 75TL's, etc. to a Class C load with response variations not exceeding ±1db. over the stated frequency range. Primary impedances, 9000/6700 ohms ct; secondary, 8000/6000/4000 ohms. Case size 26. Wt., 22 lbs.

No. CMS-1.........List Price, $43.45

MODULATION TRANSFORMER CMS-2

Delivers 500-750 watts of Class B audio power from 810's, 822's, etc. to a Class C load. Frequency response is within ±1 db. over the stated voice range. Primary impedance, 12,000 ohms CT; secondary, 6,250 ohms. FS-Type mounting, size 65 (see page N-79). Wt. 43 lbs.

No. CMS-2.........List Price, $81.50

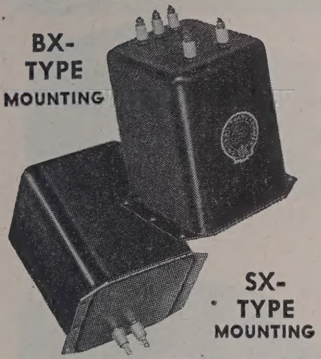
CHICAGO

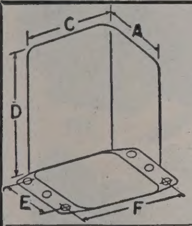
NEW EQUIPMENT

TRANSFORMERS and REACTORS

for Broadcast, Amateur, and Industrial Application

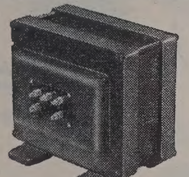
CHICAGO TRANSFORMER DIVISION * ESSEX WIRE CORPORATION



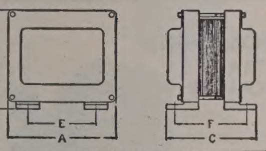


CASE DIMENSIONS FOR BX-, S- & SX-TYPE MOUNTINGS

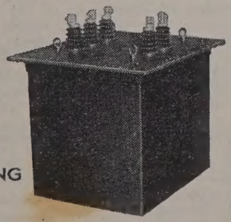
Case Size	Dimensions in Inches A	C	D	E	F
22	4 9/16	4⅛	5 5/16	2½	4¾
24	5 5/16	4 13/16	6 1/16	3½	5⅜
26	6⅛	5¼	7 1/16	4¼	6
28	7 1/16	6⅛	8 1/16	5	7



FS TYPE MOUNTING



Size	Dimensions in Inches A	D	E	F	C
60	7½	7	4¾	5½	6 5/16
61	7½	7	4¾	5 5/16	6⅞
62	7½	7	4¾	6¼	7⅛
63	7½	7	4¾	6 11/16	7½
65	7½	7	4¾	6⅞	7 13/16
71	8⅞	8½	5½	6½	8⅛
81	11½	10½	7½	8¼	10¼
84	11½	10½	7½	11 13/16	13 13/16



WC-TYPE MOUNTING

Overall Case Dimensions:
H—31½" W—26½" D—23½"

LARGE CAPACITY TRANSFORMERS AND REACTORS
For Broadcast, Communications and Industrial Use

DRIVER TRANSFORMERS

Recommended Application: In:	Tubes:	Ratio Pri./½ Sec.	Mtg. Type	Case Size	Wt. Lbs.	Cat. No.	List Price
250-Watt Transmitter	From two 2A3's, 6B4's, or similar P-P Plates to Class B 838's, 805's, 203-A's, etc.	3.5:1	B*	20	6½	BD-1	$32.60
1-KW Transmitter	From four 2A3's, 6B4's, or similar P-P Plates to two 833-A's or similar P-P Grids	3:1	†	24	12¼	BD-2	67.35
5-KW Transmitter	From four 845's, two 152-TL's or similar P-P Plates to 891-R's or similar P-P Grids	3.5:1	BX	26	24	BD-3	173.85

†Similar to SX-Type mounting, but with screw terminals on a terminal board.
*B-Type mounting, but with screw terminals. See page N-77 for dimensions.

MODULATION TRANSFORMERS

Recommended Application In:	With:	Impedances (Pri. Plate to Plate)	Modulator Tubes	Mtg. Type	Size	Wt. Lbs.	Cat. No.	List Price
250-Watt Transmitter	Driver Transformer #BD-1	Pri: 7500 ohms CT Sec: 5000 ohms	203-A, 838 805, etc.	BX	26	25	BM-1	$72.80
1-KW Transmitter	Driver Transformer #BD-2	Pri: 9000 ohms CT Sec: 7500 ohms	833-A, etc.	FS	84	175	BM-2	423.85
5-KW Transmitter	Driver Transformer #BD-2	Pri: 13500 ohms CT Sec: 10250 ohms	891-R, etc.	WC		1100	BM-3	777.00 (net)

MODULATION REACTORS

Recommended Application: In:	With:	Induct-ance	D.C. Ma.	Mtg. Type	Size	Wt. Lbs.	Cat. No.	List Price
250-Watt Transmitter	Mod. Transformer #BM-1	65 hy.	250	BX	28	41	BR-1	$105.42
1-KW Transmitter	Mod. Transformer #BM-2	100 hy.	500	FS	81	165	BR-2	201.06
5-KW Transmitter	Mod. Transformer #BM-3	120 hy.	900	WC		1100	BR-3	652.08(net)

PLATE TRANSFORMERS

Primary: Volts	Max. VA.	Secondary: A.C. Load Volts	D.C. Volts after Filter	D.C. Ma.	Mtg. Size	Mtg. Type	Wt. Lbs.	Cat. No.	List Price
115-230	185	675-0-675 575-0-575	500 400	250	22	S	12	P-45	$19.55
115-230	250	900-0-900 735-0-735	750 600	250	22	S	13½	P-67	23.35
115-230	310	1150-0-1150 870-0-870	1000 750	250	60	FS	37	P-107	54.35
115-230	360	1425-0-1425* 600-0-600	1250 400	150 200	24	S	26	P-1240	35.30
115-230	550	1710-0-1710 1430-0-1430	1500 1250	300	63	FS	43	P-1512	70.65
115-230	915	2820-0-2820 2260-0-2260	2500 2000	300	71	FS	71	P-2520	108.70
115-230	1850	3450-0-3450 2850-0-2850	3000 2500	500	81	FS	137	P-3025	190.20

*Both secondaries may be rectified simultaneously.

FILTER REACTORS

Inductance in Henrys	Max. D.C. Ma.	D.C. Resist-ance, Ohms	Insulation Test Volts	Mtg. Type	Mtg. Size	Wt. Lbs.	Cat. No.	List Price
10	500	40	9,000	FS	62	35	R-105	$38.00
10	300	40	7,500	SX	26	22	R-103	21.70
6	700	35	10,000	FS	61	35	R-67	43.45
6	500	35	9,000	FS	60	35	R-65	35.30
6	300	35	7,500	SX	24	16½	R-63	18.45

Splatter Chokes for High Level "Clipper" Filters

Can withstand high peak voltages. Has tapped windings to cover an inductance from .02 to 1.5 henries at relatively constant Q. Eliminates splatter, caused by heavy modulation; limits band width to 3,000 cycles, effectively increases "get through" ability of phone signals, and prevents negative peak clipping.

Type	D.C. Ma.	Insulation Volts	Inductance in Henries	Mounting Type	Size	List
SR-300	300	7,500	.02 to 1.5 Hy	BX	22	$18.45
SR-500	500	10,000	.02 to 1.5 Hy	BX	24	23.90

Low Pass Filter No. LPF-1

For attenuating frequencies above 3,000 cycles in low level speech amplifiers. Operates out of a 15,000 ohm source, *e.g.*, the plate of 6C5, 6J5, etc. when its 60,000 ohm secondary is connected to an equal impedance output. Operates at signal levels up to −8 db. Complete with operating instructions. S type mtg. Case size 13. (See pg. N-76).

List Price......................$13.55

CHICAGO

REPLACEMENT TYPE

TRANSFORMERS and REACTORS

Premium Quality—Yet They Cost No More

CHICAGO TRANSFORMER DIVISION * ESSEX WIRE CORPORATION

POWER TRANSFORMERS—(Pri: 117 volts, 50/60 cycles)

6.3-VOLT FILAMENTS—VERTICAL SHIELD MOUNTING (V)

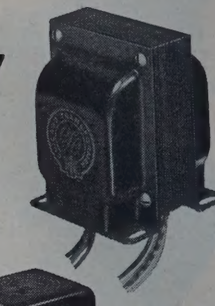
Catalog No.	High Voltage Secondary A.C. Volts	High Voltage Secondary D.C. Ma.	Rectifier Filament Volts	Rectifier Filament Amps.	Other Filaments Volts	Other Filaments Amps.	Dimensions H	Dimensions W	Dimensions D	Wt. Lbs.	List Price
PV-10S	250-0-250	10	6.3	1.2	6.3	0.6	2¼	2⅞	2⅛	1	$ 8.80
PV-20S	250-0-250	20	6.3	1.2	6.3	0.6	2⅝	3 5/16	2¼	1½	8.60
PV-40	225-0-225	40	5	2	6.3 C-T	1	3⅛	2½	2¼	2¼	7.15
PV-50	325-0-325	50	5	3	6.3 C-T	2	3¾	2⅞	3	3¾	8.05
PV-50A	117	50			6.3	1.75	2⅝	3 5/16	2¼	1½	4.15
PV-60	250-0-250	60	5	2	6.3 C-T	2	3⅛	2½	3	3	8.60
PV-70	350-0-350	70	5	3	6.3 C-T	3	4⅛	3⅛	3⅛	4½	9.25
PV-70A	300-0-300	70	5	3	6.3 C-T	3	3¾	2⅞	3⅛	4	9.15
PV-90	350-0-350	90	5	3	6.3 C-T	3.5	4⅛	3⅛	3½	5¼	10.30
PV-100	350-0-350	100	5	3	6.3 C-T	5	4⅞	3¾	3¾	7½	10.65
PV-120	300-0-300	120	5	3	6.3 C-T	5	4⅛	3⅛	3¾	5¾	10.85
PV-120A	350-0-350	120	5	3	6.3 C-T	4.5	4⅛	3⅛	3 7/16	6	11.95
PV-145	372-0-372	145	5	3	6.3 C-T	5	4⅞	3¾	4	7½	12.85
PV-200	400-0-400	200	5	4	6.3 C-T	5.5	4⅞	3¾	4¼	9	15.00

6.3-VOLT FILAMENTS—HORIZONTAL SHIELD MOUNTING (H)

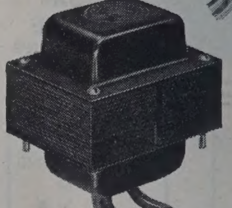
Catalog No.	High Voltage Secondary A.C. Volts	High Voltage Secondary D.C. Ma.	Rectifier Filament Volts	Rectifier Filament Amps.	Other Filaments Volts	Other Filaments Amps.	Dimensions H	Dimensions W	Dimensions D	Wt. Lbs.	List Price
PH-20S	250-0-250	20	6.3	1.2	6.3	0.6	2⅜	2⅝	2 3/16	1	$9.50
PH-40	250-0-250	40	5	2	6.3 C-T	1.6	3	3	2½	2½	7.40
PH-50	250-0-250	50	5	2	6.3 C-T	2	3½	3	2½	3	7.50
PH-50A	280-0-280	50	5	3	6.3 6.3	1.5 .6	3¼	3	2½	3½	7.70
PH-70	300-0-300	70	5	3	6.3 C-T	3	3½	3⅜	2 13/16	4	7.80
PH-70B	350-0-350	70	5	3	6.3 C-T	2.5	3¼	3	2½	4½	7.95
PH-90	350-0-350	90	5	3	6.3 C-T	3.5	3¾	3¾	3⅛	5¼	8.35
PH-120	300-0-300	120	5	3	6.3 C-T	5	3⅞	3¾	3⅛	5¾	9.25
PH-120B	350-0-350	120	5	3	6.3 C-T	4.5	3⅞	4⅛	3½	6	9.25
PH-145	372-0-372	145	5	3	6.3 C-T	5	3⅞	4½	3¾	7½	10.85
PH-200	350-0-350	200	5	3	6.3 C-T	6	4	4½	3¾	8	13.30

2.5-VOLT FILAMENTS—HORIZONTAL SHIELD MOUNTING (H)

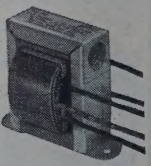
Catalog No.	High Voltage Secondary A.C. Volts	High Voltage Secondary D.C. Ma.	Rectifier Filament Volts	Rectifier Filament Amps.	Other Filaments Volts	Other Filaments Amps.	Dimensions H	Dimensions W	Dimensions D	Wt. Lbs.	List Price
PH-70A	325-0-325	70	5	3	2.5 C-T	9	3⅝	3¾	3⅛	4½	$ 8.95
PH-120A	325-0-325	120	5	3	2.5 C-T 2.5 C-T	12.5 3.5	3⅞	4⅛	3½	6	11.40



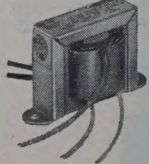
V



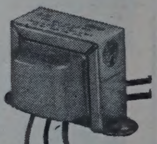
H



U



L



LS

FILAMENT TRANSFORMERS

Catalog No.	Secondary Volts	Secondary Amps.	Primary Volts	Primary Cycles	Insulation Test Volts	Mounting Type	Dimensions H	Dimensions W	Dimensions D	Wt. Lbs.	List Price
FO-26	2.5 C-T	6	107/117	60	2000	U	2⅜	2⅞	1⅞	1	$3.80
FO-210H	2.5 C-T	10	107/117	60	7500	U	3	3⅝	2½	2½	6.15
FO-53	5.0 C-T	3	107/117	60	2000	U	2⅜	2⅛	2	1	4.15
FO-56	5.0 C-T	6	107/117	60	2000	U	2⅝	3 5/16	2	2	5.40
FO-513	5.0 C-T	13	107/117	60	2000	U*	3⅜	2 13/16	2½	4	6.65
FV-520H	5.0 C-T	20	117	50/60	9000	V	4½	3¾	3⅝	7	14.55
FV-530	5.0 C-T	30	117	50/60	2000	V	4½	3¾	4	6	14.05
FO-615	6.3 C-T	1.5	107/117	60	2000	U	1⅝	2⅞	1¾	¾	2.95
FO-63	6.3 C-T	3	107/117	60	2000	U	2⅜	2⅞	2	1¼	4.15
FO-66	6.3 C-T	6	107/117	60	2000	U	2¼	4¾	2½	2	5.65
FO-610	6.3 C-T	10	107/117	60	2000	U*	3⅜	2 13/16	2¾	3¼	7.05
FO-75	7.5 C-T	5	107/117	60	2000	U	3	3⅝	2½	2¼	5.15
FO-105	10 C-T	5	107/117	60	2000	U	3 1/16	2½	2½	3	7.15
FV-1010	10 C-T	10	117	50/60	2000	V	3¾	3⅛	3 9/16	5	9.35
FO-122	12.6 C-T	2	107/117	60	2000	U	2 3/16	3 11/16	2	1½	4.65

*Universal mounting frames.

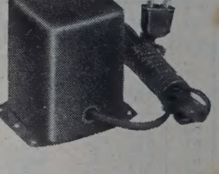
FILTER REACTORS

Catalog No.	Inductance in Henries	Maximum D.C. Current Ma.	D.C. Resistance in Ohms	Insulation Test Volts	Mtg. Type	Dimensions H	Dimensions W	Dimensions D	Wt. Lbs.	List Price
R-1230	12	30	400	2000	L	1⅜	2⅜	1⅜	½	$1.65
R-1240	12	40	400	2000	L	1⅝	2⅞	1⅜	¾	1.70
R-650	6	50	300	1500	L	1⅝	2⅞	1⅜	¾	1.75
R-1365	13	65	500	2000	L	2¼	3¾	2¼	1½	2.70
R-885	8	85	250	2000	L	2¼	3¾	2¼	1½	2.95
R-23110	23	110	250	2000	V	3⅛	2½	2¾	2½	4.15
R-8120	8	120	350	1500	L	2½	4	2	2½	4.25
R-7150	7.5	150	160	2000	V	3⅛	2½	3⅛	2½	5.45
R-7200	8	200	125	3000	V	3⅜	2⅞	3⅛	3¾	6.85
R-8300	8	300	60	3500	V	4½	3¾	4	8	12.35

DRIVER TRANSFORMERS

Cat. No.	Typical Applications: From Driver Tubes	Typical Applications: To Output Tubes	Class	Ratio Primary: ½ Sec.	Max. Pri. D.C. Ma.	Mtg. Type	Dimensions H	Dimensions W	Dimensions D	Wt. Lbs.	List Price
D-15	Single 30	P-P 19 or 30's	B	2.5-1	15	L	1⅝	2⅞	1½	¾	$2.80
D-30	6C5, 6R7, or Triode 6F6	P-P 6L6's	AB	3:1	30	LS	2	3¼	2⅛	1	4.00
D-35	Triode Plate	P-P Grids		1:1, 1.5:1 or 2:1	35	L	2	3¼	1⅞	1	4.30
D-40	6C5, 6R7, or Triode 6F6	P-P 6L6's	AB	3:1	40	V	3⅛	2½	2½	2½	5.95

ISOLATION TRANSFORMERS



CHICAGO Isolation Transformers are designed for a dual purpose: (1) To supply 115 volts isolated from a line of above/below normal, or normal, voltage—primary switch sets for 125/115/105 volts, 50/60 cycles; or (2) For use in servicing to eliminate shock hazard, by isolating chassis ground from line ground (particularly important on "hot" AC-DC television sets). Also provide 125 and 105 volts on the secondary for locating doubtful tubes, etc.

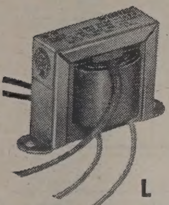
Cat. No.	Capacity	List Price
IS-50	50 VA	$ 9.75
IS-100	100 VA	15.20
IS-150	150 VA	22.80
IS-250	250 VA	38.00

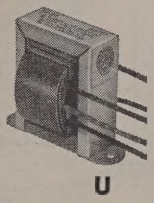
CHICAGO

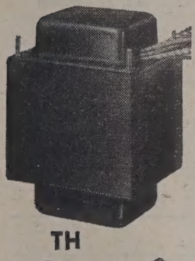
REPLACEMENT TYPE

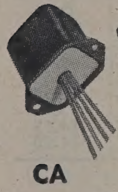
TRANSFORMERS

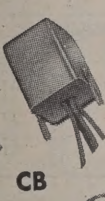
Premium Quality—
Yet They Cost No More

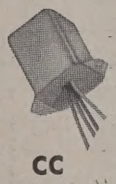

L

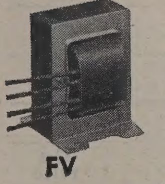

U

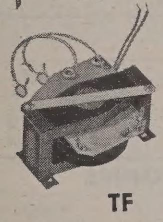

TH

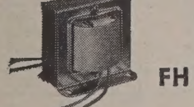

CA


CB


CC


FV


TF


FH

Vertical Blocking Oscillator Transformers

No. TBO-1. Creates 60-cycle vertical sweep voltages. Pri. Induc.: 1.15 hy. @ 3 v., 1000 cycles. Ratio (Pri:Sec) 1:4.2 Type CC mounting. Wt.. 1 lb.
List Price, $2.95

No. TBO-2. Same as TBO-1, but in Type CB mounting. Wt. ½ lb.
List Price, $2.70

No. TBO-3. Same function as TBO-1. Pri. Induc.: 3 hy. @ 3 v., 60 cycles. Type CA mtg. Wt., 1 lb.
List Price, $3.25

TV Filter Reactors (Type L)

Low inductance chokes for use in TV power supplies. 2⅝″H. x 4″ x 2″. Mtg. 3 9/16″.

Type TR-3300. Inductance 2.8 henries @ 300 ma. D.C. D.C. resistance 60 ohms. Insulation tests at 1250 V. Ship. Wt., 2½ lbs. . . . . List, $4.25

Type TR-4200. Inductance 3.7 henries @ 200 ma. D.C. D.C. resistance 60 ohms. Insulation tests at 1250 V. Ship. Wt., 2½ lbs. . . . . List, $4.25

OUTPUT TRANSFORMERS

SINGLE PLATE TO VOICE COIL

Catalog No.	Application Typical Output Tubes	Ohms Impedance Pri.	Sec.	Max. Primary D.C.Ma.	Max. Audio Watts	Mtg. Type	Dimensions H	W	D	Wt. Lbs.	List Price
RO-2	25L6 35A5, 2A3, 6B4	2000	3 to 6	50	4	L	1⅜	2⅜	1¼	½	$1.85
RO-3	25L6 (10-ohm tap on primary)	2000	3 to 6	50	4	L	3⅜	2⅜	1⅜	½	2.25
RO-6	12A5, 25A6, 45, 71A	4000	4-8-15	40	10	L	2	3¼	1¾	1	2.80
RO-8	2A5, 25A6, 43	4500	3 to 6	35	5	L	1⅜	2⅜	1¼	½	2.00
RO-9	6V6, 25A7G, 30, 31, 50	5000	4-8-15	50	8	L	2	3¼	1¾	1	2.80
RO-11	1S4	6000	3 to 6	5	2	L	1⅛	2⅛	1⅛	⅜	1.70
RO-13	7B5, 18, 31, 33, 42, 46, 47	7000	3 to 6	35	5	L	1⅜	2⅜	1¼	½	1.85
RO-16	1C5G, 1G5G, 1J6G, 6A4, 6A6	10000	3 to 6	30	5	L	1⅜	2⅜	1¼	½	1.95
RO-18	1A5G, 1E7G, 1N6G, 6V7G	25000	3 to 6	10	5	L	1⅝	2⅞	1⅜	⅝	1.80

PUSH-PULL PLATES TO VOICE COIL

RO-110	P-P 2A5, 6AC5G, 6A6, 6N7, 45	10000	4-8-15	80	12	U	2⅜	2⅞	1¾	1	$3.25
RO-111	P-P 6B5, 6K6, 6N6G, 7B5, 31	14000	4-8-15	80	15	U	2⅜	2⅞	1¾	1	3.45
RO-113	P-P 1A5G, 1E7G, 1N6G, 6V7G	50000	3 to 6	20	8	L	1⅝	2⅞	1½	⅝	3.15

UNIVERSAL TYPE—SINGLE PLATE TO VOICE COIL

Catalog No.	Range of Ohms Impedance Primary	Secondary	Primary D.C. Ma.	Max. Audio Watts	Mtg. Type	Dimensions H	W	D	Wt. Lbs.	List Price
RO-201	4000, 7000, or 100000	3 to 6	40	8	L	1⅝	2⅞	1½	⅝	$2.80

UNIVERSAL TYPE—SINGLE OR PUSH-PULL PLATES TO VOICE COIL

RO-301	2500 to 14000	2, 4, 6, 8, 15, etc.	30	4	L	1⅜	2⅜	1⅝	½	$2.85
RO-302	2500 to 15000	2, 4, 6, 8, 15	50	4	L	1⅜	2⅜	1⅝	⅝	2.85
RO-303	2500 to 14000	2, 4, 6, 8, 15, etc.	40	8	L	1⅝	2⅞	1⅞	⅝	2.95
RO-304	2500 to 13000	2, 4, 6, 8, 15	70	8	U	2	2½	1⅞	13/16	3.25
RO-305	2500 to 14000	2, 4, 6, 8, 15, etc.	60	12	L	2	3¼	2⅜	1	4.45
RO-307	2500 to 14000	2, 4, 6, 8, 15, etc.	50	10	U	2⅜	2⅞	2¼	1	3.45

UNIVERSAL TYPE—PUSH-PULL PLATES (ONLY) TO VOICE COIL

RO-401	2500 to 13000	2, 4, 6, 8, 15	70	15	U	2 5/16	2¾	2⅜	1½	$4.55

SPEAKER MATCHING TRANSFORMERS

SM-1	Sgl. Tube—500–1000–1500–2000	6	80	12	L	2⅜	2⅞	1⅞	1	$4.05
SM-2	Sgl. Tube—2500–4000–6000–8000	6	80	12	L	2⅜	2⅞	1⅞	1	4.35
SM-3	Sgl. Tube—500–1000–1500–2000	6	60	5	L	1⅞	2⅜	1½	¾	2.50

CHICAGO EXACT REPLACEMENT TELEVISION TRANSFORMERS

POWER TRANSFORMERS (Primary 117 volts, 60 cycles)

Catalog No.	HV Secondary A.C. Volts	D.C. Ma.	Filaments Rectifier	Others	Mtg. Type	Wt. Lbs.	List Price
TP-210	233-0-233	90	5 v. 2 a.	6.3 v. 5.3 a.	TH	4½	$ 9.50
TP-350	356-0-356 2380	200 2	5 v. 3 a.	6.4 v. 8.7 a.; 6.4 v. 0.6 a. 1.25 v. 0.3 a.	C (in case)	15	38.00
TP-355	360-0-360	250	5 v. 3 a.	5 v. 2 a.; 6.4 v. 8 a.; 6.4 v. 0.6 a.	TH	13	20.10
TP-360	365-0-365	260	5 v. 6 a.	6.3 v. 9 a.; 6.3 v. 1.2 a.	TH	13½	20.10
TP-365	362-0-362	295	5 v. 6 a.	12.6 v. CT 5 a.; 5 v. 2 a.	TH	17	28.25
TP-370	348-0-348	215	5 v. 3 a.	6.3 v. 9 a.; 6.3 v. 1.2 a.	TH	12	20.10
TP-375	354-0-354 163-0-163	185 65	5 v. 3 a.	6.45 v. 12 a.	TH	11	18.45
TP-380	380-0-380	180	5 v. 3 a.	6.3 v. 9 a.	TH	9½	16.30
TP-383	383-0-383	230	5 v. 3 a.	5 v. 2 a.; 6.3 v. 9. a.	TH	13½	21.75
TP-390	400-330-0 330-400	180	5 v. 3 a.	5 v. 3 a.	V Vert. Shield	11	19.55
TP-392	383-0-383	230	5 v. 3 a.	5 v. 2 a.; 6.45 v. 7.4 a.; 6.3 v. 1.6 a.	TH	13¼	21.75
TP-393	366-0-366	270	5 v. 6 a.	6.7 v. 4.5 a.	TH	10½	19.00
TP-395	360-0-360	260	5 v. 6 a.	5 v. 2 a.; 6.3 v. 8.85 a.	TH	13¼	22.80
TP-400	374-0-374	205	5 v. 3 a.	5 v. 2 a.; 6.3 v. 5.6 a.	TH	9	16.30
TP-405	350-0-350	270	5 v. 6 a.	5 v. 2 a.; 6.6 v. 7.8 a.; 6.3 v. 1.6 a.	TH	13¼	22.80
TP-409	360-0-360	240	5 v. 6 a.	6.5 v. 9.3 a.	TH	11½	19.00
TP-410	385-0-385	240	5 v. 3 a.	5 v. 2 a.; 6.3 v. 8.6 a.	TH	12	20.65
TP-450	364-0-364 229-0-229	195 105	5 v. 3 a. 5 v. 2 a.	5 v. 2 a.; 6.3 v. 8.25 a. 6.3 v. 0. 6 a.	TH	12	22.50

Vertical Scanning Output Transformers

No. TSO-1.	Type FV	List, $5.65
No. TSO-2.	Type FH	List, 5.10
No. TSO-3.	Type FV	List, 5.40
No. TSO-4.	Type FV	List, 4.55
No. TSO-5.	Type L	List, 3.80

Horizontal Deflection Output and H-V Transformers (Type TF)

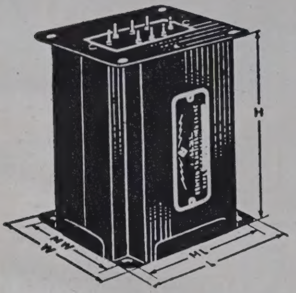
No. TFB-1.	7 and 10-inch tubes . . .	List, $ 7.60
No. TFB-2.	10-inch tubes	List, 7.60
No. TFB-3.	12-inch tubes	List, 10.30
No. TFB-4.	16-inch tubes; has filament windings to supply 2 rectifiers.	List, 10.30

INTERSTAGE TRANSFORMERS

Cat. No.	Application	Class	Ohms Impedance Pri.	Sec.	Max. Primary D.C.Ma	Ratio Sec.: Pri.	Mtg. Type	Dimensions H	W	D	Wt. Lbs.	List Price
IN-10	S. Pl. to P-P Gds.	A	10000	160,000	10	4-1	L	2	3¼	1¾	1	$3.45
IN-11	S. Pl. to P-P Gds.	A	10000	122,500	10	3.5:1	L	1⅝	2⅞	1½	⅝	2.80
IN-13	S. Pl. to P-P Gds.	A	10000	90,000	10	3:1	L	2	3¼	1⅞	1	3.45
IN-14	S. Pl. to P-P Gds.	A	10000	90,000	10	3:1	L	1⅝	2⅞	1½	⅝	3.15
IN-15	P-P Pls.-P-P Gds.	A	10000	* 90,000	10	3:1	L	2	3¼	1⅞	1	4.40
IN-16	Sgl. or P-P Input & Output	A				1:1, 3:1, or 6:1	L	2	3¼	2¼	1½	4.60

*Universal type: center-tapped primary, split secondary.

Kenyon "T" LINE TRANSFORMERS



DIMENSIONS OF "T" LINE TRANSFORMERS

MOUNTING DIMENSIONS			OVERALL DIMENSIONS		
Case No.	ML	MW	Length (L)	Width (W)	Height (H)
1A	2-1/32	1-9/16	2-7/16	2	2⅞
2A	2⅛	1-13/16	2¾	2⅜	3-3/16
3A	2-7/16	1-15/16	3-1/16	2-9/16	3⅝
4A	3⅞	2-7/16	4½	3	3⅞
5A	4-5/16	3-3/16	5	3⅞	5
5½A	4-5/16	3-27/32	5	4½	5
6A	4-5/16	4½	5	5⅛	5
7A	5½	4-5/16	6-5/16	5-3/16	6⅜
8A	5¾	4-13/16	6-9/16	5-11/16	7⅛
9A	6-15/16	5¾	7¾	6⅝	7-3/16
10A	8⅝	7-11/32	9½	8¼	10⅝

LOW IMPEDANCE SOURCE TO GRID TRANSFORMERS

Type No.	From	Primary Ohms	Secondary Ohms	Case No.	Weight lbs.	Weight ozs.	List Price
T-2 (Hum bucking type)	Any line	500-333-250-200-125-50	80,000 Single Grid	1A	1	1	**$11.75**
T-3 (Hum bucking type)	Any line	500-333-250-200-125-50	80,000 P.P. Grids	1A	1	1	**12.10**
T-6 (Multiple Shielded)	Any line	500-333-250-200-125-50	20,000 Single Grid	1A	1		**15.95**

LINE-TRANSFORMERS — LINE TO LINE AND LINE TO VOICE COIL

Type No.	Primary Ohms	Secondary Ohms	Maximum Level	Case No.	Weight lbs.	Weight ozs.	List Price
T-26 (Hum bucking type)	500-333-250-200-125-50	500-333-250-200-125-50	+ 24 D.B.	1A	1	1	**$10.75**
T-28	500-200	15-8-4	30 watts	4A	5	10	**17.80**

DRIVER TRANSFORMERS

Type No.	Primary to Match	Class AB or Class B Tubes	Ratio (pri. to ½ Sec.)	Case No.	Weight lbs.	Weight ozs.	List Price
T-251	Single 53, 6A6, 6N7, 56, 6C5	53, 6A6, 6N7	2.3:1	2A	1	14	**$ 9.75**
T-252	Single 30, 49, 89	19, 30's, 49's	1.7:1	1A		13	**8.40**
T-255	P.P. 56, 6C5, 53, 6N7	6L6's	2.9:1	2A	1	14	**10.55**
T-271	P.P. 45's, 2A3's, 6F6's	6L6's, 809's, TZ40's	3.7:1	3A	2	13	**13.65**
T-264	7 Watts	Any Line or Single or Push		3A	2	12	**14.55**
T-263	18 Watts	Pull Plates to Class B Grids		4A	5	12	**21.80**

PREAMPLIFIER OUTPUT TRANSFORMERS

Type No.	From	Secondary Ohms	Case No.	Weight lbs.	Weight ozs.	List Price
T-101	Single 56, 76, 6C5	200-500	1A	1	4	**$ 8.35**
T-102	P.P. 56, 76, 6C5	200-500	1A	1	4	**8.90**

OUTPUT TRANSFORMERS TO 500-200 OR 15-8-4 OHMS

Type No.	From	Primary Ohms	Case No.	Weight lbs.	Weight ozs.	List Price
T-104	Single 2A5, 6F6, 42, 47, 89	7,000	2A	1	14	**$11.20**
T-105	Class "A," P.P. 2A5's, 6F6's, 42's, 47's, 89's	14,000	2A	2		**12.15**
T-301	Class "A," P.P. 6L6's, Class AB 45's, 2A3's	5,000 or 3,000	4A	4	5	**17.95**

Type No.			Case No.	Weight lbs.	Weight ozs.	List Price
T-108	Will match any set of Push-Pull or Push-Pull Parallel or a single plate to 500-200 or speaker voice-coils. Low impedance connection for speaker voice coils range from .5 to 25 ohms.	15 watts	3A	2	13	**$13.80**
T-109		30 watts	4A	5	2	**19.40**

KEN-O-TAP MODULATION TRANSFORMERS

Type No.	Audio Watts	Class C. W. Sec.	Max. Pri. D.C.	Max. Sec. D.C.	Max D.C. Voltage	Primary Range Ohms	Secondary Range Ohms	Case No.	Weight lbs.	Weight ozs.	List Price
T-489	15	30	120	120	600	2000-20000	200-20000	3A	2	13	**$13.15**
T-493	40	80	250	250	750	2000-20000	200-20000	4A	5	10	**19.10**
T-494	75	150	250	300	1250	2000-20000	200-20000	5A	9		**25.95**
T-441	125	250	250	250	1500	2000-20000	200-20000	6A	15	8	**36.05**
T-496	300	600	250	300	2500	500-18000	200-19000	8A	26	4	**80.60**
T-442	600	1200	400	400	3000	500-18000	200-19000	9A	45		**90.10**

FILAMENT TRANSFORMERS

Type No.	SECONDARY RATING	Case No.	Weight lbs.	Weight ozs.	List Price
T-365	10 V.-4 A. CT. 5000 V. Test	3A	2	13	**$11.55**
T-361	10 V.-8 A. CT. 5000 V. Test	4A	5	10	**18.00**
T-384	10, 10.5, 11 V.-5 A. CT. 2000 V. Test	4A	5		**16.75**
T-386	6.3 V.-3 A. CT. 2000 V. Test 5 V.-4 A. CT. 2000 V. Test	3A	2	13	**13.15**
T-368	6.3 V.-4 A. CT. 2000 V. Test 6.3 V.-4 A. CT. 2000 V. Test	4A	4	11	**17.55**
T-376	5 V.-3 A. 2000 V. Test 6.3 V.-4 A. CT. 2000 V. Test 6.3 V.-4 A. CT. 2000 V. Test	4A	5	10	**18.10**
T-377	5 V.-3 A. 2000 V. Test 5 V.-6 A. 2000 V. Test 6.3 V.-1 A. CT. 2000 V. Test 6.3 V.5 A. CT. 2000 V. Test 6.3 V.5 A. CT. 2000 V. Test	5A	10	1	**27.10**

KENYON "T" LINE TRANSFORMERS

PLATE TRANSFORMERS DESIGNED FOR BOTH CONTINUOUS AND INTERMITTENT DUTY

Type No.	Primary Conn.	Volts Secondary No. 1 D.C.	Volts Secondary No. 1 A.C.	55°C. Rise MA Cont.	55°C. Rise 15 Min. On 15 Min. Off MA Int.		Case No.	Weight lbs.	Weight ozs.	List Price
T-655	High Low	450 350	575-0-575 460-0-460	— 250	340 375		5A	10	1	$26.30
T-656	High Low	750 600	925-0-925 740-0-740	— 270	320 360		6A	15	9	40.30
T-665	High Low	1250 1000	1470-0-1470 1180-0-1180	— 200	270 300		7A	23	4	60.60
T-666		1250	1460-0-1460	280	350		8A	32	2	66.65
T-652	High Low	1750 1500	2080-0-2080 1760-0-1760	— 320	450 500		9A	50	8	86.35
T-663		2000	2360-0-2360	350	500	Primaries on these items for 115/230 volt series-parallel connection.	10A	82		149.15
T-673	High Low	3000 2500	3400-0-3400 2840-0-2840	— 425	400 500		10A	82		154.55
T-674	High Low	3000 2500	3400-0-3400 2840-0-2840	— 850	800 1000		Spec.	135		219.40

REACTORS

Type No.	Inductance At Rated D.C.	Rated D.C. MA	D.C. Resistance	Insulation Test R.M.S.	Case No.	Weight lbs.	Weight ozs.	List Price	Type No.	Inductance At Rated D.C.	Rated D.C. MA	D.C. Resistance	Insulation Test R.M.S.	Case No.	Weight lbs.	Weight ozs.	List Price
T-155	280	10	5200	1500	2A	2		$ 8.80	T-178	10	400	90	5000	6A	15	2	$35.15
T-156	30	25	800	1500	1A	1	4	6.65	T-177	11	500	90	5000	7A	21	1	47.85
T-157	10	50	200	1500	1A	1	4	6.45	T-161	7.5	600	50	5000	7A	21	4	46.40
T-153	20	90	360	1500	3A	2	12	9.65	T-180	10	500	60	7000	8A	26	4	61.55
T-154	12.5	165	220	1500	3A	3	2	11.00	T-181	5	1000	18	7000	9A	50		90.10
T-151	7.5	250	100	1500	4A	5	10	15.05	T-515	6/21	165/30	220	1500	3A	3	2	11.00
T-152	7	200	140	1500	3A	2	13	10.40	T-506	4/16	200/30	140	1500	3A	2	13	10.40
T-164	13	250	120	1500	5A	10	1	22.15	T-501	5/15	250/30	100	1500	4A	5	10	15.00
T-166	10	300	120	1500	5A	10	1	22.15	T-510	6/20	300/30	120	1500	5A	10	1	22.15
T-159	10	500	70	1500	6A	15	9	33.80	T-502	6/22	500/50	70	1500	6A	15	9	33.85
T-160	11	300	120	3000	5A	10	1	22.15	T-512	6/22	300/30	103	5000	5A	10	1	22.15
T-167	11	400	70	3000	6A	15	9	33.80	T-521	6/26	500/60	90	5000	7A	21	1	47.80
T-175	10	200	140	5000	4A	5	10	15.15	T-516	6/22	400/50	70	3000	6A	15	9	33.80
T-176	10	300	103	5000	5A	10	11	24.60									

OPERATING VOLTAGES FOR 1500 VOLT TEST — UP TO 600 VOLTS D.C.
OPERATING VOLTAGES FOR 3000 VOLT TEST — UP TO 1000 VOLTS D.C.
OPERATING VOLTAGES FOR 5000 VOLT TEST — UP TO 2000 VOLTS D.C.
OPERATING VOLTAGES FOR 7000 VOLT TEST — UP TO 3000 VOLTS D.C.

FILAMENT TRANSFORMERS

Type No.	Secondary Rating		Case No.	Weight lbs.	Weight ozs.	List Price
T-388	2.5, 5, 6.3 V.-3A	1000 V. Test	1A	1	7	$ 8.75
T-352	2.5 V.-10 A. CT.	2000 V. Test	2A	1	14	9.55
T-360	2.5 V.-10 A. CT.	5000 V. Test	3A	2	13	11.70
T-389	2.5 V.-10 A. CT.	9000 V. Test	4A	4	14	16.80
T-354	5 V.-3 A. CT.	2000 V. Test	2A	1	14	9.35
T-390	5 V.-20 A. CT.	10000 V. Test	5½A	11	9	27.05
T-382	5, 5.1, 5.25 V.-16 A. CT.	2000 V. Test	4A	5	10	18.90
T-351	6.3 V.-3 A. CT.	2000 V. Test	2A	1	14	9.10
T-378	6.3, 7.5 V.-7 A. CT.	2000 V. Test	3A	2	13	12.10
T-387	6.3, 6.45, 6.6 V.-8 A. CT.	2000 V. Test	3A	2	13	12.55
T-395	6.3 V.-20 A. CT.	2000 V. Test	5A	9		21.90
T-396	6.3 V.-30 A. CT.	2000 V. Test	5½A	12		30.05
T-397	6.3 V.-12 A. CT.	2000 V. Test	4A	5	12	17.60

PLATE AND FILAMENT TRANSFORMERS

Type No.	High Voltage — Volts	M.A.	Filament No. 1 Volts	Filament No. 1 Amps	Filament No. 2 Volts	Filament No. 2 Amps	Filament No. 3 Volts	Filament No. 3 Amps	Filament No. 4 Volts	Filament No. 4 Amps	Case No.	Weight lbs.	Weight ozs.	List Price
T-249*	235-0-235	20	6.3 C.T.	0.6	6.3 C.T.	0.9					2A	2		$12.80
T-245*	320-0-320	40	5	2	6.3 C.T.	2					3A	2	13	14.30
T-205*	350-0-350	75	5	2	6.3 C.T.	3					4A	5	10	19.90
T-222*	250-0-250	50	5	2	6.3 C.T.	2					3A	2	13	13.70
T-206*	325-0-325	100	5	3	6.3 C.T.	3	6.3 C.T.	2			5A	9		27.05
T-212	420-0-420	125	5	3	6.3 C.T.	3	2.5 C.T.	4			5A	9	2	27.15
T-244*	425-0-425	165	5	3	6.3 C.T.	3	6.3 C.T.	3			6A	13	11	34.60
T-213	520-110-0-520	180	5	3	2.5	3	6.3 C.T.	3	6.3 C.T.	3	5A	10	6	32.05
T-215	360-125-0-360	200	5	3	2.5 C.T.	3	2.5 C.T.	10	6.3 C.T.	2.1	5A	10	10	32.15
T-247	590-0-590	200	5	3	6.3 C.T.	3	6.3 C.T.	3			5A	12	8	33.10
T-220*	125-0-125	200	5	3							4A	5		16.75
T-246	625-0-625	250	5	3	6.3 C.T.	3	6.3 C.T.	3			6A	15	9	39.10
T-223	600-0-600	300	5	6	6.3 C.T.	3	6.3 C.T.	2			6A	15	9	39.60
T-221	High voltage secondary 520-390-105-390-520 to deliver 400 V. D.C. at 400 M.A. and 300 V. D.C. at 160 M.A.		Filament No. 1 5 V.-6A		Filament No. 2 5 V.-3A		Filament No. 3 2.5 V.-3A		Filament No. 4 6.3 V. C.T.-4A Filament No. 5 6.3 V. C.T.-4A		7A	21	10	61.70

* Indicates unit designed for condenser input. All other units should be used choke input. If used with condenser input, the D.C. current rating of these items should be reduced to 70% of that specified.

POWER LINE AUTO TRANSFORMERS

Type No.	Input	Output	Volt-Amperes Capacity	Case No.	Weight lbs.	Weight ozs.	List Price
T-219	88 to 130 volts	115 volts	500	5A	10	1	$30.00

All power transformers are designed for 115 volt, 50 to 60 cycle operation. For any other voltage 50 to 60 cycle operation add 25% to list prices. For 115 volt 25 cycle operation, add 60% to list prices. For any other voltage 25 cycle operation add 100% to list prices. Case sizes for 25 cycle application are different from those specified for standard 115 volt 50 to 60 cycle operations.

Prices and Specifications Subject to Change Without Notice

MERIT
CTC
Since 1924
FINE RADIO PARTS

TRANSFORMERS

REPLACEMENT TRANSFORMERS

OUTPUT TRANSFORMERS **Receiver Replacement Type**

To couple the plate or plates of the output stage to the speaker voice coil. Sec. impedance—3.5 ohms.

Type No.	List Price	Tube	Class	Pri. Impedance	Pri. M.A.	Max. Watts	Mtg. Centers	Dimensions			Mtg.
								H.	W.	D.	
A-3025	$1.50	7A5, 35A5, 35C5, 50C5, 32L7, 35L6, 50B5	A	2500	50	3	1¾	1 3/16	1 7/16	⅞	A
A-3026	1.50	6V6, 7C5, 25AC5, 35A5, 35B5, 35L6	A	5000	40	3	1¾	1 3/16	1 7/16	⅞	A
A-2927	1.60	Single 1C5-G, 1G5-G, 1G5, 1S4, 3Q4, 3Q5, 3S4, 6A4	A	8000	20	3	1½	1⅜	1⅞	1	B
A-2928	1.75	Single 2A3, 6A3, 6B4, 6Y6, 25AC5, 25B6, 25N6, 25L6, 35A5, 35L6, 50L6, 48, 50B5, 35B5, 50A5	A	2000	60	5	2	1⅜	2⅜	1¼	A
A-3018	2.75	Single 6A3, 6L6, 6Y6, 7A5, 12A5, 25A6, 25B6, 25C6, 25L6, 50, 50A5, 50B5, 50C5, 50L6	A	3500	60	8	2⅜	1⅝	2 13/16	1½	A
A-2930	1.80	Single 6V6, 7C5, 12A, 12A5, 25A6, 25A7, 35A5, 35L6, 31, 45, 50, 59	A	5000	40	5	2	1⅜	2⅜	1¼	A
A-3019	2.75	Single 6L6, 6V6, 6AQ5, 6AS5, 7C5, 25A6, 35A5, 35L6, 50	A	5000	50	8	2⅜	1⅝	2 13/16	1½	A
A-2935	3.60	PP 6L6	A	5000 c.t.	150	18	2 13/16	2	3¼	1⅝	A
A-2931	1.80	Single 2A5, 6AC5, 6B5, 6F6, 6K6, 6N6, 7B5, 20, 31, 42, 47, 50, 6V5	A	7000	30	5	2	1⅜	2⅜	1¼	A
A-3020	2.75	Single 2A5, 6AC5, 6AD7, 6AR5, 6B5, 6F6, 6K6, 6N6, 6Y7, 7B5, 12A6, 14A5, 41, 47	A	7000	40	8	2⅜	1⅝	2 13/16	1½	A
A-2932	1.80	Single 1C5, 1Q5, 3C5, 6A4, 6G6, 6N7, 6R7, 12A, 38, 41, 49, 3V4	A	10000	30	5	2	1⅜	2⅜	1¼	A
A-2938	2.50	Single 19, 1G6, 1J6 PP 1H4, 30, 49	B	10000 c.t.	40	5	2	1⅜	2⅜	1¼	A
A-2936	2.88	PP 6AC5 PP 6V6, 7C5	B AB$_1$	10000 c.t.	75	10	2⅜	1⅝	2 13/16	1½	A
A-2933	2.20	Single 1D8, 7B5, 6K6, 6G6	A	12000	10	5	2	1⅜	2⅜	1¼	A
A-3021	3.60	PP2A5, 6E6, 6K6 PP6AD7, 47, 49 Single 6Y7, 6Z7, 79	A B B	14000 c.t.	35	12	2 13/16	2	3¼	1⅝	A
A-2934	1.85	Single 1D8, 1F4, 1F5, 1J5, 1T5, 6V7, 12A7, 85	A	15000	10	5	2	1⅜	2⅜	1¼	A
A-2937	2.40	Single 1A5, 1N6, 6V7, 85	A	25000 c.t.	10	5	2	1⅜	2⅜	1¼	A
A-3017	2.50	PP 1E7, 1J5, 6G6, 3A4, 3V4 PPIA5, IAC5, IN6, ILA4	A	50000 c.t.	10	5	2	1⅜	2⅜	1¼	A

FILTER TAPPED OUTPUT TRANSFORMERS **Pri. has 3% and 6% Humbucking Taps Sec. Impedance 3-4 ohms**

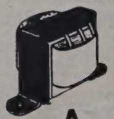
Type No.	List Price	Tube	Class	Pri. Impedance	Pri. M.A.	Max. Watts	Mtg. Centers	Dimensions			Mtg.
								H.	W.	D.	
A-3031	$2.20	Single 2A3, 6A3, 7A5, 25L6, 35A5, 35B5, 35L6, 45, 50B5, 50L6	A	3000	50	5	2	1⅜	2⅜	1¼	A
A-3032	2.20	Single 6V6, 6B5, 7C5, 6F6	A	6000	40	5	2	1⅜	2⅜	1¼	A

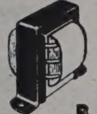
SPECIAL OUTPUT TRANSFORMERS **To Couple Push Pull Plates to Line or Voice Coil Sec. Impedance 2-4-8-15-250-500 ohms**

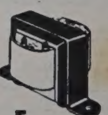
Type No.	List Price	Tube	Class	Pri. Impedance	Pri. M.A. per Side	Max. Watts	Mtg. Centers	Dimensions			Mtg.
								H.	W.	D.	
A-3027	$6.60	PP2A5, 6V6, 7C5, 19, 6F6 PP1H4G, 1J6, 6AC5, 49	A AB$_1$ B	10000 c.t.	45	15	2 13/16	2	3¼	1¾	F
A-3028	7.50	PP6L6 PP2A3	A$_1$ AB$_1$	5000 c.t.	70	20	3⅛	2 3/16	3 11/16	2	F

All prices subject to trade discount, and change without notice.

Products of Merit


A


B


F

TRANSFORMERS

VERTICAL OUTPUT TRANSFORMER

Type No.	List Price	Turns Ratio Primary to Secondary	Mtg. Centers	Dimensions H.	W.	D.	Mtg. Type
★A-3035	$6.00	10:1	1 19/32x2	3 1/8	2 11/16	2 1/2	EV
★A-3036	4.00	10:1	2 13/16	2	3 1/4	2	A
★A-3037	4.00	11.4:1*	2 13/16	2	3 1/4	1 5/8	A
★A-3038	5.50	10:1	3 1/8	2 1/4	3 11/16	2 1/4	A
★A-3039	5.50	18:1*	3 1/8	2 1/4	3 11/16	2 1/8	A
★A-3080	5.25	25:1, 50:1	3 1/8	3	3 9/16	2 1/4	B
★A-3081	6.00	30:1, 50:1*	3 1/8	2 1/4	3 11/16	2 1/4	A

★Indicates TV Replacements. *Auto Transformer.

DUAL PRIMARY OUTPUT TRANSFORMERS

For Use with AC-DC Battery Portable Receivers—Sec. Impedance 3-4 ohms

Type No.	List Price	Tube	Class	Pri. Impedance	Pri. M.A.	Max. Watts	Mtg. Centers	Dimensions H.	W.	D.	Mtg.
A-3029	$2.20	Single 25AC5, 25B6, 25L6, 25N6, 35A5, 35B5, 35L6, 50A5, 50B5, 50L6 OR Single 1S4, 1Q5, 3Q4, 3Q5, 3V4	A A	2000 or 6000	60 or 10	5	2	1 3/8	2 3/8	1 1/4	A
A-3030	2.20	Single 25AC5, 25B6, 25L6, 25N6, 35A5, 35L6, 50A5, 50B5, 50L6 OR Single 1S4, 1Q5, 3Q4, 3Q5, 3V4	A A	2000 or 10000	60 or 10	5	2	1 3/8	2 3/8	1 1/4	A

UNIVERSAL OUTPUT TRANSFORMERS

To Provide Correct Coupling Between a Variety of Output Tubes and Any Speaker Voice Coil

Type No.	List Price	Tube	Ohms Impedance Pri.	Sec.	Pri. M.A.	Max. Watts	Mtg. Centers	Dimensions H.	W.	D.	Mtg.
A-2900	$2.60	Single or Push-pull	4000-7000-8000-10000-14000 c.t.	.17 to 32	35	4	2	1 3/8	2 3/8	1 1/4	F
A-2901	2.75	Single or Push-pull	4000-7000-8000-10000-14000 c.t.	.17 to 32	40	8	2 3/8	1 5/8	2 13/16	1 1/2	F
A-2902	2.75	Single	1500-2000-4000-5000-7000-10000	.1 to 40	55	10	2 3/8	1 5/8	2 13/16	1 1/2	F
A-2903	2.50	Single	2000-4500-7000-10000	3.2	30	4	2	1 3/8	2 3/8	1 1/4	F
A-2904	3.75	Single or Push-pull	4000-7000-8000-10000-14000 c.t.	.17 to 32	40	18	2 3/8	2 1/4	2 7/8	1 7/8	G
A-2905	5.25	Single or Push-pull	3000-5000-7000-8000-10000 c.t.	.17 to 32	70	24	3 1/8	2 1/4	3 11/16	2 1/8	F
A-2998	2.50	Single	3500-5000-7000-10000	3.2	35	3	1 3/4	1 1/8	2 1/8	1 1/8	F
A-2999	2.65	Single	12000-15000-18000-25000	3.2	10	3	1 3/4	1 1/8	2 1/8	1 1/8	F

HEAVY DUTY OUTPUT TRANSFORMERS

High Level Type to Couple to Line or Speaker. Sec. Impedance: 4-8-15-250-500 ohms

Type No.	List Price	Tube	Class	Pri. Impedance	Pri. M.A. per Side	Max. Watts	Dimensions H.	W.	D.	Mtg.
A-3127	$ 6.00	Single 6L6, 2A3, 6A3, 6Y6	A	2500	80	8	3 1/8	2 5/8	2 1/2	D
A-3128	10.00	PP6V6, 6F6	AB$_1$	8000 c.t.*	50	14	3 1/2	2 15/16	3 1/8	D
A-3129	10.00	PP6L6	AB$_1$	4300 c.t.*	95	25	3 1/2	2 15/16	3 1/8	D
A-3130	10.50	PP6L6	AB$_1$	6600 c.t.*	80	34	3 7/8	3 3/16	3 3/8	D
A-3131	8.50	PP6L6, 6Y6, PP2A3, 6A3, 6B4, 45, PP6N7, 46	A AB B	5000 c.t.	80	30	3 1/2	2 15/16	3 1/8	D
A-3132	8.50	PP6F6,2A5, 7C5, Single 6N7, 6A6	AB$_2$ B	10000 c.t.	40	25	3 1/2	2 15/16	3 1/8	D
A-3133	13.75	P.P. Par. 6L6. P.P. 807	AB$_1$	3300 c.t.	240	55	4 5/8	3 13/16	4	D†

* 10% Feedback Winding. † Mtg. Centers 3 x 2 13/16.

OUTPUT TRANSFORMERS—HIGH FIDELITY TYPE

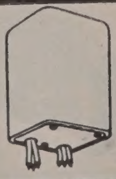
Frequency Response ± 1 DB 30-20000 Cycles

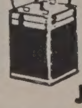
A-3100	$18.00	PP2A3, 6A5G, 275A, 6A3, 6L6, etc.	5000 and 3000 c.t.	Sec. 4–8–16	20	3 7/8	3 3/16	3 5/8	D
A-3101	18.00	PP6F6, 6L6, 6V6, etc.	10000 and 6600 c.t.		20	4 1/4	3 1/2	3 7/8	D

All prices subject to trade discount, and change without notice.

D

EV


JT


JG

Products of Merit

MERIT CTC Since 1924 FINE RADIO PARTS

TRANSFORMERS

UNIVERSAL LINE TRANSFORMERS To Couple Various Line Impedances to a Voice Coil

Type No.	List Price	Ohms Impedance		Watts	Mtg. Centers	Dimensions			Mtg.
		Pri.	Sec.			H.	W.	D.	
A-2906	$3.00	500-1000-1500-2000	3.2, 6-8	10	2 3/8	1 5/8	2 13/16	1 1/2	F
A-2907	5.00	500-1000-1500-2000	3.2, 6-8	18	2 3/8	2 1/4	2 7/8	1 7/8	G
A-2908	5.25	500-1000-1500-2000	6-8, 16	24	3 1/8	2 1/4	3 11/16	2 1/8	F
A-2909	2.75	45-50	3.2, 6-8	8	2	1 5/8	2 13/16	1 1/2	G
A-3005	2.10	500	3.2, 6-8	5	2	1 3/8	2 3/8	1 1/4	A

For Use With Constant 70.7V. Line as Recommended by the RMA. Rated Power is Furnished on Lowest Tap. Other Taps Provide Reduction in Power in Steps of 3DB.

Type No.	List Price	Pri.	Sec.	Watts	Mtg. Centers	H.	W.	D.	Mtg.
A-3013	$3.00	1000-2000-4000-8000-16000	3.5, 7	5	2	1 5/16	2 3/8	1 1/2	F
A-3014	3.60	500-1000-2000-4000-8000	4-8-16	10	2 3/8	1 5/8	2 13/16	1 1/2	F
A-3015	5.25	275-550-1100-2200-4400-8800	4-8-16	18	2 3/8	2 1/4	2 7/8	1 7/8	G
A-3016	6.25	210-420-840-1680-3360-6720	4-8-16	24	3 1/8	2 1/4	3 11/16	2 1/8	F

TUBE TO LINE TRANSFORMERS For Coupling Single or Push-Pull Plates to Line or Mixer

Type No.	List Price	Ohms Impedance		Pri. M.A.	Mtg. Centers	Dimensions			Mtg.
		Pri.	Sec.			H.	W.	D.	
A-2925	$4.75	20000 c.t.	500/125	10	2 13/16	2	3 1/4	1 5/8	A
A-2926	4.75	20000 c.t.	200/50	10	2 13/16	2	3 1/4	1 5/8	A
†A-3023	5.00	5000-10000-20000 c.t.	500 /333 /200 /125 /50	15	2 13/16	2	3 1/4	1 3/4	F
†A-3024	11.00	5000-10000-20000 c.t.	500 /333 /200 /125 /50	50	2x1 11/16	3 3/16	2 5/8	2 3/4	DL

†20,000 ohm only center tapped.

INPUT TRANSFORMERS For Coupling Microphone or Line to Single or Push-Pull Grids. Static Shielded.

Type No.	List Price	Ohms Impedance		Turns Ratio	Mtg. Centers	Dimensions			Mtg.
		Pri.	Sec.			H.	W.	D.	
A-2923	$2.75	3.2	50000	1:125	2	1 3/8	2 3/8	1 1/4	A
A-2918	4.25	100	400000 c.t.	1:64	2 13/16	2	3 1/4	1 5/8	A
A-2919	4.25	200/50	100000	1:22	2 13/16	2	3 1/4	1 5/8	A
A-2924	4.75	500/125	100000 c.t.	1:14	2 13/16	2	3 1/4	1 5/8	A

INTERSTAGE TRANSFORMERS To Couple a Single Plate to a Single Grid

Type No.	List Price	Ohms Impedance		Turns Ratio	Pri. M.A.	Mtg. Centers	Dimensions			Mtg.
		Pri.	Sec.				H.	W.	D.	
A-2910	$2.75	10000	90000	3:1	10	2	1 3/8	2 3/8	1 1/4	A
A-2911	2.75	10000	90000	3:1	10	2 3/8	1 5/8	2 13/16	1 1/2	A

To Couple a Single Plate to Push-Pull Grids

Type No.	List Price	Pri.	Sec.	Turns Ratio	Pri. M.A.	Mtg. Centers	H.	W.	D.	Mtg.
A-2914	$2.75	10000	90000 c.t.	3:1	10	2	1 3/8	2 3/8	1 1/4	A
A-2915	3.00	10000	90000 c.t.	3:1	10	2 3/8	1 5/8	2 13/16	1 1/2	A
A-2916	3.60	10000	90000 c.t.	3:1	10	2 13/16	2	3 1/4	1 5/8	A

To Couple Push-Pull Plates to Push-Pull Grids

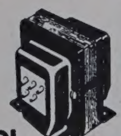
Type No.	List Price	Pri.	Sec.	Turns Ratio	Pri. M.A.	Mtg. Centers	H.	W.	D.	Mtg.
A-2912	$4.25	10000 c.t.	90000*	3:1	10 per side	2 13/16	2	3 1/4	1 5/8	A
A-2913	3.60	20000 c.t.	20000 c.t.	1:1	10 per side	2 3/8	1 5/8	2 13/16	1 1/2	A
A-2917	4.25	20000 c.t.	45000 c.t.	1.5:1	10 per side	2 13/16	2	3 1/4	1 5/8	A

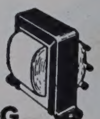
*Split secondary.

All prices subject to trade discount, and change without notice.

Products of Merit

F


DL


G

MERIT
CTC
Since 1924
FINE RADIO PARTS

TRANSFORMERS

POWER TRANSFORMERS[1] Receiver Replacement Type — Primary for 115 V., 60 Cy. Leads R.M.A. Color Coded—Mtg. Fig. C

Type No.	List Price	H. V. Secondary		Rectifier		Fil. Wdgs.		Mtg. Centers	Dimensions		
		Volts	D.C. M.A.	Volts	Amp.	Volts	Amp.		H.	W.	D.
*P-3045 ●	$ 4.65	120	50			6.3	2	3⅛	2 3/16	2⅝	2
*P-3046 ▲	3.00	150	25	....	....	6.3 c.t.	.5	2	2	2½	1¾
P-3047	5.50	240–240	50			6.3	2.5	2 x 2½	2½	3	2
P-3048	6.50	260–260	90			6.3	4.7	2 x 2½	2½	3	2¾
P-2949	6.00	240–240	40	5	2	6.3 c.t.	2	2 x 2½	2½	3	2½
P-2958	6.00	240–240	50	5	2	6.3	2.6	2 x 2½	2½	3	3
P-3051	7.70	260–260	70	5	2	6.3	3	2 x 2½	2½	3	3
P-3052	8.50	280–280	90	5	2	6.3	5	2¼ x 2 13/16	2 13/16	3⅜	3½
P-2957	7.25	350–350	50	5	2	6.3 c.t.	2.6	2¼ x 2 13/16	2 13/16	3⅜	3
P-2966†	8.00	350–350	70	5	3	2.5 c.t. 2.5 c.t.	9 3.5	2¼ x 2 13/16	2 13/16	3⅜	3⅝
P-2967	10.00	350–350	90	5	3	2.5 c.t.	12.5	2½ x 3⅛	3⅛	3¾	4 1/16
P-2968	12.50	400–400	110	5	3	2.5 c.t. 2.5 c.t.	15 3.5	3 x 3¾	3¾	4½	3 13/16
P-2950	6.25	325–325	40	5	2	6.3 c.t.	2	2 x 2½	2½	3	2⅞
P-2951	7.25	325–325	70	5	3	6.3 c.t.	3.5	2 x 2½	2½	3	3 7/16
P-2952	8.00	350–350	90	5	3	6.3 c.t.	3.5	2¼ x 2 13/16	2 13/16	3⅜	3¾
P-2953	9.25	350–350	120	5	3	6.3 c.t.	4.7	2½ x 3⅛	3⅛	3¾	3 13/16
P-2954	12.00	375–375	150	5	3	6.3 c.t.	5	2½ x 3⅛	3⅛	3¾	4 5/16
P-2955	14.00	400–400	200	5	3	6.3 c.t.	5	3 x 3¾	3¾	4½	4⅛
P-2956	17.50	435–435 (80-volt Bias Tap)	250	5 2.5	3 10	6.3 c.t. 6.3 or 5	3 3	3 x 3¾	3¾	4½	4¾
★P-3079	14.00	140 tap 117	300			6.3 6.3 6.3	9 2 1	3 x 3¾	3¾	4½	3¾
★P-3071‡	22.50	360–360	180	5	3	6.3	9	2¾ x 3 7/16	3 7/16	4⅛	4 9/16
★P-3072	21.25	360–360	180	5	3	6.3	9	2¾ x 3 7/16	3 7/16	4⅛	4 5/16
★P-3069‡	22.50	350–350	225	5	3	6.3 6.3	10 2.7	3 x 3¾	3¾	4½	4¼
★P-3070	21.25	350–350	225	5	3	6.3 6.3	10 2.7	3 x 3¾	3¾	4½	4
★P-3077	17.50	300–300	250	5	3	6.3	9	3 x 3¾	3¾	4½	4¼
★P-3059	25.00	360–360	250	5 5	2 3	6.3 6.3	2.7 9	3 x 3¾	3¾	4½	5⅛
★P-3063	22.50	360–360	250	5	3	6.3 6.3 5	9 1.2 2	3 3/16 x 4 1/16	5 11/16	3 27/32	4 23/32
★P-3078	22.50	360–360	275	5	3	6.3 6.3	9 1.5	3 x 3¾	3¾	4½	4¾
★P-3061	27.50	362–362	295	5	6	6.3 or 5 12.6 c.t. 5	2.7 5 2	3 3 3/16 x 4 1/16	6 13/16	3 27/32	4 23/32
★P-3073‡	27.50	† 322–322 205–205	180 70	5	3	6.3 6.3	10 2.7	3 x 3¾	3¾	4½	5
★P-3066	25.00	† 375–375 325–325	170 130	5 5 5	3 3 2	12.6 c.t. 6.3	5 2.6	3 x 3¾	3¾	4½	5⅜
★P-3067	25.00	† 400–400 212–212	220 90	5 5 5	3 3 2	6.3 6.3	10 2.6	3 x 3¾	3¾	4½	5⅜
★P-3076	23.00	† 270–270 180–180	300 200	5	3	6.3 6.3	6.5** 6.5**	3 x 3¾	3¾	4½	5

* For use with Half-Wave Rectifier. † Replaces P2965.
‡ Socket Type. See Figure CS.
[1] All TV Powers are Fully Flux and Static Shielded.
● Type A Mtg.
▲ Shielded to meet Underwriters approval for pre-amp use.. Mtg B.

	P-3066	P-3067	P-3073	P-3076
†Max. MA High Tap Only	320	300	220	435
Max MA Low Tap Only	340	340	325	500

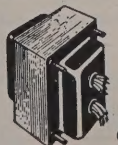
**Can be used in series for 12.6 V.

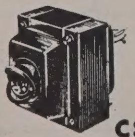
REPLACEMENT TYPE FILTER CHOKES Inductance Ratings are at 10 V. 60 cy. with Rated Current Flowing as Recommended by the R.M.A.

Type No.	List Price	Inductance Henries	Current Rating M.A.	DC Res. Ohms	Volts Insul.	Mtg. Centers	Dimensions			Mtg.
							H.	W.	D.	
★C-2973	$1.55	1.5	10	95	1500	1¾	1 3/16	1 7/16	1	A
★C-2994	2.00	1.5	200	90	1500	2⅜	1⅝	2 13/16	1⅝	A
C-2974	3.85	2.0	200	50	1500	2 13/16	2	3¼	1⅝	A
C-2977	2.20	4.5	50	200	1500	2⅜	1⅝	2 13/16	1½	A
C-2975	1.80	5.5	50	330	1500	2	1 5/16	2⅜	1⅛	A
C-2976	1.80	8	40	500	1500	2	1⅜	2⅜	1¼	A
★C-2995	2.75	8.0	100	375	1500	2 13/16	2	3¼	1⅝	A
C-2981	2.20	8.5	50	400	1500	2⅜	1⅝	2 13/16	1½	A
C-2985	2.20	20	15	900	1500	2⅜	1⅝	2 13/16	1½	A
C-2987	2.50	16	50	550	1500	2 13/16	2	3¼	1⅝	A
C-2990	3.30	15	75	400	1500	3⅛	2¼	3 11/16	2⅛	A
★C-2991	4.40	2	250	53	2000	3 5/16	2 3/16	3 11/16	2	A
C-2993	4.40	10.5	110	220	1500	3 9/16	2 9/16	4	2¼	A
★C-2996	3.30	1.0	300	60	1500	3⅛	2¼	3 11/16	2	A

★Indicates TV replacements.

All prices subject to trade discount, and change without notice.





Products of Merit

MERIT
Since 1924
FINE RADIO PARTS

TRANSFORMERS

POWER TRANSFORMERS[1]

Receiver Replacement Type—Primary for 115 V., 60 Cy. Leads R.M.A. Color Coded
Fully Shielded Upright Mounting Type—Mtg. Fig. D

Type No.	List Price	H. V. Secondary		Rectifier		Fil. Wdgs.		Mtg. Centers	Dimensions		
		Volts	D.C. M.A.	Volts	Amp.	Volts	Amp.		H.	W.	D.
P-3147	$5.50	240-240	50	-------	-------	6.3	2.5	2 x 1 9/16	3 1/8	2 5/8	2 1/2
P-3148	6.50	260-260	90	-------	-------	6.3	4.7	2 x 2 3/16	3 1/8	2 5/8	3 1/4
P-3149	6.00	240-240	40	5	2	6.3 c.t.	2	2 x 1 11/16	3 1/8	2 5/8	2 5/8
P-3150	6.25	325-325	40	5	2	6.3 c.t.	2	2 x 1 7/8	3 1/8	2 5/8	2 13/16
P-3154	8.25	275-275	50	5	2	6.3	2.6	2 x 2 3/16	3 1/8	2 5/8	3 1/8
P-3160	7.25	350-350	50	5	2	6.3 c.t.	2.6	2 1/4 x 1 7/8	3 1/2	2 15/16	3 1/16
P-3151	7.25	325-325	70	5	3	6.3 c.t.	3.5	2 1/2 x 1 15/16	3 7/8	3 3/16	3 3/16
P-3152	8.00	350-350	90	5	3	6.3 c.t.	3.5	2 3/4 x 2 1/2	4 1/4	3 1/2	3 7/16
P-3153	9.25	350-350	110	5	3	6.3 c.t.	4.5	3 x 2 1/4	4 5/8	3 13/16	3 7/16
P-3173	11.25	350-350	150	5	3	6.3	6.5	2 1/2 x 2 7/8	3 7/8	3 1/4	4 1/8
P-3155	14.00	400-400	200	5	3	6.3 c.t.	5	3 x 3 3/16	4 5/8	3 13/16	4 1/4
P-3156	17.50	435-435	250	5	3	6.3 c.t.	3	3 x 3 13/16	4 5/8	3 13/16	4 7/8
		(80-volt Bias Tap)		2.5	10	6.3 or 5	3				
★P-3165	18.00	350-350	200	5	2	6.3	.6	3 x 3 7/8	4 5/8	3 3/4	5
				5	3	6.3	7				
★P-3169	27.00	†390-390	160	5	3	6.3	8	3 x 3 5/8	4 5/8	3 13/16	4 3/4
		325-325	130	5	3	6.3	4				
				5	2						
★P-3166	30.00	400-400	300	5	3	12.6 c.t.	10	3 1/2 x 4 1/4	5 1/2	4 3/8	5 3/4
				5	6						
★P-3174	40.00	†450-450	240	5	3	6.3	6	3 5/8 x 3 7/8	5 15/16	4 7/16	5 5/8
		325-325	200	5	3	6.3	6				
				5	3	6.3	2.6				
★P-3170	10.50	1750	2	2.5	2	6.3	.9	2 x 1 15/16	3 1/8	2 5/8	2 7/8
						or 2.5	2				
★P-3171	14.00	2500	5	2.5	2	6.3	3	2 1/2 x 2 3/16	3 7/8	3 3/16	3 3/8
						or 2.5	3				

[1] All TV Powers are Fully Flux and Static Shielded.

†Max. M. A. High Tap Only P-3169: 270 P-3174: 400
Max. M.A. Low Tap Only P-3169: 290 P-3174: 430

FILAMENT TRANSFORMERS

For Amplifier, Amateur, Industrial Use. Pri.: 115 Volts, 60 Cycles

Type No.	List Price	Sec. Volts	Sec. Amp.	Insulation Volts	Dimensions			Mtg.
					H.	W.	D.	
P-2939	$ 3.75	2.5 c.t.	5	2500	2	3 1/4	1 5/8	A
P-2940	5.75	2.5 c.t.	10	7500	3	3 5/8	2 1/4	B
P-3042	6.25	2.5 c.t.	10	10000	2 7/8	3 3/8	2 3/4	EH
P-3040	4.25	5 c.t.	3	2500	2	3 1/4	2 1/8	A
P-2941	5.00	5 c.t.	6	2500	2 1/4	3 11/16	1 7/8	A
P-2942	11.00	5 c.t.	15	10000	4 1/2	3 3/4	3 1/2	EV
P-2943	11.00	5 c.t.	30	2500	3 7/8	3 1/8	3	DL
P-2944	2.80	6.3 c.t.	1	2500	1 5/8	2 13/16	1 1/2	A
★P-3074	3.60	6.3	1.2	5000	2	3 1/4	2	A
P-2945	3.60	6.3 c.t.	2	2500	2	3 1/4	1 5/8	A
P-2946	4.25	6.3 c.t.	3	2500	2	3 1/4	1 7/8	A
P-2947	5.50	6.3 c.t.	6	2500	3	3 5/8	2 1/4	B
P-2948	7.50	6.3 c.t.	10	2500	3 7/16	2 13/16	2 7/8	EV
P-2960	5.00	7.5 c.t.	4	2500	2 5/8	3 1/8	1 7/8	B
P-2961	6.90	6.3 c.t.	3	2500	3	3 5/8	2 1/4	B
		6.3 c.t.	3					
P-3041	6.90	5 c.t.	3	2500	2 1/2	4	2 1/8	A
		6.3 c.t.	3.6					
P-3143	8.50	7.5 c.t.	8	2500	3 1/2	2 15/16	3 1/8	D
P-3145	8.50	10 c.t.	5	2500	3 1/2	2 15/16	3	D
P-3146	10.00	10 c.t.	10	3000	3 7/8	3 3/16	3 5/8	D
P-2959	4.50	12.6 c.t.	2	2500	2	3 1/4	1 7/8	A
P-2962	4.50	25.2	1	2500	2	3 1/4	1 7/8	A
P-2963	10.00	12.6	7	2500	3 1/8	2 5/8	3 1/2	D
		or 25.2	3.5					

TV ISOLATION FILAMENT TRANSFORMER

Isolates damper tube from other filaments. Secondary insulated for 5000 V.

Type No.	List Price	Pri. Volts	Sec.		Mtg. Centers	Dimensions			Mtg.
			Volts	Amps.		H	W	D	
P-3097	3.70	6.3	12.6 or 6.3	1 1.2	2 13/16	1 7/8	3 1/4	2	A

TV AUTOTRANSFORMER

Provides TV picture tube booster voltage.

Type No.	List Price	Input Volts	Output		Mtg. Centers	Dimensions			Mtg.
			Volts	Amps.		H	W	D	
P-3098	2.75	6.3	12.6 taps at 9.45–6.3	1	2 3/8	1 5/8	2 13/16	1 1/4	A

TV CONVERSION—REPLACEMENT—IMPROVEMENT KIT

KIT No. 1000	$25.25	1 EA. HVO-7, MDF-70, MWC-1 CONVERSION AND REPLACEMENT DATA INCLUDED

VIBRATOR TRANSFORMERS

For Operation From 6 V. Battery and Vibrator

Type No.	List Price	Sec. DC Volts to Filter	Sec. M.A.	Dimensions			Mtg.
				H.	W.	D.	
P-2969	$5.25	150	40	2 1/4	2 7/8	1 3/4	B
P-2970	5.75	225	40	2 5/8	3 5/16	2 1/8	B
P-2971	6.00	250	50	2 5/8	3 1/8	2 1/4	B
P-2972	6.90	260	60	3	3 5/8	2 1/8	B
P-3068	5.00	260	60	2 3/16	2 5/8	1 7/8	C
P-4071	7.50	250	50	3	2 3/8	2 3/16	JT
P-4076	7.00	265	55	3 1/4	2 5/8	2 5/8	JG
P-4077	7.50	280	65	3 7/8	2 1/4	2 3/8	JT
P-4078	6.90	270	60	2 5/8	2 3/16	2 3/4	JT
P-4079	8.00	270	75	3 1/32	2 3/8	2 1/2	JT

★Indicates TV Replacement.

All prices subject to trade discount, and change without notice.

MERIT
C T C
Since 1924
FINE RADIO PARTS

TRANSFORMERS

BLOCKING OSCILLATOR TRANSFORMERS

Type No.	List Price	Turns Ratio Primary to Secondary	Mtg. Centers	Dimensions H.	Dimensions W.	Dimensions D.	Mtg. Type
★A-3000 Vertical	$2.50	1:4.2	2	1 3/8	2 3/8	1 1/4	A
★A-3001 Vertical	3.75	†	2 3/8	1 5/8	2 13/16	1 1/2	A
★A-4000 Vertical	3.25	1:4.2	1 15/16	1 3/4	2 5/16	1 1/2	J
★A-3002 Horizontal	2.75	2:1	2	1 3/8	2 3/8	1 1/4	A
★A-4002 Horizontal	3.75	2:1	1 15/16	1 3/4	2 5/16	1 1/2	J
★A-4003 Vertical	2.25	1:4.2	1 3/16	1 9/16	1 3/16	1 3/16	JL

† Pri./Sec. 1—1:2.08, Pri./Sec. 2—1:1.

TV COMPONENTS

HORIZONTAL OUTPUT AND HI-VOLTAGE TRANSFORMERS

Type No.	List Price	Picture Tube	Equivalent Type	Mtg. Type
★HVO-3	$ 8.00	7DP4—10 BP4 Etc.	211T1—211T3	M
★HVO-5	10.00	16 AP4 Etc.	211T5	M
★HVO-7	12.00	10″ to 24″	GE 77J1–HVO6	N
★HVO-8	7.00	10″ to 24″	Air Core—74951	T
★MWC-1	2.25	Width lin. con. 4-29 M.H.—AGC wind.	None	O
★MWC-2	1.10	Width control .2–4.0 M.H.	RCA 208R1, 201R1, 201R4	O
★MWC-3	1.90	Width/Linearity Con. 20–60 M.H.	None	O

FOCUS COILS

Type No.	List Price	Tube Size	Dimensions–Depth	Equivalent Type	M.A.	DC. Res. Ohms	Mtg. Type
★MF-1•	$8.25	10″–12″	1″–15/32″	202D1	100	247	P
★MF-2	11.00	16″	1″–3/16″	202D2	100	470	S
★MF-3•	8.25	10″–12″	1″–15/32″		100	360	P
★MF-4	11.00	14″–20″	1″–3/16″		75	1000	S
★MF-5	11.00	14″–20″	1″–3/16″		75	1500	S

•Equipped with lugs on each side and universal mtg. plate.

DEFLECTION YOKES

Type No.	List Price	Tube Size	Inductance Horizontal	Inductance Vertical	Equivalent RCA Type	Def. Angle
★MD-12	$9.00	10″–16″	Low	High	201D1–D3–D12	53°
★MD-13	9.00	10″–16″	High	High		53°
★MDF-30▲	11.00	10″–24″	High	Low	211D1	70°
★MDF-70▲	11.00	12″–24″	Low	High		70°
★MDF-71▲	11.00	12″–24″	High	High		70°

INDUSTRIAL—AMATEUR

OUTDOOR TYPE UNIVERSAL LINE TRANSFORMER

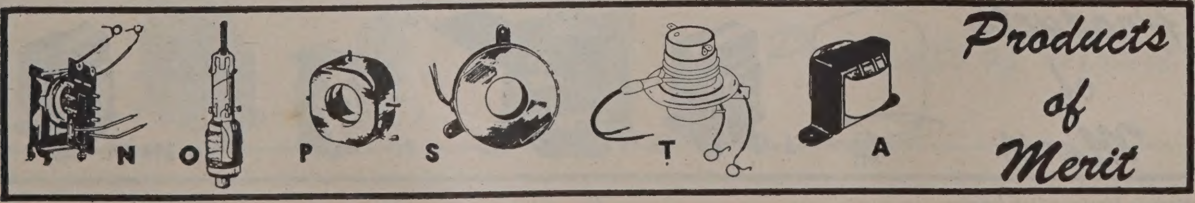
To Couple Various Line Impedances to a Voice Coil
Universal Mounting Bracket

Type No.	List Price	Ohms Impedance Primary	Ohms Impedance Sec.	Watts	Mtg. Center Case	Dimensions H.	Dimensions W.	Dimensions D.	Mtg. Type
A-4040	$11.00	250-500-1000-1500-2000	4-8-16	8	2 3/4 x 3 7/8	4 1/4	4 7/16	3 9/16	JO
A-4041	11.75	250-500-1000-1500-2000	4-8-16	12	2 3/4 x 3 7/8	4 1/4	4 7/16	3 9/16	JO
A-4042	16.25	250-500-1000-1500-2000	4-8-16	25	2 3/4 x 3 7/8	4 1/4	4 7/16	3 9/16	JO
A-4043	11.75	45-50	4-8	12	2 3/4 x 3 7/8	4 1/4	4 7/16	3 9/16	JO

DRIVER TRANSFORMERS To Couple Driver Plate to Amplifier Grids

Type No.	List Price	Driver	Output	Ratio, Pri. to ½ Sec.	Class	Pri. M.A.	Mtg. Centers	Dimensions H.	Dimensions W.	Dimensions D.	Mtg.
A-2920	$3.00	6C5, 1H4, 30, 49	Single 1J6, 19, Push-pull 30, 49	2.5:1	B	10	2 3/8	1 5/8	2 13/16	1 1/2	A
A-2921	4.25	6F6, 2A5, 42	PP6F6, 2A5, 6L6	1.7:1, 1.5:1, 1.3:1	AB	35	2 13/16	2	3 1/4	1 5/8	A
A-2922	5.00	6A6, 6C5 6N7, 46	Single 6A6, 6N7, Push-pull 46	5:1, 4:1, 3:1, 2.5:1	B	20	2 13/16	2	3 1/4	1 5/8	A
A-3120	12.75	500 ohm line	Class B Grids 15 Watt Capacity	1:.75, 1:.85, 1:1, 1:1.25, 1:1.45, 1:1.75, 1:2, 1:2.25, 1:2.5, 1:2.75, 1:3	B	------	2 5/16 x 2	3 3/16	2 5/8	3 3/8	DL
A-3121	14.50	500 ohm line	Class B Grids 30 Watt Capacity		B	------	2 1/4 x 2 1/4	3 9/16	3	3 3/4	DL
A-3123	6.00	PP6A6, 53, PP6C5,6N7, 6J5	PP6N7, 6A6, 53, PP6L6, T21	5:1*	B AB_2	15	2 x 1 11/16	3 1/8	2 5/8	2 5/8	D
A-3124	6.00	6F6, 46, 59, 2A5, 42	PP46, 59, PP6L6, 807	2.2:1	B AB_2	30	2 x 1 11/16	3 1/8	2 5/8	2 5/8	D
A-3125	8.50	6F6,2A5,47,42	PP6L6	1.4:1*	AB_2	40	2 1/4 x 2	3 1/2	2 15/16	3 1/8	D
A-3126	6.90	PP2A3, 6L6, 45, 6V6, 6F6	PP800,203A,811,812, 812A, RK18,RK58,T20, TZ40, T55, 807, 809, 838, 845, 35, 100TH	2:1	B	40	2 x 1 11/16	3 1/8	2 5/8	2 5/8	D

★Indicates TV Replacement. *Split secondary. ▲Cosine-Ferrite core. *All prices subject to trade discount, and change without notice.*



MERIT
CTC
Since 1924
FINE RADIO PARTS

TRANSFORMERS

MODULATION TRANSFORMERS For Specific Applications

Type No.	List Price	Output Tubes	Ohms Impedance		Max. M.A.		Watts	Dimensions			Mtg.
			Pri.	Sec.	Pri.	Sec.		H.	W.	D.	
A-3008	$3.60	PP6AQ5, 6V6, 6F6, Single 6A6, 6N7, 53	10000 c.t.	4000-5000 7500-10000 12000	70	60	10	2¼	2⅞	2⅛	B
A-3109	8.50	PP2A3, 6A3, 6B4, 6L6, 45, 46, 59	6000 c.t. 3800 c.t. 3000 c.t.	5000-8000 10000	80	100	25	3⅛	2⅝	2¾	D
A-3110	14.50	PP6L6, 807, RK41, HY56, HY61, HK24	6600-3800 c.t.	4000-5000 7500-10000 12000	175	150	60	4¼	3½	3¾	D
A-3113	22.00	PP 800, 809, TZ-40, T-55, HK-54, RK-31, HY-40, 811A, 807, 812A, 5514	15000-6900c.t.	3000-4000 5000-6000	250	300	175	4⅝	3 13/16	5⅝	D

UNIVERSAL MODULATION TRANSFORMERS Tapped Series-Parallel Coils Provide a Wide Range of Modulation Ratios

Type No.	List Price	Pri. Impedance	Pri. M.A. per Side	Sec. Impedance	Max. Sec. M.A. ‡	Watts	Dimensions			Mtg.
							H.	W.	D.	
A-3104	$10.75	2000-20000	50	2000-20000	50/100	15	3 3/16	2⅝	2¾	DL
A-3105	16.00	2000-20000	150	2000-20000	150/300	60	3⅞	3⅛	4⅛	DL
A-3106	22.50	2000-20000	220	2000-20000	220/440	125	4⅝	3 13/16	4⅝	DL

‡Series/Parallel

PLATE TRANSFORMERS For Small Transmitters. DC Voltage Ratings are Approx. Values Obtained at Output of a 2 Section Choke Input Filter Using Mercury Vapor Rectifier Tubes. Pri. is for 115 V. 60 cy.

Type No.	List Price	Sec. Rms. Volts	Sec. DC Volts	DC Sec. M.A.	Dimensions			Mtg.
					H.	W.	D.	
P-3175	$10.50	550-550	400	150	3 9/16	3	3⅞	D
P-3157	13.75	660-660 † 550-550	500 400	250	4⅝	3 13/16	4⅜	D
P-3158	17.00	1080-1080 500-500	1000 ‡ 400	125 150	4⅝	3 13/16	5	D
P-3159	16.50	900-900 800-800	750 600	225	4⅝	3 13/16	5⅛	D
P-3167	41.00	1450-1450 1175-1175	1200 1000	300	5¾	6⅛	5	EH
P-3168	52.00	2100-2100 1800-1800	1750 1500	300	5¾	6⅛	6	EH
P-4062	80.00	2900-2900 2385-2385	2500 2000	300	8½	6½	5⅝	H

‡For dual operation with simultaneous use of both sec. ratings. †Has 40-volt bias tap.

FILTER CHOKES For Small Transmitter and Amplifier Applications

Type No.	List Price	Inductance Henries	Current Rating M.A.	DC Res. Ohms	Volts Insul.	Dimensions			Mtg.
						H.	W.	D.	
C-3192	$5.00	15	85	325	1500	3⅛	2⅝	2⅝	D
C-3193	5.00	10	110	200	1500	3⅛	2⅝	2⅝	D
C-3194	6.00	12	150	230	1500	3½	2 15/16	3⅛	D
C-3195	8.75	15	150	180	2000	3⅞	3 3/16	3⅜	D
C-3196	7.00	5	200	80	1500	3½	2 15/16	3⅛	D

FILTER SMOOTHING CHOKES For Transmitter Power Supplies

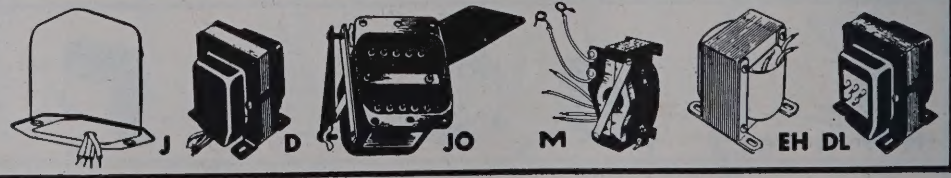
C-3180	$6.50	10	150	210	3000	3⅛	2⅝	2¾	D
C-3181	8.00	10	200	140	3000	3½	2 15/16	3½	D
C-3182	11.00	10	250	125	3000	3⅞	3 3/16	3¾	D
C-3183	11.50	8	300	80	3000	3⅞	3 3/16	3¾	D

FILTER INPUT OR SWINGING CHOKES

C-3187	$6.50	4-16	150	210	3000	3⅛	2⅝	2¾	D
C-3188	8.00	4-16	200	140	3000	3½	2 15/16	3½	D
C-3189	11.00	4-16	250	125	3000	3⅞	3 3/16	3¾	D
C-3190	11.50	3-14	300	80	3000	3⅞	3 3/16	3¾	D

All prices subject to trade discount, and change without notice.

Products of Merit



TRANSFORMERS

AC-DC VIBRATOR TRANSFORMER For Operation from 6 V. Battery and Vibrator or 115 V. 60 cy. Line

Type No.	List Price	H.V. Secondary		Filament		Dimensions			Mtg.
		DC Volts	MA	Volts	Amps	H.	W.	D.	
P-3176	$15.00	300	160	6.3 or 5 6.3	3 4.5	4 5/8	3 13/16	4 1/4	D
P-3075	10.00	330	100	6.3	4	3 7/8	3 3/16	3 3/8	D

PHOTO-FLASH POWER TRANSFORMER Primary for 117 V. 60 Cy. Line or 4 V. Battery Vibrator (or Charger Winding)

Type No.	List Price	Secondary		Mtg. Centers	Dimensions			Mtg.
		AC Volts	DC M.A.		H.	W.	D.	
P-3065	$8.00	1100	1.5	2 11/16	2 5/8	3 1/8	2	B

STEP-DOWN AUTOTRANSFORMERS Input 220—250 V. 60 cy. Output 110—125 V. Pri. Cord and Plug. Sec. Receptacle.

Type No.	List Price	Output Watts	Dimensions			Mtg.
			H.	W.	D.	
P-3161	$9.75	80	3 1/2	2 15/16	3	D
P-3162	13.25	150	3 7/8	3 3/16	3 5/8	D
P-3163	17.75	250	4 5/8	3 13/16	4	D
P-3164	21.50	500	4 5/8	3 13/16	4 3/8	D
P-4065	50.00	1000	7 1/4	6 5/8	5 5/8	H

ISOLATION TRANSFORMERS Equipped with Pri. Cord and Plug—Sec. Standard Receptacle. Voltage Selector Switch. Static Shielded

Type No.	List Price	Primary Volts	Secondary Volts	Watts	Dimensions			Mtg.
					H.	W.	D.	
P-3177	$27.50	117	105–115–125	350	5 5/16	4 1/2	5 1/4	D

ISOLATION TRANSFORMERS To Provide Isolation Between Line and Associated Circuits. Primary for 50-60 Cy. Static Shielding Between Primary and Secondary.

Type No.	List Price	Primary Volts	Secondary Volts	Watts	Dimensions			Mtg.
					H.	W.	D.	
P-3096	$ 6.90	117	117	40	3 1/8	2 5/8	2 5/8	B
P-3197	10.00	117	117	80	3 7/8	3 3/16	3 1/2	D

ISOLATION TRANSFORMERS Equipped with Line Cord and Standard Receptical

Type No.	List Price	Primary Volts	Secondary Volts	Watts	Dimensions			Mtg.
					H.	W.	D.	
P-3172	$50.00	117	117	500	5 3/8	4 5/8	6 1/2	D
P-3198	18.75	117	117	100	4 1/4	3 9/16	3 3/4	D
P-3199	35.00	117	117	250	4 5/8	3 13/16	4 7/8	D

All prices subject to trade discount, and change without notice.

D

B

H

Products of Merit

IF-RF COILS

★TELEVISION UNITS—IF Transformers—Permeability Tuned

Type No.	List Price	Function	Freq. MC.	Mtg. Centers	Dimensions	Mtg.
TV-100	$2.75	1st Pix Amp.	25.3	⅞	⅞x ⅞x2⅛	A
TV-101	2.10	2nd Pix Amp.	22.3	⅞	⅞x ⅞x2¼	A
TV-102	.80	3rd Pix Amp.	25.2	7/16 Hole	½x1½	B
TV-103	.80	4th Pix Amp. (Detector)	23.4	7/16 Hole	½x1½	B
TV-104	2.20	1st Sound (Amplifier)	21.25	⅞	⅞x ⅞x2¼	A
TV-105	2.20	2nd Sound (Amplifier)	21.25	⅞	⅞x ⅞x2¼	A
TV-106	2.60	Sound Discrim.	21.25	1⅛	1⅛x1⅛x2½	A
TV-107	2.75	Converter	21.8	⅞	⅞x ⅞x2¼	A
TV-108	2.75	Input Amp.	4.5	1 1/16	1⅛x1⅛x2⅛	A
TV-109	3.00	Sound Disc.	4.5	1 1/16	1⅛x1⅛x2⅛	A
TV-110	3.30	Sound Ratio Det.	4.5	1 1/16	1⅛x1⅛x2⅛	A
TV-111	3.30	Sound Ratio Det.	21.25	1⅛	1⅛x1⅛x2½	A
TV-112	1.00	Tunable Choke	21-25 MC	7/16	½x1½	B
TV-113	2.75	Sound Amp.	4.5	Clip	¾x ¾x2	K
TV-114	3.30	Sound Disc.	4.5	Clip	¾x ¾x2	K
TV-115	3.30	Sound Ratio Det.	4.5	Clip	¾x ¾x2	K

TRAPS—Permeability Tuned

Type No.	List Price	Function	Freq. MC.	Mtg. Centers	Dimensions	Mtg.
TV-150	$2.00	Cathode Trap*	21.25	7/16 Hole	½ O.D.x1½	B
TV-151	1.00	Sound Trap	4.5	7/16 Hole	½ O.D.x1½	B

*Includes Condenser.

HORIZONTAL "SYNC." TRANSFORMERS

Type No.	List Price	System	Mtg. Centers	Dimensions	Mtg.
TV-160	$2.75	"Sync." Lock	1 7/16	1 7/16x1 7/16x2	C
TV-161	2.00	"Sync." Guide	1 7/16	1 7/16x1 7/16x2	C
TV-162	2.50	"Sync." Freq. and Phase	1 7/16	1 7/16x1 7/16x2	C
TV-163	2.00	Ringing Coil	7/16 Hole		B

ANTENNA COUPLING TRANSFORMERS

Type No.	List Price	Impedance Ratio	Mtg.	Dimensions	Mtg.
TV-170	$2.75	52/300 or 300/52	"L" Bracket	¾x¾x1⅜	D
TV-171	2.75	72/300 or 300/72	"L" Bracket	¾x¾x1⅜	D

PEAKING COILS

Type No.	List Price	Inductance Microhenries	Color Code	Shunt Resistor	Mtg.
TV-180	$0.45	36	Black	—	E
TV-181	.45	93	Red	—	E
TV-182	.45	120	Blue	22K	E
TV-183	.45	180	White	39K	E
TV-184	.50	180	Yellow	—	E
TV-185	.50	250	Green	—	E
TV-189	.50	.8	Orange	—	E
TV-186	.50	73	—	10 meg.	E
TV-187	.50	250	—	22K	E
TV-188	.50	500	—	10 meg.	E

HIGH-PASS FILTERS

Type No.	List Price	Line Impedance	Mtg.	Dimensions	Mtg.
TV-210	$5.50	72 Ohm	L-Bracket	1 7/16x1⅞x3½	F
TV-211	5.50	300 Ohm	L-Bracket	1 7/16x1⅞x3½	F

★ IF-RF television units prefix "TV."

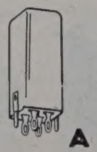
WAVE TRAPS TV-FM

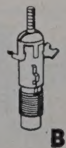
Type No.	List Price	Freq. Range	Mtg. Centers	Dimensions	Mtg.
TV-220	$4.40	150-250 MC.	1 7/16	1⅜x1⅞x3⅜	D
TV-221	4.40	75-150 MC.	1 7/16	1⅜x1⅞x3⅜	D
TV-222	4.40	40- 80 MC.	1 7/16	1⅜x1⅞x3⅜	D
TV-223	4.40	20- 40 MC.	1 7/16	1⅜x1⅞x3⅜	D

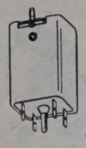
HI-VOLT OSCILLATOR TRANSFORMERS

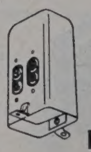
Type No.	List Price	Output Volts	Mtg. Centers	Dimensions	Mtg.
TV-230	$ 8.25	To 4000	1¼	1¼ dia. x 3¾ high	H
TV-231	13.75	To 30000	2¼	2¼ dia. x 6 high	H

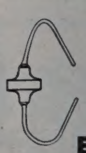
Products of Merit


A


B


C


D


E

IF-RF COILS

FM

IF TRANSFORMERS (Permeability Tuned)

Type No.	List Price	Description	Freq.	Mtg. Centers	Dimensions	Mtg.
FM-250	$3.30	Discriminator	10.7 MC.	$1\frac{1}{16}$	$1\frac{1}{8}$x$1\frac{1}{8}$x$2\frac{1}{8}$	A
FM-251	2.20	Amp. Interstage	10.7 MC.	$1\frac{1}{16}$	$1\frac{1}{8}$x$1\frac{1}{8}$x$2\frac{1}{8}$	A
FM-252	2.20	Ratio Detect.	10.7 MC.	$1\frac{1}{16}$	$1\frac{1}{8}$x$1\frac{1}{8}$x$2\frac{1}{8}$	A
FM-253	2.75	Disc.—Min.	10.7 MC.	Clip	$\frac{3}{4}$x$\frac{3}{4}$x2	K
FM-254	3.30	Amp.—Min.	10.7 MC.	Clip	$\frac{3}{4}$x$\frac{3}{4}$x2	K
FM-255	3.30	Ratio Det.—Min.	10.7 MC.	Clip	$\frac{3}{4}$x$\frac{3}{4}$x2	K

ANTENNA—OSCILLATORS—RF (Slug Tuned)

Type No.	List Price	Description	Freq. MC.	Mtg. Centers	Dimensions	Mtg.
FM-280	$2.20	Antenna	88–108	$\frac{7}{16}$" Hole	$\frac{1}{2}$x$1\frac{1}{2}$	B
FM-281	2.20	RF	88–108	$\frac{7}{16}$" Hole	$\frac{1}{2}$x$1\frac{1}{2}$	B
FM-282	2.20	Osc.	88–108	$\frac{7}{16}$" Hole	$\frac{1}{2}$x$1\frac{1}{2}$	B

BROADCAST

IF TRANSFORMERS (Capacity Tuned)

Type No.	List Price	Function	Freq.	Mtg. Centers	Dimensions	Mtg.
BC-300	$2.50	Input	175 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$2\frac{5}{8}$	I
BC-301	2.50	Interstage	175 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$2\frac{5}{8}$	I
BC-302	2.50	Full Wave Output	175 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$2\frac{5}{8}$	I
BC-303	2.50	Half Wave Output	175 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$2\frac{5}{8}$	I
BC-304	2.20	Input	262 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$2\frac{5}{8}$	I
BC-305	2.20	Interstage	262 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$2\frac{5}{8}$	I
BC-306	2.20	Full Wave Output	262 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$2\frac{5}{8}$	I
BC-307	2.20	Half Wave Output	262 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$2\frac{5}{8}$	I
BC-308	2.20	Input	455 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$2\frac{5}{8}$	I
BC-309	2.20	Interstage	455 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$2\frac{5}{8}$	I
BC-310	2.20	Full Wave Output	455 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$2\frac{5}{8}$	I
BC-311	2.20	Half Wave Output	455 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$2\frac{5}{8}$	I
BC-312	2.20	Input	1500 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$2\frac{5}{8}$	I
BC-313	2.20	Interstage	1500 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$2\frac{5}{8}$	I
BC-314	2.20	Full Wave Output	1500 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$2\frac{5}{8}$	I
BC-315	2.20	Half Wave Output	1500 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$2\frac{5}{8}$	I

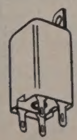
IF TRANSFORMERS (Iron Core—Capacity Tuned)

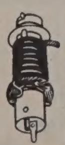
Type No.	List Price	Function	Freq.	Mtg. Centers	Dimensions	Mtg.
BC-330	$3.30	Input	175 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$3\frac{1}{4}$	I
BC-331	3.30	Interstage	175 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$3\frac{1}{4}$	I
BC-332	3.30	Full Wave Output	175 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$3\frac{1}{4}$	I
BC-333	3.30	Half Wave Output	175 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$3\frac{1}{4}$	I
BC-334	2.75	Input	262 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$3\frac{1}{4}$	I
BC-335	2.75	Interstage	262 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$3\frac{1}{4}$	I
BC-336	2.75	Full Wave Output	262 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$3\frac{1}{4}$	I
BC-337	2.75	Half Wave Output	262 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$3\frac{1}{4}$	I
BC-338	2.75	Input	455 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$3\frac{1}{4}$	I
BC-339	2.75	Interstage	455 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$3\frac{1}{4}$	I
BC-340	2.75	Half Wave Output	455 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$3\frac{1}{4}$	I
BC-341	2.75	Full Wave Output	455 KC	$1\frac{3}{8}$	$1\frac{3}{8}$x$1\frac{3}{8}$x$3\frac{1}{4}$	I

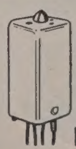
IF TRANSFORMERS (Capacity Tuned)

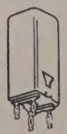
Type No.	List Price	Description	Freq.	Mtg. Centers	Dimensions	Mtg.
BC-360	$2.20	Input Midget	175 KC	$1\frac{1}{8}$	$1\frac{1}{8}$x$1\frac{1}{8}$x2	I
BC-361	2.20	Interstage—Midget	175 KC	$1\frac{1}{8}$	$1\frac{1}{8}$x$1\frac{1}{8}$x2	I
BC-362	2.20	Full Wave—Midget	175 KC	$1\frac{1}{8}$	$1\frac{1}{8}$x$1\frac{1}{8}$x2	I
BC-363	2.20	Half Wave—Midget	175 KC	$1\frac{1}{8}$	$1\frac{1}{8}$x$1\frac{1}{8}$x2	I
BC-364	1.95	Input—Midget	262 KC	$1\frac{1}{8}$	$1\frac{1}{8}$x$1\frac{1}{8}$x2	I
BC-365	1.95	Interstage—Midget	262 KC	$1\frac{1}{8}$	$1\frac{1}{8}$x$1\frac{1}{8}$x2	I
BC-366	1.95	Full Wave—Midget	262 KC	$1\frac{1}{8}$	$1\frac{1}{8}$x$1\frac{1}{8}$x2	I
BC-367	1.95	Half Wave—Midget	262 KC	$1\frac{1}{8}$	$1\frac{1}{8}$x$1\frac{1}{8}$x2	I
BC-368	1.95	Input—Midget	455 KC	$1\frac{1}{8}$	$1\frac{1}{8}$x$1\frac{1}{8}$x2	I
BC-369	1.95	Interstage—Midget	455 KC	$1\frac{1}{8}$	$1\frac{1}{8}$x$1\frac{1}{8}$x2	I
BC-370	1.95	Full Wave—Midget	455 KC	$1\frac{1}{8}$	$1\frac{1}{8}$x$1\frac{1}{8}$x2	I
BC-371	1.95	Half Wave—Midget	455 KC	$1\frac{1}{8}$	$1\frac{1}{8}$x$1\frac{1}{8}$x2	I
BD-372	1.95	Output—Midget*	262 KC	$1\frac{1}{8}$"	$1\frac{1}{8}$x$1\frac{1}{8}$x2	I

*Includes output filter.


F


H


I


K

Products of Merit

IF-RF COILS

BROADCAST (Cont.)

IF TRANSFORMERS (Permeability Tuned)

Type No.	List Price	Description	Freq.	Mtg. Centers	Dimensions	Mtg.
BC-350	$2.75	Input—Miniature	262 KC	¾	¾x¾x2	K
BC-351	2.75	Output—Miniature	262 KC	¾	¾x¾x2	K
BC-352	2.40	Input—Miniature	455 KC	¾	¾x¾x2	K
BC-353	2.40	Output—Miniature	455 KC	¾	¾x¾x2	K
BC-354	2.65	Output—Miniature*	262 KC	Clip	¾x ¾x2	K
BC-355	2.35	Output—Miniature*	455 KC	Clip	¾x ¾x2	K

*Includes output filter.

IF TRANSFORMERS—Special

Type No.	List Price	Description	Freq.	Mtg.	Dimensions	Mtg.
BC-375	$1.95	Cartwheel	455 KC	6-32 Screw	1⅜x1½	
BC-376	2.75	Std. IF (Tweet Filter)	455 KC	1⅜-Mtg. Center	1⅜x1⅜x2½	A
BC-377	4.75	AM-FM	455 KC-10.7 MC	1 7/16-Mtg. Center	1 7/16x1 7/16x2½	A

RF—ANTENNA—OSCILLATOR (Permeability Tuned) Univ. Replac.

Type No.	List Price	Description	Mtg.	Cond. Max.	Dimensions	Mtg.
BC-380	$2.20	Antenna	L Bracket	250–450-MMF	⅞ Dia. x 2	B
BC-381	2.20	Oscillator*	L Bracket	250–450-MMF	⅞ Dia. x 2	B
BC-382	2.20	RF	L Bracket	250–450-MMF	⅞ Dia. x 2	B
BC-383	2.75	Antenna (Shielded)	1⅜ Centers	250–450-MMF	1⅜x1⅜x2½	A
BC-384	2.75	Oscillator* (Shielded)	1⅜ Centers	250–450-MMF	1⅜x1⅜x2½	A
BC-385	2.75	RF (Shielded)	1⅜ Centers	250–450-MMF	1⅜x1⅜x2½	A

*Used with any "IF" (100 to 550 KC) Tapped Pri. and Sec.

MINIATURE (IRON CORE) TYPE K

Type No.	List Price	Description	Operating Freq. KC	Cond. Size	Dimensions	Mtg.
BC-390	$1.65	Antenna†	540–1700	365 MMF	¾x¾x2	Spring Clips
BC-391	1.65	RF	540–1700	365 MMF	¾x¾x2	Spring Clips
BC-392	1.65	Oscillators†	540–1700	365 MMF	¾x¾x2	Spring Clips

†Tapped Secondaries.

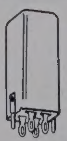
MIDGET—OSCILLATORS (Screw Mounting) (For use with 365 MMF Cond.)

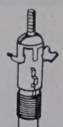
Type No.	List Price	Description	Operating Freq.	Dimensions	Mtg.
BC-395	$1.10	Oscillator	175 KC	1" Dia. x 1" High	L
BC-396	1.10	Oscillator	262 KC	1" Dia. x 1" High	L
BC-397	1.10	Oscillator	455 KC	1" Dia. x 1" High	L
BC-398	1.10	Oscillator (Autoformer)	175 KC	1" Dia. x 1" High	L
BC-399	1.10	Oscillator (Autoformer)	262 KC	1" Dia. x 1" High	L
BC-400	1.10	Oscillator (Autoformer)	455 KC	1" Dia. x 1" High	L

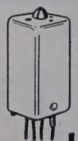
BEAT FREQUENCY OSCILLATORS (Capacity Tuned) Type M

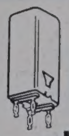
Type No.	List Price	Frequency Range	IF Freq.	Dimensions	Mtg. Centers
BC-430	$2.50	165–185 KC	175 KC	1⅛x1⅛x2⅛	1⅛
BC-431	2.50	250–275 KC	262 KC	1⅛x1⅛x2⅛	1⅛
BC-432	2.50	450–475 KC	455 KC	1⅛x1⅛x2⅛	1⅛
BC-433	2.50	500–550 KC	525 KC	1⅛x1⅛x2⅛	1⅛
BC-434	2.50	1500–1600 KC	1500 KC	1⅛x1⅛x2⅛	1⅛

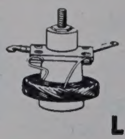
Products of Merit

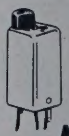

A


B


I


K


L


M

IF-RF COILS

BROADCAST (Cont.)

TRF UNITS

Type No.	List Price	Description	Freq. Range	Dimensions	Mtg.
BC-410	$1.00	Antenna†	540–1700 KC	1⅜ Dia. x 2	N
BC-411	1.00	RF†	540–1700 KC	1⅜ Dia. x 2	N
BC-412	.95	Antenna†	540–1700 KC	⅝ Dia. x 2⅛	N
BC-413	.95	RF†	540–1700 KC	⅝ Dia. x 2⅛	N
BC-414	.95	Band—Pass†	540–1700 KC	⅝ Dia. x 2⅛	N
BC-415	1.25	Antenna (Shielded)	540–1700 KC	1⅜x1⅜x2½	A
BC-416	1.25	RF (Shielded)	540–1700 KC	1⅜x1⅜x2½	A
BC-417	1.25	Band—Pass (Shielded)	540–1700 KC	1⅜x1⅜x2½	A

OSCILLATOR—Special

Type No.	List Price	Description	Freq.	Mtg. Center	Dimensions	Mtg.
BC-460	$3.30	Phono—Osc.	540–700 KC	1 7/16	1 7/16x1 7/16x2½	A

FILTERS

Type No.	List Price	Description	Voltage	Watts	Dimensions	Mtg.
BC-450	$7.70	Appliance Type	115	550	2¼x2¼x4	O
BC-451	1.65	Fluorescent Light	220	20	1¼ Dia. x 1½	P
BC-452	1.65	Fluorescent Light	220	40	1¼ Dia. x 1½	P
BC-453	1.65	Fluorescent Light	220	80	1¼ Dia. x 1½	P
BC-454	1.65	Fluorescent Light	220	160	1¼ Dia. x 1½	P
BC-455	7.70	All-Wave Filter	115	150	2¼x2¼x4	O

CHOKES

UNSHIELDED AIR CORE*

Type No.	List Price	Inductance MH	Current M.A.	Resistance Ohms	Mtg.
BC-500	$0.45	.25	125	8	R
BC-501	.45	.75	125	17	R
BC-502	.45	1.50	125	21	R
BC-503	.55	2.50	125	28	R
BC-504	.55	5.0	125	41	R
BC-505	.55	7.5	125	53	R
BC-506	.65	10.0	125	64	R
BC-507	.65	12.5	125	74	R
BC-508	.65	15.0	125	83	R
BC-509	.85	20.0	125	97	R
BC-510	.85	30.0	125	120	R
BC-511	1.10	60.0	100	175	R
BC-512	1.40	80.0	100	230	R

*Single Bolt Mtg. Dimen.—1⅛ Dia. x ⅝.

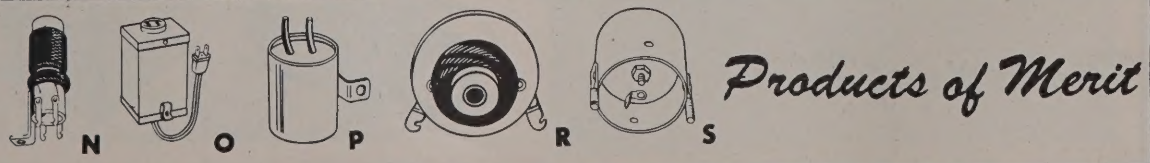
SHIELDED AIR CORE*

Type No.	List Price	Inductance MH	Current M.A.	Resistance Ohms	Mtg.
BC-515	$0.85	.5	125	10	S
BC-516	.85	1.0	125	17	S
BC-517	.95	2.5	125	30	S
BC-518	.95	5.0	125	49	S
BC-519	.95	7.5	125	61	S
BC-520	1.05	10.0	125	75	S
BC-521	1.20	25.0	125	125	S
BC-522	1.50	50.0	125	186	S

*1¼ Mtg. Centers Dimen.—1¼ Dia. x 1⅛.

RF TYPE

Type No.	List Price	Inductance MH	Current M.A.	Resistance Ohms	Mtg.
BC-549	$ 0.85	2.5	200	26	E
BC-550	66.00	100—BC-549 Bulk Packed			



IF-RF COILS

CHOKES (Cont.)

UNSHIELDED IRON CORE*

Type No.	List Price	Inductance MH	Current M.A.	Resistance Ohms	Mtg.
BC-525	$1.00	.5	125	6.8	R
BC-526	1.10	1.0	125	10.9	R
BC-527	1.15	2.5	125	19.5	R
BC-528	1.30	5.0	125	23.0	R
BC-529	1.40	7.5	125	37.0	R
BC-530	1.45	10.0	125	45.0	R
BC-531	1.75	25.0	100	78.0	R
BC-532	1.95	50.0	100	130.0	R
BC-533	2.20	75.0	100	172.0	R
BC-534	2.50	100.0	100	210.0	R
BC-535	2.75	150.0	100	268.0	R

*Single Bolt Mtg. Dimen. 1⅛ Dia. x ⅝.

SHIELDED IRON CORE*

Type No.	List Price	Inductance MH	Current M.A.	Resistance Ohms	Mtg.
BC-538	$1.40	.5	125	8.6	S
BC-539	1.50	1.0	125	11.5	S
BC-540	1.55	2.5	125	22.0	S
BC-541	1.70	5.0	125	31.0	S
BC-542	1.75	7.5	125	42.0	S
BC-543	1.80	10.0	125	47.0	S
BC-544	2.15	25.0	125	100.0	S
BC-545	2.30	50.0‡	100	160.0	S
BC-546	2.60	75.0‡	100	222.0	S
BC-547	2.85	100.0‡	100	348.0	S
BC-548	3.15	150.0‡	100	520.0	S

*1¼ Mtg. Centers Dimen. 1¼ Dia. x 1⅛.
‡1⅝ Mtg. Centers Dimen. 1⅝ Dia. x 1⅛.

FILAMENT

Type No.	List Price	Inductance UH	Current Amps	Resistance Ohms	Mtg.
BC-537	$0.70	10.0	8	.02	E

SHORT WAVE

IF TRANSFORMERS

Type No.	List Price	Description	Freq.	Mtg. Center	Dimensions	Mtg.
SW-600	$2.20	Input	1400–1600	1⅜	1⅜x1⅜x2⅝	I
SW-601	2.20	Interstage	1400–1600	1⅜	1⅜x1⅜x2⅝	I
SW-602	2.20	Interstage (Miniature)	1400–1600	¾	¾x ¾x2	K
SW-603	2.20	Output (Miniature)	1400–1600	¾	¾x ¾x2	K
SW-604	2.20	Input Midget	1400–1600	1⅛	1⅛x1⅛x2	I
SW-605	2.20	Interstage Midget	1400–1600	1⅛	1⅛x1⅛x2	I
SW-606	2.20	Full Wave Output	1400–1600	1⅛	1⅛x1⅛x2	I
SW-607	2.20	Half Wave Output	1400–1600	1⅛	1⅛x1⅛x2	I

SW CHOKES

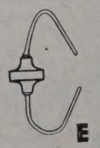
Type No.	List Price	Description	Ohms	Micro Henries	Dimensions	M.A.	Mtg.
SW-630	$0.65	Choke	.07	2.5	¼ Dia. x 1½	200	P
SW-631	.65	Choke	.25	5.0	¼ Dia. x 1½	200	P

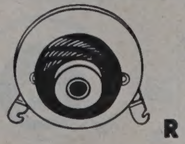
RF—ANTENNA—OSCILLATORS—Miniature Type

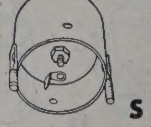
Type No.	List Price	Description	Freq.	Mtg.	Dimensions	Mtg.
SW-620	$1.65	Antenna	2.1–6.3 MC	Clip	¾x¾x2	K
SW-621	1.65	RF	2.1–6.3 MC	Clip	¾x¾x2	K
SW-622	1.65	Oscillator*	2.1–6.3 MC	Clip	¾x¾x2	K

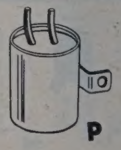
*1600 MMF Series pad.

Products of Merit


E


R


S


P

TRANSFORMERS

For Electronic Equipment

MILITARY, INDUSTRIAL, & COMMERCIAL

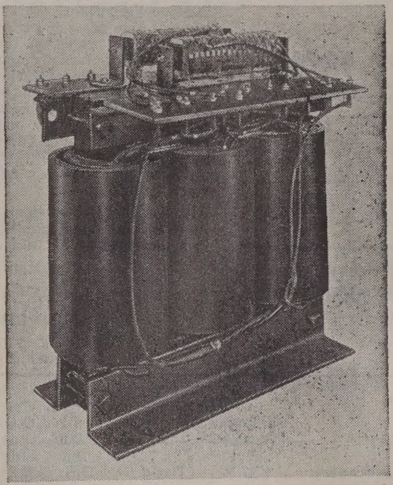
Plate
Filament
Plate and Filament
Filter Reactors
Pulse
Audio

in

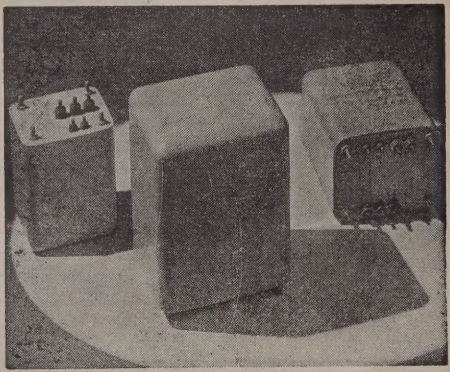
Core-and-coil
Permafil
Compound-filled
Hermetic
Construction

for

Radar
Communication
Television and Radio
Transmitters
and Similar Equipment

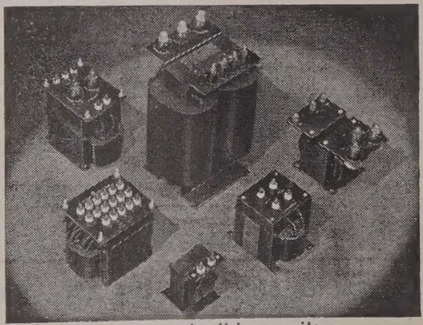


Core-and-coil assemblage for plate transformer for use with rectifier, 33.3 kva

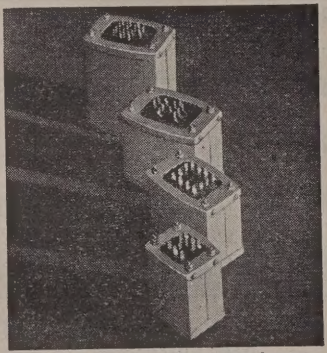


Hermetically sealed transformers

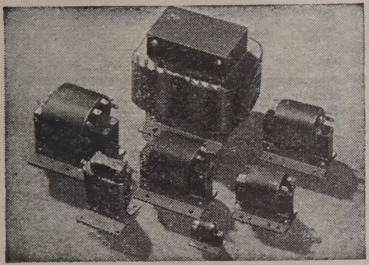
Details on transformers for electronic equipment can be obtained from the nearest G-E Apparatus Sales Office, or by writing General Electric Company, Section 640-306. Schenectady 5, N. Y., for Bulletin GEC-481.



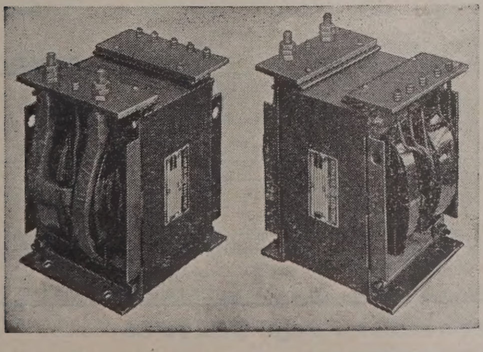
Core-and-coil-type units



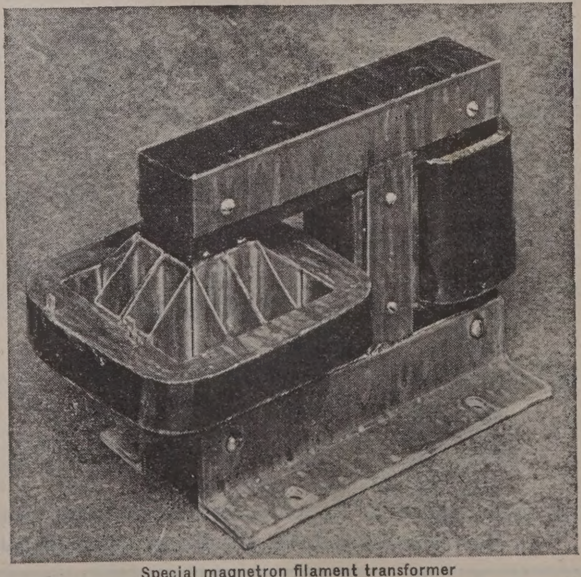
Standard compound filled transformers



Permafil-type transformer



Heavy duty, high reactance filament transformers



Special magnetron filament transformer

for **PRECISION** {**FREED TRANSFORMERS**} *for* **QUALITY**

FREED TRANSFORMER CO., INC., 1718-36 WEIRFIELD ST., BROOKLYN (RIDGEWOOD) 27, N. Y.

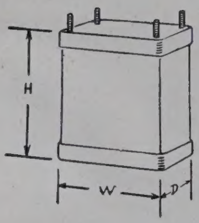
HIGH FIDELITY COMPONENTS

INPUT TRANSFORMERS

Modern high fidelity broadcasting and transcription apparatus require the utmost performance and reliability in the audio transformers used in their circuitry. The Freed "Quality Grade" audio transformers are wide band, high fidelity components featuring astatic construction, longitudinal balance, low harmonic distortion, uniform response, high efficiency, and constant impedance match throughout the audio frequency spectrum. Maximum neutralization of stray fields is accomplished by use of humbalanced coil structures and multiple alloy shielding. High fidelity is achieved on every tap of universal impedance winding without line reflection of transverse coupling.

All Quality Grade Components are thoroughly impregnated in a special non-hygroscopic varnish, and fully encapsulated in a moisture proof, high-melting point compound.

CASE DIMENSIONS NO. DC-2AT



Mtg. Centers	Dimensions		
	W	D	H
2″ x 1¾″	2⅝″	2¼″	3″

Knockout	Mtg. Studs	Wgt.
1½″ x 1⅜″	8-32	1

L after case number indicates leads.
T after case number indicates terminals.

U-60 IMPEDANCES IN OHMS

2.5, 5, 10, 15, 20, 30, 40, 60

U-500 IMPEDANCES IN OHMS

50, 125, 200 CT, 250, 330, 500 CT.
125 and 500 ohms can be used for 150 and 600 ohms.

Catalog No.	Application	Impedance Level Ohms Primary	Impedance Level Ohms Secondary	Maximum Power Level V.U.*	Ratio	Equivalent Shielding D.B.	Max. Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Freq. Response C.P.S.	Case Number
QGA 1	Universal 500 ohm line to push-pull grids	U-500	100,000 split	+10	1:14.1	70	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 2	Universal 500 ohm line to push-pull grids	U-500	100,000 split	+10	1:14.1	90	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 3	Universal 500 ohm line to single or push-pull grids	U-500	60,000 split	+10	1:11	70	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 4	Universal 500 ohm line to single or push-pull grids	U-500	60,000 split	+10	1:11	90	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 5	Universal low impedance microphone, pickup or line to single or push-pull grids	U-60	60,000 split	+10	1:31.6	70	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 6	Universal low impedance microphone, pickup or line to single or push-pulll grids	U-60	60,000 split	+10	1:31.6	90	0	0	±1.0 DB 20-20,000	DC-2AT

HYBRID AND REPEAT COILS

CASE DIMENSIONS
Same as Input Transformers above

Catalog No.	Application	Impedance Level Ohms Primary	Impedance Level Ohms Secondary	Maximum Power Level V.U.*	Ratio	Equivalent Shielding D.B.	Max. Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Freq. Response C.P.S.	Case Number
QGA 7	Hybrid. Unbalanced 500/600 ohm lines to 600 ohms.	Total Pri 1200/1000 split 300/250 300/250	600/150 or 500/125 split	+10	1.41:1	70	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 8	Hybrid. Balanced 500/600 ohm lines to 600 ohms. Longitudinal balance 70 DB	Total Pri 1200/1000 split 300/250C.T. 300/250C.T.	600/150 or 500/125 split	+10	1.41:1	70	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 9	Hybrid. Unbalanced 500/600 ohm lines to triode plate. No D.C. in secondary.	Total Pri 1200/1000 split 300/250 300/250	15,000 or 12,500	+10	1:3.54	70	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 10	Hybrid. Balanced 500/600 ohm lines to triode plate. No D.C. in secondary. Longitudinal balance 70 DB.	Total Pri 1200/1000 split 300/250C.T. 300/250C.T.	15,000 or 12,500	+10	1:3.54	70	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 11	Repeat coil for low frequency ringing. Longitudinal balance 70 DB.	600/500 split	600/500 split Balanced	+10	1:1	90	0	0	±1.0 DB 20-20,000	DC-2AT

For Freed Precision Laboratory Test Instruments see Section F Page F-82 to 86

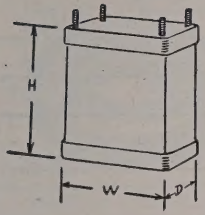
See pages N-115, 116 for FREED Prices

for **PRECISION** **FREED TRANSFORMERS** *for* **QUALITY**

FREED TRANSFORMER CO., INC., 1718-36 WEIRFIELD ST., BROOKLYN (RIDGEWOOD) 27, N. Y.

HIGH FIDELITY COMPONENTS

INTERSTAGE TRANSFORMERS



CASE DIMENSIONS

Case #	Mtg. Centers	Dimensions W	D	H	Knockout	Mtg. Studs	Wgt.
DC-2AT	2″ x 1¾″	2⅝″	2¼″	3″	1½″ x 1⅜″	8-32	2¾
DC-4AT	2½″ x 2½″	3⅛″	3″	3¾″	2″ x 1¾″	8-32	4½

L after case number indicates leads.
T after case number indicates terminals.

Catalog No.	Application	Impedance Level Ohms Primary	Secondary	Maximum Power Level V.U.*	Ratio	Equivalent Shielding D.B.	Max. Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Freq. Response C.P.S.	Case Number
QGA 12	Bridging line to single or push-pull grids.	10,000	60,000 split	+10	1:2.45	70	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 13	Single 6C4, 6J5, ½ 6SN7 triode to push-pull grids. Shunt feed.	15,000	60,000 split	+18	1:2	45	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 14	Single 6C4, 6J5, ½ 6SN7 triode to push-pull grids.	15,000	60,000 split	+18	1:2	45	8	8	±1.0 DB 50-20,000	DC-2AT
QGA 15	Push-pull triode plates to push-pull class A grids.	20,000 split	45,000 split	+25	1:1.5	30	8	0.5	±1.0 DB 20-20,000	DC-4AT

LOW LEVEL OUTPUT, MIXING, MATCHING TRANSFORMERS

CASE DIMENSIONS
See DC-2AT above

U-500 IMPEDANCES IN OHMS
50, 125, 200 CT, 250, 330, 500C.T.
125 and 500 ohms can be used for 150 and 600 ohms

Catalog No.	Application	Impedance Level Ohms Primary	Secondary	Maximum Power Level V.U.*	Ratio	Equivalent Shielding D.B.	Max. Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Freq. Response C.P.S.	Case Number
QGA 16	Single plate or bridging line to Universal 500 ohm line. Shunt feed.	15,000	U-500	+18	5.5:1	70	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 17	Single plate to Universal 500 ohm line.	15,000	U-500	+18	5.5:1	70	8	8	±1.0 DB 50-20,000	DC-2AT
QGA 18	Push-pull triode plates to Universal 500 ohm line.	20,000 C.T.	U-500	+25	6.3:1	70	8	0.5	±1.0 DB 20-20,000	DC-2AT
QGA 19	Mixing, low impedance microphone or line to Universal 500 ohm line.	U-500	U-500	+12	1:1	70	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 20	Line level mixing and matching.	U-500	U-500	+30	1:1	70	0	0	±1.0 DB 20-20,000	DC-2AT
QGA 21	High mu triode photo-cell to Universal 500 ohm line.	100,000	U-500	+12	14.1:1	70	0	0	±1.0 DB 20-20,000	DC-2AT

For Freed Precision Laboratory Test Instruments see Section F Page F-82 to 86

See pages N-115, 116 for FREED Prices

for **PRECISION**

FREED TRANSFORMERS

for **QUALITY**

FREED TRANSFORMER CO., INC., 1718-36 WEIRFIELD ST., BROOKLYN (RIDGEWOOD) 27, N. Y.

HIGH FIDELITY COMPONENTS

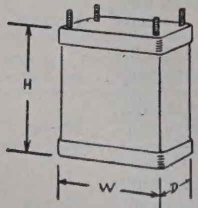
DRIVER TRANSFORMERS

Catalog No.	Application	Primary Impedance Ohms	Maximum Power Level V.U.*	Turn Ratio Pri: ½ Sec.	Max. Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Frequency Response C.P.S.	Case Number
QGA 22	Universal 500 ohm line to Class B grids.	U-500	+40	1:1	0	0	±1.0 DB 20-20,000	DC-4AT
QGA 23	Push-pull 6J5, etc. to push-pull 2A3's, 6L6's, etc.	20,000 C.T.	+30	3.2:1	8	0.5	±1.0 DB 20-20,000	DC-2AT
QGA 24	Push-pull 2A3, 6B4 to push-pull 809, T2-40, 4/125A.	5,000 C.T.	+40	3.1:1	50	5	±1.0 DB 20-20,000	DC-4AT

HIGH LEVEL OUTPUT TRANSFORMERS

TUBES TO LINE, TUBES TO VOICE COIL, LINE TO LINE, LINE TO VOICE COIL

Catalog No.	Application	Impedance Level Ohms Primary	Impedance Level Ohms Secondary	Maximum Power Level V.U.*	Ratio	Max. D.C. per Side Ma.	D.C. Unbalance Ma.	Frequency Response C.P.S.	Case Number
QGA 25	PP 2A3, 6B4, 6L6, 300A, 275A to Universal 500 ohm line.	5,000 split	U-500	+42 (15 watts)	3.16:1	50	5	±0.5 DB 20-30,000	DC-5BT
QGA 26	As above to Universal voice coil.	5,000 split	U-16	+42	17.7:1	50	5	±0.5 DB 20-30,000	DC-5BT
QGA 27	Push-pull 6V6, 6AQ5, 7C5, 6N7 to Universal 500 ohm line.	8,000 split	U-500	+42	4:1	50	5	±0.5 DB 20-30,000	DC-5BT
QGA 28	As above to Universal voice coil.	8,000 split	U-16	+42	22.4:1	50	5	±0.5 DB 20-30,000	DC-5BT
QGA 29	P.P. 6F6, 6V6, 6AQ5, 7C5, 7B5, 6AR5, 6K6, 6L6 to Universal 500 ohm line.	10,000 split	U-500	+42	4.47:1	40	4	±0.5 DB 20-30,000	DC-5BT
QGA 30	As above to Universal voice coil.	10,000 split	U-16	+42	25:1	40	4	±0.5 DB 20-30,000	DC-5BT
QGA 31	PP. 807, 1614, KT-66, (Williamson Amplifier) to Universal 500 ohm line.	10,000 split	U-500	+45.5 (36 watts)	4.47:1	50	5	±0.5 DB 20-30,000	DC-6AT
QGA 32	As above to Universal voice coil.	10,000 split	U-16	+45.5	25:1	50	5	±0.5 DB 20-30,000	DC-6AT
QGA 33	P.P. Parallel 2A3, 6A5G, 300A to Universal 500 ohm line.	2,500 split	U-500	+45.5	2.24:1	100	10	±0.5 DB 20-30,000	DC-6AT
QGA 34	As above to Universal voice coil.	2500 split	U-16	+45.5	12.5:1	100	10	±0.5 DB 20-30,000	DC-6AT
QGA 35	P.P. 6L6 or P.P. Parallel 6L6 to Universal 500 ohm line.	3800 split	U-500	+47 (50 watts)	2.75:1	130	13	±0.5 DB 20-30,000	DC-7BT
QGA 36	As above to Universal voice coil.	3800 split	U-16	+47	15.4:1	130	13	±0.5 DB 20-30,000	DC-7BT
QGA 37	High level multiple line to Universal voice coil.	U-500	U-16	+42	5.6:1	0	0	±0.5 DB 20-30,000	DC-5BT
QGA 38	High level multiple line to Universal voice coil.	U-500	U-16	+47	5.6:1	0	0	±0.5 DB 20-30,000	DC-7BT



CASE DIMENSIONS

Case #	Mtg. Centers	Dimensions W	Dimensions D	Dimensions H	Knockout	Mtg. Studs	Wgt.
DC-2AT	2" x 1¾"	2⅝"	2¼"	3"	1½" x 1⅜"	8-32	2½
DC-4AT	2½" x 2½"	3⅛"	3"	3¾"	2" x 1¾"	8-32	4½
DC-5BT	3⅛" x 2⅝"	4⅛"	3½"	4½"	2½" x 2"	10-32	10
DC-6AT	3¾" x 3"	5"	4⅛"	4⅞"	3" x 2½"	10-32	15
DC-7BT	4⅜" x 3¾"	5½"	5"	6¾"	3" x 2½"	¼-20	22

When supplied with leads: DC-L
When supplied with terminals: DC-T

U-16 IMPEDANCE IN OHMS

2, 4, 8, 12, 16

U-500 IMPEDANCES IN OHMS

50, 125, 200CT, 250, 330, 500CT.
125 and 500 ohms can be used for 150 and 600 ohms.

A 70 volts level can be obtained for the following impedances:

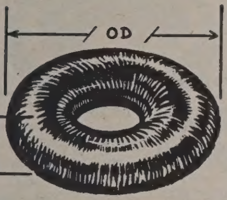
500 ohms — 10 watts + 40 VU
330 ohms — 15 watts + 42 VU
250 ohms — 20 watts + 43 VU
200 ohms — 25 watts + 44 VU
125 ohms — 40 watts + 46 VU
50 ohms — 100 watts + 50 VU

For Freed Precision Laboratory Test Instruments see Section F Page F-82 to 86

See pages N-115, 116 for FREED Prices

FREED TOROIDAL INDUCTORS

STANDARD TOLERANCE ±2%



UNCASED DIMENSIONS		
Type	T	OD
TI-1	$\frac{11}{16}$″	1 $\frac{13}{16}$″
TI-2	$\frac{11}{16}$″	1 $\frac{9}{16}$″
TI-3	¾″	1⅝″
TI-3A	1″	2⅛″

TYPE TI-1

DC CASE

Frequency Range — Up to 15 KC
Non-stabilized

Maximum Inductance — 20 HY
Maximum "Q" 185 @ 7.5 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-800	5 MHY	F-811	1000 MHY	F-822	4500 MHY
F-801	10 MHY	F-812	1250 MHY	F-823	5000 MHY
F-802	15 MHY	F-813	1500 MHY	F-824	6000 MHY
F-803	30 MHY	F-814	1750 MHY	F-825	7000 MHY
F-804	50 MHY	F-815	2000 MHY	F-826	8000 MHY
F-805	75 MHY	F-816	2250 MHY	F-827	9000 MHY
F-806	100 MHY	F-817	2500 MHY	F-828	10000 MHY
F-807	150 MHY	F-818	2750 MHY	F-829	15000 MHY
F-808	200 MHY	F-819	3000 MHY	F-830	20000 MHY
F-809	500 MHY	F-820	3500 MHY		
F-810	750 MHY	F-821	4000 MHY		

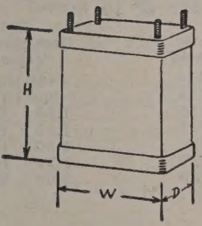
TYPE TI-2^{s}

DC CASE

Frequency Range — Up to 75 KC
Stabilized

Maximum Inductance — 500 MHY
Maximum "Q" 270 @ 23 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1800	1 MHY	F-1806	15 MHY	F-1812	200 MHY
F-1801	2 MHY	F-1807	30 MHY	F-1813	300 MHY
F-1802	3 MHY	F-1808	50 MHY	F-1814	400 MHY
F-1803	4 MHY	F-1809	75 MHY	F-1815	500 MHY
F-1804	5 MHY	F-1810	100 MHY		
F-1805	10 MHY	F-1811	150 MHY		



DC CASE

TYPE TI-3^{s}

DC CASE

Frequency Range — Up to 200 KC
Stabilized

Maximum Inductance — 10 MHY
Maximum "Q" 280 @ 75 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1846	.1 MHY	F-1850	.5 MHY	F-1854	4 MHY
F-1847	.2 MHY	F-1851	1 MHY	F-1855	5 MHY
F-1848	.3 MHY	F-1852	2 MHY	F-1845	7.5 MHY
F-1849	.4 MHY	F-1853	3 MHY	F-1844	10 MHY

CASED DIMENSIONS		
TYPE TI-1		
H	W	D
2½″	2 $\frac{1}{16}$″	1 $\frac{13}{16}$″
Mtg. Centers 1½″ x 1¼″		
TYPE TI-2		
H	W	D
2½″	2 $\frac{1}{16}$″	1 $\frac{13}{16}$″
Mtg. Centers 1½″ x 1¼″		
TYPE TI-3		
H	W	D
2½″	2 $\frac{1}{16}$″	1 $\frac{13}{16}$″
Mtg. Centers 1½″ x 1¼″		
TYPE TI-3A		
H	W	D
3″	2⅝″	2¼″
Mtg. Centers 2″ x 1¾″		

TYPE TI-3A^{s}

DC CASE

Frequency Range — Up to 200 KC
Stabilized

Maximum Inductance — 100 MHY
Maximum "Q" 300 @ 37 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1856	10 MHY	F-1859	30 MHY	F-1862	75 MHY
F-1857	15 MHY	F-1860	40 MHY	F-1863	100 MHY
F-1858	20 MHY	F-1861	50 MHY		

NOTE: When ordering Freed Inductors in Commercial Type Cases, add "C" to Catalog Number. When ordering Hermetically Sealed units, add "H."

Freed Toroidal Inductors can also be supplied on special order to tolerances of ±1%.

For Freed Precision Laboratory Test Instruments see Section F Page F-82 to 86

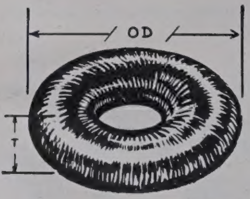
See pages N-115, 116 for FREED Prices

for **PRECISION** **FREED TRANSFORMERS** *for* **QUALITY**

FREED TRANSFORMER CO., INC., 1718-36 WEIRFIELD ST., BROOKLYN (RIDGEWOOD) 27, N. Y.

FREED TOROIDAL INDUCTORS

STANDARD TOLERANCE ±2%



UNCASED DIMENSIONS		
Type	T	OD
TI-4	5/8"*	1 5/16"
TI-5	3/8"	1"
TI-6	5/8"*	1 5/16"
TI-7	3/8"	1"

*Wedding Ring Size

TYPES TI-4 & 4^s

DM CASE

TYPE TI-4

Frequency Range — Up to 15 KC
Non-stabilized
Maximum Inductance — 5 HY
Maximum "Q" 175 @ 7.5 KC

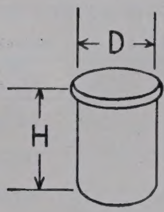
TYPE TI-4^s

Frequency Range — Up to 15 KC
Stabilized
Maximum Inductance — 5 HY
Maximum "Q" 175 @ 7.5 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-850	5 MHY	F-860	400 MHY	F-870	2.00 HY
F-851	10 MHY	F-861	500 MHY	F-871	2.25 HY
F-852	15 MHY	F-862	600 MHY	F-872	2.50 HY
F-853	30 MHY	F-863	700 MHY	F-873	2.75 HY
F-854	50 MHY	F-864	800 MHY	F-874	3.00 HY
F-855	75 MHY	F-865	900 MHY	F-875	3.50 HY
F-856	100 MHY	F-866	1.00 HY	F-876	4.00 HY
F-857	150 MHY	F-867	1.25 HY	F-877	4.50 HY
F-858	200 MHY	F-868	1.50 HY	F-878	5.00 HY
F-859	300 MHY	F-869	1.75 HY		

TYPES TI-5 & 5^s

DM CASE



TYPE TI-5

Frequency Range — Up to 15 KC
Non-stabilized
Maximum Inductance — 2 HY
Maximum "Q" 115 @ 10 KC

TYPE TI-5^s

Frequency Range — Up to 15 KC
Stabilized
Maximum Inductance — 2 HY
Maximum "Q" 115 @ 10 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1700	5 MHY	F-1707	150 MHY	F-1714	800 MHY
F-1701	10 MHY	F-1708	200 MHY	F-1715	900 MHY
F-1702	15 MHY	F-1709	300 MHY	F-1716	1.00 HY
F-1703	30 MHY	F-1710	400 MHY	F-1717	1.25 HY
F-1704	50 MHY	F-1711	500 MHY	F-1718	1.50 HY
F-1705	75 MHY	F-1712	600 MHY	F-1719	1.75 HY
F-1706	100 MHY	F-1713	700 MHY	F-1720	2.00 HY

CASED DIMENSIONS

TYPE TI-4*
H 1½" D 1⅜"
Mtg. Centers ⅞"

TYPE TI-5*
H 1" D 1⅛"
Mtg. Centers ⅝"

TYPE TI-6*
H 1½" D 1⅜"
Mtg. Centers ⅞"

TYPE TI-7*
H 1" D 1⅛"
Mtg. Centers ⅝"

*Commercial type cases have Bakelite cover with solder lugs.

TYPES TI-6 & 6^s

DM CASE

TYPE TI-6

Frequency Range — Up to 75 KC
Non-stabilized
Maximum Inductance — 1 HY
Maximum "Q" 250 @ 17 KC

TYPE TI-6^s

Frequency Range — Up to 75 KC
Stabilized
Maximum Inductance — 1 HY
Maximum "Q" 250 @ 17 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1726	1 MHY	F-1732	10 MHY	F-1738	100 MHY
F-1727	2 MHY	F-1733	15 MHY	F-1739	150 MHY
F-1728	3 MHY	F-1734	20 MHY	F-1740	200 MHY
F-1729	4 MHY	F-1735	30 MHY	F-1741	250 MHY
F-1730	5 MHY	F-1736	50 MHY	F-1742	300 MHY
F-1731	7.5 MHY	F-1737	75 MHY	F-1743	500 MHY

TYPE TI-7

DM CASE

Frequency Range — Up to 75 KC
Non-stabilized

Maximum Inductance — 200 MHY
Maximum "Q" 170 @ 30 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1781	.5 MHY	F-1787	10 MHY	F-1793	50 MHY
F-1782	1 MHY	F-1788	15 MHY	F-1794	75 MHY
F-1783	2 MHY	F-1789	20 MHY	F-1795	100 MHY
F-1784	3 MHY	F-1790	25 MHY	F-1796	150 MHY
F-1785	5 MHY	F-1791	30 MHY	F-1797	200 MHY
F-1786	7.5 MHY	F-1792	40 MHY		

For Freed Precision Laboratory Test Instruments see Section F Page F-82 to 86

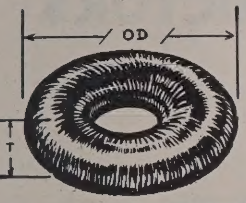
See pages N-115, 116 for FREED Prices

for **PRECISION** **FREED TRANSFORMERS** *for* **QUALITY**

FREED TRANSFORMER CO., INC., 1718-36 WEIRFIELD ST., BROOKLYN (RIDGEWOOD) 27, N. Y.

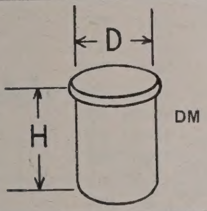
FREED TOROIDAL INDUCTORS

STANDARD TOLERANCE ±2%



UNCASED DIMENSIONS		
Type	T	OD
TI-8	⅜″*	1″
TI-9	1″	2⅛″
TI-10	¾″	1⅝″
TI-11	$\frac{15}{16}$″	2⅝″

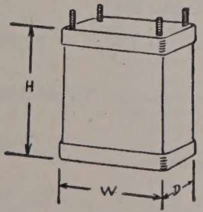
*Wedding Ring Size



CASED DIMENSIONS

Type	H	W	D	Mtg. Centers
TYPE TI-8*	1″		1⅛″	⅝″
TYPE TI-9	3"	2⅝″	2¼″	2″ x 1¾
TYPE TI-10	2½″	2$\frac{1}{16}$″	1$\frac{13}{16}$″	1½″ x 1¼″
TYPE TI-11 (Commercial Case)	3½″	2⅝″	2¼″	2″ x 1¾″
TYPE TI-11 (Hermetically Sealed Case)	3$\frac{9}{16}$″	1$\frac{9}{16}$″	3$\frac{1}{16}$″	2½″ x 1″

*Commercial type cases have Bakelite cover with solder lugs.



DC

TYPES TI-8 & 8^{s}

DM CASE

TYPE TI-8

Frequency Range — Up to 60 KC
Non-stabilized

Maximum Inductance — 100 MHY
Maximum "Q" 150 @ 50 KC

TYPE TI-8^{s}

Frequency Range — Up to 60 KC
Stabilized

Maximum Inductance — 100 MHY
Maximum "Q" 150 @ 50 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1821	.1 MHY	F-1828	3 MHY	F-1835	25 MHY
F-1822	.2 MHY	F-1829	4 MHY	F-1836	30 MHY
F-1823	.3 MHY	F-1830	5 MHY	F-1837	40 MHY
F-1824	.4 MHY	F-1831	7.5 MHY	F-1838	50 MHY
F-1825	.5 MHY	F-1832	10 MHY	F-1839	75 MHY
F-1826	1 MHY	F-1833	15 MHY	F-1840	100 MHY
F-1827	2 MHY	F-1834	20 MHY		

TYPE TI-9^{s}

DC CASE

Frequency Range — Up to 60 KC
Stabilized

Maximum Inductance — 500 MHY
Maximum "Q" 270 @ 17.5 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1554	1 MHY	F-1560	10 MHY	F-1566	150 MHY
F-1555	2 MHY	F-1561	15 MHY	F-1567	200 MHY
F-1556	3 MHY	F-1562	30 MHY	F-1568	300 MHY
F-1557	4 MHY	F-1563	50 MHY	F-1569	400 MHY
F-1558	5 MHY	F-1564	75 MHY	F-1570	500 MHY
F-1559	7.5 MHY	F-1565	100 MHY		

TYPE TI-10^{s}

DC CASE

Frequency Range — Up to 60 KC
Stabilized

Maximum Inductance — 200 MHY
Maximum "Q" 180 @ 40 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1579	1 MHY	F-1584	7.5 MHY	F-1589	75 MHY
F-1580	2 MHY	F-1585	10 MHY	F-1590	100 MHY
F-1581	3 MHY	F-1586	15 MHY	F-1591	150 MHY
F-1582	4 MHY	F-1587	30 MHY	F-1592	200 MHY
F-1583	5 MHY	F-1588	50 MHY		

TYPE TI-11^{s}

DC CASE

Frequency Range — Up to 15 KC
Stabilized

Maximum Inductance — 50 HY
Maximum "Q" 255 @ 4 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1747	1 MHY	F-1759	200 MHY	F-1771	4.50 HY
F-1748	2 MHY	F-1760	300 MHY	F-1772	5.00 HY
F-1749	3 MHY	F-1761	400 MHY	F-1773	7.50 HY
F-1750	4 MHY	F-1762	500 MHY	F-1774	10.00 HY
F-1751	5 MHY	F-1763	750 MHY	F-1775	15.00 HY
F-1752	10 MHY	F-1764	1.00 HY	F-1776	20.00 HY
F-1753	15 MHY	F-1765	1.50 HY	F-1777	25.00 HY
F-1754	30 MHY	F-1766	2.00 HY	F-1778	30.00 HY
F-1755	50 MHY	F-1767	2.50 HY	F-1779	40.00 HY
F-1756	75 MHY	F-1768	3.00 HY	F-1780	50.00 HY
F-1757	100 MHY	F-1769	3.50 HY		
F-1758	150 MHY	F-1770	4.00 HY		

NOTE: When ordering Freed Toroidal Inductors in Commercial Type Cases, add "C" to catalog number. When ordering Hermetically Sealed units, add "H."

For Freed Precision Laboratory Test Instruments see Section F Page F-82 to 86

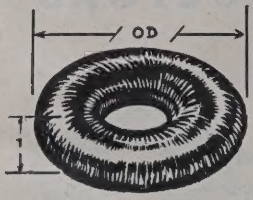
See pages N-115, 116 for FREED Prices

for PRECISION **FREED TRANSFORMERS** for QUALITY

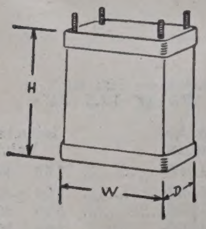
FREED TRANSFORMER CO., INC., 1718-36 WEIRFIELD ST., BROOKLYN (RIDGEWOOD) 27, N. Y.

FREED TOROIDAL INDUCTORS

STANDARD TOLERANCE ±2%



UNCASED DIMENSIONS		
Type	T	OD
TI-12	$\frac{15}{16}$″	2⅛″
TI-13	1″	2⅛″



DC

CASED DIMENSIONS		
TYPE TI-12		
H	W	D
3″	2⅝″	2¼″
Mtg. Centers 2″ x 1¾″		
TYPE TI-13		
H	W	D
3″	2⅝″	2¼″
Mtg. Centers 2″ x 1¾″		

All Freed Toroidal Inductors can be supplied in tolerances of ±1% on special order. . . . Complete Toroid Catalog with curves for each unit is available on request. . . . Jobbers and Engineers are urged to send for it.

TYPES TI-12 & 12s

DC CASE

TYPE TI-12

Frequency Range — Up to 15 KC
Non-stabilized

Maximum Inductance — 30 HY
Maximum "Q" 200 @ 5 KC

Cat. No. Uncased	Inductance Value
F-1655	1 MHY
F-1656	2 MHY
F-1657	3 MHY
F-1658	4 MHY
F-1659	5 MHY
F-1660	7.5 MHY
F-1661	10 MHY
F-1662	15 MHY
F-1663	30 MHY
F-1664	50 MHY
F-1665	75 MHY
F-1666	100 MHY
F-1667	150 MHY
F-1668	200 MHY
F-1669	300 MHY
F-1670	400 MHY
F-1671	500 MHY
F-1672	600 MHY
F-1673	750 MHY
F-1674	100 MHY

TYPE TI-12s

Frequency Range — Up to 15 KC
Stabilized

Maximum Inductance — 30 HY
Maximum "Q" 200 @ 5 KC

Uncased Cat. No.	Value Inductance
F-1675	1.50 HY
F-1676	2.00 HY
F-1677	2.50 HY
F-1678	3.00 HY
F-1679	3.50 HY
F-1680	4.00 HY
F-1681	4.50 HY
F-1682	5.00 HY
F-1683	6.00 HY
F-1684	7.00 HY
F-1685	8.00 HY
F-1686	9.00 HY
F-1687	10.00 HY
F-1688	12.00 HY
F-1689	15.00 HY
F-1690	17.00 HY
F-1691	20.00 HY
F-1692	25.00 HY
F-1693	30.00 HY

TYPE TI-13s

DC CASE

Frequency Range — Up to 75 KC
Non-stabilized

Maximum Inductance — 500 MHY
Maximum "Q" 340 @ 15 KC

Cat. No. Uncased	Inductance Value	Cat. No. Uncased	Inductance Value
F-1629	1 MHY	F-1638	50 MHY
F-1630	2 MHY	F-1639	75 MHY
F-1631	3 MHY	F-1640	100 MHY
F-1632	4 MHY	F-1641	150 MHY
F-1633	5 MHY	F-1642	200 MHY
F-1634	7.5 MHY	F-1643	300 MHY
F-1635	10 MHY	F-1644	400 MHY
F-1636	15 MHY	F-1645	500 MHY
F-1637	30 MHY		

NOTE: When ordering Freed Toroidal Inductors in Commercial Type cases, add "C" to catalog number.

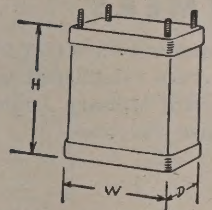
When ordering Hermetically Sealed units, add "H."

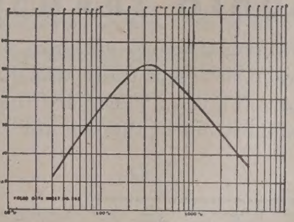
For Freed Precision Laboratory Test Instruments see Section F Page F-82 to 86

for PRECISION {FREED TRANSFORMERS} *for* QUALITY

FREED TRANSFORMER CO., INC., 1718-36 WEIRFIELD ST., BROOKLYN (RIDGEWOOD) 27, N. Y.

QUALITY GRADE HIGH Q REACTORS





HIGH Q, LOW FREQUENCY REACTORS

Whenever there is need for a stable reactor with high Q at the lower audio frequencies, these reactors will be ideally suited. Units up to 400 henries can be supplied with inductance tolerance of ±2%.

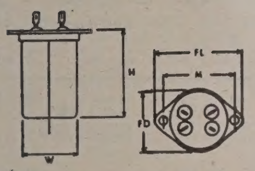
CASE DIMENSIONS

Case #	Mtg. Centers	Dimensions W	D	H
DC-2AT	2″ x 1¾″	2⅝″	2¼″	3″

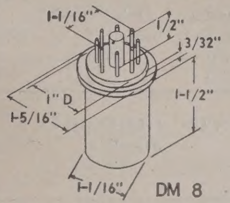
Knockout	Mtg.	Wgt.
1½″ x 1⅜″	8-32's	2¾

Catalog Number	Inductance in Henries	Sase Size
QGC-1	100	DC-2AT
QGC-2	75	DC-2AT
QGC-3	50	DC-2AT
QGC-4	25	DC-2AT
QGC-5	10	DC-2AT
QGC-6	5	DC-2AT
QGC-7	1	DC-2AT

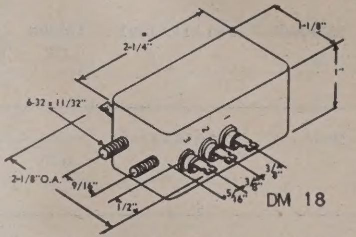
MILITARY PULSE TRANSFORMERS



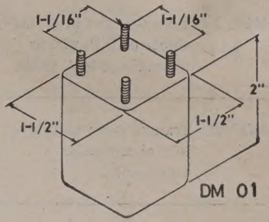
DM-12



DM 8



DM 18



DM 01

CASE DIMENSIONS

CASE #	FL	FD	W	H	M	Screws	Cutout	Wgt.
DM-12	1½	1 1/32	15/16	1 15/32	1 7/32	4-40	⅞	1.5 oz.
DM-8	Dimensions shown on drawing.							
DM-18	Dimensions shown on drawing.							
DM-01	Dimensions shown on drawing (knockout 1¼″ diam.)							

HERMETICALLY SEALED PULSE TRANSFORMERS for use in blocking oscillators, low level interstage coupling, and modulator outputs. Made in accordance with MIL-T-27 specifications. These pulse transformers are designed for maximum power, efficiency and optimum pulse performance. Balanced coil structures permit series or parallel connection of windings for turn ratios other than unity. Pulse charactertistics, voltages and impedance levels will depend upon interconnections made.

Catalog Number	Application	Pulse Voltage Kilovolts	Pulse Duration Microseconds	Duty Ratio	Test Voltage KV., RMS	Characteristic Impedance Ohms	Case Size
MPT-1	Blocking oscillator or interstage coupling.	0.25/0.25/0.25	0.2-1.0	.004	0.7	250	DM-12
MPT-2	Blocking oscillator or interstage coupling.	0.25/0.25	0.2-1.0	.004	0.7	250	DM-12
MPT-3	Blocking oscillator or interstage coupling.	0.5/0.5/0.5	0.2-1.5	.002	1.0	250	DM-18
MPT-4	Blocking oscillator or interstage coupling.	0.5/0.5	0.2-1.5	.002	1.0	250	DM-18
MPT-5	Blocking oscillator or interstage coupling.	0.5/0.5/0.5	0.5-2.0	.002	1.0	500	DM-12
MPT-6	Blocking oscillator or interstage coupling.	0.5/0.5/0.5	0.5-2.0	.002	1.0	500	DM-12
MPT-7	Blocking oscillator, interstage coupling or low power output.	0.7/0.7/0.7	0.5-1.5	.002	1.5	200	DM-18
MPT-8	Blocking oscillator, interstage coupling or low power output.	0.7/0.7	0.5-1.5	.002	1.5	200	DM-18
MPT-9	Blocking oscillator, interstage coupling or low power output.	1.0/1.0/1.0	0.7-3.5	.002	2.0	200	DM-18
MPT-10	Blocking oscillator, interstage coupling or low power output.	1.0/1.0	0.7-3.5	.002	2.0	200	DM-18
MPT-11	Blocking oscillator, interstage coupling or low power output.	1.0/1.0/1.0	1.0-5.0	.002	2.0	500	DM-01
MPT-12	Blocking oscillator, interstage coupling or low power output.	0.15/0.15/0.15 0.15/0.3	0.2-1.0	.004	0.7	700	DM-8

For Freed Precision Laboratory Test Instruments see Section F Page F-82 to 86

See pages N-115, 116 for FREED Prices

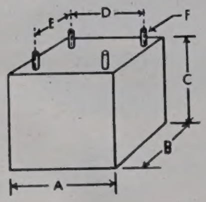
for **PRECISION**

FREED TRANSFORMERS

for **QUALITY**

FREED TRANSFORMER CO., INC., 1718-36 WEIRFIELD ST., BROOKLYN (RIDGEWOOD) 27, N. Y.

STANDARD MILITARY AUDIO TRANSFORMERS



A group of hermetically sealed audio transformers designed in accordance with MIL-T-27 specifications. The functional characteristics of these transformers were established by a standardization committee of the A.S.E.S.A. These are the "Standard Military Audio Components" for use in new communication equipment for the Armed Services.

#AJ CASE DIMENSIONS

A	B	C	D	E	F
1⅝″	1⅝″	2⅜″	1 1/16″	1 1/16″	6-32

Cat. No.	Application	Military Standard #	Type Designation	Impedance Level in Ohms Primary	Impedance Level in Ohms Secondary	Ratio	Max. Power Level V.U.	Pri. D.C. Per Side in MA	Max. D.C. Unbalance	Frequency Response	Case
MGA 1	Transformer; interstage, single or P.P. plates to single or P.P. grids	MS90000	TF1A15AJ001	10,000 CT	90,000 split and CT	1:3 overall	+15	10	10	±1 DB 300-10,000	AJ
MGA 2	Transformer; matching, 600 ohm line to voice coil	MS90001	TF1A16AJ002	600 split	4, 8, 16	6.12:1 overall	+33	0	0	±1 DB 300-10,000	AJ
MGA 3	Transformer; input, 600 ohm line to single or P.P. grids	MS90002	TF1A10AJ001	600 split	135,000 CT	1:15	+15	0	0	±2 DB 300-10,000	AJ
MGA 4	Transformer; matching, 600 ohm line to 600 ohm line	MS90003	TF1A16AJ001	600 split	600 split	1:1	+15	0	0	±1 DB 300-10,000	AJ
MGA 5	Transformer; output, single plate 7600 ohm, 4800 ohm to 600 ohm line	MS90004	TF1A13AJ001	7600 tap @ 4800	600 split	3.56:1	+33	40	40	±2 DB 300-10,000	AJ
MGA 6	Transformer; output, single plate 7600 ohm, 4800 ohm to voice coil	MS90005	TF1A13AJ002	7600 tap @ 4800	4, 8, 16	21.8:1	+33	40	40	±2 DB 300-10,000	AJ
MGA 7	Transformer; output, single or P.P. plates to 600 ohm line	MS90006	TF1A13AJ003	15,000 CT	600 split	5:1	+33	10	10	±1 DB 300-10,000	AJ
MGA 8	Transformer; output, P.P. plates to 600 ohm line	MS90007	TF1A13AJ004	24,000 CT	600 split	6.32:1	+30	10	1	±1 DB 300-10,000	AJ
MGA 9	Transformer; output, P.P. plates to 600 ohm line	MS90008	TF1A13AJ005	60,000 CT	600 split	10:1	+27	10	1	±2 DB 300-10,000	AJ

For Freed Precision Laboratory Test Instruments see Section F Page F-82 to 86

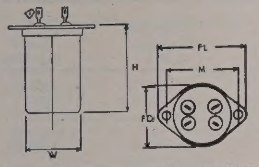
See pages N-115, 116 for FREED Prices

for PRECISION **FREED TRANSFORMERS** for QUALITY

FREED TRANSFORMER CO., INC., 1718-36 WEIRFIELD ST., BROOKLYN (RIDGEWOOD) 27, N. Y.

PROFESSIONAL GRADE COMPONENTS

MINIATURE AUDIO TRANSFORMERS



DM-12 CASE DIMENSIONS

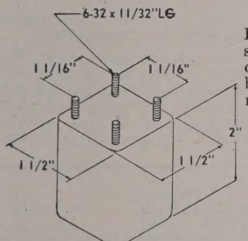
FL — 1½″
FD — 1 1/32″
W — 15/16″
H — 1 15/32″
M — 1 7/32″

These high quality, minature transformers feature hermetic sealing for maximum protection from moisture penetration with subsequent electrolysis and corrosion of fine wires. While primarily intended for non-military equipment, these units are constructed in accordance with MIL-T-27 Specifications.

Catalog No.	Application	Impedance Level Ohms Primary	Impedance Level Ohms Secondary	Maximum Power Level V.U.*	Ratio	Equivalent Shielding D.B.	Max. Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Frequency Response C.P.S.	Case Number
PMA 1	Line or microphone to single or push-pull grids.	50/200/500	60,000 C.T.	+8	1:11		0	0	±2.0 DB 30-20,000	DM-12
PMA 2	Dynamic microphone or speaker voice coil to single or P.P. grid.	4/8	60,000 C.T.	+8	1:86.6		0	0	±2.0 DB 30-20,000	DM-12
PMA 3	Line or microphone to single or push-pull grids. Magnetically shielded.	50/200/500	60,000 C.T.	+8	1:11	30	0	0	±2.0 DB 30-20,000	DM-12
PMA 4	Single triode plate to single or push-pull grids.	15,000	60,000 C.T.	+8	1:2		0	0	±2 DB 30-10,000	DM-12
PMA 5	Single triode plate to push-pull grids.	15,000	60,000 C.T.	+8	1:2		2	2	±2 DB 200-10,000	DM-12
PMA 6	Single triode plate to multiple line.	15,000	50/200/500	+8	5.48:1		0	0	±2 DB 20-20,000	DM-12
PMA 7	Single triode plate to multiple line.	15,000	50/200/500	+8	5.48:1		2	2	±1 DB 200-10,000	DM-12
PMA 8	Push-pull triode plates to multiple line.	30,000 C.T.	50/200/500	+8	7.75:1		2	0.25	±2 DB 30-20,000	DM-12
PMA 9	Crystal mike or pickup to multiple line.	60,000	50/200/500	+8	11:1		0	0	±2 DB 30-20,000	DM-12
PMA 10	Mixing or matching.	50/200	50/200/500	+8	1:1.50		0	0	±2 DB 20-20,000	DM-12
PMA 11	Parallel Feed Reactor.	40 hy, 3 ma dc, 3500 ohms d.c. resistance								DM-12

*1 mw. reference level.

PROFESSIONAL GRADE AUDIO TRANSFORMERS



For popular priced high fidelity amplifiers, professional equipment and receivers, for home and public address service. Freed has developed this series of audio transformers using the latest design techniques and the best commercially available materials. Except for units carrying unbalanced direct current, the frequency response is better than ±1 DB from 30 to 15,000 cycles. All units feature excellent performance characteristics with minimum size aand weight.

INPUT TRANSFORMERS

DM-01 CASE DIMENSIONS

Mtg. Centers	Dimensions W	Dimensions W	Dimensions H	Knockout	Mtg. Studs	Wgt.
1 1/16″ x 1 1/16″	1½″	1½″	2″	1⅜″ diam.	6-32	½

U-500 IMPEDANCES IN OHMS

50, 125, 200CT, 250, 330, 500 CT.
125 and 500 ohms can be used for 150 and 60 ohms.

Catalog No.	Application	Impedance Level Ohms Primary	Impedance Level Ohms Secondary	Maximum Power Level V.U.*	Ratio	Equivalent Shielding D.B.	Max. Pri. D.C. per Side Ma.	D.C. Unbalance Ma.	Frequency Response C.P.S.	Case Number
PGA 1	Universal 500 ohm line to single grid.	U-500	50,000	+12	1:10	50	0	0	±1.0 DB 30-15,000	DM-01
PGA 2	Universal 500 ohm line to push-pull grids.	U-500	60,000 split	+12	1:11	50	0	0	±1.0 DB 30-15,000	DM-01
PGA 3	Universal 500 ohm line to push-pull grids.	U-500	100,000 split	+12	1:14.1	50	0	0	±1.0 DB 30-15,000	DM-01
PGA 4	Bridging line to single grid.	10,000	60,000	+12	1:2.45	50	0	0	±1.0 DB 30-15,000	DM-01
PGA 5	Bridging line to push-pull grids.	10,000	60,000 split	+12	1:2.45	50	0	0	±1.0 DB 30-15,000 30-15,000	DM-01
PGA 6	Low level line matching.	U-500	U-500	+18	1:1	50	0	0	±1 DB	DM-01

*1 mw. reference level.

For Freed Precision Laboratory Test Instruments see Section F Page F-82 to 86

See pages N-115, 116 for FREED Prices

for **PRECISION** **FREED TRANSFORMERS** *for* **QUALITY**

FREED TRANSFORMER CO., INC., 1718-36 WEIRFIELD ST., BROOKLYN (RIDGEWOOD) 27, N. Y.

PROFESSIONAL GRADE COMPONENTS

LOW LEVEL OUTPUT AND MIXING TRANSFORMERS

Cat. No.	Application	Impedance Level Ohms Primary	Impedance Level Ohms Secondary	Maximum Power Level V.U.* or Power in Watts	Ratio	Max. Pri. D.C. Per Side Ma.	D.C. Unbalance Ma.	Frequency Response C.P.S.	Case Number
PGA 7	Single triode plate to Universal 500 ohm line. Shunt feed.	15,000	U500	+18	5.48:1	0	0	±1.0 DB 30-15,000	DM-01
PGA 8	Single triode plate to Universal 500 ohm line.	15,000	U500	+18	5.48:1	8	8	±1.0 DB 100-15,000	DM-01
PGA 9	Push-pull triode plate to Universal 500 ohm line.	20,000 CT	U500	+30	6.32:1	8	0.5	±1.0 DB 30-15,000	DM-01
PGA 10	Low level line matching.	U500	U500	+18	1:1	0	0	±1.0 DB 30-15,000	DM-01

*1 mw. reference level.

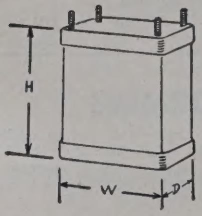
U-500 IMPEDANCES IN OHMS 50, 125, 200 CT, 250, 330, 500 CT — 125 and 500 ohms can be used for 150 and 600 ohms

DRIVER TRANSFORMERS

Cat. No.	Application	Primary Impedance Ohms	Turn Ratio Pri: ½ Sec.	Max. Level V.U.*	Max. Pri. D.C. Per Side Ma.	Max. D.C. Unbalance Ma.	Frequency Response C.P.S.	Case Number
PGA 11	Universal 500 ohm line to push-pull grids.	U500	1:1	+40	0	0	±1.0 DB 30-15,000	DC-2AL
PGA 12	Push-pull 6C4, 6SN7 triodes to push-pull 2A3, 6L6 grids.	20,000 C.T.	3.0:1	+30	10	0	±1.0 DB 30-15,000	DM-01
PGA 13	Push-pull 2A3, 6B4, 6A5G to push-pull 809, TZ-40, 4/125A	5,000 C.T.	3.2:1	+40	50	5	±1.0 DB 30-15,000	DC-2AL

U-500 IMPEDANCES IN OHMS 50, 125, 200 CT, 250, 330, 500 CT — 125 and 500 ohms can be used for 150 and 600 ohms

HIGH LEVEL OUTPUT TRANSFORMERS



CASE DIMENSIONS

Case #	Mtg. Cent.	Dimensions W	Dimensions D	Dimensions H	Knockout	Mtg. Studs	Wgt.
DC2AL	2 x1¾	2⅝	2¼	3	1½x1⅜	8-32	2¾
DC2BL	2 x1¾	2⅝	2¼	3½	1½x1⅜	8-32	3
DC4AL	2½x2½	3⅛	3	3¾	2 x1¾	8-32	4½
DC5AL	3⅛x2⅝	4⅛	3½	3⅞	2½x2	10-32	9
DC6AL	3¾x3	5	4⅛	4⅞	3 x2½	10-32	15

L after case number indicates Leads.
T after case number indicates Terminals.

U-16 IMPEDANCES IN OHMS
2, 4, 8, 12, 16

U-500 IMPEDANCES IN OHMS
50, 125, 200CT, 250, 330, 500CT. 125 and 500 ohms can be used for 150 and 600 ohms.

A 70 volts level can be obtained for the following impedances:

500 ohms — 10 watts + 40 VU
330 ohms — 15 watts + 42 VU
250 ohms — 20 watts + 43 VU
200 ohms — 25 watts + 44 VU
125 ohms — 40 watts + 46 VU
50 ohms — 100 watts + 50 VU

Cat. No.	Application	Impedance Level Ohms Primary	Impedance Level Ohms Secondary	Maximum Power Level V.U.* or Power in Watts	Ratio	Max. Pri. D.C. Per Side Ma.	D.C. Unbalance Ma.	Frequency Response C.P.S.	Case Number
PGA 14	P.P. 6K6, 6AR5, 7B5 Class A to Universal voice coil.	12,000 C.T.	U16	+40 (10 watts)	27.4:1	40	4	±1.0 DB 30-15,000	DC-2BL
PGA 15	P.P. 6F6 Cl. AB_2, P.P. 6V6, 6AQ5, 7C5, 6L6 Cl. AB_1 to Universal voice coil.	10,000 C.T.	U16	+43 (20 watts)	25:1	50	5	±1.0 DB 30-15,000	DC-4AL
PGA 16	P.P. 6L6 Cl. AB_1, self bias to Universal 500 ohm line.	9,000	U500	+44.8	4.23:1	50	5	±1.0 DB 30-15,000	DC-4AL
PGA 17	As above to Universal voice coil.	9,000	U16	+44.8	23.7:1	50	5	±1.0 DB 30-15,000	DC-4AL
PGA 18	P.P. 6N7 Cl. B, P.P. 6V6, 6AQ5, 7C5 Cl. AB_1 to Universal voice coil.	8,000 C.T.	U16	+41.8 (15 watts)	22.3:1	45	5	±1.0 DB 30-15,000	DC-4AL
PGA 19	P.P. 6L6, fixed bias, Cl. AB_1 to Universal 500 ohm line.	6,600 C.T.	U500	+44.8 (30 watts)	3.63:1	70	7	±1.0 DB 30-15,000	DC-4AL

*1 mw. reference level.

For Freed Precision Laboratory Test Instruments see Section F Page F-82 to 86

See pages N-115, 116 for FREED Prices

for PRECISION **FREED TRANSFORMERS** *for* QUALITY

FREED TRANSFORMER CO., INC., 1718-36 WEIRFIELD ST., BROOKLYN (RIDGEWOOD) 27, N. Y.

PROFESSIONAL GRADE COMPONENTS

HIGH LEVEL OUTPUT TRANSFORMERS

Continued from previous page — See same for case sizes

Cat. No.	Application	Impedance Level Ohms Primary	Impedance Level Ohms Secondary	Maximum Power Level V.U.* or Power in Watts Maximum	Ratio	Max. Pri. D.C. Per Side Ma.	D.C. Unbalance Ma.	Frequency Response C.P.S.	Case Number
PGA 20	As above to Universal voice coil.	6600	U16	+44.8	20.3:1	70	7	±1.0 DB 30-15,000	DC-4AL
PGA 21	P.P. 6L6 Cl. A, P.P. 2A3, 6A5G, 6B4 self bias Par. 6V6 Cl. AB_1 to Universal voice coil.	5000 C.T.	U16	+43	17.7:1	80	8	±1.0 DB 30-15,000	DC-4AL
PGA 22	P.P. Par 6L6 Cl. AB_1 self bias P.P. 6L6 Cl. AB_2 fixed bias PP807 Cl. AB_2 to Universal 500 ohm line.	4000 C.T.	U500	+47 (50 watts)	2.83:1	100	10	±1.0 DB 30-15,000	DC-5AL
PGA 23	As above to Universal voice coil.	4000 C.T.	U16	+47	15.8:1	100	10	±1.0 DB 30-15,000	DC-5AL
PGA 24	P.P. 6A5G, 6B4, 2A3, fixed bias Universal voice coil.	3000 C.T.	U16	+41.8	13.7:1	75	7.5	±1.0 DB 30-15,000	DC-4AL
PGA 25	P.P. Par. 807 Cl. AB_2 to Universal 500 ohm line.	2100 C.T.	U500	+51.8 (150 watts)	2.05:1	120	12	±1.0 DB 30-15,000	DC-6A
PGA 26	P.P. Par 2A3, 6A5G, fixed bias 6B4, 300A Cl. AB_1, P.P. Par 6L6 Cl. A to Universal 500 ohm line.	1500 C.T.	U500	+44.8	1.73:1	150	15	±1.0 DB 30-15,000	DC-4AL
PGA 27	As above to Universal voice coil.	1500 C.T.	U16	+44.8	9.7:1	150	15	±1.0 DB 30-15,000	DC-4AL
PGA 28	Matching line to Universal voice coil.	U500	U16	+44.8	5.6:1	0	0	±1.0 DB 30-15,000	DC-4AL
PGA 29	Matching line to Universal voice coil.	U500	U16	+47	5.6:1	0	0	±1.0 DB 30-15,000	DC-5AL
PGA 30	Matching line to Universal voice coil.	U500	U16	+50 (100 watts)	5.6:1	0	0	±1.0 DB 30-15,000	DC-6AL

*1 mw. reference level.

U-16 IMPEDANCES IN OHMS

2 ohms, 4 ohms, 8 ohms, 12 ohms, 16 ohms

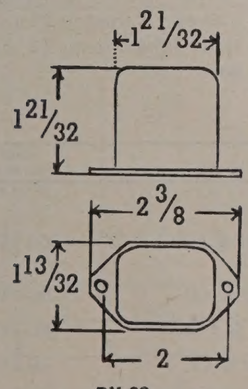
U-500 IMPEDANCES IN OHMS

50, 125, 200 CT, 250, 330 500 CT
125 and 500 ohms can be used for 150 and 600 ohms
A 70 volts level can be obtained for the following impedances:

500 ohms — 10 watts + 40 VU
330 ohms — 15 watts + 42 VU
250 ohms — 20 watts + 43 VU
200 ohms — 25 watts + 44 VU
125 ohms — 40 watts + 46 VU
50 ohms — 120 watts + 51 VU

HIGH Q REACTORS

High Q Reactors for use in resonant wave traps and dynamic noise suppression circuits.



DM-02

Cat. No.	Application	Rated Ind. in Henries	Q	Tuning Capacitor (Mf)	Case Size
PQC 1	60 cps resonant trap	14.00	10	.5	DM-02
PQC 2	400 cps resonant trap	1.58	15	.1	DM-02
PQC 3	1000 cps resonant trap	1.00	20	.025	DM-02
PQC 4	Dynamic noise suppression inductor	2.40	20 @ 4 KC		DM-02
PQC 5	Dynamic noise suppression inductor	2.00	20 @ 4 KC		DM-02
PQC 6	Dynamic noise suppression inductor	1.30	20 @ 4 KC		DM-02
PQC 7	Dynamic noise suppression inductor	.80	20 @ 4 KC		DM-02
PQC 8	Dynamic noise suppression inductor	.60	20 @ 4 KC		DM-02
PQC 9	Dynamic noise suppression inductor	.40	20 @ 4 KC		DM-02

For Freed Precision Laboratory Test Instruments see Section F Page F-82 to 86

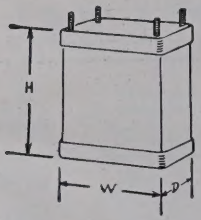
See pages N-115, 116 for FREED Prices

for PRECISION FREED TRANSFORMERS *for* QUALITY

FREED TRANSFORMER CO., INC., 1718-36 WEIRFIELD ST., BROOKLYN (RIDGEWOOD) 27, N. Y.

REACTORS—PROFESSIONAL GRADE COMPONENTS

CASE DIMENSIONS



Case #	Mtg. Cent.	Dimensions W	D	H	Knockout	Mtg. Studs	Wgt.
DM-01	1 1/16x1 1/16	1½	1½	2	1⅜ diam.	6-32	½
DC1AL	1½x1¼	2 1/16	1 13/16	2½	1 7/32 diam.	8-32	1
DC2AL	2 x1¾	2⅝	2¼	3	1½x1⅜	8-32	2¾
DC2BL	2 x1¾	2⅝	2¼	3½	1½x1⅜	8-32	3
DC4AL	2½x2½	3⅛	3	3¾	2 x1¾	8-32	4½
DC5BL	3⅛x2⅝	4⅛	3½	4½	2½x2	10-32	10

Inductance measured at 50V, 60 cycles with rated direct current in the winding.

Cat. No.	Inductance in Hy.	Rated Current D.C. Ma.	D.C. Resistance	Dielectric Test Voltage	Case Number
PGC 1	40	15	2000	1000	DM-01
PGC 2	12	40	400	1000	DC-1AL
PGC 3	8	50	300	1000	DC-1AL
PGC 4	20	50	425	1500	DC-2AL
PGC 5	10	70	250	1500	DC-2AL
PGC 6	6	100	160	1500	DC-2AL
PGC 7	6	150	115	1500	DC-2BL
PGC 8	10	150	160	1500	DC-4AL
PGC 9	7	200	95	1500	DC-4AL
PGC 10	10	200	150	1500	DC-4AL
PGC 11	10	250	135	1500	DC-5BL
PGC 12	8	300	95	1500	DC-5BL
PGC 13	7	400	60	1500	DC-5BL
		Parallel Feed Audio Chokes			
PGC 14	100	10	3500	1000	DM-01
PGC 15	40	50	650	1500	DC-2AL
PGC 16	400	1	6000	1000	DM-01

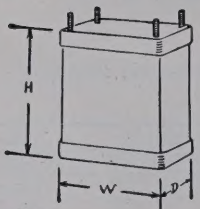
SWINGING INPUT REACTORS

Cat. No.	Inductance in Hy.*	Rated Current D.C. Ma.	D.C. Resistance	Dielectric Test Voltage	Case Number	
PGC 17	5 - 20	150	160	1500	DC-4AL	See Above
PGC 18	5 - 20	200	135	1500	DC-5BL	
PGC 19	3 - 15	300	95	1500	DC-5BL	
PGC 20	3 - 15	400	60	1500	DC-5BL	

* Inductance values for 100% and 10% of rated Direct Current.

PROFESSIONAL GRADE POWER TRANSFORMERS

CASE DIMENSIONS



Case #	Mtg. Cent.	Dimensions W	D	H	Knockout	Mtg.	Wgt.
DC2BL	2 x1¾	2⅝	2¼	3½	1½x1⅜	8-32s	3
DC4AL	2½x2½	3⅛	3	3¾	2 x1¾	8-32s	4½
DC5AL	3⅛x2⅝	4⅛	3½	3⅞	2½x2	10-32s	9
DC5BL	3⅛x2⅝	4⅛	3½	4½	2½x2	10-32s	10
DC6AL	3¾x3	5	4⅛	4⅞	3 x2½	10-32s	15
DC7BL	4⅜x3¾	5½	5	6¾	3 x2½	¼-20s	22

Fully impregnated and sealed in heavy gauge cases. Temperature rises range from 45° to 50°C.

Cat. No.	Pri. Va	Hi Volt	Choke Input D.C. V.	Choke Input D.C. Ma.	Cond. Input D.C. V.	Cond. Input D.C. Ma.	Rectifier	Fil. #1	Fil. #2	Case Number
PGP 1	15	440V. C.T.	Low flux density, hum-bucking. For Preamplifier service.		270	15	6X4	6.3 CT @ 0.6A.	6.3 @ 0.3A.	DC-2BL
PGP 2	30	550V. C.T.	Low flux density, hum-bucking. For Preamplifier service.		310	35	6X4	6.3 CT @ 0.6A.	6.3 CT @ 0.9A.	DC-4AL
PGP 3	45	500V. C.T.			270	40	6X4, 5Y3	5/6.3V @ 2A.	6.3 @ 2A.	DC-4AL
PGP 4	57	600V. C.T.			330	50	6X4, 5Y3	5/6.3V @ 2A.	6.3 @ 2.5A.	DC-4AL
PGP 5	64	650V. C.T.			370	50	6X4, 5Y3	5/6.3V @ 2A.	6.3 @ 3A.	DC-4AL
PGP 6	73	600V. C.T.			320	70	6X4, 5Y3	5/6.3V @ 2A.	6.3 @ 3A.	DC-5AL

For Freed Precision Laboratory Test Instruments see Section F Page F-82 to 86

See pages N-115, 116 for FREED Prices

for PRECISION **{FREED TRANSFORMERS}** for QUALITY

FREED TRANSFORMER CO., INC., 1718-36 WEIRFIELD ST., BROOKLYN (RIDGEWOOD) 27, N. Y.

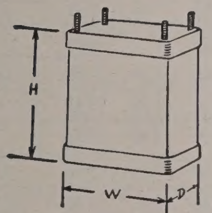
PROFESSIONAL GRADE POWER TRANSFORMERS

Continued from previous page — See same for case sizes

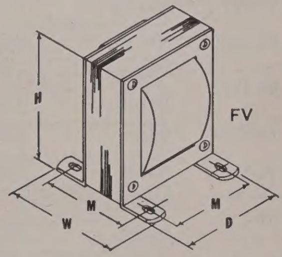
Cat. No.	Py Va	Hi Volt	Choke Input D.C. V.	Choke Input D.C. Ma.	Cond. Input D.C. V.	Cond. Input D.C. Ma.	Bias Tap.	Rectifier	Fil. #1	Fil. #2	Fil. #3	Case Number
PGP 7	110	650V. C.T.	225	140	330	100		5Y3, 5U4	5 @ 3A.	6.3 @ 5A.		DC-5BL
PGP 8	76	700V. C.T.	260	100	385	70		5Y3	5 @ 2A.	6.3 @ 2.5A.		DC-5AL
PGP 9	108	700V. C.T.	250	125	370	90		5Y3, 5U4	5 @ 3A.	6.3 @ 5A.		DC-5BL
PGP 10	127	700V. C.T.	260	170	350	120		5U4	5 @ 3A.	6.3 @ 5A.		DC-5BL
PGP 11	146	700V. C.T.	260	210	350	150		5U4	5 @ 3A.	6.3 @ 5A.	6.3 @ 1A.	DC-6AL
PGP 12	207	800V. C.T.	295	280	400	200		5U4, 2-5Y3	5 @ 4A.	6.3 @ 6A.		DC-6AL
PGP 13	225	800V. C.T.	295	280	400	200	80	5U4, 2-5Y3	5 @ 4A.	6.3 @ 6A.	5/6.3 @ 2A.	DC-6AL
PGP 14	268	840V. C.T.	330	350	450	250	80	2-5U4	5 @ 6A.	6.3 @ 6A.	5/6.3 @ 2A.	DC-6AL
PGP 15	320	900V. C.T.	340	420	490	300	80	2-5U4	5 @ 6A.	6.3 @ 6A.	5/6.3 @ 2A.	DC-6AL
PGP 16	127	900V. C.T.	360	150				5U4	5 @ 3A.	6.3 @ 5A.		DC-6AL
PGP 17	150	900V. C.T.	350	200				5U4	5 @ 3A.	6.3 @ 5A.		DC-6AL
PGP 18	203	1100V. C.T.	400	250				5R4GY	5 @ 3A.	6.3 @ 5A.		DC-6AL
PGP 19	248	1100V. C.T.	420	300				2-5R4GY	5 @ 4A.	6.3 @ 7A.		DC-6AL
PGP 20	310	1280V. C.T.	480	350				2-5R4GY	5 @ 4A.	6.3 @ 7A.		DC-7BL

FILAMENT TRANSFORMERS

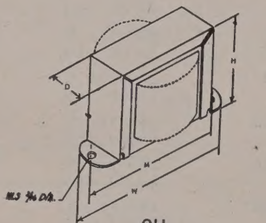
ALL PRIMARIES ARE FOR 115 V., 50/60 c.p.s.



DC



FV



CH

L after case number indicates Leads
T after case number indicates Terminals

Cat. No.	Secondary Voltage	Secondary Current Amps.	Secondary Test Voltage RMS	Case Size
TF 1	2.5 (C.T.)	7.5	1500	CH60
TF 2	2.5 (C.T.)	10	1500	CH70
TF 3	2.5 (C.T.)	5	7500	DC2BT
TF 4	2.5 (C.T.)	10	7500	DC4AT
TF 5	5.0 (C.T.)	4	1500	CH60
TF 6	5.0 (C.T.)	6	1500	CH70
TF 7	5.0 (C.T.)	10	1500	CH80
TF 8	5.0 (C.T.)	10	1500v	FV10
TF 9	5.0 (C.T.)	20	2500	FV30
TF 10	5.0 (C.T.)	20	10,000	DC6AT
TF 11	6.3 (C.T.)	1.35	1500	CH50
TF 12	6.3 (C.T.)	3	1500	CH60
TF 13	6.3 (C.T.)	5	1500	CH70
TF 14	6.3 (C.T.)	7	1500	FV12
TF 15	6.3 (C.T.)	10	1500	FV22
TF 16	10 (C.T.)	5	2500	CH80
TF 17	10 (C.T.)	5	2500	FV10
TF 18	10 (C.T.) or 11 (C.T.) (tapped primary)	12 or 11	7500	DC5CT
TF 19	12.6 (C.T.)	2	1500	CH62

CASE DIMENSIONS

Case #	Mtg. Cent.	Dimensions W	Dimensions D	Dimensions H	Knockout	Mtg. Studs	Wgt.
DC2B2	2 x1¾	2⅝	2¼	3½	1½x1⅜	8-32	3
DC4AT	2½x2½	3⅛	3	3¾	2 x1¾	8-32	4½
DC5CT	3⅛x2⅝	4⅛	3½	4⅞	2½x2	10-32	12
DC6AT	3¾x3	5	4⅛	4⅞	3 x2½	10-32	15
FV10	2 x2	2½	2½	3 1/16			2½
FV12	2 x2⅛	2½	2⅝	3 1/16			2¾
FV22	2¼x2¼	2 13/16	2⅞	3 7/16			4
FV30	2½x2¼	3⅛	3¼	3 13/16			5½
CH50	2⅜	2 13/16	1¾	1 11/16			¾
CH60	2 13/16	3¼	2	2			1½
CH62	2 13/16	3¼	2⅛	2			1¾
CH70	3⅛	3 11/16	2¼	2 5/16			2
CH80	3 9/16	4	2⅝	2⅝			2¾

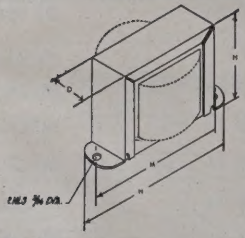
For Freed Precision Laboratory Test Instruments see Section F Page F-82 to 86

See pages N-115, 116 for FREED Prices

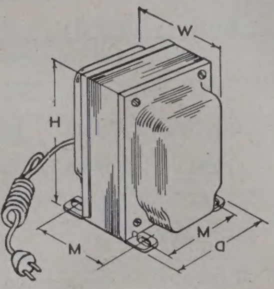
for PRECISION FREED TRANSFORMERS *for* QUALITY

FREED TRANSFORMER CO., INC., 1718-36 WEIRFIELD ST., BROOKLYN (RIDGEWOOD) 27, N. Y.

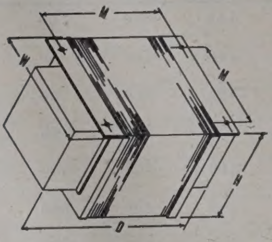
AUTO TRANSFORMERS



CH



VS



HB

To be used as a step-down transformer. Equipped with standard receptacle and line cord.

CATALOG NUMBER	TRANSFORMATION	VA RATING	CASE SIZE
SDT 1	230/115 V. 50/60 c.p.s.	25	CH-60
SDT 2	230/115 V. 50/60 c.p.s.	50	CH-62
SDT 3	230/115 V. 50/60 c.p.s.	50	VS-300
SDT 4	230/115 V. 50/60 c.p.s.	100	VS-401
SDT 5	230/115 V. 50/60 c.p.s.	200	VS-501
SDT 6	230/115 V. 50/60 c.p.s.	300	VS-601
SDT 7	230/115 V. 50/60 c.p.s.	400	VS-604
SDT 8	230/115 V. 50/60 c.p.s.	500	VS-611
SDT 9	230/115 V. 50/60 c.p.s.	750	VS-706
SDT 10	230/115 V. 50/60 c.p.s.	1000	VS-718
SDT 11	230/115 V. 50/60 c.p.s.	1500	VS-728
SDT 12*	230/115 V. 50/60 c.p.s.	2000	HB-718
SDT 13*	230/115 V. 50/60 c.p.s.	2500	HB-728
SDT 14*	230/115 V. 50/60 c.p.s.	3000	HB-828
SDT 15*	230/115 V. 50/60 c.p.s.	5000	HB-920

*Supplied without line cord and receptacle.

CASE DIMENSIONS

Case #	Mtg. Cent.	Dimensions W	D	H	Wgt. (lbs.)
CH60	2 13/16	3 ¼	2	2	1 ½
CH62	2 13/16	3 ¼	2 ⅛	2	1 ¾
HB718	4 ¾ x4 ¾	6 ⅜	8 ½	6 ¼	36
HB728	4 ¾ x6	6 ⅜	9 ¾	6 ¼	45
HB828	5 ⅝ x5 ⅞	7 ¼	9 ⅞	6 ⅝	54
HB920	5 ⅜ x4 ¾	7 ¼	8 ⅝	10	75
VS300	2 x1 11/16	2 19/32	2 ¾	3 3/32	2 ¾
VS401	2 ¼ x1 ¾	2 29/32	3	3 15/32	4 ½
VS501	2 ½ x2 1/16	3 7/32	3 5/16	3 27/32	6 ¼
VS503	2 ½ x2 5/16	3 7/32	3 ⅝	3 27/32	5 ¼
VS601	3 x2 7/16	3 27/32	3 ⅝	4 19/32	7 ¼
VS604	3 x2 11/16	3 27/32	3 ⅞	4 19/32	7 ⅜
VS611	3 x3 11/16	3 27/32	4 ⅞	4 19/32	12
VS700	3 ½ x3 5/16	4 ½	4 ¾	5 11/32	14
VS706	3 ½ x3 13/16	4 ½	5 ¼	5 11/32	16
VS714	3 ½ x4 13/16	4 ½	6 ¼	5 11/32	25
VS718	3 ½ x5 5/16	4 ½	6 ¾	5 11/32	29
VS728	3 ½ x6 9/16	4 ½	8	5 11/32	36

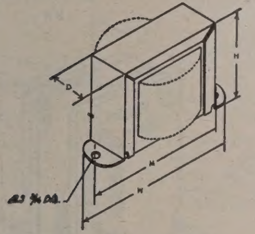
ISOLATION TRANSFORMERS

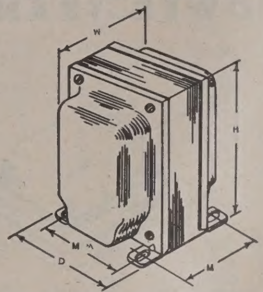
Electrostatic shield between primary and secondary. Equipped with standard receptacle and line cord.

CATALOG NUMBER	PRIMARY VOLTAGE 50/60 c.p.s.	SECONDARY VOLTAGE	VA RATING	CASE SIZE
IT 1	115	115	50	VS-401
IT 2	115	115	100	VS-503
IT 3	115	115	300	VS-700
IT 4	115	115	500	VS-714

For Freed Precision Laboratory Test Instruments see Section F Page F-82 to 86

REPLACEMENT GRADE AUDIO TRANSFORMERS





CASE DIMENSIONS

Case Number	Mtg. Centers	Dimensions W	D	H	Wgt. (lbs.)
CH-40	2″	2⅜″	1⅝″	1 7/16″	½
CH-50	2⅜″	2 13/16″	1¾″	1 11/16″	¾
CH-60	2 13/16″	3¼″	2″	2″	1½
CH-80	3 9/16″	4″	2⅝″	2⅝″	2¾
VS-100	1½″ x 1 7/16″	1⅞″	2¼″	2 11/32″	1½
VS-300	2″ x 1 11/16″	2 19/32″	2¾″	3 3/32″	2¾

Catalog No.	Application	Impedance Level Ohms Primary	Secondary	Max. Power Level V.U.* or Power in Watts	Ratio	Max. Pri. D.C. per Side Ma.	D.C. Un-balance Ma.	Freq. Response C.P.S.	Case Number
RGA 1	Input; multiple line or double button mike to single or push-pull grids.	500 CT 200 CT	100.000 CT	+20	1:14.1	50	5	±1 DB 200-5000	CH-40
RGA 2	Input; single button mike to single or push-pull grids.	100	100.000 CT	+20	1:31.6	50		±1 DB 200-5000	CH-40
RGA 3	Input; voice coil to grid.	3.2	100.000	+20	1:179			±1 DB 200-5000	CH-40
RGA 4	Mixing and matching line to line.	600 CT 500 CT 200 CT 150/125/50	600 CT 500 CT 200 CT 150/125/50	+20	1:1			±1 DB 100-5000	CH-40
RGA 5	Interstage; single triode plate to single or P.P. grids.	10.000	90.000	+30	1:3	10		±1 DB 200-5000	CH-40
RGA 6	Output; single plate to line or mixer.	10.000	600 CT 500 CT 200 CT 150/125/50	+30	4.8:1	10		±1 DB 200-5000	CH-40
RGA 7	Output; Push-pull plate to line or mixer.	20.000 CT	600 CT 500 CT 200 CT 150/125/50	+30	6.32:1	10	1	±1 DB 200-5000	CH-40
RGA 8	Output; plate to V.C. 6AL6, 6L6, 6Y6, 25B6, 25C6, 35A5, 35B5, 35C5, 50B5, 50C5, 50C6, 50L6, 117N7.	2500	3.2	5W		70		±1 DB 200-5000	CH-40
RGA 9	Output; plate to V.C. 6V6, 6AQ5, 6AS5, 7C5.	5000	3.2	5W		50		±1 DB 200-5000	CH-40
RGA 10	Output; plate to V.C. 6AR5, 6K6, 6V6, 7B5, 14A5, 3S4, 3U4, 3Q4, 3Q5, 3C5, 3A4.	10.000 or 7500	3.2	5W		30		±1 DB 200-5000	CH-40
RGA 11	Output; P.P. plates to V.C. P.P. 6V6, PP6K6.	12.000 CT or 8000 CT	3.2	15W		50	5	±1 DB 50-5000	CH-60

REPLACEMENT GRADE CHOKES

CATALOG No.	INDUCTANCE IN HENRIES	RATED CURRENT A.C. Ma.	D.C. RESISTANCE	DIELECTRIC TEST VOLTAGE	CASE No.
RGC 1	4	40	200	1000	CH-40
RGC 2	9	40	400	1000	CH-40
RGC 3	6	50	400	1000	CH-40
RGC 4	10	55	400	1500	CH-50
RGC 5	10	75	250	1500	CH-60
RGC 6	10	75	250	1500	VS-100
RGC 7	6	100	150	1500	CH-60
RGC 8	6	100	150	1500	VS-100
RGC 9	3.5	150	100	1500	CH-60
RGC 10	3.5	150	100	1500	VS-100
RGC 11	2	200	60	1500	CH-60
RGC 12	2	200	60	1500	VS-100
RGC 13	3.7	200	65	1500	CH-80
RGC 14	3.7	200	65	1500	VS-300
RGC 15	2.8	300	65	1500	CH-80
RGC 16	2.8	300	65	1500	VS-300

For Freed Precision Laboratory Test Instruments see Section F Page F-82 to 86

See pages N-115, 116 for FREED Prices

for **PRECISION**

FREED TRANSFORMERS

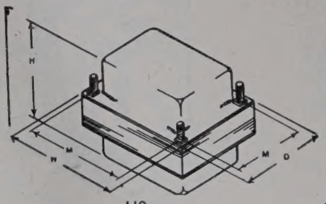
for **QUALITY**

FREED TRANSFORMER CO., INC., 1718-36 WEIRFIELD ST., BROOKLYN (RIDGEWOOD) 27, N. Y.

REPLACEMENT GRADE POWER TRANSFORMERS

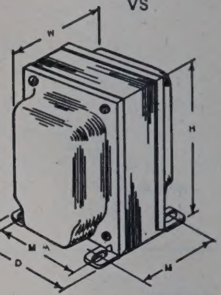
CASE DIMENSIONS

CASE #	MTG. CENTERS	DIMENSIONS W	D	H	WGT. (lbs.)
VS-300	2″ x 1 11/16″	2 19/32″	2 ¾″	3 3/32″	2 ¾
VS-303	2″ x 1 15/16″	2 19/32″	3″	3 3/32″	3 ½
VS-306	2″ x 2 5/16″	2 19/32″	3 ⅜″	3 3/32″	4 ½
VS-307	2″ x 2 7/16″	2 19/32″	3 ¾″	3 3/32″	4 ¾
VS-503	2 ½″ x 2 5/16″	3 7/32″	3 ⅝″	3 27/32″	5 ¼
VS-505	2 ½″ x 2 9/16″	3 7/32″	3 ⅞″	3 27/32″	6
VS-604	3″ x 2 11/16″	3 27/32″	3 ⅞″	4 19/32″	7 ⅜
VS-605	3″ x 2 15/16″	3 27/32″	4 ⅛″	4 19/32″	8 ¾
VS-606	3″ x 3 1/16″	3 27/32″	4 ¼″	4 19/32″	9 ¼
VS-609	3″ x 3 7/16″	3 27/32″	4 ⅝″	4 19/32″	11
VS-611	3″ x 3 11/16″	3 27/32″	4 ⅞″	4 19/32″	12
VS-612	3″ x 3 13/16″	3 27/32″	5″	4 19/32″	13
VS-709	3 ½″ x 4 3/16″	4 ½″	5 ⅝″	5 11/32″	19
HS-300	2 ½″ x 2″	3″	2 ½″	2 ⅝″	2 ¾
HS-303	2 ½″ x 2″	3″	2 ½″	2 ⅞″	3 ½
HS-306	2 ½″ x 2″	3″	2 ½″	3 ¼″	4 ½
HS-307	2 ½″ x 2″	3″	2 ½″	3 ⅜″	4 ¾
HS-503	3 ⅛″ x 2 ½″	3 ¾″	3 ⅛″	3 ⅜″	5 ¼



HS

VS



CASE DIMENSIONS

CASE #	MTG. CENTERS	DIMENSIONS W	D	H	WGT. (lbs.)
HS-505	3 ⅛″ x 2 ½″	3 ¾″	3 ⅛″	3 ⅝″	6
HS-604	3 ¾″ x 3″	4 ½″	3 ¾″	3 ⅝″	7 ⅜
HS-605	3 ¾″ x 3″	4 ½″	3 ¾″	3 ⅞″	8 ¾
HS-606	3 ¾″ x 3″	4 ½″	3 ¾″	4″	9 ¼
HS-609	3 ¾″ x 3″	4 ½″	3 ¾″	4 ⅜″	11
HS-611	3 ¾″ x 3″	4 ½″	3 ¾″	4 ⅝″	12
HS-612	3 ¾″ x 3″	4 ½″	3 ¾″	4 ¾″	13
HS-709	4 ⅜″ x 3 ½″	5 ¼″	4 ⅜″	5 ⅞″	19

Cat. No.	Py Va	Hi Volt	Choke Input D.C. V.	Choke Input D.C. Ma.	Cond. Input D.C. V.	Cond. Input D.C. Ma.	Bias Tap.	Rectifier	Fil. #1	Fil. #2	Fil. #3	Case Number
RGP 1 RGP 2	45 "	500V. CT "			270	40		6X4, 5Y3	5/6.3 @ 2A	6.3 @ 2A		VS300 HS300
RGP 3 RGP 4	57 "	600V. CT "			330	50		6X4, 5Y3	5/6.3 @ 2A	6.3 @ 2.5A		VS303 HS303
RGP 5 FGP 6	64 "	650V. CT "			370	50		6X4, 5Y3	5/6.3 @ 2A	6.3 @ 3A		VS303 HS303
RGP 7 RGP 8	73 "	600V. CT "			320	70		6X4, 5Y3	5/6.3 @ 2A	6.3 @ 3A		VS306 HS306
RGP 9 RGP 10	110 "	650V. CT "	225	140	330	100		5Y3, 5U4	5 @ 3A	6.3 @ 5A		VS503 HS503
RGP 11 RGP 12	76 "	700V. CT "	260	100	385	70		5Y3	5 @ 2A	6.3 @ 8.5A		VS307 HS307
RGP 13 RGP 14	108 "	700V. CT "	250	125	370	90		5Y3, 5U4	5 @ 3A	6.3 @ 5A		VS503 HS503
RGP 15 RGP 16	127 "	700V. CT "	260	170	350	120		5U4	5 @ 3A	6.3 @ 5A		VS505 HS505
RGP 17 RGP 18	146 "	700V. CT "	260	210	350	150		5U4	5 @ 3A	6.3 @ 5A	6.3 @ 1A	VS604 HS604
RGP 19 RGP 20	207 "	800V. CT "	295	280	400	200		5U4, 2-5Y3	5 @ 4A	6.3 @ 6A		VS605 HS605
RGP 21 RGP 22	225 "	800V. CT "	295	280	400	200	80V.	5U4, 2-5Y3	5 @ 4A	6.3 @ 6A	5/6.3 @ 2A	VS606 HS606
RGP 23 RGP 24	268 "	840V. CT "	330	350	450	250	80V.	2-5U4	5 @ 6A	6.3 @ 6A	5/6.3 @ 2A	VS609 HS609
RGP 25 RGP 26	320 "	900V. CT "	295	280	400	200	80V.	2-5U4	5 @ 6A	6.3 @ 6A	5/6.3 @ 2A	VS709 HS709
RGP 27 RGP 28	127 "	900V. CT "	360	150				5U4	5 @ 3A	6.3 @ 5A		VS604 HS604
RGP 29 RGP 30	150 "	900V. CT "	350	200				5U4	5 @ 3A	6.3 @ 5A		VS605 HS605
RGP 31 RGP 32	203 "	1100V. CT "	400	250				5R4GY	5 @ 3A	6.3 @ 5A		VS611 HS611
RGP 33 RGP 34	248 "	1100V. CT "	420	300				2-5R4GY	5 @ 4A	6.3 @ 7A		VS612 HS612
RGP 35 RGP 36	310 "	1280V. CT "	480	350				2-5R4GY	5 @ 4A	6.3 @ 7A		VS709 HS709

For Freed Precision Laboratory Test Instruments see Section F Page F-82 to 86

See pages N-115, 116 for FREED Prices

for PRECISION FREED TRANSFORMERS *for* QUALITY

FREED TRANSFORMER CO., INC., 1718-36 WEIRFIELD ST., BROOKLYN (RIDGEWOOD) 27, N. Y.

HIGH FIDELITY COMPONENTS

Input Transformers

Catalog No.	List Price†
QGA 1	28.00
QGA 2	35.00
QGA 3	25.00
QGA 4	35.00
QGA 5	32.00
QGA 6	37.00

Hybrid and Repeat Coils

Catalog No.	List Price†
QGA 7	25.00
QGA 8	35.00
QGA 9	35.00
QGA 10	40.00
QGA 11	30.00

Interstage Transformers

Catalog No.	List Price†
QGA 12	30.00
QGA 13	25.00
QGA 14	26.00
QGA 15	32.00

Low Level Output, Mixing Matching Transformers

Catalog No.	List Price†
QGA 16	26.00
QGA 17	26.00
QGA 18	28.00
QGA 19	26.00
QGA 20	33.00
QGA 21	30.00

Driver Transformers

Catalog No.	List Price†
QGA 22	50.00
QGA 23	35.00
QGA 24	35.00

High Level Output Transformers

Catalog No.	List Price†
QGA 25	35.00
QGA 26	35.00
QGA 27	35.00
QGA 28	35.00
QGA 29	35.00
QGA 30	35.00
QGA 31	45.00
QGA 32	45.00
QGA 33	45.00
QGA 34	45.00
QGA 35	49.50
QGA 36	49.50
QGA 37	30.00
QGA 38	49.50

TOROIDAL INDUCTORS

Prices given are Net for Hermetically Sealed Units. For Commercial Cased units deduct $.75 from net. For Uncased units deduct $1.50 from net.

Tolerances are adjusted to within 1% or 2% depending on the inductance value.

Type TI - 1

Catalog No.	Net Price
F-800	7.00
F-801	7.00
F-802	7.00
F-803	7.50
F-804	8.00
F-805	8.00
F-806	9.00
F-807	9.00
F-808	9.00
F-809	10.00
F-810	10.00
F-811	11.00
F-812	11.00
F-813	11.00
F-814	11.00
F-815	11.00
F-816	11.50
F-817	12.00
F-818	12.50
F-819	13.00
F-820	13.30
F-821	13.50
F-822	13.75
F-823	14.00
F-824	14.50
F-825	15.00
F-826	15.30
F-827	15.60
F-828	16.00
F-829	17.00
F-830	18.00

Type TI - 2s

Catalog No.	Net Price
F-1800	14.95
F-1801	14.95
F-1802	14.95
F-1803	14.95
F-1804	14.95
F-1805	15.40
F-1806	15.40
F-1807	15.40
F-1808	15.40
F-1809	15.40
F-1810	15.40
F-1811	15.70
F-1812	15.70
F-1813	15.70
F-1814	15.70
F-1815	15.70

Type TI - 3s

Catalog No.	Net Price
F-1844	15.00
F-1845	15.00
F-1846	15.00
F-1847	15.00
F-1848	15.00
F-1849	15.00
F-1850	15.00
F-1851	15.00
F-1852	15.00
F-1853	15.00
F-1854	15.00
F-1855	15.00

Type TI - 3As

Catalog No.	Net Price
F-1856	21.00
F-1857	21.50
F-1858	21.50
F-1859	23.50
F-1860	24.00
F-1861	24.00
F-1862	24.50
F-1863	25.50

Type TI - 4 and 4s

Catalog No.	Net Price
F-850	8.30
F-851	8.30
F-852	8.30
F-853	8.30
F-854	8.30
F-855	8.30
F-856	8.70
F-857	9.05
F-858	9.23
F-859	9.35
F-860	9.50
F-861	9.70
F-862	9.85
F-863	10.00
F-864	10.30
F-865	10.80
F-866	11.20
F-867	11.20
F-868	11.20
F-869	11.70
F-870	11.70
F-871	11.70
F-872	12.10
F-873	12.10
F-874	12.60
F-875	13.10
F-876	13.60
F-877	14.10
F-878	14.60

Type TI - 5

Catalog No.	Net Price
F-1700	6.00
F-1701	6.00
F-1702	6.00
F-1703	6.50
F-1704	7.00
F-1705	7.25
F-1706	7.50
F-1707	7.75
F-1708	8.00
F-1709	8.25
F-1710	8.50
F-1711	8.75
F-1712	9.50
F-1713	10.10
F-1714	10.30
F-1715	10.80
F-1716	11.20
F-1717	11.40
F-1718	11.80
F-1719	12.10
F-1720	12.50

Type TI - 5s

Catalog No.	Net Price
F-1700	8.30
F-1701	8.30
F-1702	8.30
F-1703	8.30
F-1704	8.30
F-1705	8.60
F-1706	8.70
F-1707	9.05
F-1708	9.25
F-1709	9.35
F-1710	9.50
F-1711	9.70
F-1712	9.80
F-1713	10.10
F-1714	10.30
F-1715	10.80
F-1716	11.20
F-1717	11.40
F-1718	11.80
F-1719	12.10
F-1720	12.50

Type TI - 6 and 6s

Catalog No.	Net Price
F-1726	8.60
F-1727	8.60
F-1728	8.60
F-1729	8.60
F-1730	8.60
F-1731	8.60
F-1732	8.90
F-1733	8.90
F-1734	9.00
F-1735	9.00
F-1736	9.00
F-1737	9.50
F-1738	10.50
F-1739	10.50
F-1740	10.50
F-1741	10.50
F-1742	11.00
F-1743	12.50

Type TI - 7

Catalog No.	Net Price
F-1781	8.30
F-1782	8.30
F-1783	8.30
F-1784	8.30
F-1785	8.30
F-1786	8.30
F-1787	8.50
F-1788	8.50
F-1789	8.70
F-1790	8.70
F-1791	8.90
F-1792	9.10
F-1793	9.10
F-1794	9.10
F-1795	9.50
F-1796	9.75
F-1797	10.50

Type TI - 8 and 8s

Catalog No.	Net Price
F-1821	9.10
F-1822	9.10
F-1823	9.10
F-1824	9.10
F-1825	9.10
F-1826	9.10
F-1827	9.10
F-1828	9.10
F-1829	9.10
F-1830	9.10
F-1831	9.10
F-1832	9.20
F-1833	9.30
F-1834	9.50
F-1835	9.50
F-1836	9.50
F-1837	9.60
F-1838	9.70
F-1839	10.00
F-1840	10.20

Type TI - 9s

Catalog No.	Net Price
F-1554	17.50
F-1555	17.70
F-1556	17.90
F-1557	18.20
F-1558	18.30
F-1559	18.40
F-1560	18.50
F-1561	18.75
F-1562	19.00
F-1563	19.25
F-1564	19.50
F-1565	19.50
F-1566	20.00
F-1567	20.50
F-1568	21.00
F-1569	21.50
F-1570	22.50

Type TI - 10s

Catalog No.	Net Price
F-1579	14.90
F-1580	14.90
F-1581	15.10
F-1582	15.20
F-1583	15.30
F-1584	15.40
F-1585	15.50
F-1586	15.60
F-1587	15.70
F-1588	15.80
F-1589	15.90
F-1590	16.10
F-1591	16.20
F-1592	16.40

Type TI - 11s

Catalog No.	Net Price
F-1747	14.95
F-1748	14.95
F-1749	14.95
F-1750	14.95
F-1751	14.95
F-1752	16.00
F-1753	16.00
F-1754	16.00
F-1755	16.00
F-1756	16.00
F-1757	14.95
F-1758	14.95
F-1759	15.45
F-1760	15.45
F-1761	16.00
F-1762	16.50
F-1763	17.00
F-1764	17.50
F-1765	18.00
F-1766	18.50
F-1767	18.75
F-1768	19.00
F-1769	19.45
F-1770	19.45
F-1771	19.45
F-1772	20.00
F-1773	20.50
F-1774	21.00
F-1775	21.50
F-1776	22.00
F-1777	23.00
F-1778	24.00
F-1779	25.00
F-1780	26.00

Type TI - 12 and 12s

Catalog No.	Net Price
F-1655	14.30
F-1656	14.30
F-1657	14.30
F-1658	14.80
F-1659	14.80
F-1660	14.80
F-1661	15.40
F-1662	15.40
F-1663	15.90
F-1664	15.90
F-1665	14.50
F-1666	14.50
F-1667	14.90
F-1668	14.90
F-1669	15.40
F-1670	15.40
F-1671	15.40
F-1672	15.90
F-1673	16.40
F-1674	16.90
F-1675	16.90
F-1676	17.40
F-1677	17.40
F-1678	17.90
F-1679	17.90
F-1680	18.40
F-1681	18.40
F-1682	18.40
F-1683	18.90
F-1684	18.90
F-1685	18.90
F-1686	19.40
F-1687	19.90
F-1688	20.50
F-1689	21.00
F-1690	21.50
F-1691	22.00
F-1692	22.50
F-1693	23.00

Type TI - 13

Catalog No.	Net Price
F-1629	17.50
F-1630	17.70
F-1631	17.90
F-1632	18.20
F-1633	18.30
F-1634	18.40
F-1635	18.50
F-1636	18.75
F-1637	19.00
F-1638	19.25
F-1639	19.50
F-1640	19.50
F-1641	20.00
F-1642	20.50
F-1643	21.00
F-1644	21.50
F-1645	22.50

HIGH Q REACTORS

Catalog No.	Net Price
QGC 1	20.00 ea.
QGC 2	20.00 ea.
QGC 3	20.00 ea.
QGC 4	20.00 ea.
QGC 5	20.00 ea.
QGC 6	20.00 ea.
QGC 7	20.00 ea.

MIL. PULSE TRANSFORMERS

Catalog No.	Net Price
MPT-1	17.50
MPT-2	15.00
MPT-3	22.50
MPT-4	20.00
MPT-5	17.50
MPT-6	15.00
MPT-7	17.50
MPT-8	15.00
MPT-9	22.50
MPT-10	20.00
MPT-11	17.50
MPT-12	27.50

MILITARY AUDIO TRANSFORMERS

Catalog No.	Net Price
MGA 1	12.50
MGA 2	12.50
MGA 3	12.50
MGA 4	12.50
MGA 5	12.50
MGA 6	12.50
MGA 7	12.50
MGA 8	12.50
MGA 9	12.50

Net †40

for PRECISION **FREED TEST INSTRUMENTS** *for* QUALITY

FREED TRANSFORMER CO., INC., 1718-36 WEIRFIELD ST., BROOKLYN (RIDGEWOOD) 27, N. Y.

FREED TRANSFORMERS (CONT.)

PROFESSIONAL GRADE COMPONENTS

Miniature Audio Transformers

Catalog No.	List Price†
PMA 1	16.50
PMA 2	13.50
PMA 3	19.00
PMA 4	13.50
PMA 5	13.50
PMA 6	16.50
PMA 7	16.50
PMA 8	16.50
PMA 9	16.50
PMA 10	15.50
PMA 11	12.00

Input Transformers

Catalog No.	List Price†
PGA 1	16.00
PGA 2	18.50
PGA 3	16.00
PGA 4	15.00
PGA 5	17.50
PGA 6	16.00

Low Level Output and Mixing Transformers

Catalog No.	List Price†
PGA 7	16.00
PGA 8	17.00
PGA 9	16.00
PGA 10	16.00

Driver Transformers

Catalog No.	List Price†
PGA 11	22.50
PGA 12	16.00
PGA 13	22.50

High Level Output Transformers

Catalog No.	List Price†
PGA 14	22.50*
PGA 15	23.75*
PGA 16	25.00*
PGA 17	25.00*
PGA 18	22.50*
PGA 19	25.00*
PGA 20	25.00*
PGA 21	23.75*
PGA 22	30.00*
PGA 23	30.00*
PGA 24	22.50*
PGA 25	50.00*
PGA 26	25.00*
PGA 27	25.00*
PGA 28	23.75*
PGA 29	27.50*
PGA 30	40.00*

*5.00 off list price supplied in vertical shells.

High Q Reactors

Catalog No.	List Price†
PQC 1	10.00
PQC 2	10.00
PQC 3	10.00
PQC 4	10.00
PQC 5	10.00
PQC 6	10.00
PQC 7	10.00
PQC 8	10.00
PQC 9	10.00

Filter Reactors

Catalog No.	List Price†
PGC 1	6.50
PGC 2	7.00
PGC 3	7.00
PGC 4	7.50
PGC 5	7.50
PGC 6	7.50
PGC 7	8.00
PGC 8	9.00
PGC 9	9.00
PGC 10	9.50
PGC 11	10.50
PGC 12	13.00
PGC 13	16.00

Parallel Feed Audio Chokes

Catalog No.	List Price†
PGC 14	10.00
PGC 15	11.00
PGC 16	10.50

Swinging Input Reactors

Catalog No.	List Price†
PGC 17	9.00
PGC 18	10.50
PGC 19	13.00
PGC 20	16.00

Power Transformers

Catalog No.	List Price†
PGP 1	12.50
PGP 2	18.50
PGP 3	4.00
PGP 4	9.50
PGP 5	10.00
PGP 6	11.00
PGP 7	12.50
PGP 8	11.75
PGP 9	12.50
PGP 10	14.00
PGP 11	19.00
PGP 12	22.50
PGP 13	25.00
PGP 14	30.00
PGP 15	35.00
PGP 16	16.00
PGP 17	18.50
PGP 18	25.00
PGP 19	30.00
PGP 20	37.50

FILAMENT TRANSFORMERS

Catalog No.	List Price†
TF 1	4.00
TF 2	4.50
TF 3	15.00
TF 4	18.50
TF 5	4.00
TF 6	5.50
TF 7	6.00
TF 8	6.40
TF 9	10.40
TF 10	24.00
TF 11	2.70
TF 12	4.00
TF 13	5.50
TF 14	6.60
TF 15	6.95
TF 16	6.00
TF 17	6.40
TF 18	24.00
TF 19	4.50

STEP-DOWN TRANSFORMERS

Catalog No.	List Price†
SDT 1	3.25
SDT 2	3.75
SDT 3	7.50
SDT 4	10.20
SDT 5	11.55
SDT 6	14.70
SDT 7	18.40
SDT 8	20.05
SDT 9	26.75
SDT 10	37.60
SDT 11	55.00
SDT 12	66.00
SDT 13	77.00
SDT 14	89.35
SDT 15	105.00

ISOLATION TRANSFORMERS

Catalog No.	List Price†
IT 1	10.00
IT 2	14.30
IT 3	36.10
IT 4	44.00

REPLACEMENT GRADE COMPONENTS

Chokes

Catalog No.	List Price†
RGC 1	2.00
RGC 2	2.00
RGC 3	2.00
RGC 4	2.20
RGC 5	2.75
RGC 6	4.00
RGC 7	2.75
RGC 8	4.00
RGC 9	2.75
RGC 10	4.00
RGC 11	2.75
RGC 12	4.00
RGC 13	4.25
RGC 14	5.50
RGC 15	4.25
RGC 16	5.50

Audio Transformers

Catalog No.	List Price†
RGA 1	5.00
RGA 2	4.00
RGA 3	4.00
RGA 4	7.00
RGA 5	4.00
RGA 6	4.75
RGA 7	5.00
RGA 8	2.25
RGA 9	2.25
RGA 10	2.75
RGA 11	5.00

Power Transformers

Catalog No.	List Price†
RGP 1	7.50
RGP 2	7.50
RGP 3	7.50
RGP 4	7.50
RGP 5	8.00
RGP 6	8.00
RGP 7	9.00
RGP 8	9.00
RGP 9	10.00
RGP 10	10.00
RGP 11	9.00
RGP 12	9.00
RGP 13	10.00
RGP 14	10.00
RGP 15	11.00
RGP 16	11.00
RGP 17	13.50
RGP 18	13.50
RGP 19	13.70
RGP 20	13.70
RGP 21	18.50
RGP 22	18.50
RGP 23	25.00
RGP 24	25.00
RGP 25	30.00
RGP 26	30.00
RGP 27	11.00
RGP 28	11.00
RGP 29	13.50
RGP 30	13.50
RGP 31	20.00
RGP 32	20.00
RGP 33	25.00
RGP 34	25.00
RGP 35	32.50
RGP 36	32.50

FREED TEST INSTRUMENTS

See Radio's Master pages F-82 to F-86 for complete descriptions, illustrations and specifications.

Type No.	Description	Net Prices
1010	Comparison & Limit Bridge	$ 185.00
1020-B	Megohmmeter	225.00
1030	Low Frequency "Q" Indicator	1050.00
1040	Vacuum Tube Voltmeter	195.00
1060	Vacuum Tube Voltmeter	265.00
1110-A	Incremental Inductance Bridge	345.00
1140	Null Detector	234.00
1150	Universal Bridge	275.00
1160	Decade Inductor	172.00
1161	Decade Inductor	191.00
1162	Decade Inductor	197.00
1163	Decade Inductor	172.00
1164	Decade Inductor	210.00
1170	DC Supply for No. 1110-A Bridge	294.00
1180	AC Supply for No. 1110-A Bridge	108.00
1195	Variable Condenser Decade	160.00
1206-A	Frequency Standard	$ 750.00
1207	Frequency Standard	750.00
1210	Null Detector & Vacuum Tube Voltmeter	325.00
1220	Decade Inductor	55.00
1230	Decade Inductor	51.00
1240	Decade Inductor	55.00
1250	Condenser Decade	160.00
1260	Decade Inductor	215.00
1270	Decade Inductor	65.00
1280	Decade Inductor	210.00
1290	Decade Inductor	265.00
1310	Decade Inductor	195.00
1341	Decade Inductor	75.00
1342	Decade Inductor	205.00
1350	Condenser Decade	250.00

All prices are F.O.B. Brooklyn, New York

Net †40

DRY ELECTROLYTIC CAPACITORS

P.R. MALLORY & CO. Inc. MALLORY

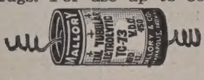
P.R. MALLORY & CO., INC. · INDIANAPOLIS

Metal Tubular Dry Electrolytic Capacitors

MALLORY
METAL TUBULAR ELECTROLYTIC
TCD-47

For filter and audio by-pass circuits. Sealed aluminum tube with external insulating sleeve. 3″ bare, tinned-copper leads at each end, except TCS styles which have solder lugs. For use up to 85°C except types designated (†).

MALLORY
MADE IN USA
MFD. VDC
20-20 150 RED



Single Section

Catalog Number	Cap. Mfd.	DC Wkg. Volts	Size Dia. Length	List Price
TC310	1000	3	15/16 x 1¾	**$1.70**
TC605	500	6	13/16 x 1¾	**1.55**
TC610	1000	6	15/16 x 2	**1.90**
TC1505	500	15	15/16 x 2	**1.75**
TC22	10	25	9/16 x 1¼	**1.00**
TC26	25	25	9/16 x 1¼	**1.00**
TC29	50	25	11/16 x 1½	**1.10**
TC2501	100	25	11/16 x 1¾	**1.35**
TC2505	500	25	1 1/16 x 2⅞	**2.30**
TC302	2	50	9/16 x 1¼	**.90**
TC30	5	50	9/16 x 1¼	**1.00**
TC31	1	50	9/16 x 1¼	**.90**
TC32	10	50	9/16 x 1¼	**1.00**
TC36	25	50	11/16 x 1¼	**1.05**
TC39	50	50	13/16 x 1¼	**1.20**
TC3501	100	50	13/16 x 2	**1.40**
TC40	5	150	9/16 x 1¼	**1.00**
TC41	8	150	11/16 x 1¼	**1.05**
TC42	10	150	11/16 x 1¼	**1.05**
TC43	12	150	11/16 x 1½	**1.10**
TC44	16	150	11/16 x 1½	**1.15**
TC45	20	150	13/16 x 1½	**1.20**
TC47	30	150	13/16 x 1½	**1.30**
TC48	40	150	15/16 x 1¾	**1.35**
TC49	50	150	15/16 x 1¾	**1.40**
TC492	80	150	15/16 x 2¼	**1.60**
TC495	150	150	1 1/16 x 2⅞	**1.90**
TC50X	5	250	11/16 x 1¼	**1.05**
TC51	8	250	11/16 x 1¾	**1.15**
TC52	10	250	11/16 x 1¾	**1.20**
TC53	12	250	13/16 x 1¾	**1.25**
TC54	16	250	13/16 x 1¾	**1.30**
TC55	20	250	13/16 x 1¾	**1.35**
TC58	40	250	1 1/16 x 1¾	**1.55**
TC59	50	250	1 1/16 x 2	**1.70**
TC60	5	350	11/16 x 1¾	**1.05**
TC61	8	350	13/16 x 1¾	**1.20**
TC62	10	350	13/16 x 1¾	**1.25**
TC63	12	350	15/16 x 1¾	**1.30**
TC64	16	350	15/16 x 1¾	**1.40**
TC65	20	350	15/16 x 1¾	**1.45**
TC68	60	350	1 1/16 x 2⅞	**1.95**
TC70	5	450	11/16 x 1¾	**1.20**
TC71	8	450	13/16 x 1¾	**1.25**
TC72	10	450	13/16 x 1¾	**1.30**
TC73	12	450	13/16 x 1¾	**1.35**
TC74	16	450	15/16 x 1¾	**1.40**
TC75	20	450	1 1/16 x 1¾	**1.55**
TC77	30	450	1 1/16 x 2¼	**1.70**
TC78	40	450	1 1/16 x 2⅞	**1.80**
†TC81	10	500	15/16 x 1¾	**1.35**
TC82	10	500	1 1/16 x 2 15/16	**2.70**
†TC83	20	500	1 1/16 x 2 15/16	**1.60**
†TC84	30	500	1 1/16 x 2¼	**1.75**
TC92	10	600	1 1/16 x 2 15/16	**2.95**
TC50025	250	50	1 1/16 x 2⅞	**1.75**
TC308	.5Z @ 15750 Cycles 3 V.N.P.		1 1/16 x 2	**2.20**
TC420	1.5Z @ 60 Cycles 4 V		1 1/16 x 2⅞	**3.50**
TC421	1.5Z @ 120 Cycles 6 V		1 1/16 x 2	**3.00**

Dual Common Negative

TCD26	25-25	25	13/16 x 1¼	**$1.40**
TCD45	20-20	150	13/16 x 2	**1.65**
TCD47	30-30	150	15/16 x 2	**1.80**
TCD48	40-40	150	1 1/16 x 2	**1.85**
TCD485	40-20	150	1 1/16 x 2	**1.75**
TCD49	50-50	150	1 1/16 x 3 1/16	**2.10**
TCD497	50-30	150	1 1/16 x 2¼	**1.95**
TCD498	80-50	150	1 1/16 x 2¼	**2.35**
TCD52	10-10	250	15/16 x 2	**1.65**
TCD55	20-20	250	1 1/16 x 2	**1.85**
TCD62	10-10	350	15/16 x 2	**1.70**
TCD65	20-20	350	1 1/16 x 3 1/16	**2.25**
TCD71	8-8	450	15/16 x 2	**1.70**
TCD72	10-10	450	1 1/16 x 2	**1.85**
TCD74	15-15	450	1 1/16 x 3 1/16	**2.20**
TCD75	20-20	450	1 1/16 x 3 1/16	**2.50**

Dual Separate Section

Catalog Number	Cap. Mfd.	DC Wkg. Volts	Size Dia. Length	List Price
TCS44	15-15	150	13/16 x 2⅜	**$2.00**
TCS45	20-20	150	15/16 x 2⅜	**2.10**
TCS47	30-30	150	1 1/16 x 2⅜	**2.25**
TCS48	40-40	150	1 1/16 x 2⅞	**2.35**
TCS505	70-70	175	1 1/16 x 3⅞	**3.60**
TCS52	10-10	250	15/16 x 2⅜	**2.10**
TCS55	20-20	250	1 1/16 x 2⅞	**2.35**
TCS61	8-8	350	15/16 x 2⅜	**2.10**
TCS64	15-15	350	1 1/16 x 2⅞	**2.75**
TCS71	8-8	450	1 1/16 x 2⅜	**2.15**
TCS74	15-15	450	1 1/16 x 2⅞	**2.75**
TCS75	20-20	450	1 1/16 x 3½	**3.15**

FP-WP Dry Electrolytic Capacitors

MALLORY
MALLORY

For use at ambient temperatures up to 85°C in filter and by-pass circuits in radio, TV and industrial electronics. Sealed in aluminum cans with twist-prong, lug construction. FP types have Mallory exclusive Fabricated Plates. WP have special etched plates. All feature low RF impedance and minimum coupling between sections. Separate anode terminals. Case is common cathode. For hardware, see page 11, Mallory Capacitors Section, of this catalog.

FP-WP—Singles

Catalog Number	Capacity Mfd.	Working Volts—DC	Size D L	List Price
WP510	.5Z/15750 cycles	3V	1 x 2	**$2.20**
WP540	1.0Z/60 cycles	3V	1⅜ x 3	**4.00**
WP505	10Z/30 cycles	3V	¾ x 2	**2.00**
WP032*	3000	10	1⅜ x 2½	**3.20**
WP039	1000	15	1 x 2½	**2.55**
WP041	2000	15	1⅜ x 2½	**3.45**
WP042	3000	15	1⅜ x 3	**3.50**
WP052	40	25	¾ x 2	**1.35**
WP055	100	25	1 x 2	**1.60**
WP057	500	25	1 x 2½	**2.55**
WP059	1000	25	1⅜ x 2	**3.55**
WP063	4	50	¾ x 2	**1.25**
WP065	500	50	1⅜ x 2	**2.65**
WP068	1500	50	1⅜ x 4	**3.85**
FP113	30	150	¾ x 2	**1.55**
FP115	50	150	1 x 2	**1.65**
FP116	100	150	1 x 2½	**2.00**
FP117	150	150	1 x 3	**2.15**
FP119	300	150	1⅜ x 3	**2.80**
FP125	15	250	¾ x 2	**1.55**
FP135	30	350	1 x 2	**1.90**
FP137	50	350	1 x 2½	**2.10**
FP138	80	350	1⅜ x 2½	**2.85**
FP140	125	350	1⅜ x 3	**3.95**
FP142	10	450	¾ x 2	**1.55**
FP143	15	450	1 x 2	**1.70**
FP144	20	450	1 x 2	**1.80**
FP145	30	450	1 x 2½	**1.95**
FP146	40	450	1 x 2½	**2.05**
FP149	80	450	1⅜ x 2½	**3.05**

FP-WP—Duals

WP204	250-1000	10-6	1⅜ x 2	**$2.85**
WP205	.5Z-2.5Z/ 15750C-60C	12-6V	1⅜ x 3	**3.60**
WP200	1000-1000	15-15	1⅜ x 2½	**4.40**
WP206	50-150	150-25	1 x 2½	**2.20**
FP208	20-20	150-150	1 x 2	**1.70**
FP211	30-30	150-150	1 x 2	**1.85**
FP210	40-20	150-150	1 x 2	**1.80**
FP212	40-40	150-150	1 x 2½	**1.90**
FP213	50-30	150-150	1 x 2½	**2.00**
FP214	50-50	150-150	1 x 2½	**2.15**
FP214.5	75-75	150-150	1⅜ x 2	**2.60**
FP216	80-40	150-150	1 x 3	**2.30**
FP215	125-100	150-150	1⅜ x 2½	**3.40**
FP216.3	200-150	150-150	1⅜ x 4	**3.75**
FP216.4	200-200	150-150	1⅜ x 4	**4.00**
FP217	20-20	250-250	1 x 2	**1.90**
FP221	40-40	250-250	1 x 3	**2.50**
FP217.7	150-150	250-250	1⅜ x 4	**5.15**
FP218	120-20	300-300	1⅜ x 3	**4.00**
FP228*	30-30	350-300	1 x 3	**2.65**
FP225	15-15	350-350	1 x 2	**2.25**
FP227	20-20	350-350	1 x 2½	**2.30**
FP227.3	30-30	350-350	1 x 3	**2.90**
FP227.6	80-80	350-350	1⅜ x 4	**4.70**
FP229	35-100	400-50	1 x 3	**2.60**
FP229.3	75-75	400-400	1⅜ x 4	**4.85**
FP229.6	50-100	450-50	1⅜ x 2½	**3.00**

See next page for additional values

* See Table of Recommended Replacements for Modified and Discontinued FP and WP Types, page 11, Mallory Capacitors section, this catalog.

DRY ELECTROLYTIC CAPACITORS

FP-WP—Duals—Continued from Preceding Page

Catalog Number	Capacity Mfd.	Working Volts—DC	Size D L	List Price
FP244	80-50	450-50	1⅜ x 3	$3.50
FP230	20-50	450-250	1 x 3	2.80
FP235	20-80	450-350	1⅜ x 2½	3.65
FP550*	10-80	450-400	1⅜ x 3	3.45
WP230.9	5-5	450-450	¾ x 2	1.70
FP231	10-10	450-450	1 x 2	1.90
FP234	20-20	450-450	1 x 3	2.55
FP237	30-30	450-450	1⅜ x 2½	3.05
FP236*	40-10	450-450	1⅜ x 2	2.65
FP238	40-40	450-450	1⅜ x 3	3.45
FP239	50-40	450-450	1⅜ x 3	3.65
FP240	50-50	450-450	1⅜ x 3	3.85
FP245	80-10	450-450	1⅜ x 3	3.60
FP245.3	80-30	450-450	1⅜ x 4	4.15
FP250	40-80	475-200	1⅜ x 2½	3.65
FP255	20-100	475-300	1⅜ x 3	3.95
FP246X*	80-50	475-450	1⅜ x 4	4.85
FP258	15-15	475-475	1 x 2½	2.35
FP260	40-10	475-475	1⅜ x 3	3.10
FP262	40-40	475-475	1⅜ x 3	4.30
FP266	80-50	475-475	1⅜ x 4	5.20
FP277	60-80	500-150	1⅜ x 3	3.75
FP280	40-50	500-200	1⅜ x 2½	3.30
FP288	40-40	500-500	1⅜ x 3	4.30

FP-WP—Triples

Catalog Number	Capacity Mfd.	Working Volts—DC	Size D L	List Price
WP520	40-40-40	25-25-25	1 x 2	$2.15
FP303	20-250-100	150-15-15	1⅜ x 2	2.90
FP312	100-50-25	150-50-25	1 x 3	3.00
WP302*	15-15-1000	150-150-2	1 x 2	3.00
WP302.1	15-15-1200	150-150-2	1 x 2	3.00
FP302.7	80-30-300	150-150-10	1⅜ x 2	3.15
FP306	40-20-20	150-150-25	1 x 2	2.30
FP307	40-20-100	150-150-25	1 x 2½	2.50
FP304	40-20-200	150-150-25	1 x 2½	2.70
FP310	40-40-20	150-150-25	1 x 2½	2.40
FP314	40-40-200	150-150-25	1 x 3	2.80
FP309	50-30-100	150-150-25	1 x 2½	2.70
FP311	50-50-20	150-150-25	1 x 3	2.65
FP311.2 †	20-20-20	150-150-150	1 x 2	2.30
FP311.4 †	40-20-20	150-150-150	1 x 2½	2.40
FP311.5 †	40-40-40	150-150-150	1 x 3	2.60
FP311.7 †	80-40-20	150-150-150	1⅜ x 2	2.90
FP311.9 †	120-120-40	150-150-150	1⅜ x 3	4.05
FP313*	30-20-20	200-200-25	1 x 2	2.55
FP318*	90-90-20	200-200-50	1⅜ x 3	3.85
FP319	80-40-50	250-150-50	1⅜ x 2½	3.30
FP360*	15-20-20	250-150-150	1 x 2	2.40
FP316*	20-15-20	250-250-25	1 x 2	2.35
FP319.5	90-90-20	250-250-50	1⅜ x 3	4.60
FP320†	40-20-20	250-250-250	1⅜ x 2	2.90
FP326	100-60-20	300-150-25	1⅜ x 3	4.20
FP334*	20-80-10	300-250-200	1⅜ x 2½	3.45
FP335	100-60-20	300-250-250	1⅜ x 3	4.90
FP336	200-60-20	300-250-250	1⅜ x 4	5.80
FP331	30-30-20	350-300-25	1 x 3	3.15
FP328	15-10-20	350-350-25	1 x 2	2.50
FP330	30-20-20	350-350-25	1 x 3	3.10
FP330.3 †	20-10-5	350-350-250	1 x 2½	2.55
FP371*	30-10-20	350-350-250	1 x 3	3.05
FP330.5 †	10-10-10	350-350-350	1 x 2	2.40
FP330.7	30-20-10	350-350-350	1 x 3	3.25
FP331.3	80-60-60	350-350-350	1⅜ x 4	5.55
FP333	10-50-30	400-350-25	1⅜ x 2	3.10
FP333.8	80-20-10	400-400-350	1⅜ x 3	4.30
FP342*	40-40-130	450-150-50	1⅜ x 2½	3.70
FP343	40-100-50	450-150-50	1⅜ x 3	3.95
FP340	20-50-100	450-150-75	1⅜ x 2	3.40
FP341	40-90-50	450-150-150	1⅜ x 3	4.00
FP341.5 †	20-60-100	450-250-25	1⅜ x 2½	3.65
FP353*	20-40-10	450-250-250	1⅜ x 2	3.15
FP343.1	15-20-20	450-350-250	1 x 3	2.95
FP343.4 †	20-15-15	450-350-350	1 x 3	3.25
FP343.6	20-40-10	450-350-350	1⅜ x 2½	3.50
FP343.9	10-30-150	450-400-5	1 x 3	3.00
FP344*	10-30-30	450-400-300	1⅜ x 2½	3.35
FP344.5	10-30-40	450-400-300	1⅜ x 2½	3.65
FP345.2 †	10-10-20	450-450-25	1 x 2	2.40
FP345.5	15-15-40	450-450-25	1 x 2½	2.75
FP345.8 †	20-20-20	450-450-25	1 x 3	3.05
FP346	40-40-20	450-450-25	1⅜ x 3	3.95
FP364	80-40-100	450-450-25	1⅜ x 4	5.10
FP366	20-10-50	450-450-50	1 x 3	2.85
FP368	60-40-75	450-450-50	1⅜ x 4	4.60
FP369.1 †	40-40-40	450-450-150	1⅜ x 3	4.15
FP370†	40-10-80	450-450-200	1⅜ x 3	3.90
FP373*	40-10-100	450-450-200	1⅜ x 3	4.20
FP375	40-40-100	450-450-200	1⅜ x 4	4.95
FP376*	10-10-40	450-450-250	1⅜ x 2½	2.90
FP375.8 †	10-10-10	450-450-450	1 x 2½	2.60
FP376.1 †	15-15-10	450-450-450	1 x 3	2.90
FP376.3	20-10-10	450-450-450	1 x 3	2.90
FP376.5	20-20-20	450-450-450	1⅜ x 2½	3.60
FP376.8 †	40-40-10	450-450-450	1⅜ x 3	$4.15
FP377	40-40-40	450-450-450	1⅜ x 4	4.90
FP378	80-40-20	450-450-450	1⅜ x 4	5.40
FP379*	10-100-40	475-200-50	1⅜ x 2½	3.35
FP384	20-20-40	475-300-25	1⅜ x 2	3.10
FP385	10-40-100	475-450-200	1⅜ x 3	4.20
FP386	10-10-5	475-475-25	1 x 2½	2.45
FP387*	10-10-100	475-475-50	1 x 3	2.85
FP387.1	10-10-150	475-475-50	1 x 3	3.00
FP391*	20-20-60	475-475-400	1⅜ x 3	4.80
FP391.1	20-20-60	475-475-450	1⅜ x 4	4.85
FP394	10-10-10	475-475-475	1 x 3	2.70
FP396	30-30-20	475-475-475	1⅜ x 3	4.45
FP396.2	40-10-10	475-475-475	1⅜ x 2½	3.85
FP397	40-35-10	475-475-475	1⅜ x 3	4.55
FP398	10-40-40	500-450-450	1⅜ x 3	4.15

FP-WP—Quads

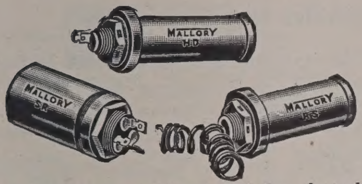
Catalog Number	Capacity Mfd.	Working Volts—DC	Size D L	List Price
FP405	20-20-160-40	150-150-25-25	1⅜ x 2	$3.20
FP407	30-20-20-200	150-150-150-10	1⅜ x 2	3.10
FP408	60-40-20-200	150-150-150-10	1⅜ x 2	3.45
FP409	40-40-30-20	150-150-150-25	1⅜ x 2	3.10
FP409.4	50-20-20-200	150-150-150-25	1⅜ x 2	3.50
FP410	50-50-50-20	150-150-150-25	1⅜ x 2½	3.55
FP411	80-40-30-100	150-150-150-25	1⅜ x 2½	3.70
FP411.3	80-40-40-20	150-150-150-25	1⅜ x 2½	3.50
FP411.5	100-90-60-200	150-150-150-25	1⅜ x 3	4.95
FP411.7	125-125-40-100	150-150-150-25	1⅜ x 4	4.85
FP412	100-80-60-40	150-150-150-150	1⅜ x 3	4.65
FP412.2	40-40-50-80	250-250-150-50	1⅜ x 2½	4.10
FP417	100-40-80-20	300-50-25-25	1⅜ x 2½	4.55
FP418*	120-20-100-20	300-250-30-25	1⅜ x 3	5.25
FP418.3	120-20-100-20	300-250-50-25	1⅜ x 4	5.05
FP419	200-20-100-20	300-250-50-25	1⅜ x 4	5.80
FP423*	40-40-40-40	300-250-250-25	1⅜ x 2½	4.40
FP419.7	60-40-20-50	300-300-300-25	1⅜ x 3	4.65
FP420*	40-40-20-10	300-300-300-300	1⅜ x 2½	4.55
FP414	15-80-40-200	350-200-200-25	1⅜ x 3	4.50
FP416*	40-40-20-20	350-300-300-25	1⅜ x 3	4.55
FP419.3	40-40-20-20	350-350-350-25	1⅜ x 3	4.65
FP419.9	15-15-15-50	350-350-350-50	1⅜ x 2	3.75
FP420.2	50-40-40-160	350-350-350-50	1⅜ x 4	5.75
FP420.6	80-40-100-20	400-400-50-25	1⅜ x 4	5.65
FP421	5-5-50-80	400-400-300-250	1⅜ x 3	4.65
FP422.1 †	20-80-20-50	450-200-200-50	1⅜ x 2½	4.10
FP422.7	60-80-40-20	450-250-250-150	1⅜ x 4	5.65
FP413X	40-40-40-20	450-300-300-150	1⅜ x 3	4.90
FP422*	10-40-80-100	450-350-200-50	1⅜ x 3	4.75
FP423.4	10-40-100-100	450-350-250-50	1⅜ x 3	5.55
FP424.1	10-100-10-20	450-350-350-25	1⅜ x 3	5.20
FP425*	30-40-40-10	450-350-350-200	1⅜ x 3	5.15
FP425.1	80-10-40-30	450-400-300-300	1⅜ x 4	5.80
FP426	20-15-20-20	450-450-25-25	1⅜ x 2	3.45
FP426.5	20-20-60-100	450-450-150-25	1⅜ x 2½	4.25
FP426.9	40-40-125-125	450-450-150-25	1⅜ x 4	5.70
FP427.5	10-10-60-100	450-450-200-50	1⅜ x 2½	3.85
FP428	40-10-35-10	450-450-350-350	1⅜ x 3	4.60
FP428.4	40-40-30-30	450-450-350-350	1⅜ x 4	5.90
FP424	15-15-10-20	450-450-450-25	1⅜ x 2	3.50
FP432	40-10-10-250	450-450-450-25	1⅜ x 3	4.70
FP431	40-15-10-25	450-450-450-25	1⅜ x 2½	4.10
FP430.2	40-20-20-25	450-450-450-25	1⅜ x 3	4.60
FP436	40-20-20-40	450-450-450-25	1⅜ x 3	4.65
FP429	40-30-10-20	450-450-450-25	1⅜ x 3	4.50
FP430.6	40-40-40-40	450-450-450-25	1⅜ x 4	5.50
FP430.9	60-40-40-10	450-450-450-25	1⅜ x 4	6.00
FP437	20-20-20-100	450-450-450-50	1⅜ x 2½	4.55
FP431.4	60-40-10-25	450-450-450-50	1⅜ x 4	5.25
FP433	60-10-10-20	450-450-450-150	1⅜ x 3	4.60
FP432.4	40-40-30-10	450-450-450-200	1⅜ x 4	5.35
FP432.9	40-20-10-100	450-450-450-250	1⅜ x 4	5.85
WP433.6	5-5-5-5	450-450-450-450	1⅜ x 2	3.00
FP434	10-10-10-10	450-450-450-450	1⅜ x 2	3.35
FP434.5	20-10-10-10	450-450-450-450	1⅜ x 2	3.70
FP444	20-20-20-20	450-450-450-450	1⅜ x 3	4.70
FP444.4	30-15-15-15	450-450-450-450	1⅜ x 2½	4.45
FP444.8	30-30-20-20	450-450-450-450	1⅜ x 3	5.20
FP444.9	30-30-30-15	450-450-450-450	1⅜ x 4	5.30
FP445	35-35-10-5	450-450-450-450	1⅜ x 3	4.60
FP447	40-40-20-20	450-450-450-450	1⅜ x 4	5.55
FP450	80-10-10-10	450-450-450-450	1⅜ x 4	5.05
FP453	20-40-80-100	475-350-200-100	1⅜ x 4	5.45
FP456	25-20-40-100	475-450-300-50	1⅜ x 3	4.95
FP456.5	10-60-30-125	475-450-400-50	1⅜ x 4	5.55
FP455	10-50-30-30	475-450-450-25	1⅜ x 3	4.75
FP457*	10-40-10-20	475-450-450-50	1⅜ x 2½	3.95
FP461	15-15-80-40	475-475-300-50	1⅜ x 3	4.80
FP465*	10-10-20-100	475-475-400-25	1⅜ x 2	3.70
FP467	20-10-20-100	475-475-450-25	1⅜ x 2½	4.20
FP471*	40-20-10-10	475-475-475-250	1⅜ x 3	5.00
FP473	20-20-10-10	475-475-475-300	1⅜ x 2½	4.30
FP474	10-10-10-10	475-475-475-475	1⅜ x 2	3.50
FP476	40-20-10-10	475-475-475-475	1⅜ x 4	5.10

*† See Table of Recommended Replacements for Modified and Discontinued FP and WP Types, page 11, Mallory Capacitors section, this catalog.

DRY ELECTROLYTIC CAPACITORS

P. R. MALLORY & CO. Inc.
MALLORY

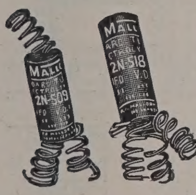
P. R. MALLORY & CO., INC. · INDIANAPOLIS



Aluminum Can Threaded Neck Dry Electrolytic Capacitors

For replacement of wet and dry electrolytic capacitors. RS, RM and HS have flexible, insulated leads. HD and SR have solder lug anode connections; cathodes are connected to case.

Catalog Number	Capacity Mfd.	Volts DC	Size Dia. Length	List Price
RS207	30	250	1 x 3½	$2.05
RS212	8	450	1⅜ x 3	2.20
RS213	8	450	1 x 2¾	2.20
RS214	12	450	1⅜ x 3	2.40
RS215	12	450	1 x 2¾	2.40
RS216	16	450	1 x 3½	2.45
RS217	16	450	1⅜ x 3	2.45
RS219	20	450	1⅜ x 3	2.70
RS223	30	450	1⅜ x 3	3.00
RS224	40	450	1⅜ x 3	3.15
HD684	10	450	1 x 3	2.30
HS691	4	600	1⅜ x 4	2.95
HS693	8	600	1⅜ x 4	3.15
HS696	20	600	1⅜ x 4¼	3.85
RM262	8-8	450	1⅜ x 3	3.00
RM265	8-8-8	450	1⅜ x 4¼	5.00
SR638	8-8	450	1⅜ x 2¾	3.00
SR645	8-8	450	1⅜ x 2¾	3.00



Cardboard Tubular Dry Electrolytic Capacitors

Economical, cardboard tube, wax-sealed filter and by-pass units. Have flexible, insulated leads out one end except those marked (*) which have negative leads out opposite ends. All units (except TN111) are supplied with mounting strap; in addition all units marked (†) have special feet for vertical mounting.

Catalog Number	Capacity Mfd.	Volts DC	Size D L	List Price
		Single Section		
ST595†	8	450	13/16 x 2⅛	$1.25
ST597†	16	450	⅞ x 2¾	1.40
ST598†	20	450	1 x 2¾	1.55
ST599†	30	450	1 x 3¼	1.70
ST645	60	450	1 3/16 x 3⅜	2.35
ST845	80	450	1 3/16 x 4⅜	2.80
		Dual Common Negative		
TN111§	10-10	25-25	⅝ x 1¾	$1.40
2N501	250-1000	10-6	1 1/16 x 2⅝	2.80
2N509*	20-20	150-150	⅞ x 2⅛	1.65
2N513*	30-30	150-150	⅞ x 2⅜	1.80
2N514*	40-20	150-150	⅞ x 2½	1.75
2N511*	40-40	150-150	15/16 x 2½	1.85
2N520*	50-30	150-150	15/16 x 2⅜	1.95
2N521†	50-50	150-150	1 x 2⅞	2.10
2N523	100-100	150-150	1⅛ x 3⅜	3.20
2N525	30-30	200-200	1 x 2⅝	2.20
2N527	50-75	250-50	1¼ x 2⅝	2.40
2N529	100-150	250-50	1⅜ x 3⅜	3.60
2N516*	8-8	250-250	⅞ x 2⅛	1.60
2N531	40-40	300-300	1⅛ x 3⅜	2.95
2N533	40-50	450-50	1⅛ x 3⅜	2.50
2N535	30-60	450-300	1¼ x 3⅜	3.20
2N518†	8-8	450-450	15/16 x 2¾	1.70
2N537	40-40	450-450	1⅜ x 3⅜	3.40
		Dual Separate Section		
2S556†	30-30	150-150	1 x 2¾	$2.25
2S567†	8-8	450-450	1⅛ x 2¾	2.15
2S569†	16-16	450-450	1¼ x 3⅞	2.80

Cardboard Tubular Dry Electrolytic Capacitors
(Continued from Preceding Column)

Catalog Number	Capacity Mfd.	Volts DC	Size D L	List Price
		Triple Common Negative		
3N527*	20-20-20	150-150-25	15/16 x 2¼	$2.05
3N533*	30-30-20	150-150-25	1 x 2⅜	2.20
3N529	50-30-200	150-150-25	1 x 2⅜	2.75
TN125*	20-10-10	150-150-150	⅞ x 2⅜	2.00
3N528	20-20-20	150-150-150	13/16 x 2¾	2.15
TN129†	40-20-20	150-150-150	15/16 x 2⅞	2.25
3N534	30-30-30	150-150-150	⅞ x 2¾	2.35
3N536	40-40-40	150-150-150	1 x 3	2.45
3N538	80-40-20	150-150-150	1 x 3¼	2.75
3N535	40-30-40	350-250-150	1 3/16 x 3⅜	3.30
3N537	30-50-100	450-150-25	1¼ x 3⅛	3.20
3N539	30-30-30	450-350-250	1 5/16 x 3⅜	3.75
3N541	40-20-10	450-450-450	1 5/16 x 3⅜	3.55
		Triple Separate Section		
3S579†	8-8-20	450-450-25	1 3/16 x 2⅞	$2.65
3S584†	8-8-8	450-450-450	1 3/16 x 2⅞	2.85
		Quad Common Negative		
4N723	10-10-10-150	450-450-450-50	1 3/16 x 3⅜	$3.60
4N727	10-10-10-10	450-450-450-450	1⅛ x 3⅜	3.25
		Quad Separate Section		
4S715†	16-16-10-10	150-150-25-25	1⅛ x 2⅝	$3.25

§ Has bare tinned leads out both ends.

Plastic Cased High Capacity and Non-Polarized Electrolytic Capacitors

HC types are for use with dry disc rectifiers, in such applications as; movie equipment and electric fence power supplies. NP types are non-polarized for intermittent AC service.

Catalog Number	Capacity Mfd.	DC Wkg. Volts	Size D L	List Price
HC1020	2000	10	1 7/16 x 3⅜	$5.15
HC1040	4000	10	1 13/16 x 3⅜	7.25
HC1060A*	6000	10	1½ x 4⅛	7.50
HC1520	2000	15	1 7/16 x 3⅜	5.80
HC1540	4000	15	1 13/16 x 3⅜	8.10
HC1560	6000	15	1 13/16 x 4⅜	10.00
HC2510	1000	25	1 7/16 x 3⅜	4.85
HC2520	2000	25	1 13/16 x 3⅜	7.20
HC2540	4000	25	1 13/16 x 4⅜	9.85
HC5005	500	50	1 7/16 x 3⅜	4.80
HC5010	1000	50	1 13/16 x 3⅜	7.00
HC5020	2000	50	1 13/16 x 4⅜	9.10
HC15010	1000	150	2 1/16 x 4⅜	10.50
HC20005	500	200	2 1/16 x 4⅜	9.80
HC45003**	300	450	2 1/16 x 4⅜	12.00
NP1225	200	125	1 13/16 x 4⅜	5.00
NP1235	300	125	2 1/16 x 4⅜	5.75
NP1255	500	125	2 1/16 x 4⅜	7.50
NP3003	15	300	1 7/16 x 3⅜	3.75
NP3014	100	300	1 13/16 x 4⅜	6.75
NP3025	200	300	2 1/16 x 4⅜	9.50
NP4505	50	450	1 13/16 x 3⅜	7.50
NP4510	100	450	2 1/16 x 4⅜	11.60

* This unit in Aluminum Case
** Designed for Photoflash Application

MALLORY
VAC CAPACITOR SELECTOR

Capacitor Selector

For determining correct capacity to use in making replacements of defective motor starting capacitors which have lost their identity. For checking capacity ranges from 25 to 645 mfd. 110-125 VAC.

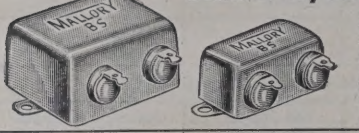
Catalog No. **MSS-101** **$15.00 Net**

DRY ELECTROLYTIC AND PLASTIC TUBULAR CAPACITORS

P. R. MALLORY & CO., INC. · INDIANAPOLIS

P. R. MALLORY & CO. Inc.
MALLORY

Bathtub Dry Electrolytic Capacitors

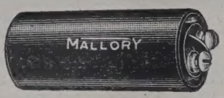


Hermetically sealed for marine, aircraft and geophysical service. Will operate, without derating, from —40°F to 185°F. Have mounting flanges and solder lugs.

Catalog Number	Cap. Mfd.	DC Wkg. Volts	Size* H W L Y	List Price
BS26	25	25	¾ x 1 x 1¾ x 2⅛	**$4.50**
BS29	50	25	¾ x 1 x 1¾ x 2⅛	**4.60**
BS36	25	50	¾ x 1 x 1¾ x 2⅛	**4.55**
BS39	50	50	⅞ x 1 x 1¾ x 2⅛	**4.70**
BS45	20	150	⅞ x 1 x 1¾ x 2⅛	**4.70**
BS48	40	150	1 x 1¼ x 1¾ x 2⅛	**4.85**
BS62	10	300	⅞ x 1 x 1¾ x 2⅛	**4.75**
BS65	20	300	1⅛ x 1¼ x 1¾ x 2⅛	**4.90**
BS81	8	500	1 x 1¾ x 2 x 2⅜	**5.75**
BS91	8	600	1 x 1¾ x 2 x 2⅜	**5.85**

* H—Height; W—Width; L—Length; Y—Mounting Centers

AC Motor Starting Capacitors

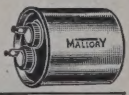


PS type—round, moisture-proof, plastic case. For mounting accessories, see page 11, Mallory Capacitors section, this catalog.

Catalog Number	Mfd. New	Rating Old	Volts AC	Size D L	List Price
PS2010*	20	20-24	110	1 7/16 x 2¾	**$2.05**
PS2610*	26	26-30	110	1 7/16 x 2¾	**2.10**
PS3210*	32	32-36	110	1 7/16 x 2¾	**2.10**
PS3810*	38	38-42	110	1 7/16 x 2¾	**2.10**
PS4310*	43	43-48	110	1 7/16 x 2¾	**2.10**
PS5310	53	53-60	110	1 7/16 x 3⅜	**2.15**
PS6410	64	64-72	110	1 7/16 x 3⅜	**2.25**
PS7010	70	70-78	110	1 7/16 x 3⅜	**2.40**
PS7510	75	75-84	110	1 7/16 x 3⅜	**2.55**
PS8610	86	86-96	110	1 7/16 x 3⅜	**2.65**
PS9710	97	97-107	110	1 7/16 x 3⅜	**2.80**
PS10810	108	108-120	110	1 7/16 x 3⅜	**2.85**
PS12410	124	124-138	110	1 7/16 x 3⅜	**2.95**
PS13010	130	130-157	110	1 7/16 x 3⅜	**2.95**
PS14510	145	145-162	110	1 7/16 x 3⅜	**3.20**
PS16110	161	161-180	110	1 7/16 x 3⅜	**3.25**
PS19410	194	194-216	110	1 7/16 x 3⅜	**3.90**
PS20010*	200	200-220	110	1 7/16 x 4⅜	**3.90**
PS21610	216	216-240	110	1 13/16 x 3⅜	**4.05**
PS24310	243	243-270	110	1 13/16 x 3⅜	**4.70**
PS27010	270	270-300	110	1 13/16 x 4⅜	**4.75**
PS32410	324	324-360	110	1 13/16 x 4⅜	**5.40**
PS34010	340	340-412	110	1 13/16 x 4⅜	**5.55**
PS37810	378	378-420	110	2 1/16 x 4⅜	**6.00**
PS40010	400	400-450	110	2 1/16 x 4⅜	**6.05**
PS43010	430	430-485	110	2 1/16 x 4⅜	**6.95**
PS48510	485	485-540	110	2 1/16 x 4⅜	**7.60**
PS2520	25	25-30	220	1 7/16 x 3⅜	**4.60**
PS3220	32	32-36	220	1 13/16 x 3⅜	**4.90**
PS3820	38	38-42	220	1 13/16 x 3⅜	**5.30**
PS4320	43	43-48	220	1 13/16 x 3⅜	**5.55**
PS5320	53	53-60	220	1 13/16 x 3⅜	**5.75**
PS6420	64	64-72	220	1 13/16 x 4⅜	**6.75**
PS7020	70	70-78	220	2 1/16 x 4⅜	**7.00**
PS7520	75	75-84	220	2 1/16 x 4⅜	**7.35**
PS8620	86	86-96	220	2 1/16 x 4⅜	**7.65**

* Cases will not accommodate PL caps and HB brackets.

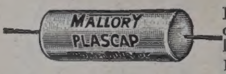
AC Motor Running Capacitors



Have sealed metal cases. Non-inflammable oil impregnation. All welded terminals. For continuous AC duty. Not suitable for DC.

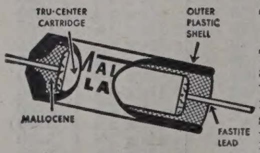
Catalog Number	Cap. Mfd.	Volts AC	Size Dia. Length	List Price
RP-3301	1	330	1⅜ x 1 15/16	**$4.20**
RP-3302	2	330	1⅜ x 3 3/16	**5.20**
RP-3303	3	330	2 x 2⅜	**5.55**
RP-3304	4	330	2 x 2 15/16	**6.20**
RP-3305	5	330	2 x 3⅜	**6.80**
RP-3306	6	330	2 x 3⅞	**7.50**
RP-3307	7	330	2 x 4⅜	**7.90**
RP-3308	8	330	2 1/16 x 5 5/16	**8.35**
RP-3310	10	330	2½ x 4 9/16	**9.55**
RP-3312	12	330	2½ x 5 3/16	**10.90**
RP-3315	15	330	2½ x 6¼	**13.80**

Plascap®—Plastic Tubular Paper Capacitors



Have moisture-proof, plastic cases, Mallocene-sealed leads, low power-factor and high insulation resistance. For use in bypass, coupling and auto set buffer circuits.

Catalog Number	Capacity Mfd.	Size Dia. Length	List Price
	400 Volts DC		
PT411	.01	⅜ x 1	**$0.25**
PT412	.02	⅜ x 1¼	**.25**
PT4122	.022	⅜ x 1¼	**.30**
PT413	.03	7/16 x 1¼	**.30**
PT4133	.033	7/16 x 1¼	**.30**
PT4147	.047	½ x 1¼	**.30**
PT415	.05	½ x 1¼	**.30**
PT401	.1	½ x 1½	**.35**
PT4025	.25	⅝ x 1⅞	**.45**
PT405	.5	¾ x 2¼	**.60**
PT41	1.0	13/16 x 2 11/16	**1.25**
	600 Volts DC		
PT621	.001	5/16 x 1	**$0.25**
PT622	.002	5/16 x 1	**.25**
PT6222	.0022	5/16 x 1	**.25**
PT623	.003	5/16 x 1	**.25**
PT6233	.0033	5/16 x 1	**.25**
PT624	.004	⅜ x 1	**.25**
PT6247	.0047	⅜ x 1	**.25**
PT625	.005	⅜ x 1	**.25**
PT626	.006	⅜ x 1	**.25**
PT611	.01	⅜ x 1¼	**.30**
PT612	.02	7/16 x 1¼	**.30**
PT6122	.022	7/16 x 1¼	**.30**
PT613	.03	½ x 1¼	**.35**
PT6133	.033	½ x 1¼	**.35**
PT614	.04	½ x 1½	**.35**
PT6147	.047	½ x 1½	**.40**
PT615	.05	½ x 1½	**.40**
PT616	.06	½ x 1½	**.40**
PT601	.1	⅝ x 1⅞	**.45**
PT6025	.25	¾ x 2¼	**.55**
PT605	.5	13/16 x 2 11/16	**.80**
PT61	1.0	1 x 3	**1.25**
	1600 Volts DC		
PT1621	.001	⅜ x 1	**$0.55**
PT1622	.002	⅜ x 1	**.55**
PT16222	.0022	⅜ x 1¼	**.55**
PT1623	.003	⅜ x 1¼	**.55**
PT16233	.0033	⅜ x 1¼	**.55**
PT1624	.004	⅜ x 1¼	**.55**
PT16247	.0047	⅜ x 1¼	**.55**
PT1625	.005	⅜ x 1¼	**.55**
PT1626	.006	7/16 x 1¼	**.55**
PT1627	.007	7/16 x 1¼	**.55**
PT16275	.0075	7/16 x 1¼	**.55**
PT1628	.008	7/16 x 1¼	**.60**
PT1611	.01	½ x 1¼	**.60**
PT16115	.015	½ x 1½	**.60**
PT1612	.02	½ x 1½	**.60**
PT16122	.022	⅝ x 1⅞	**.60**
PT1613	.03	⅝ x 1⅞	**.60**
PT1614	.04	⅝ x 1⅞	**.70**
PT1615	.05	⅝ x 1⅞	**.70**
PTD16115	.015-.015	⅝ x 1⅞	**.80**



The Secret of Mallocene†

There is only *one* logical way to build a molded type plastic tubular capacitor . . . with a plastic that sticks to the metal leads! But with ordinary construction methods, this has been impossible for such a plastic would stick to the mold!

Mallory engineers refused to put an inferior plastic tubular on the market. Instead, they set in motion the vast Mallory research facilities and called in top consulting specialists. The final result . . . Mallocene, the *one* perfect plastic for capacitors, exclusive with the Mallory Plascap!

Here's the secret. First, an extremely tough plastic shell is molded. The cartridge is carefully centered within this shell. Then, the cartridge is surrounded with Mallocene! When Mallocene hardens, it actually becomes part of the outer shell, and *sticks to the metal leads!* Thus, Mallocene provides a solid plastic tubular capacitor with the *first* moisture-proof construction!

† Trademark

Paper, Oil, Wax Impregnated and Wax Filled Capacitors

MALLORY
TP 418
MFD. 600V

Wax-Impregnated, Cardboard Cased Tubular Paper Capacitors

For use in by-pass and coupling circuits where temperature is not a problem.

Cap. Mfd.	400 Volts DC Catalog Number	400 Volts DC S*	400 Volts DC List Price	600 Volts DC Catalog Number	600 Volts DC S*	600 Volts DC List Price	1000 Volts DC Catalog Number	1000 Volts DC S*	1000 Volts DC List Price
.0001				**TP401**	1	$0.23			
.00025				**TP402**	1	.23			
.0005				**TP403**	1	.23			
.001				**TP404**	19	.23	**TP455**	19	$0.45
.002				**TP405**	19	.23	**TP456**	19	.45
.003				**TP406**	19	.23	**TP457**	20	.45
.004				**TP407**	19	.23	**TP458**	20	.45
.005				**TP408**	19	.23	**TP459**	3	.45
.006				**TP409**	19	.23	**TP460**	3	.45
.007				**TP445**	2	.27	**TP461**	5	.45
.008				**TP450**	2	.27	**TP462**	5	.45
.01	**TP421**	19	$0.23	**TP410**	2	.27	**TP434**	3	.45
.015	**TP400**	2	.23	**TP411**	3	.27	**TP463**	7	.45
.02	**TP423**	3	.23	**TP412**	5	.27	**TP435**	8	.45
.025				**TP451**	5	.32			
.03	**TP424**	5	.27	**TP413**	6	.32	**TP464**	9	.45
.04	**TP425**	5	.27	**TP414**	8	.32	**TP465**	9	.54
.05	**TP426**	7	.27	**TP415**	8	.36	**TP437**	10	.54
.06	**TP427**	7	.32	**TP416**	8	.36	**TP466**	10	.54
.075				**TP452**	9	.41	**TP467**	11	.63
.1	**TP428**	8	.32	**TP418**	9	.41	**TP439**	12	.68
.15				**TP417**	11	.45			
.2	**TP429**	10	.36	**TP419**	12	.50			
.25	**TP430**	11	.41	**TP420**	13	.50			
.3	**TP444**	11	.45	**TP453**	14	.59			
.4	**TP442**	12	.50	**TP454**	15	.68			
.5	**TP431**	14	.54	**TP432**	16	.72			
1.0	**TP422**	17	.81	**TP433**	18	1.13			

***Type TP Size Chart**

To save space in the main chart, the various sizes have been listed below. Column "S" refers to these sizes.

S	Size Dia. Length
1	11/32 x 1
2	7/16 x 1
3	7/16 x 1¼
4	½ x 1 1/16
5	½ x 1¼
6	9/16 x 1¼
7	½ x 1½
8	17/32 x 1½
9	⅝ x 1 9/16
10	⅝ x 1⅞
11	11/16 x 1⅞
12	¾ x 1⅞
13	13/16 x 1⅞
14	⅞ x 1⅞
15	⅞ x 2
16	1 x 2¼
17	1 x 2½
18	1¼ x 2½
19	.390 x 1
20	.390 x 1¼

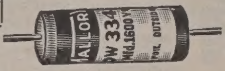
ALLOR
461
2000

Metal Cased Oil Impregnated Paper Capacitors

For vibrator buffer, coupling and other electronic circuits where highest quality, tubular-type capacitors are required. Mineral oil-impregnated, hermetically sealed, aluminum-cased tubulars with external insulating sleeves. 2⅜″ leads. For operation at 85°C.

Catalog Number	Capacity Mfd.	Working Volts DC	Size Dia. Length	List Price
OT101	.01	600	⅝ x 1 3/16	$0.95
OT103	.02	600	⅝ x 1 3/16	1.05
OT106	.05	600	11/16 x 1⅜	1.10
OT110	.1	600	11/16 x 1 11/16	1.25
OT113	.25	600	13/16 x 2⅛	1.70
OT116	.5	600	1 1/16 x 2¼	2.20
OT301	.01	1000	⅝ x 1 3/16	1.10
OT303	.02	1000	11/16 x 1⅜	1.20
OT306	.05	1000	11/16 x 2 3/16	1.30
OT310	.1	1000	13/16 x 2 3/16	1.50
OT370	.002	1600	⅝ x 1⅜	1.20
OT377	.003	1600	⅝ x 1⅜	1.20
OT371	.005	1600	⅝ x 1⅜	1.20
OT372	.008	1600	⅝ x 1⅜	1.20
OT373	.01	1600	11/16 x 1⅜	1.20
OT375	.015	1600	11/16 x 1 11/16	1.25
OT376	.02	1600	11/16 x 1 11/16	1.30
OT378	.03	1600	11/16 x 2 3/16	1.30
OT379	.04	1600	11/16 x 2 3/16	1.30
OT380	.05	1600	11/16 x 2 7/16	1.40
OT458	.0025	2000	11/16 x 1⅜	1.25
OT459	.005	2000	11/16 x 1 11/16	1.25
OT460	.0075	2000	11/16 x 1⅝	1.25
OT461	.01	2000	11/16 x 1⅝	1.25
OT462	.0125	2000	11/16 x 1⅞	1.30
OT463	.015	2000	11/16 x 1⅞	1.30
OT464	.02	2000	11/16 x 2	1.35
OT465	.03	2000	13/16 x 2	1.40
OT466	.04	2000	13/16 x 2 9/16	1.40
OT467	.05	2000	13/16 x 2 9/16	1.45

NEW!
1952 MALLORY VIBRATOR GUIDE
Contains 46 Pages of Replacement Information.
See Your Mallory Distributor.

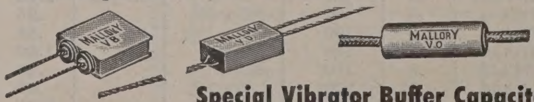


Oil Impregnated Cardboard Cased Tubular Paper Capacitors

Ideal for auto set buffer circuits.

Catalog Number	Capacity Mfd.	Working Volts DC	Size Dia. Length	List Price
OW340	.0005	1600	½ x 1⅛	$0.55
OW341	.001	1600	½ x 1⅛	.55
OW331	.002	1600	9/16 x 1⅛	.55
OW342	.003	1600	⅝ x 1⅛	.55
OW343	.004	1600	9/16 x 1 5/16	.55
OW332	.005	1600	9/16 x 1 5/16	.55
OW344	.006	1600	9/16 x 1 9/16	.55
OW345	.007	1600	9/16 x 1 9/16	.55
OW346	.0075	1600	9/16 x 1 9/16	.60
OW333	.008	1600	9/16 x 1 9/16	.60
OW334	.01	1600	⅝ x 1 9/16	.60
OW335	.015	1600	11/16 x 1 9/16	.60
OW336	.02	1600	¾ x 1 9/16	.60
OW337	.03	1600	¾ x 2	.60
OW338	.04	1600	13/16 x 2	.70
OW339	.05	1600	⅞ x 2	.70
OWD335*	.0 5 .015	1600	¾ x 2	.80
OW635*	.0005	6000	9/16 x 1¾	1.10
OW621*	.001	6000	11/16 x 1¾	1.10
OW622*	.002	6000	27/32 x 1¾	1.10
OW623*	.003	6000	1 x 1¾	1.15
OW625*	.005	6000	27/32 x 2½	1.15
OW6275*	.0075	6000	15/16 x 2½	1.20
OW611*	.01	6000	1 1/32 x 2½	1.20
OW612*	.02	6000	1 7/32 x 3	1.25
OW613*	.03	6000	1¼ x 3¾	1.25
OW615*	.05	6000	1⅜ x 4⅜	1.75

* Packaged in Individual Display Carton with Mounting Strap. All others packed 25, 50 or 100 capacitors per display carton.



Special Vibrator Buffer Capacitors

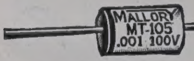
Intended for replacement of original vibrator buffer and hash suppressor capacitors of similar design.

Catalog Number	Capacity Mfd.	Working Volts DC	Size* W L H	List Price
VB470	.0075	1600	5/16 x ⅝ x ⅞	$1.10
VB471	.01	1600	5/16 x ⅝ x ⅞	1.15
VD491	.0008 .0008	1600	5/16 x ⅝ x 1 1/16	.65
VO480	.5	120	7/16 x ¾ x 2⅛	.65

* H—Height; W—Width; L—Length.

Paper, Oil and Wax Impregnated, and Ceramic Capacitors

Miniature Metal Tubular Capacitors



For hearing aid, personal radio, and other uses where very small size tubulars are desirable. Wax impregnated (100 volt units) or oil impregnated (600 volt units) tubular capacitors in minute hermetically sealed metal tubes with insulating sleeve. Tinned copper leads.

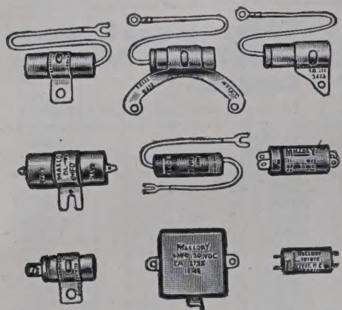
Catalog Number	Capacity Mfd.	Working Volts DC	Size Dia. Length	List Price
MT105*	.001	100	9/32 x ½	**$0.90**
MT107*	.002	100	9/32 x ½	**.90**
MT115*	.005	100	9/32 x ½	**.90**
MT125*	.01	100	19/64 x ½	**.90**
MT127*	.02	100	19/64 x 11/16	**.95**
MT135*	.05	100	19/64 x 1 1/16	**.95**
MT145*	.1	100	5/16 x 1¾	**1.00**
MT605†	.001	600	9/32 x 13/16	**.95**
MT607†	.002	600	9/32 x 15/16	**.95**
MT615†	.005	600	9/32 x 15/16	**.95**
MT625†	.01	600	21/64 x 1 9/16	**.95**

* Wax impregnated
† Oil impregnated

Automotive Noise Suppression Capacitors

For suppressing radio interference emanating from auto generators, oil gauges, ammeters and other automotive, aircraft or marine equipment.

AM—For ammeter and gauge suppression.
FM—For Ford generator suppression.
DL—For domelight suppression.
RF—For vibrator hash suppression.
CA—For general suppression in aircraft and marine applications.
AS, AG—For generator, ammeter and contact spark suppression.



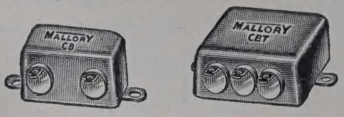
Top Row: AG Types; FM442; FM441
Center Row: DL445X; AM454; RF482
Bottom Row: AS types; CA275X; RF481

Wax impregnated cartridges assembled in various style housings. Type AG is hermetically sealed, provides low impedance and is ideal for extreme climatic conditions.

Catalog Number	Cap. Mfd.	Working Volts DC	Size D L	Signal Corps No.	List Price
RF481	.5	50	¾ x 1⅜		**$0.90**
RF482	1.0	50	⅞ x 1⅝		**1.15**
CA275X	4.0	50	2 x 2 x 1		**3.00**
AS125‡	.01	100	.675 x 15/16	CA-432	**1.20**
AG442*	.05	100	⅜ x 1¼		**.80**
AG443	.05	100	7/16 x 1 3/16		**1.00**
AS145‡	.1	100	.675 x 1⅜	CA-442	**1.40**
AS165‡	.25	100	¾ x 1½	CA-452	**1.50**
AS185‡	.5	100	1 x1⅝	CA-462	**1.75**
FM441	.5	100	.675 x 1⅞		**.85**
RF480	.5	100	13/16 x 1 5/16		**.80**
AG450	.5-.5	100	⅞ x 2		**1.50**
FM442	.5	160	.675 x 1⅞		**.65**
AG444	.25	200	⅝ x 1¾		**.60**
DL445X	.4	200	1 x 2⅜		**2.25**
AM454	.5	200	11/16 x 2		**.65**
AG451	.5	200	¾ x 2		**.65**
AG453†	.5	200	¾ x 2		**1.50**
AG452	1.0	200	1 x 2 3/16		**.90**
AS525‡	.01	500 AC-DC	.675 x 1	CA-472	**1.35**
AS545‡	.1	500 AC-DC	1 x 2½	CA-482	**1.60**
AS565‡	.25	500 AC-DC	1 x 2½	CA-502	**2.00**

* For Midget Aircraft Motors.
† Has shielded lead.
‡ Also marked with Signal Corps Number as shown.

Steel-Cased, Oil-Filled Capacitors



For general use in aircraft, marine, geophysical and industrial electronic equipment where extreme dependability under severe conditions is desired. Oil impregnated, single, dual, and triple section units housed in rugged, hermetically sealed, hot-tinned steel cases. Single sections have two terminals. Dual section units have three terminals with left terminal common, and both are internally insulated from case. Triple units have three terminals with common ground to case. All terminals protrude in a row on one long side of case.

Catalog Number	Cap. Mfd.	Working Volts DC	Size* H W L X	List Price
CB403	.25	400	¾ x ⅞ x 1¾ x 2⅛	**$2.25**
CB404	.5	400	⅞ x 1 x 1¾ x 2⅛	**2.40**
CB405	1.0	400	¾ x 1¾ x 2 x 2⅜	**2.85**
CB406	2.0	400	1⅛ x 2 x 2 x 2⅜	**3.60**
CB602	.1	600	¾ x ⅞ x 1¾ x 2⅛	**2.65**
CB603	.25	600	¾ x 1 x 1¾ x 2⅛	**2.80**
CB604	.5	600	⅞ x 1¼ x 1¾ x 2⅛	**3.00**
CB605	1.0	600	⅞ x 1¾ x 2 x 2⅜	**3.40**
CB1002	.1	1000	¾ x ⅞ x 1¾ x 2⅛	**2.85**
CB1003	.25	1000	¾ x 1¼ x 1¾ x 2⅛	**2.95**
CB1004	.5	1000	⅞ x 1¾ x 2 x 2⅜	**3.20**
CBD403	.25-.25	400	¾ x 1¼ x 1¾ x 2⅛	**3.25**
CBD404	.5-.5	400	¾ x 1¾ x 2 x 2⅜	**3.75**
CBD602	.1-.1	600	¾ x ⅞ x 1¾ x 2⅛	**3.35**
CBT403	3X .25	400	¾ x 1¾ x 2 x 2⅜	**4.00**
CBT404	3X .5	400	1 x 1¾ x 2 x 2⅜	**4.75**
CBT602	3X .1	600	⅞ x 1 x 1¾ x 2⅛	**3.80**

* H—Height; W—Width; L—Length; X—Mounting Centers.

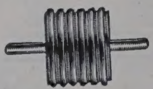
Uncased Wax Impregnated Capacitors

Designed for replacement of defective sections in large paper capacitor blocks.

Catalog Number	Cap. Mfd.	Working Volts DC	Size* W L H	List Price
UB351	1	200	½ x 1⅜ x 2⅛	**$1.00**
UB352	2	200	¾ x 1 9/16 x 2⅛	**1.50**
UB353	4	200	1 1/16 x 2 1/16 x 2⅛	**2.60**
UB354	1	400	9/16 x 1⅝ x 2⅛	**1.15**
UB355	2	400	1 x 1¾ x 2⅛	**1.80**
UB356	4	400	15/16 x 1⅝ x 4⅜	**3.00**
UB357	.5	600	½ x 1⅜ x 2⅛	**1.05**
UB358	1	600	¾ x 1 9/16 x 2⅛	**1.40**
UB359	2	600	1⅛ x 2 1/16 x 2⅛	**2.10**
UB364	4	600	1 1/16 x 1⅞ x 4¼	**3.90**
UB362	1	1000	11/16 x 1½ x 4⅜	**2.30**
UB363	2	1000	1⅛ x 1⅞ x 4⅜	**3.80**

* W—Width; L—Length; H—Height.

High Voltage Ceramic Capacitor



With a rating of 500 micromicrofarads at 20,000 volts, this capacitor may be used as an exact replacement in the high voltage power circuit of many TV sets. A rigid case and built-in corona shield give an added safety factor. The capacitor is supplied with No. 6 copper terminals ½" long. Interconnecting leads may be soldered or clipped to these terminals without damage to the capacitor. Two spring clips furnished for alternate mounting. Overall dimensions are 1⅛" diameter by ⅞" long, excluding terminals. Each capacitor is packaged in an individual display carton.

Catalog No. **HV-20035** List Price **$2.25**

CERAMIC CAPACITORS

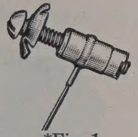


*Fig. 1

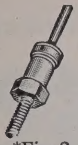


*Fig. 2

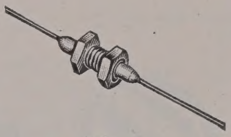


*Fig. 3

Mallory Ceramic Tubular Trimmers

Have high quality, silvered, steatite tubes; screw adjustment; low minimum capacitance and tinned-copper leads. 500 wkg. V. DC.

Cat. No.	mmf	Length of Body	Fig. No.*	List Price
CT565A	.5-3	3/8"	1	**$0.50**
CT565	.5-3	5/8"	1	**.50**
CT551	1-4	5/8"	1	**.50**
CT552	2-6	5/8"	1	**.50**

Stand-Off Ceramic Capacitors

Recommended for the dual purpose of by-passing R.F. current to ground, and of mechanically supporting other circuit elements. They are especially suited for VHF and UHF applications because of their low inductance and high resonant frequency.

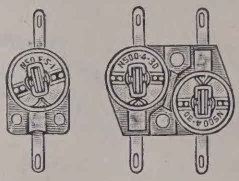
Cat. No.	Cap. mmfd	Tolerance	Fig. No.*	List Price
SC-521	1000	20%	2	**$1.00**
SC-535	500	20%	2	**1.00**

Feed-Thru Ceramic Capacitor

A well built, sturdy, feed-thru capacitor used to by-pass R.F. to ground in feed-thru applications. Wire terminals are rugged and will serve as tie points for several connections for supporting other circuit elements, and are sufficiently long for point-to-point wiring.

Cat. No.	Cap. mmfd	Tolerance	Fig. No.*	List Price
FC5215	1500	20%	3	**$1.00**

Ceramic Trimmer Capacitors



Small, electrically stable capacitors for use in high frequency FM-TV circuits. Each capacitor consists of fired silver electrodes on a ceramic rotor and base. They have a 360° rotor with a substantially constant capacity change and are completely sealed from dust and dirt. Single or dual units are available.

Solder type lugs at each end of capacitor.

Two clearance holes are provided in each capacitor for screw mounting.

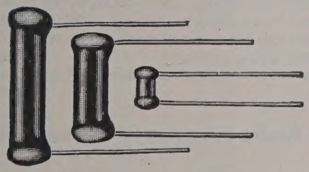
Single Units—Overall size 21/32" x 27/32" x 3/8" thick.
Voltage Rating—600 VDC

Catalog No.	Cap. Range (mmfd)	Temperature Coefficient	List Price
ST-5515-Z	1.5 to 7	Zero	**$1.50**
ST-553-Z	3 to 12	Zero	**1.50**
ST-554-N	4 to 30	Neg. 500 Parts/Million/°C.	**1.50**
ST-557-N	7 to 45	Neg. 500 Parts/Million/°C.	**1.50**

Dual Units—Overall size 1 19/64" x 7/8" x 3/8" thick.
Voltage Rating—600 VDC

Catalog No.	Cap. Range Each Section (mmfd)	Temperature Coefficient	List Price
DT-5515-Z	1.5 to 7	Zero	**$2.50**
DT-553-Z	3 to 12	Zero	**2.50**
DT-554-N	4 to 30	Neg. 500 Parts/Million/°C.	**2.50**
DT-557-N	7 to 45	Neg. 500 Parts/Million/°C.	**2.50**

Fixed Ceramic Capacitors



Mallory tubular, fixed, ceramic capacitors are manufactured in 3 types. UC is general purpose type for by-passing, coupling and other applications where a moderate capacitance change with temperature change can be tolerated. ZT is zero temperature type, the nominal capacitance of which remains substantially constant over a temperature variation from −55°C to 85°C. NT is negative temperature type with a negative coefficient of 750 parts/million/degrees C. These capacitors are supplied with a dipped phenolic insulation for protection against moisture and have radially placed bare, tinned-copper leads approximately 1¼" long.

Voltage Rating—600VDC.

General Purpose
±20% Tolerance

Cat. No.	Capacity (mmfd)	Size*	List Price
UC-541	10	1	**$0.25**
UC-5412	12	1	**.25**
UC-5415	15	1	**.25**
UC-5418	18	1	**.25**
UC-5422	22	1	**.25**
UC-5425	25	1	**.25**
UC-5427	27	1	**.25**
UC-5433	33	1	**.25**
UC-5439	39	1	**.25**
UC-5447	47	1	**.25**
UC-545	50	1	**.25**
UC-5456	56	1	**.25**
UC-5468	68	1	**.25**
UC-5475	75	1	**.25**
UC-531	100	1	**.25**
UC-5312	120	1	**.25**
UC-5315	150	1	**.25**
UC-532	200	1	**.25**
UC-5322	220	1	**.25**
UC-5325	250	1	**.25**
UC-5327	270	1	**.25**
UC-533	300	1	**.25**
UC-5333	330	1	**.25**
UC-5339	390	1	**.25**
UC-5347	470	1	**.25**
UC-535	500	1	**.25**
UC-5356	560	1	**.25**
UC-5368	680	1	**.25**
UC-5375	750	2	**.25**
UC-521	1000	2	**.25**
UC-5212	1200	2	**.25**
UC-5215	1500	2	**.25**
UC-5218	1800	3	**.25**
UC-522	2000	3	**.25**
UC-5222	2200	3	**.25**
UC-5225	2500	3	**.25**
UC-5227	2700	3	**.25**
UC-523	3000	3	**.25**
UC-5233	3300	3	**.25**
UC-5240	4000	3	**.25**
UC-5247	4700	3	**.25**
UC-525	5000	3	**.30**

Zero Temperature Coefficient
±10% Tolerance

Cat. No.	Capacity (mmfd)	Size*	List Price
ZT-5675	.75	1	**$0.75**
ZT-5515	1.5	1	**.50**
ZT-553	3	1	**.50**
ZT-5533	3.3	1	**.50**
ZT-5547	4.7	1	**.50**
ZT-555	5	1	**.50**
ZT-5568	6.8	1	**.50**
ZT-541	10	1	**.50**
ZT-542	20	1	**.50**
ZT-5425	25	2	**.50**
ZT-5433	33	2	**.50**
ZT-545	50	3	**.55**
ZT-5475	75	3	**.55**
ZT-531	100	3	**.55**
ZT-5315	150	4	**.60**
ZT-53175	175	4	**.60**

Negative Temperature Coefficient
750 Parts/Million/°C
±10% Tolerance

Cat. No.	Capacity (mmfd)	Size*	List Price
NT-555	5	1	**$0.50**
NT-541	10	1	**.50**
NT-5447	47	2	**.50**
NT-5475	75	3	**.50**
NT-531	100	3	**.50**

*** SIZE CHART**

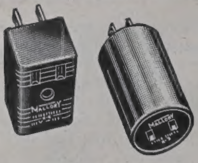
Sizes	Diameter	Length
1	.240	.460
2	.240	.710
3	.315	1.250
4	.415	1.213

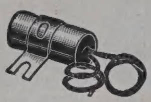
NOISE FILTERS • CERAMIC CAPACITORS • CHOKE COILS

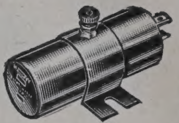
P.R. MALLORY & CO., INC. • INDIANAPOLIS

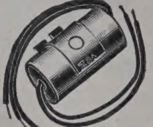
P.R. MALLORY & CO. Inc. MALLORY

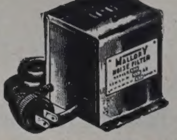
Mallory Noise Filters

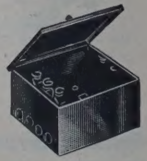

Type X


Type W


Type Z


Type Z8A

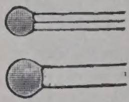

Type LC


Type LB

For reducing or eliminating radio frequency interference caused by various electrical appliances.
Type W has dual capacitors housed in metal tubes. Common lead of capacitors connected to case, except WSP type which has shock-limiting capacitor from common lead to case. Designed for direct mounting. **Type X** has single and dual capacitors housed in round metal case, except X6 which is housed in rectangular plastic case. Designed for plug-in mounting. **Type Z**—Single and dual inductance-capacity filters housed in round metal container and designed for insertion between appliance and electrical outlet. Types Z6 and Z8 have terminal for return lead to ground of appliance. Type Z8A designed for direct mounting and is equipped with 5″ flexible leads. **Type LC**—combination inductance-capacity filter housed in rectangular metal case. Equipped with line cord and plug as well as outlet for appliance. **Type LB**—heavy duty choke-capacity, combination filters sealed in rectangular, standard, heavy-gauge metal cut-out boxes. Equipped with heavy, flexible insulated wire leads for splicing with house or motor wiring.

Catalog Number	Amps	Volts	Size	Intensity or Degree of Interference	Source of Interference	List Price
W7		110-220 AC-DC	⅞ x 2	Light	Compressors, Sewing Machines, Vacuum Cleaners	**$1.35**
W9		115-220 AC-DC	1 x 3	Medium	Air-Conditioners, Dental Equipment, Fans, Signs	**1.75**
W11		115-220 AC-DC	1⅜ x 3	Severe	Grinders, Thermostats, Motors	**2.10**
W7SP		115-220 AC-DC	⅞ x 2	Light	Adding Machines, Cash Registers, Dishwashers	**1.80**
W9SP		115-220 AC-DC	1 x 2⅝	Medium	Vacuum Cleaners, Washing Machines	**2.20**
X1	5	110	1⅜ x 1¾	Slight	Heating Pads, Radio Receivers	**1.60**
X3	5	110-220	1⅜ x 2³⁄₁₆	Medium	Barber Clippers, Hair Dryers (small)	**1.80**
X5	5	110-220	1⅜ x 2³⁄₁₆	Medium	Floor Polishers, Refrigerators	**2.70**
X6	15	125 AC-DC	1¼ x 2 x 1	Light	Electric Razors, Food Mixers and Grinders	**1.60**
X6D	15	125 AC-DC	1¼ x 2 x 1	Light	Electric Razors, Food Mixers and Grinders	**9.60**
Z2	3	110-220	1⅜ x 2¹³⁄₁₆	Medium	Violet Ray, Radio Receivers, Barber Clippers	**2.20**
Z4	3	110-220	1⅜ x 2¹³⁄₁₆	Severe	Heating Pads, Humidifiers (plug type)	**2.50**
Z6	3	110-220	1⅛ x 3¼	Severe	Electric razors, Radio Receivers	**3.60**
Z8	3	110-220	1⅛ x 3¼	Severe	Sewing Machines, Hair Dryers (small)	**3.60**
Z8A	3	115-220 AC-DC	1⁷⁄₁₆ x 2¾	Severe	Fans (plug type) Vacuum Cleaners	**3.60**
LC5	5	115-220 AC-DC	2¹⁵⁄₁₆ x 3¹⁄₁₆ x 3⁹⁄₁₆	Heavy	Air Conditioners, Cash Registers	**11.25**
LC10	10	115-220 AC-DC	2¹⁵⁄₁₆ x 3¹⁄₁₆ x 3⁹⁄₁₆	Heavy	Dictating Machines, Ironing Machines	**15.00**
LB10	10	220	6½ x 6½ x 4	Heavy	Sign Flashers, Oil Burners, Neon Signs	**17.50**
LB20	20	220	10¼ x 10¼ x 6	Heavy	Stokers, Garbage Grinders, Fans, Compressors	**47.50**
LB40	40	220	12 x 10¼ x 6	Heavy	Motors, Sign Flashers	**58.75**
NF1-115	1	115 AC—500 DC	1¾ x 1¼ x ⅞		NF type filters are designed for professional-	**8.90**
NF3-220	3	220 AC	2 x 1¾ x 1		industrial noise filtering problems. May be used	**13.20**
NF5-115	5	115 AC—500 DC	2 x 1¾ x ⅞		in such applications as; electric motors, lighting	**7.30**
NF10-115	10	115 AC—500 DC	2 x 2 1⅛		systems, make and break relay systems and fans.	**9.75**
NF15-220	15	220 AC	2¹¹⁄₁₆ x 2½ x 1¹⁵⁄₁₆		Should be installed and used exactly as suggested	**27.10**
NF25-230	25	230 AC	2 x 2 x 1¼		on applicable instruction sheets.	**12.10**

Disc Ceramic Capacitors



Small physical size, rugged construction, and excellent electrical characteristics. These unique capacitors are particularly suitable for replacement of molded mica and paper tubular units. They have dipped phenolic coating for maximum protection from moisture.

600 Working Volts DC

Catalog Number	Capacity (mfd)	Size Dia. Thickness	List Price
DC-521	.001	¹⁹⁄₃₂ x ⁵⁄₃₂	**$0.25**
DC-5215	.0015	¹⁹⁄₃₂ x ⁵⁄₃₂	**.25**
DC-522	.002	¹⁹⁄₃₂ x ⁵⁄₃₂	**.30**
DC-525	.005	¹⁹⁄₃₂ x ⅛	**.25**
DC-511	.01	¾ x ⅛	**.25**
DCD-521	.001-.001	¹⁹⁄₃₂ x ⁵⁄₃₂	**.40**
DCD-5215	.0015-.0015	¹⁹⁄₃₂ x ⁵⁄₃₂	**.40**
DCD-522	.002-.002	¹⁹⁄₃₂ x ⁵⁄₃₂	**.40**
DCD-524	.004-.004	¾ x ⁵⁄₃₂	**.45**

Radio Frequency Choke Coil

MALLORY
RF583
RF CHOKE

General purpose radio frequency choke coils for all circuits. Hour-glass wound for low distributed capacity. Housed in compact insulating tubes. Two bare tinned copper wire leads, one at each end.

Catalog Number	Turns	Wire	Inductance Microhenries	Size Dia. Length	List Price
RF581	90	16	25*	1 x 1½	**$0.60**
RF582	55	16	12*	1 x 1³⁄₁₆	**.60**
RF583	55	12	12*	1⁵⁄₁₆ x 1⅝	**1.25**

* Measured at 2.5 mc.

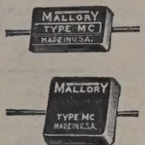
MALLORY PLASCAP!

Plastic tubular capacitor with Moisture-Proof Construction.

For complete description and listing see page 4, Mallory Capacitor section, this catalog.

MICA CAPACITORS

Mica Receiver Capacitors



Designed for use in radio, TV and industrial electronic circuits. Made with carefully selected mica and foil. Phenolic case with RTMA color coding for identification.

Case Size—7/16″ x 25/32″ x 7/32″ with 1⅛″ Wire Leads

Voltage Rating =500 VDC Working—1000 VDC Test

Capacity Mfd.	Standard Mica ±20% Cap. Tolerance		Silver Mica ±10% Cap. Tolerance		Silver Mica ±2% Cap. Tolerance	
	Catalog Number	List Price	Catalog Number	List Price	Catalog Number	List Price
.000005	MC205	$0.25	MCB205	$0.45		
.00001	MC215	.25	MCB215	.40	MCE215	$0.50
.000025	MC220	.25	MCB220	.40	MCE220	.50
.00004	MC223	.20	MCB223	.40	MCE223	.50
.00005	MC225	.20	MCB225	.40	MCE225	.50
.000075	MC230	.20	MCB230	.40	MCE230	.50
.0001	MC235	.20	MCB235	.40	MCE235	.50
.00015	MC236	.20	MCB236	.45	MCE236	.55
.0002	MC237	.20	MCB237	.45	MCE237	.55
.00025	MC240	.25	MCB240	.45	MCE240	.55
.0003	MC241	.25	MCB241	.55	MCE241	.70
.0004	MC243	.25	MCB243	.65	MCE243	.80
.0005	MC245	.25	MCB245	.70	MCE245	.85
.0008	MC251	.25	MCB251	.95	MCE251	1.10
.001	MC255	.30	MCB255	1.10	MCE255	1.35
.0015	MC256	.30				

Case Size—13/16″ x 13/16″ x 5/16″ with 1⅛″ Wire Leads

Voltage Rating =500 VDC Working—1000 VDC Test

Capacity Mfd.	Standard Mica ±20% Cap. Tolerance		Silver Mica ±10% Cap. Tolerance		Silver Mica ±2% Cap. Tolerance	
	Catalog Number	List Price	Catalog Number	List Price	Catalog Number	List Price
.0005	MC445	.30	MCB445	.70	MCE445	.85
.0008	MC451	.30	MCB451	.95	MCE451	1.15
.0015			MCB456	1.35	MCE456	1.65
.002	MC457	.40	MCB457	1.35	MCE457	1.65
.0025	MC460	.45	MCB460	1.80	MCE460	2.20
.003	MC461	.50	MCB461	2.05	MCE461	2.45
.004	MC463	.55	MCB463	2.15	MCE463	2.60
.005	MC465	.60	MCB465	2.25	MCE465	2.70
.006	MC467	.75	MCB467	2.60	MCE467	3.15
.007	MC469	.90	MCB469	2.90	MCE469	3.50
.008	MC471	1.00	MCB471	3.20	MCE471	3.85
.01	MC475	1.20	MCB475	3.50	MCE475	4.20

High-Voltage Mica Capacitors for TV Replacement

Catalog Number	Capacity mmfd	Working Volts DC	Size	List Price
MCP550	5	3000	1 x 5/8 x 11/32	$0.35
MCP410	10	3000	1 x 5/8 x 11/32	.35
MCM422	22	2500	25/32 x 7/16 x 7/32	.30
MCM433	33	2500	25/32 x 7/16 x 7/32	.35
MCL447	47	2000	25/32 x 7/16 x 7/32	.30
MCL468	68	2000	25/32 x 7/16 x 7/32	.35
MCK475	75	1500	25/32 x 7/16 x 7/32	.30
MCK310	100	1500	25/32 x 7/16 x 7/32	.35
MCK315	150	1500	25/32 x 7/16 x 7/32	.35
MCK318	180	1500	25/32 x 7/16 x 7/32	.35
MCK322	220	1500	25/32 x 7/16 x 7/32	.40
MCK327	270	1500	25/32 x 7/16 x 7/32	.45
MCK333	330	1500	25/32 x 7/16 x 7/32	.50
MCK347	470	1500	25/32 x 7/16 x 7/32	.60
MCK368	680	1500	1 x 5/8 x 11/32	.65
MCK382	820	1500	1 x 5/8 x 11/32	.75
MCK210	1000	1500	1 x 5/8 x 11/32	.80
MCK215	1500	1500	1 x 5/8 x 11/32	1.10
MCK220	2000	1500	1 x 5/8 x 11/32	1.35
MCK224	2400	1500	1 x 5/8 x 11/32	1.55

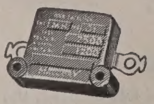
THE MALLORY TV-101 UHF CONVERTER

Offers Outstanding Features for Increased TV Reception

- √ Reception of all UHF channels
- √ No loss of VHF channels
- √ Built-in UHF antenna
- √ Fast, easy installation
- √ Constructed with Mallory UHF Inductuner®
- √ Adaptable to all TV sets

For complete description and listing see page 1, Mallory Television Accessories section, this catalog.

Mica Transmitting Capacitors (Type MH)



For use in transmitting and power amplifier circuits. Made with accurately gauged, high-quality, India mica in molded phenolic case.

Test volts are 200% of WVDC. Case size 1⅝″ x 1⅛″ (minus terminals).

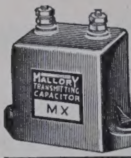
Catalog Number	Cap. Mfd.	Working Volts DC	Test Volts DC	Thickness	List Price
MH535	.0001	600	1200	23/64	$0.70
MH635	.0001	1200	2500	23/64	1.00
MH735	.0001	2500	5000	23/64	1.25
MH545	.0005	600	1200	23/64	.70
MH645	.0005	1200	2500	23/64	1.00
MH745	.0005	2500	5000	23/64	1.70
MH555	.001	600	1200	23/64	.70
MH655	.001	1200	2500	23/64	1.25
MH755	.001	2500	5000	23/64	2.05
MH557	.002	600	1200	23/64	.80
MH657	.002	1200	2500	23/64	1.90
MH757	.002	2500	5000	23/64	3.10
MH565	.005	600	1200	23/64	1.00
MH665	.005	1200	2500	29/64	2.40
MH765	.005	2500	5000	29/64	4.70
MH575	.01	600	1200	23/64	3.10
MH675	.01	1200	2500	29/64	3.90
MH577	.02	600	1200	29/64	2.20

You can depend on
MALLORY CAPACITORS
Ask for them by name!

MICA, OIL FILLED AND IMPREGNATED CAPACITORS

P. R. MALLORY & CO., INC. · INDIANAPOLIS

P. R. MALLORY & CO. Inc.
MALLORY



Mica Transmitting Capacitors (Type MX)

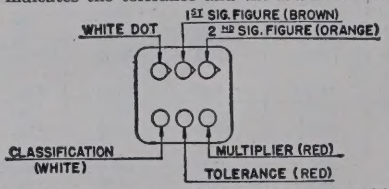
Ideal for amateur transmitting equipment. May also be used in coupling, tank and by-pass circuits at currents within specified rating.

Catalog Number	Cap. Mfd.	Test Volts DC	Max. Amps.	Freq. KC.	List Price
MX855	.001	12,500	9.0 10.0 11.0 12.0	15000 7500 3750 1875	$8.00
MX857	.002	12,500	9.0 12.0 13.0 15.0	15000 7500 3750 1875	11.00
MX865	.005	10,000	10.0 13.0 14.0 15.0	15000 7500 3750 1875	14.50
MX875	.01	7,000	10.0 13.0 15.0 15.0	15000 7500 3750 1875	15.25
MX877	.02	3,500	10.0 13.0 17.0 17.0	15000 7500 3750 1875	16.00
MX885	.05	3,500	11.0 14.0 16.0 18.0	15000 7500 3750 1875	18.50
MX895	.1	2,000	11.0 14.0 16.0 18.0	15000 7500 3750 1875	18.50

Case Size: 4¹⁄₁₆" x 2¾" x 2⅛" (Minus Terminals).

Instructions for use of RTMA Color Code

Hold capacitor with arrow pointing to right. From lĕft to right, the first dot shall always be white to indicate standard RTMA molded mica capacitor. The second and third dots become the first two significant figures in the capacitance. The second row is read from right to left. The lower right dot should be the multiplier. The lower second dot indicates the tolerance and the lower left dot indicates the class.



Example shown above = 1300 mmfd. ±2%, 500 V.W.

Note: When any Mallory mica capacitor has a white dot in the upper left hand corner (when the arrows point to the right) that capacitor is coded under the **new** RTMA color code, as shown above. Any other color in the upper left hand corner indicates the **old** color code, which may be found in Catalogue No. 467-A.

The key to color significance is as follows:

Color	Sig. Fig.	Mult.	Tol.	Class.*
Black	0	1	±20%	A
Brown	1	10		B
Red	2	100	± 2%	C
Orange	3	1000	± 3%	D
Yellow	4	10000		
Green	5		± 5%	
Blue	6			
Violet	7			
Gray	8			I
White	9			J
Gold		0.1		
Silver		0.01	±10%	

* Denotes various electrical characteristics.
Voltage ratings vary with capacitance as shown in RMA Specification—April, 1946.

Transmitting Capacitors (Type TX)

For radio, television, transmitting and all circuits requiring high voltage capacitors. Compact rectangular oil filled capacitors of sturdy construction.

Catalog Number	Cap. Mfd.	Working Volts DC	Size* W	L	H	List Price
TX801	1	600	1	x 1¾	x 2⅛	$5.20
TX802	2	600	1	x 1¾	x 2⅝	6.50
TX803	4	600	1	x 1¾	x 4¼	8.50
TX816	6	600	1³⁄₁₆	x 2½	x 4⅝	10.50
TX817	10	600	1¼	x 3¾	x 4⅝	14.00
TX822	.5	1000	1	x 1¾	x 2⅛	4.55
TX804	1	1000	1	x 1¾	x 2⅝	5.70
TX805	2	1000	1	x 1¾	x 3⅞	7.60
TX806	4	1000	1³⁄₁₆	x 2½	x 4⅝	9.60
TX824	6	1000	1¼	x 3¾	x 4⅝	12.75
TX825	10	1000	1¾	x 3¾	x 4⅝	15.50
TX807	1	1500	1	x 1¾	x 4¼	6.85
TX808	2	1500	1³⁄₁₆	x 2½	x 4⅝	9.50
TX809	4	1500	1½	x 3¾	x 4⅝	12.75
TX829	6	1500	1¾	x 3¾	x 4⅝	15.75
TX830	10	1500	3³⁄₁₆	x 3¾	x 4⅝	23.00
TX831	.25	2000	1	x 1¾	x 2⅛	6.50
TX832	.5	2000	1	x 1¾	x 2⅔	6.90
TX810	1	2000	1³⁄₁₆	x 2½	x 3⅜	8.40
TX811	2	2000	1¼	x 3¾	x 4¼	9.95
TX823	4	2000	2¼	x 3¾	x 4¾	13.75
TX833	6	2000	3³⁄₁₆	x 3¾	x 4⅝	18.00
TX834	10	2000	4⁹⁄₁₆	x 3¾	x 4⅝	28.50
TX812	1	2500	1³⁄₁₆	x 2½	x 4¼	12.25
TX813	2	2500	1¼	x 3²³⁄₃₂	x 4⁷⁄₃₂	20.00
TX835	.1	3000	1³⁄₁₆	x 2½	x 2⅜	12.75
TX836	.25	3000	1³⁄₁₆	x 2½	x 3⅜	14.00
TX837	.5	3000	1³⁄₁₆	x 2½	x 4⅝	15.50
TX814	1	3000	1¾	x 3¾	x 4⅝	18.75
TX815	2	3000	3³⁄₁₆	x 3¾	x 4⅝	23.25
TX838	4	3000	4⁹⁄₁₆	x 3¾	x 5½	34.00
TX839	1	4000	2¼	x 3¾	x 4¾	34.00
TX827	2	4000	4⁹⁄₁₆	x 3¾	x 4¾	43.00
TX818	1	5000	5⅛	x 3½	x 5⅝	39.00
TX819	2	5000	5⅛	x 3½	x 9	50.00
TX820	.5	6000	4⅜	x 5⅛	x 3½	62.00
TX821	1	6000	3¹⁵⁄₁₆	x 4¹³⁄₁₆	x 6¹³⁄₁₆	77.00

* W—Width; L—Length; H—Height.

Transmitting Capacitors (Type TZ)

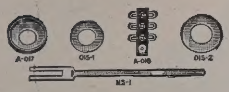
For filter and by-pass circuits in power amplifiers, television and transmitting equipment where compact round can units are desired.

Catalog Number	Capacity Mfd.	Working Volts DC	Size Dia. x Height	List Price
TZ382	2.0	600	1 x 2⅝	$4.65
TZ383	4.0	600	1⅜ x 4⅛	6.20
TZ384	1.0	1000	1⅜ x 2⅝	4.30
TZ385	2.0	1000	1⅜ x 4⅛	5.45
TZ389	4.0	1000	2 x 4	7.25
TZ386	.5	1500	1⅜ x 3⅛	5.05
TZ387	1.0	1500	1⅜ x 4¹¹⁄₁₆	5.45
TZ388	2.0	1500	2 x 4	7.25
TZ390	1.0	2000	2 x 3¼	6.85
TZ391	2.0	2000	2 x 4½	7.60

TERMINAL HEIGHTS

TX Capacitors	TZ Capacitors
600 through 2500V—1¼ 3000 through 4000V—1⅝ 5000 through 6000V—2½	600V—⅝ 1 and 2 mfd at 1000V—⅝ .5 and 1 mfd at 1500V—⅝ 4 mfd at 1000V—1⅜ 2 mfd at 1500V—1⅜ 1 mfd at 2000V—1⅜ 2 mfd at 2000V—1⅜

Capacitor Hardware



Type MS-1—Adjustable metal strap for horizontal mounting tubular types up to 1⅜″ diameter.

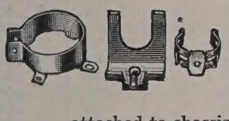
Type A-016—Terminal connector or anchor strap for general use where required.

Type 015-1—Washer for RS type ⅝″ neck when used in over-size chassis hole.

Type 015-2—Washer for use with RS, RM, or HS units where chassis hole is too large for regular mounting. Use two washers, one above and one below chassis.

Type A-017—Special washer with turned-over edge for ring clamp mounting 1″ RS type in 1⅜″ ring clamp.

Cat. No.	Description	Size	List Price
015-1	Washer for ⅝″ neck in ⅞″ hole......	Var.	**$0.05**
015-2	Washer for ¾″ neck in 1″ hole......	Var.	**.05**
MS-1	Adjustable mounting strap.........	Var.	**.05**
A-016	Terminal connector...............	Var.	**.10**
A-017	Washer for clamp mounting neck cans	Var.	**.10**



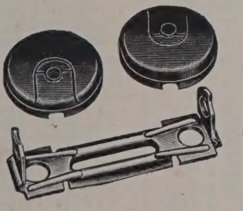
Type TH—Special clips for horizontal mounting of any tubular or FP unit within the diameter range shown. Designed primarily to mount without tools under special chassis lances in original equipment; they may also be attached to chassis with 5-32 screw and nut in any ⅛″ hole.

Type VR—Brackets for vertical mounting round units.

Type 104-1—Special bracket with spade bolt for mounting RS and RM units where spade bolt mounting was used.

Cat. No.	Description	Size	List Price
TH-13	Spring clip for TC........	⅜	**$0.05**
TH-15	Spring clip for TC........	½ to 9/16	**.05**
TH-17	Spring clip for TC........	⅝ to 11/16	**.05**
TH-19	Spring clip for TC and FP..	¾ to 13/16	**.05**
TH-21	Spring clip for TC........	⅞ to 15/16	**.05**
TH-23	Spring clip for TC and FP..	1 to 1 1/16	**.05**
TH-25	Spring clip for TC and FP..	1⅜ to 1 7/16	**.10**
VR-1	Clamp for vertical mounting	1 to 1 1/16	**.15**
VR-3	Clamp for vertical mounting	1⅜ to 1 7/16	**.15**
VR-4	Clamp for vertical mounting	1½ to 1 9/16	**.20**
VR-6	Clamp for vertical mounting	1¾ to 1 13/16	**.25**
VR-8	Clamp for vertical mounting	2 to 2 1/16	**.30**
VR-10	Clamp for vertical mounting	2½	**.35**
104-1*	Spade bolt mounting for neck type cans..........	Variable	**.20**

* Will be discontinued when present stocks are exhausted.



Type "P" Hardware

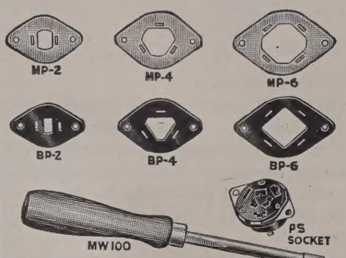
Types PL and PL-A—Plastic end cap to protect terminals on HC, NP or P units when desired.

Type HB—Horizontal bracket for mounting HC, NP or P units, using end cap type PL or PLA.

Cat. No.	Description		Size	List Price
PL-3	Plastic end cap	For "On Motor" mounting	1 7/16	**$0.20**
PL-6	Plastic end cap		1 13/16	**.25**
PL-8	Plastic end cap		2 1/16	**.30**
PL-3A	Plastic end cap	For "Off Motor" mounting	1 7/16	**.20**
PL-6A	Plastic end cap		1 13/16	**.25**
PL-8A	Plastic end cap		2 1/16	**.30**
HB-4	Horizontal bracket (plastic cases).		3⅜	**.30**
HB-8	Horizontal bracket (plastic cases).		4⅜	**.35**

Type "MSU," P, HC and NP Hardware

Catalog Number	Description	Size	List Price
115-1	Top Cap................	1⅜	**$0.20**
116-1	Top Cap................	2	**.20**
118-1	Bottom Cap.............	1⅜	**.20**
119-1	Bottom Cap.............	2	**.20**
121-1	Bracket................	1⅜ x 3¼	**.35**
122-1	Bracket................	1⅜ x 4¼	**.35**
123-1	Bracket................	2 x 3⅛	**.35**
124-1	Bracket................	2 x 4⅛	**.35**



Type MP—Metal plates for grounded mounting of FP and WP capacitors.

Type BP—Phenolic plates for insulated mounting of FP and WP capacitors.

Type PS—Molded plastic sockets for plug-in mounting FP or WP capacitors. (Blank ear on capacitor should be removed to permit polarization with respect to socket.)

Type MW-100—Special wrench for twisting mounting ears on FP or WP capacitors.

Cat. No.	Description	Size	List Price
MP-2	Metal mounting wafer for FP...	¾	**$0.05**
MP-4	Metal mounting wafer for FP...	1	**.05**
MP-6	Metal mounting wafer for FP...	1⅜	**.05**
BP-2	Phenolic mounting wafer for FP.	¾	**.05**
BP-4	Phenolic mounting wafer for FP.	1	**.05**
BP-4A	Phenolic mounting wafer for FP. (To mount 1″ FP in chassis punched for 1⅜″ wafer)	1	**.05**
BP-6	Phenolic mounting wafer for FP.	1⅜	**.05**
PS-4	Plug-in socket for FP..........	1	**.70**
PS-6	Plug-in socket for FP..........	1⅜	**.90**
PSC-4	Retainer clamp for PS-4 socket..		**.10**
MW-100	Mounting wrench for FP.......		**1.75**

Recommended Replacements for Modified and Discontinued FP and WP Types

(as listed on pages 1 and 2, Mallory Capacitor Section, this catalog)

Old Catalog Number	Recommended Replacement	Old Catalog Number	Recommended Replacement
FP228*	**FP227.3**	FP371*	**FP330.7**
FP236*	**FP260**	FP373*	**FP385**
FP246X*	**FP266**	FP376*	**FP396.2**
FP313*	**FP330**	FP379*	**FP385**
FP316*	**FP343.1**	FP380	**FP343.4†**
FP318*	**FP319.5**	FP387*	**FP387.1**
FP332	**FP345.2†**	FP389	**FP375.8†**
FP334*	**FP333.8**	FP390	**FP376.1†**
FP339	**FP345.8†**	FP391*	**FP391.1**
FP342*	**FP342.5**	FP393	**FP376.8†**
FP344*	**FP344.5**	FP395	**FP369.1†**
FP345	**FP370†**	FP416*	**FP419.3**
FP352	**FP341.5†**	FP418*	**FP418.3**
FP353*	**FP343.6**	FP420*	**FP447**
FP354	**FP311.2†**	FP422*	**FP423.4**
FP355	**FP311.4†**	FP423*	**FP430.6**
FP356	**FP311.7†**	FP425*	**FP432.4**
FP357	**FP311.5†**	FP427	**FP422.1†**
FP358	**FP311.9†**	FP457*	**FP476**
FP360*	**FP343.1**	FP465*	**FP467**
FP363	**FP320†**	FP471*	**FP476**
FP367	**FP330.5†**	FP550*	**FP245**
FP369	**FP330.3†**	WP032*	**WP042**
		WP302*	**WP302.1**

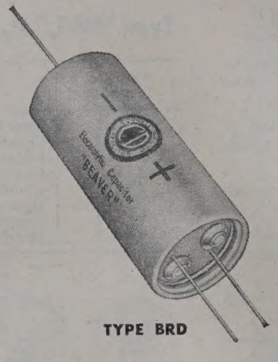
* Will be deleted from line when present stocks are exhausted.
† Change in catalog number only. No change in rating.

CORNELL DUBILIER

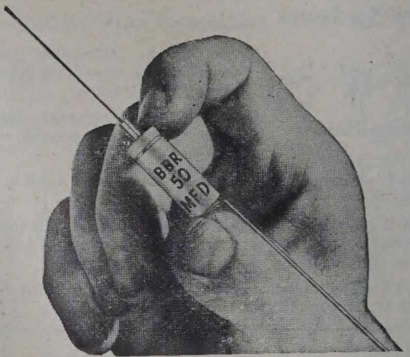
"BLUE BEAVER" ELECTROLYTIC TUBULARS

Electrolytic Capacitor
"BEAVER"
−
+

TYPE BR



TYPE BRD



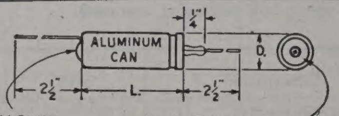
TYPE BBR

Types BR and BRD "BLUE BEAVERS" are the most popular can-type electrolytic tubulars employed for all applications where capacitors are required for convenient mounting in small spaces beneath a chassis or connected directly in the wiring assembly. They are small in physical size and self-supporting by means of strong, bare tinned-copper wire leads. Larger sizes may be mounted with a metal strap.

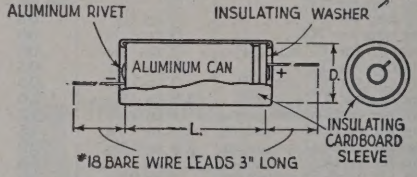
Cat. No.	Cap. Mfd.	Size—Inches Diam. x Length	List Price	Net Price
		25 V. D.C.		
BR 102A	10	5/8 x 1 1/16	$1.00	**$ .60**
BR 202A	20	5/8 x 1 1/16	1.00	**.60**
BR 252A	25	5/8 x 1 1/16	1.00	**.60**
BR 502A	50	5/8 x 1 1/16	1.10	**.66**
		50 V. D.C.		
BR 550	5	5/8 x 1 1/16	1.00	**.60**
BR 105	10	5/8 x 1 1/16	1.00	**.60**
BR 205A	20	5/8 x 1 1/16	1.00	**.60**
BR 255A	25	5/8 x 1 1/16	1.05	**.63**
BR 505	50	5/8 x 1 11/16	1.20	**.72**
		150 V. D.C.		
BR 415	4	5/8 x 1 1/16	1.00	**.60**
BR 815	8	5/8 x 1 1/16	1.05	**.63**
BR 1015	10	5/8 x 1 1/16	1.05	**.63**
BR 1215	12	5/8 x 1 7/16	1.10	**.66**
BR 1615	16	5/8 x 1 7/16	1.15	**.69**
BR 2015A	20	5/8 x 1 7/16	1.20	**.72**
BR 2515	25	3/4 x 1 7/16	1.25	**.75**
BR 3015A	30	3/4 x 1 7/16	1.30	**.78**
BR 4015A	40	3/4 x 1 11/16	1.35	**.81**
BR 5015A	50	7/8 x 1 11/16	1.40	**.84**
BR 6015	60	7/8 x 2	1.50	**.90**
BR 8015A	80	7/8 x 2	1.60	**.96**
BR 10015	100	1 x 2 1/2	1.75	**1.05**
BR 15015	150	1 x 3	1.90	**1.14**
		250 V. D.C.		
BR 425	4	5/8 x 1 1/16	1.00	**.60**
BR 825	8	5/8 x 1 7/16	1.15	**.69**
BR 1225A	12	5/8 x 1 11/16	1.25	**.75**
BR 1625	16	3/4 x 1 11/16	1.30	**.78**
BR 2025	20	3/4 x 1 11/16	1.35	**.81**
BR 3025A	30	7/8 x 1 11/16	1.45	**.87**
BR 4025A	40	7/8 x 2	1.55	**.93**
BR 5025	50	1 x 2	1.70	**1.02**
		350 V. D.C.		
BR 435	4	5/8 x 1 7/16	1.05	**.63**
BR 835A	8	5/8 x 1 11/16	1.20	**.72**
BR 1235A	12	3/4 x 1 11/16	1.30	**.78**
BR 1635A	16	7/8 x 1 11/16	1.40	**.84**
BR 2035A	20	7/8 x 1 11/16	1.45	**.87**
BR 3035A	30	1 x 2	1.65	**.99**
BR 4035	40	1 x 2 1/2	1.75	**1.05**
		450 V. D.C.		
BR 145	1	5/8 x 1 1/16	1.10	**.66**
BR 245	2	5/8 x 1 1/16	1.10	**.66**
BR 445	4	5/8 x 1 7/16	1.15	**.69**
BR 845A	8	3/4 x 1 7/16	1.25	**.75**
BR 1045A	10	3/4 x 1 11/16	1.30	**.78**
BR 1245A	12	3/4 x 1 11/16	1.35	**.81**
BR 1645A	16	7/8 x 2	1.40	**.84**
BR 2045A	20	7/8 x 2	1.55	**.93**
BR 3045A	30	1 x 2 1/2	1.70	**1.02**
BR 4045A	40	1 x 2 1/2	1.80	**1.08**
		500 V. D.C.		
BR 450A	4	5/8 x 1 11/16	1.20	**.72**
BR 850A	8	3/4 x 1 11/16	1.30	**.78**
BR 1650A	16	1 x 2	1.50	**.90**
BR 2050A	20	1 x 2	1.60	**.96**
BR 3050A	30	1 x 2 1/2	1.75	**1.05**

Type BBR "BLUE BEAVERS" — especially popular for those cramped and limited space installations in television receivers, hearing aids, miniature radios and other small assemblies. They are hermetically sealed in tubular aluminum containers and ideally suited to meet requirements in low voltage circuits.

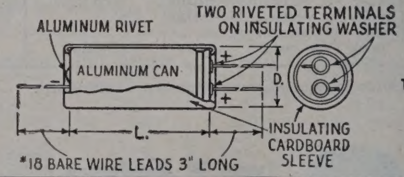
Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Ins. Dia. x Lth.	List Price	Net Price
BBR 50-3	50	3	3/8 x 1 1/16	$ .95	**$ .57**
BBR 25-3	25	3	3/8 x 1 1/16	.85	**.51**
BBR 50-6	50	6	3/8 x 1 1/16	.95	**.57**
BBR 25-6	25	6	3/8 x 1 1/16	.85	**.51**
BBR 5-6	5	6	3/8 x 1 1/16	.80	**.48**
BBR 20-25	20	25	3/8 x 1 1/16	1.00	**.60**
BBR 10-25	10	25	3/8 x 1 1/16	1.00	**.60**
BBR 10-50	10	50	3/8 x 1 1/16	1.00	**.60**
BBR 5-50	5	50	3/8 x 1 1/16	1.00	**.60**
BBR 10-90	10	90	1/2 x 1 1/16	1.10	**.66**
BBR 16-90	16	90	1/2 x 1 7/16	1.10	**.66**



TYPE BBR



TYPE BR


ALUMINUM RIVET
TWO RIVETED TERMINALS ON INSULATING WASHER
ALUMINUM CAN
+
+
D.
L.
INSULATING CARDBOARD SLEEVE
*18 BARE WIRE LEADS 3" LONG

TYPE BRD

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Ins. Dia. x Lth.	List Price	Net Price
BRD 202B	20–20	25	3/4 x 1 1/16	$1.40	**$ .84**
BRD 105	10–10	50	3/4 x 1 1/16	1.40	**.84**
BRD 16815	16–8	150	3/4 x 1 1/16	1.55	**.93**
BRD 2215A	20–20	150	7/8 x 1 7/16	1.65	**.99**
BRD 3315A	30–30	150	7/8 x 1 11/16	1.80	**1.08**
BRD 4215A	40–20	150	7/8 x 1 11/16	1.75	**1.05**
BRD 4415A	40–40	150	1 x 1 11/16	1.85	**1.11**
BRD 5315A	50–30	150	1 x 1 11/16	1.95	**1.17**
BRD 5515A	50–50	150	1 x 2 1/2	2.10	**1.26**
BRD 8415	80–40	150	1 x 2 1/2	2.25	**1.35**
BRD 2125	20–10	250	7/8 x 1 11/16	1.75	**1.05**
BRD 2225A	20–20	250	1 x 1 11/16	1.85	**1.11**
BRD 4225	40–20	250	1 x 2 1/2	2.15	**1.29**
BRD 8D35	8–8	350	7/8 x 1 11/16	1.65	**.99**
BRD 2235A	20–20	350	1 x 2 1/2	2.25	**1.35**
BRD 8D45	8–8	450	1 x 1 11/16	1.70	**1.02**
BRD 1145B	10–10	450	1 x 1 11/16	1.85	**1.11**
BRD 16845	16–8	450	1 x 2	2.10	**1.26**
BRD 16D45A	16–16	450	1 x 2 1/2	2.25	**1.35**
BRD 2245	20–20	450	1 x 3	2.50	**1.50**
BRD 1150	10–10	500	1 x 2	1.90	**1.14**

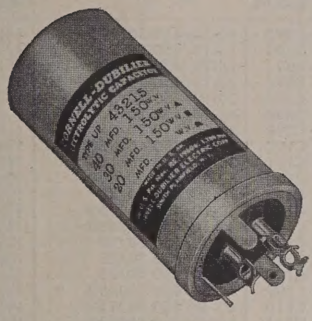
Printed in U.S.A.

Copyright 1951 by Cornell-Dubilier Electric Corp.

The names "Beaver", "Dykanol", "Faradon", "Mike", "Quietone", "Service Mike" and all identifying plaques and identifying insignia are registered trade marks of Cornell-Dubilier Electric Corp., South Plainfield, N. J.

CORNELL DUBILIER

UP, UPT & UPE TWIST-PRONG BASE ELECTROLYTICS



TYPE UP

Type UP capacitors are small, conveniently-mounted, round can-type electrolytic units furnished with bakelite and metal mounting washers. Terminals are tinned for soldering.

They are dependable in operation over wide temperature variations with minimum capacity change.

Type UPT, "Hi-Temp", units are especially designed for use in television, auto radio, amplifier and other equipment where extremely high temperatures, voltage surges and ripple currents are encountered. They are particularly popular as replacement capacitors for all standard television receivers.§

Type UPE units are designed for use in selenium rectifier circuits. When using selenium rectifiers in television, radio or other equipment, care must be taken to employ only this type electrolytic capacitor and protective resistor–

Cat. No.	Rotational Stock No.	Cap./Volts	Size—Ins. Dia. x Lgth.	List Price	Net Price
UPT 102	A001	10Ω 30 CPS.	¾ x 2	$2.00	**$1.20**
UPT 100	A002	.5Ω 15.750 CPS.	1 x 2	2.20	**1.36**
UPT 101	A003	1Ω 60 CPS.	1⅜ x 3	2.80	**1.68**
UPT 2M-6	A004	2000/6	1⅜ x 2	2.55	**1.53**
UP 3M-10	A005	3000/10	1⅜ x 2½	2.90	**1.74**
UP 1M-15	A006	1000/15	1 x 2½	2.55	**1.53**
UP 2M-15	A007	2000/15	1⅜ x 2½	3.45	**2.07**
UP 3M-15	A008	3000/15	1⅜ x 3	3.52	**2.11**
UP 40-25	A009	40/25	¾ x 2	1.35	**.81**
UP 100-25	A010	100/25	¾ x 2	1.60	**.96**
UPT 103	A011	500/25	1 x 2½	2.55	**1.53**
UP 500-25	A012	500/25	1 x 2	2.55	**1.53**
UP 1M-25	A013	1000/25	1⅜ x 2	3.55	**2.13**
UP 100-50	A014	100/50	¾ x 2	1.65	**.99**
UP 150-50	A015	150/50	1 x 2	1.80	**1.08**
UP 500-50	A016	500/50	1⅜ x 2	2.65	**1.59**
UP 1M-50	A017	1000/50	1⅜ x 3⅝	3.75	**2.25**
UP 3015	A018	30/150	¾ x 2	1.55	**.93**
UP 4015	A019	40/150	1 x 2	1.60	**.96**
UP 5015	A020	50/150	1 x 2	1.65	**.99**
UP 6015	A022	60/150	1 x 2	1.75	**1.05**
UPT 8015	A023	80/150	1 x 2	1.85	**1.11**
UP 10015	A024	100/150	1 x 2½	2.00	**1.20**
UPT 12015	A025	120/150	1⅜ x 2	2.10	**1.26**
UP 15015	A026	150/150	1 x 3	2.15	**1.29**
UP 2025	A027	20/250	¾ x 2	1.60	**.96**
UP 3025	A028	30/250	1 x 2	1.70	**1.02**
UP 4025	A029	40/250	1 x 2	1.80	**1.08**
UP 6025	A030	60/250	1 x 2½	2.05	**1.23**
UP 8025	A031	80/250	1 x 3	2.15	**1.29**
UP 5030	A032	50/300	1 x 2½	2.05	**1.23**
UP 8030	A033	80/300	1 x 3	2.55	**1.53**
UPT 10030	A034	100/300	1⅜ x 3	2.90	**1.74**
UPT 104	A035	100/300	1 x 3⅝	2.90	**1.74**
UP 1535	A036	15/350	1 x 2	1.65	**.99**
UP 3035	A037	30/350	1 x 2	1.90	**1.14**
UP 4035	A038	40/350	1 x 2½	2.00	**1.20**
UP 5035	A039	50/350	1 x 3	2.10	**1.26**
UP 8035	A040	80/350	1⅜ x 2½	2.85	**1.71**
UP 12535	A041	125/350	1⅜ x 3	3.65	**2.19**
UP 8040	A042	80/400	1⅜ x 3	2.95	**1.77**
UP 1045	A043	10/450	1 x 2	1.55	**.93**
UP 1AJ57	A044	10/450	¾ x 2	$1.55	**$ .93**
UP 1545	A045	15/450	1 x 2	1.70	**1.02**
UP 2045	A046	20/450	1 x 2	1.80	**1.08**
UP 3045	A047	30/450	1 x 2½	1.95	**1.17**
UPT 4045	A048	40/450	1 x 3	2.05	**1.23**
UP 5045	A049	50/450	1 x 3⅝	2.35	**1.41**
UP 6045	A050	60/450	1⅜ x 2½	2.60	**1.56**
UP 8045	A051	80/450	1⅜ x 3	3.05	**1.83**
UP 1050	A052	10/500	1 x 2	1.60	**.96**
UP 2050	A053	20/500	1 x 2½	1.85	**1.11**
UP 3050	A054	30/500	1 x 3	2.00	**1.20**
UP 4050	A055	40/500	1 x 3⅝	2.50	**1.50**
UP 8050	A056	80/500	1⅜ x 3⅝	3.20	**1.92**
UP 9050	A057	90/500	1⅜ x 3⅝	3.50	**2.10**

Dual Section Units

Cat. No.	Rotational Stock No.	Cap./Volts	Size—Ins. Dia. x Lgth.	List Price	Net Price
UPT 202	B001	.5Ω 15.750 CPS. 2.5Ω 60 CPS.	1⅜ x 2	$3.90	**$2.34**
UPT 203	B002	1000-500/6 VNP	1⅜ x 2	3.85	**2.31**
UPT 201	B003	1000-1000/15	1 x 3⅝	4.40	**2.64**
UP 11m-15	B004	1000-1000/15	1⅜ x 2½	4.40	**2.64**
UP 22-25	B005	20-20/25	1 x 2	1.45	**.87**
UP 44-25	B006	40-40/25	1 x 2	1.60	**.96**
UPT 205	B007	150-50/25	1 x 2	1.90	**1.14**
UP 55-50	B008	50-50/50	1 x 2	1.70	**1.02**
UP 2215	B009	20-20/150	1 x 2	1.70	**1.02**
UP 3215	B010	30-20/150	1 x 2	1.75	**1.05**
UP 3315	B011	30-30/150	1 x 2	1.85	**1.11**
UP 4215	B012	40-20/150	1 x 2	1.80	**1.08**
UP 4315	B013	40-30/150	1 x 2	1.85	**1.11**
UP 4415	B014	40-40/150	1 x 2	1.90	**1.14**
UP 5315	B015	50-30/150	1 x 2	2.00	**1.20**
UP 5515	B016	50-50/150	1 x 2½	2.15	**1.29**
UP 75D15	B017	75-75/150	1 x 3	2.60	**1.56**
UP 8415	B018	80-40/150	1 x 2½	2.30	**1.38**
UPT 6620	B019	60-60/200	1⅜ x 2	2.55	**1.53**
UP 1125	B020	10-10/250	1 x 2	1.70	**1.02**
UP 2225	B021	20-20/250	1 x 2	1.90	**1.14**
UP 3325	B022	30-30/250	1 x 2½	2.30	**1.38**
UP 4225	B023	40-20/250	1 x 2½	2.20	**1.32**
UP 4425	B024	40-40/250	1 x 3	2.55	**1.53**
UPT 150D25	B025	150-150/250	1⅜ x 4⅛	5.15	**3.09**
UP 5530	B026	50-50/300	1⅜ x 2½	3.35	**2.01**
UP 8830	B027	80-80/300	1⅜ x 3	4.05	**2.43**
UPT 12230	B028	120-20/300	1⅜ x 3	3.80	**2.28**
UP 15D35	B029	15-15/350	1 x 2	2.25	**1.35**
UP 2235	B030	20-20/350	1 x 2½	2.30	**1.38**
UP 3335	B031	30-30/350	1 x 3	2.90	**1.74**
UP 5335	B032	50-30/350	1⅜ x 2½	3.15	**1.89**
UPT 8835	B033	80-80/350	1⅜ x 3⅝	4.70	**2.82**
UPT 6640	B034	60-60/400	1⅜ x 3⅝	4.40	**2.64**
UP 8140	B035	80-10/400	1⅜ x 3	3.40	**2.04**
UPT 4D45	B036	4-4/450	1 x 2	1.65	**.99**
UPT 1145	B037	10-10/450	1 x 2	1.90	**1.14**
UP 15D45	B038	15-15/450	1 x 2½	2.25	**1.35**
UP 2145	B039	20-10/450	1 x 2½	2.25	**1.35**
UP 2245	B040	20-20/450	1 x 3	2.55	**1.53**
UPT 3145	B041	30-10/450	1 x 3	2.50	**1.50**
UPT 206	B042	30-10/450	1⅜ x 2	2.40	**1.44**
UP 3345	B043	30-30/450	1⅜ x 2½	3.05	**1.83**
UP 4245	B044	40-20/450	1⅜ x 2½	3.00	**1.80**
UPT 4445	B045	40-40/450	1⅜ x 3	3.45	**2.07**
UPT 6245	B046	60-20/450	1⅜ x 3	3.55	**2.13**
UPT 8145	B047	80-10/450	1⅜ x 3	3.60	**2.16**
UP 8445	B048	80-40/450	1⅜ x 3⅝	4.35	**2.61**
UP 1150	B049	10-10/500	1 x 2½	1.95	**1.17**
UP 2250	B050	20-20/500	1⅜ x 2½	2.85	**1.71**
UPT 25S450	B051	25-40/500	1⅜ x 3	3.65	**2.19**
UPT 3150	B052	30-10/500	1⅜ x 2½	2.60	**1.56**
UP 4450	B053	40-40/500	1⅜ x 3⅝	4.30	**2.58**
UPT 6450	B054	60-40/500	1⅜ x 3⅝	4.60	**2.76**
UPT 200	B055	250/10 1000/6	1⅜ x 2	2.85	**1.71**
UP 4015V2	B056	40/150 20/50	1 x 2	1.70	**1.02**
UP 4015C15	B057	40/150 150/25	1 x 2	2.05	**1.23**
UP 4025C	B058	40/250 20/25	1 x 2	2.00	**1.20**
UPT 5025V10	B059	50/250 100/50	1⅜ x 2	2.60	**1.56**
UPT 10025V15	B060	100/250 150/50	1⅜ x 3	3.65	**2.19**
UP 2035C	B061	20/350 20/25	1 x 2	1.90	**1.14**
UP 4035C	B062	40/350 20/25	1 x 2½	2.35	**1.41**
UP 1045C	B063	10/450 20/25	1 x 2	1.70	**1.02**
UP 2045C	B064	20/450 20/25	1 x 2	2.00	**1.20**
UP 4045C	B065	40/450 20/25	1 x 3	2.45	**1.47**
UP 8045C	B066	80/450 20/25	1⅜ x 3	3.40	**2.04**
UPT 204	B067	10/450 100/50	1⅜ x 2	2.05	**1.23**
UPT 245-835	B068	20/450 80/350	1⅜ x 3	3.65	**2.19**
UPT 245-1010	B069	20/450 100/100	1⅜ x 2	2.65	**1.59**
UPT 345-415	B070	30/450 40/150	1⅜ x 2	2.50	**1.50**
UPT 445-135	B071	40/450 10/350	1⅜ x 2	2.60	**1.56**
UPT 8045V5	B072	80/450 50/50	1⅜ x 3	3.50	**2.10**
UPT 15S50-230	B073	15/500 20/300	1 x 2½	2.30	**1.38**
UPT 250-1030	B074	20/500 100/300	1⅜ x 3	3.95	**2.37**
UPT 450-520	B075	40/500 50/200	1⅜ x 2½	3.35	**2.01**
UPT 650-815	B076	60/500 80/150	1⅜ x 3⅝	3.75	**2.25**
UPT 8050V5	B077	80/500 50/50	1⅜ x 3⅝	3.80	**2.28**

§For application data on C-D types UP, UPT and UPE Capacitors ask your jobber for C-D TELEVISION REPLACEMENT GUIDE, No. TVR7.

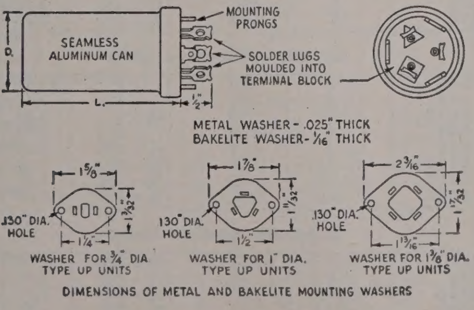
UP, UPT & UPE TWIST-PRONG BASE ELECTROLYTICS

Cat. No.	Rotational Stock No.	Cap./Volts	Size—Ins. Dia. x Lgth.	List Price	Net Price
Triple Section Units					
UP 222-25	C001	20-20-20/25	1 x 2	$1.95	$1.17
UP 444-25	C002	40-40-40/25	1 x 2	2.15	1.29
UP 333-50	C003	30-30-30/50	1 x 2	2.15	1.29
UP 22215	C004	20-20-20/150	1 x 2	2.35	1.41
UP 33115	C005	30-30-10/150	1 x 2	2.35	1.41
UP 42115	C006	40-20-10/150	1 x 2	2.35	1.41
UP 42215	C007	40-20-20/150	1 x 2	2.40	1.44
UP 43215	C008	40-30-20/150	1 x 2	2.50	1.50
UP 44415	C009	40-40-40/150	1 x 2½	2.60	1.56
UP 47415	C010	40-70-40/150	1 x 3	2.95	1.77
UP 64215	C011	60-40-20/150	1 x 3	2.75	1.65
UP 84215	C012	80-40-20/150	1 x 2½	2.90	1.74
UP 22125	C013	20-20-10/250	1 x 2	2.50	1.50
UP 32125	C014	30-20-10/250	1 x 2½	2.70	1.62
UPT 42125	C015	40-20-10/250	1⅜ x 2	2.85	1.71
UP 42225	C016	40-20-20/250	1 x 3	2.90	1.74
UPT 88625	C017	80-80-60/250	1⅜ x 3⅝	4.90	2.94
UPT 28130	C018	20-80-10/300	1⅜ x 2½	3.80	2.28
UPT 62130	C019	60-20-10/300	1⅜ x 2½	3.45	2.07
UPT 125430	C020	120-50-40/300	1⅜ x 4⅛	5.65	3.39
UP 11135	C021	10-10-10/350	1 x 2	2.40	1.44
UP 22135	C022	20-20-10/350	1 x 3	2.95	1.77
UPT 64235	C023	60-40-20/350	1⅜ x 3	4.25	2.55
UP 11145	C024	10-10-10/450	1 x 2½	2.60	1.56
UP 15D145	C025	15-15-10/450	1 x 3	2.95	1.77
UP 21145	C026	20-10-10/450	1 x 3	2.95	1.77
UP 22245	C027	20-20-20/450	1⅜ x 2½	3.60	2.16
UP 32245	C028	30-20-20/450	1⅜ x 3	3.85	2.31
UPT 33245	C029	30-30-20/450	1⅜ x 3	4.10	2.46
UPT 33345	C030	30-30-30/450	1⅜ x 3	4.35	2.61
UPT 36145	C031	30-60-10/450	1⅜ x 3⅝	4.50	2.70
UPT 41145	C032	40-10-10/450	1⅜ x 3	3.35	2.01
UP 43245	C033	40-30-20/450	1⅜ x 3	4.30	2.58
UPT 44145	C034	40-40-10/450	1⅜ x 3	4.15	2.49
UPT 44445	C035	40-40-40/450	1⅜ x 3⅝	4.90	2.94
UPT 62245	C036	60-20-20/450	1⅜ x 3⅝	4.60	2.76
UPT 84245	C037	80-40-20/450	1⅜ x 4⅛	5.40	3.24
UP 11150	C038	10-10-10/500	1 x 3	2.70	1.62
UPT 32250	C039	30-20-20/500	1⅜ x 3	4.20	2.52
UPT 41150	C040	40-10-10/500	1⅜ x 3	3.90	2.34
UPT 44150	C041	40-40-10/500	1⅜ x 3⅝	5.05	3.03
UP 4CJ69	C042	15-15/150 1200/1.5	1 x 2	3.05	1.83
UP 2215C	C043	20-20/150 20/25	1 x 2	2.20	1.32
UP 2215X10	C044	20-20/150 100/10	1 x 2	2.35	1.41
UP 2215X25	C045	20-20/150 250/10	1 x 2	2.60	1.56
UP 3315C	C046	30-30/150 20/25	1 x 2	2.35	1.41
UP 3315X20	C047	30-30/150 200/10	1 x 2	2.50	1.50
UP 4215C	C048	40-20/150 20/25	1 x 2	2.30	1.38
UP 4215C10	C049	40-20/150 100/25	1 x 2	2.50	1.50
UP 4215X10	C050	40-20/150 100/10	1 x 2	2.40	1.44
UP 4215C20	C051	40-20/150 200/25	1 x 2½	2.70	1.62
UP 4215X20	C052	40-20/150 200/10	1 x 2	2.50	1.50
UP 4215X25	C053	40-20/150 250/10	1 x 2	2.70	1.62
UP 4315C	C054	40-30/150 20/25	1 x 2	2.35	1.41
UP 4415C	C055	40-40/150 20/25	1 x 2	2.40	1.44
UP 5315C	C056	50-30/150 20/25	1 x 2	2.50	1.50
UP 5315C10	C057	50-30/150 100/25	1 x 2½	2.70	1.62
UP 5515C	C058	50-50/150 20/25	1 x 2½	2.65	1.59
UP 6215C	C059	60-20/150 20/25	1 x 2	2.55	1.53
UP 6415C	C060	60-40/150 20/25	1 x 2½	2.65	1.59
UP 8415C	C061	80-40/150 20/25	1 x 2½	2.80	1.68
UPT 12615C	C062	120-60/150 20/25	1⅜ x 2½	3.35	2.01
UP 3220C	C063	30-20/200 20/25	1 x 2	2.55	1.53
UPT 10120V4	C064	100-10/200 40/50	1⅜ x 2	3.15	1.89
UP 15D25C	C065	15-15/250 20/25	1 x 2	2.35	1.41
UP 215S25C	C066	20-15/250 20/25	1 x 2	2.35	1.41
UP 3325C	C067	30-30/250 20/25	1 x 2½	2.80	1.68
UPT 7725V2	C068	70-70/250 20/50	1⅜ x 3	3.90	2.34
UPT 8825-145	C069	80-80/250 10/450	1⅜ x 3⅝	4.20	2.52
UPT 309	C070	10-10/300 15/250	1 x 2	2.45	1.47
UP 2230C	C071	20-20/300 20/25	1 x 2	2.75	1.65
UP 3330V2	C072	30-30/300 25/50	1 x 3	2.90	1.74
UP 415S30C	C073	40-15/300 20/25	1 x 3	2.95	1.77
UPT 316	C074	10-5/350 150/50	1 x 3	2.70	1.62
UP 1135C	C075	10-10/350 20/25	1 x 2	2.25	1.35
UP 115S35C	C076	10-15/350 20/25	1 x 2	2.50	1.50
UP 15S135C	C077	15-10/350 20/25	1 x 2	2.50	1.50
UP 2135C	C078	20-10/350 20/25	1 x 2	2.55	1.53
UP 4CJ66	C079	20-10/350 5/250	1 x 2	2.55	1.53
UP 2235C	C080	20-20/350 20/25	1 x 2½	2.80	1.68
UP 3135C	C081	30-10/350 20/25	1 x 2½	2.85	1.71
UP 3135-225	C082	30-10/350 20/250	1 x 3	3.05	1.83
UPT 3235C	C083	30-20/350 20/25	1 x 3	3.10	1.86
UP 3335C	C084	30-30/350 20/25	1⅜ x 2	3.40	2.04
UPT 4235-110	C085	40-20/350 10/100	1⅜ x 2	2.85	1.71
UPT 2435-115	C086	20-40/350 10/150	1 x 3	3.20	1.92
UPT 4435C5	C087	40-40/350 50/25	1⅜ x 2½	3.75	2.25
UPT 3140V15	C088	30-10/400 150/50	1⅜ x 2½	3.40	2.04
UPT 8440V15	C089	80-40/400 150/50	1⅜ x 3⅝	5.15	3.09
UP 6CJ68	C090	15-5/450 15/350	1 x 3	2.85	1.71
UP 1145C	C091	10-10/450 20/25	1 x 2	2.40	1.44
UPT 1145V4	C092	10-10/450 40/50	1 x 2½	2.50	1.50
UPT 1145-510	C093	10-10/450 50/100	1⅜ x 2	$2.65	$1.59
UP 15D45C	C094	15-15/450 20/25	1 x 2½	2.75	1.65
UP 15D45-130	C095	15-15/450 10/300	1 x 3	2.90	1.74
UP 2145C	C096	20-10/450 20/25	1 x 2½	2.75	1.65
UPT 2145V5	C097	20-10/450 50/50	1 x 3	2.85	1.71
UP 215S45C	C098	20-15/450 20/25	1 x 3	2.90	1.74
UP 2245C	C099	20-20/450 20/25	1 x 3	3.05	1.83
UPT 2245-635	C100	20-20/450 60/350	1⅜ x 3	4.05	2.43
UPT 3245-315	C101	30-20/450 30/150	1⅜ x 2½	3.50	2.10
UPT 3345C	C102	30-30/450 20/25	1⅜ x 2½	3.55	2.13
UP 3345V4	C103	30-30/450 40/50	1⅜ x 3	3.65	2.19
UPT 4145V10	C104	40-10/450 100/50	1⅜ x 3	3.55	2.13
UPT 4145-820	C105	40-10/450 80/200	1⅜ x 3	3.90	2.34
UP 4245C	C106	40-20/450 20/25	1⅜ x 2½	3.50	2.10
UP 4445C	C107	40-40/450 20/25	1⅜ x 3	3.95	2.37
UPT 4445C4	C108	40-40/450 40/25	1⅜ x 3	2.45	1.47
UPT 4445V10	C109	40-40/450 100/50	1⅜ x 3⅝	4.30	2.58
UPT 4445-415	C110	40-40/450 40/150	1⅜ x 3⅝	4.15	2.49
UPT 8445C10	C111	80-40/450 100/25	1⅜ x 4⅛	5.10	3.06
UPT 1150V10	C112	10-10/500 100/50	1 x 3	2.85	1.71
UPT 318	C113	10-10/500 4/350	1 x 2½	2.50	1.50
UPT 2150C10	C114	20-10/500 100/25	1 x 3⅝	3.10	1.86
UPT 2250-640	C116	20-20/500 60/400	1⅜ x 3⅝	4.80	2.88
UPT 3150V2	C117	30-10/500 20/50	1⅜ x 2½	3.10	1.86
UPT 4450-1020	C118	40-40/500 100/200	1⅜ x 4⅛	5.85	3.51
UPT 308	C119	100/100 50-25/25	1 x 3	2.65	1.59
UPT 310	C120	20/150 250-100/15	1⅜ x 2	2.90	1.74
UPT 305	C121	120/300 15-10/450	1⅜ x 3⅝	4.50	2.70
UP 335-2125	C122	30/350 20-10/250	1 x 3	3.00	1.80
UPT 840-2130	C123	80/400 20-10/300	1⅜ x 3⅝	4.25	2.55
UPT 245-4125	C124	20/450 40-10/250	1⅜ x 2	3.15	1.89
UPT 304	C125	30/450 100-25/25	1⅜ x 2	3.00	1.80
UPT 445-9515	C126	40/450 90-50/150	1⅜ x 3	4.00	2.40
UPT 314	C127	40/150 25/25 130/15	1 x 3	2.35	1.41
UPT 825-415V5	C128	80/250 40/150 50/50	1⅜ x 2½	3.30	1.98
UPT 1030-615C	C129	100/300 60/150 20/25	1⅜ x 3	4.20	2.52
UPT 307	C130	20/350 50/100 100/75	1 x 3	3.10	1.86
UP 335-330C	C131	30/350 30/300 20/25	1 x 3	3.15	1.89
UPT 302	C132	50/350 10/250 500/5	1⅜ x 2½	3.60	2.16
UPT 140-535C3	C133	10/400 50/350 30/25	1 x 3	3.10	1.86
UPT 640-430C	C134	60/400 40/300 20/25	1⅜ x 3⅝	4.20	2.52
UPT 313	C135	10/450 50/150 100/25	1 x 3	2.75	1.65
UPT 306	C136	10/450 40/300 10/150	1⅜ x 2	3.10	1.86
UPT 301	C137	10/450 30/400 30/300	1⅜ x 2½	3.35	2.01
UP 6CJ17	C138	15/450 20/350 20/250	1 x 3	3.00	1.80
UPT 312	C139	20/450 60/250 100/25	1⅜ x 2½	3.65	2.19
UP 6CJ67	C140	20/450 15/350 10/300	1 x 3	3.05	1.83
UPT 317	C141	20/450 80/350 100/50	1⅜ x 3⅝	4.50	2.70
UPT 345-540C4	C142	30/450 50/400 40/25	1⅜ x 3	3.95	2.37
UPT 300	C143	40/450 40/150 130/50	1⅜ x 3	3.65	2.19
UPT 311	C144	40/450 100/150 50/50	1⅜ x 3	3.95	2.37
UPT 315	C145	10/500 100/200 40/50	1⅜ x 2½	3.35	2.01
UPT 250-230C4	C146	20/500 20/300 40/25	1⅜ x 2	3.10	1.86
UPT 303	C147	40/500 40/250 100/50	1⅜ x 3	4.30	2.58
UPT 450-440V2	C148	40/500 40/400 25/50	1⅜ x 3	4.30	2.58
UPT 345-435C5	C149	30/450 40/350 50/25	1 x 4⅛	3.70	2.22
Quadruple Section Units					
UP 444315	D001	40-40-40-30/150	1⅜ x 2	$3.35	$2.01
UPT 442130	D002	40-40-20-10/300	1⅜ x 2½	4.55	2.73
UPT 111135	D003	10-10-10-10/350	1⅜ x 2	3.10	1.86
UPT 811135	D004	80-10-10-10/350	1⅜ x 3⅝	4.60	2.76
UPT 332240	D005	30-30-20-20/400	1⅜ x 3	4.85	2.91
UPT 821140	D006	80-20-10-10/400	1⅜ x 3⅝	5.05	3.03
UPT 4Q45	D007	4-4-4-4/450	1⅜ x 2	2.90	1.74
UP 5Q45	D008	5-5-5-5/450	1⅜ x 2	3.00	1.80
UPT 111145	D009	10-10-10-10/450	1⅜ x 2	3.35	2.01
UPT 15S33145	D010	15-30-30-10/450	1⅜ x 3	4.70	2.80
UPT 15S33345	D011	15-30-30-30/450	1⅜ x 3⅝	5.30	3.18
UPT 211145	D012	20-10-10-10/450	1⅜ x 2½	3.70	2.22
UPT 222245	D013	20-20-20-20/450	1⅜ x 3	4.70	2.82
UPT 315T45	D014	30-15-15-15/450	1⅜ x 3	4.45	2.67
UPT 420	D015	35-35-10-5/450	1⅜ x 3⅝	4.65	2.79
UP 411145	D016	40-10-10-10/450	1⅜ x 3	4.15	2.49
UPT 421145	D017	40-20-10-10/450	1⅜ x 3	4.45	2.67
UPT 111150	D018	10-10-10-10/500	1⅜ x 2	3.50	2.10
UP 22215C	D019	20-20-20/150 20/25	1⅜ x 2	2.90	1.74
UP 32215X20	D020	30-20-20/150 200/10	1⅜ x 2	3.10	1.86
UP 33315C4	D021	30-30-30/150 40/25	1⅜ x 2	3.10	1.86
UPT 42215C	D022	40-20-20/150 20/25	1⅜ x 2	2.95	1.77
UP 44215X20	D023	40-40-20/150 200/10	1⅜ x 2	3.25	1.95
UP 44315C	D024	40-40-30/150 20/25	1⅜ x 2	3.10	1.86
UP 44415C	D025	40-40-40/150 20/25	1⅜ x 2	3.15	1.89
UP 44415C10	D026	40-40-40/150 100/25	1⅜ x 2	3.35	2.01
UP 44415C16	D027	40-40-40/150 160/25	1⅜ x 2	3.55	2.13
UP 53315C10	D028	50-30-30/150 100/25	1⅜ x 2	3.45	2.07
UP 55515C	D029	50-50-50/150 20/25	1⅜ x 2	3.55	2.13
UP 64215X20	D030	60-40-20/150 200/10	1⅜ x 2	3.50	2.10
UP 75T15C3	D031	75-75-75/150 30/25	1⅜ x 3	4.30	2.58
UP 84415C	D032	80-40-40/150 20/25	1⅜ x 2	3.55	2.13
UP 84415C10	D033	80-40-40/150 100/25	1⅜ x 2½	3.75	2.25
UP 42125C	D034	40-20-10/250 20/25	1⅜ x 2	3.40	2.04
UPT 86425-215	D035	80-60-40/250 20/150	1⅜ x 3⅝	5.10	3.06

§For application data on C-D types UP, UPT and UPE Capacitors ask your jobber for C-D TELEVISION REPLACEMENT GUIDE, No. TVR7.

UP, UPT & UPE TWIST-PRONG BASE ELECTROLYTICS

Cat. No.	Rotational Stock No.	Cap./Volts	Size—Ins. Dia. x Lgth.	List Price	Net Price
UPT 415	D036	100-40-10/250 100/50	1⅜ x 3⅝	$5.15	**$3.09**
UPT 44430-215	D037	40-40-40/300 20/150	1⅜ x 3	4.90	**2.94**
UPT 64230C5	D038	60-40-20/300 50/25	1⅜ x 3	4.70	**2.82**
UP 11135C	D039	10-10-10/350 20/25	1⅜ x 2	2.95	**1.77**
UPT 15T35V5	D040	15-15-15/350 50/50	1⅜ x 2	3.80	**2.28**
UP 21535C	D041	20-10-5/350 20/25	1⅜ x 2	3.10	**1.86**
UP 32235C	D042	30-20-20/350 20/25	1⅜ x 2½	4.10	**2.46**
UP 44235C	D043	40-40-20/350 20/25	1⅜ x 3	4.70	**2.82**
UPT 42235C	D044	40-20-20/350 25/25	1⅜ x 2½	4.25	**2.55**
UPT 43135V5	D045	40-30-10/350 50/50	1⅜ x 3	4.40	**2.64**
UPT 44435C4	D046	40-40-40/350 40/25	1⅜ x 3	5.20	**3.12**
UPT 44435V15	D047	40-40-40/350 150/50	1⅜ x 3⅝	5.70	**3.42**
UPT 11145C	D048	10-10-10/450 20/25	1⅜ x 2	3.15	**1.89**
UPT 11145C10	D049	10-10-10/450 100/25	1⅜ x 2	3.35	**2.01**
UPT 11145V15	D050	10-10-10/450 150/50	1⅜ x 2½	3.70	**2.22**
UPT 21145C10	D051	20-10-10 450 100/25	1⅜ x 2	3.70	**2.22**
UP 22245C	D052	20-20-20/450 20/25	1⅜ x 2½	4.15	**2.49**
UPT 22245V10	D053	20-20-20/450 100/50	1⅜ x 3	4.55	**2.73**
UP 315D45C4	D054	30-15-15/450 40/25	1⅜ x 2½	4.15	**2.49**
UP 32245C	D055	30-20-20/450 20/25	1⅜ x 3	4.40	**2.64**
UPT 400	D056	30-30-15/450 30/50	1⅜ x 3	4.15	**2.49**
UPT 404	D057	30-30-15/450 100/50	1⅜ x 3⅝	4.90	**2.94**
UP 33145C	D058	30-30-10/450 20/25	1⅜ x 3	4.35	**2.61**
UP 33245C	D059	30-30-20/450 20/25	1⅜ x 3	4.65	**2.79**
UPT 41145C25	D060	40-10-10/450 250/25	1⅜ x 3	4.25	**2.55**
UPT 42145C	D061	40-20-10/450 20/25	1⅜ x 3	4.25	**2.55**
UPT 42145V10	D062	40-20-10/450 100/50	1⅜ x 3⅝	4.65	**2.79**
UPT 42245C4	D063	40-20-20/450 40/25	1⅜ x 3	4.65	**2.79**
UP 43145C	D064	40-30-10/450 20/25	1⅜ x 3	4.50	**2.70**
UPT 44145V2	D065	40-40-10/450 25/50	1⅜ x 3⅝	4.70	**2.82**
UPT 403	D066	40-40-10/450 100/100	1⅜ x 3⅝	5.35	**3.21**
UPT 61145-215	D067	60-10-10/450 20/150	1⅜ x 3	4.60	**2.76**
UPT 407	D068	40-10-20/475 10/25	1⅜ x 3	4.85	**2.91**
UPT 22150-130	D069	20-20-10/500 10/300	1⅜ x 2½	4.30	**2.58**
UPT 414	D070	100/300 40/50 80-20/25	1⅜ x 2½	4.55	**2.73**
UPT 427	D071	20/300 150-150/150 100/30	1⅜ x 4⅛	5.30	**3.18**
UPT 402	D072	15/350 80-40/200 200/25	1⅜ x 3	4.50	**2.70**
UPT 428	D073	10/400 50-30/350 30/25	1⅜ x 3	4.40	**2.64**
UPT 424	D074	10/450 60-40/350 25/25	1⅜ x 3⅝	4.60	**2.76**
UPT 419	D075	10/450 100-10/350 20/25	1⅜ x 3⅝	5.25	**3.15**
UPT 421	D076	20/450 80-20/200 50/50	1⅜ x 3	4.15	**2.49**
UPT 425	D077	30/450 40-40/350 10/200	1⅜ x 3⅝	5.15	**3.09**
UPT 409	D078	30/450 125-125/25 30/450	1⅜ x 3	8.55	**5.13**
UPT 401	D079	5-5/400 50/300 80/250	1⅜ x 3	4.65	**2.79**
UPT 429	D080	40-60/400 40/350 10/50	1⅜ x 3⅝	5.75	**3.45**
UPT 411	D081	10-10/450 60/200 100/50	1⅜ x 3	3.85	**2.31**
UPT 42245C	D082	40-20-20/450 20/25	1⅝ x 3	4.60	**2.76**
UPT 423	D083	10-5/475 80/450 40/50	1⅜ x 3⅝	4.95	**2.97**
UPT 417	D084	15-15/475 80/300 40/50	1⅜ x 3	4.80	**2.88**
UP 4415C44	D085	40-40/150 40-40/25	1⅜ x 2	3.05	**1.83**
UP 4415CD10	D086	40-40/150 100-100/25	1⅜ x 2	3.35	**2.01**
UPT 4140-8125	D087	40-10/400 80-10/250	1⅜ x 3⅝	4.70	**2.82**
UPT 1145CC	D088	10-10/450 20-20/25	1⅜ x 2	2.95	**1.77**
UP 2245CC	D089	20-20/450 20-20/25	1⅜ x 2	3.60	**2.16**
UP 2245-3335	D090	20-20 450 30-30 350	1⅜ x 3	5.05	**3.03**
UPT 408	D091	40-10/450 35-10/350	1⅜ x 3	4.60	**2.76**
UPT 4445-3335	D092	40-40/450 30-30/350	1⅜ x 4⅛	5.90	**3.54**
UPT 405	D093	120/300 20/250 20/25 100/50	1⅜ x 4⅛	5.05	**3.03**
UPT 406	D094	200/300 20/250 20/25 100/50	1⅜ x 5	5.45	**3.27**
UPT 418	D095	20/350 40/300 10/150 250/50	1⅜ x 3	4.60	**2.76**
UPT 412	D096	80/450 10/400 30/300 40/150	1⅜ x 4⅛	5.25	**3.15**
UPT 410	D097	10/475 10/450 80/200 50/60	1⅜ x 2½	3.85	**2.31**
UPT 413	D098	10/475 60/450 30/400 125/50	1⅜ x 4⅛	5.45	**3.27**
UPT 422	D099	20/475 40/300 100/50 80/25	1⅜ x 3	4.50	**2.70**
UPT 416	D100	25/475 20/450 40/300 100/50	1⅜ x 3	4.95	**2.97**
UPT 426	D101	10/475 40/350 80/200 100/50	1⅜ x 3⅝	4.80	**2.88**
UPT 53150-230	D102	50-30-10/500 20/300	1⅜ x 3⅝	5.60	**3.36**


MOUNTING PRONGS
SEAMLESS ALUMINUM CAN
SOLDER LUGS MOULDED INTO TERMINAL BLOCK
D.
L.
½"
METAL WASHER - .025" THICK
BAKELITE WASHER - 1/16" THICK
1⅝"
1 3/32"
.130" DIA. HOLE
1¼"
WASHER FOR ¾" DIA TYPE UP UNITS
1⅞"
1 11/32"
130" DIA. HOLE
1½"
WASHER FOR 1" DIA. TYPE UP UNITS
2 3/16"
1 17/32"
.130" DIA. HOLE
1 13/16"
WASHER FOR 1⅜" DIA. TYPE UP UNITS
DIMENSIONS OF METAL AND BAKELITE MOUNTING WASHERS

TYPES UP, UPT AND UPE

SELENIUM RECTIFIER CAPACITORS

Type UPE are etched anode and cathode units especially engineered to prevent capacity drop due to high ripple and surge currents normally encountered in selenium rectifier circuits. *A protective series-resistor of approximately 50 ohms for a 100 ma. load, and at least 10 ohms for a 250 ma. load, should always be used to protect both the rectifier and filter capacitors.*

UPE Single Section Units

Cat. No.	Rotational Stock No.	Cap./Volts	Size—Ins. Dia. x Lgth.	List Price	Net Price
UPE 4015	XA001	40/150	¾ x 2	$1.60	**$ .96**
UPE 8015	XA002	80/150	1 x 2	1.85	**1.11**
UPE 10015	XA003	100/150	1 x 2½	2.00	**1.20**
UPE 15015	XA004	150/150	1 x 3	2.15	**1.29**
UPE 30015	XA005	300/150	1⅜ x 3	2.80	**1.68**
UPE 8020	XA006	80/200	1⅜ x 2	1.95	**1.17**
UPE 15020	XA007	150/200	1⅜ x 2½	2.80	**1.68**
UPE 4025	XA008	40/250	1 x 2	1.80	**1.08**
UPE 6030	XA009	60/300	1 x 2½	2.10	**1.26**
UPE 8030	XA010	80/300	1 x 3	2.55	**1.53**
UPE 8035	XA011	80/350	1⅜ x 2½	2.85	**1.71**
UPE 12535	XA012	125/350	1⅜ x 3	3.65	**2.19**
UPE 3050	XA013	30/500	1 x 3	2.00	**1.20**

UPE Dual Section Units

UPE 2215	XB001	20-20/150	1 x 2	$1.70	**$1.02**
UPE 4415	XB002	40-40/150	1 x 2	1.90	**1.14**
UPE 5515	XB003	50-50/150	1 x 2½	2.15	**1.29**
UPE 8415	XB004	80-40/150	1 x 2½	2.30	**1.38**
UPE 8815	XB005	80-80/150	1⅜ x 2	2.65	**1.59**
UPE 101015	XB006	100-100/150	1⅜ x 2½	3.25	**1.95**
UPE 150D15	XB007	150-150/150	1⅜ x 3	3.50	**2.10**
UPE 201515	XB008	200-150/150	1⅜ x 3⅝	3.75	**2.25**
UPE 202015	XB009	200-200/150	1⅜ x 3⅝	4.00	**2.40**
UPE 101020	XB010	100-100/200	1⅜ x 3	3.50	**2.10**
UPE 4425	XB011	40-40/250	1 x 3	2.55	**1.53**
UPE 8425	XB012	80-40/250	1⅜ x 2½	3.00	**1.80**
UPE 4430	XB013	40-40/300	1 x 3	3.00	**1.80**
UPE 8430	XB014	80-40/300	1⅜ x 2½	3.55	**2.13**

UPE Triple Section Units

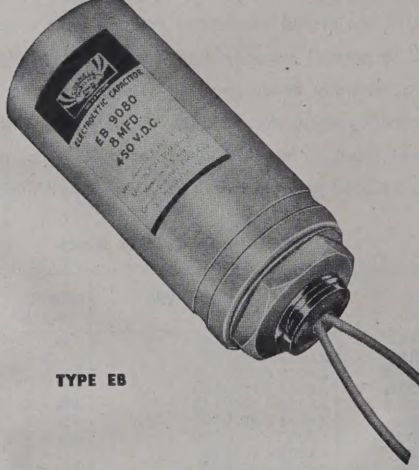
UPE 22215	XC001	20-20-20/150	1 x 2	$2.35	**$1.41**
UPE 42215	XC002	40-20-20/150	1 x 2	2.40	**1.44**
UPE 55515	XC003	50-50-50/150	1 x 3	3.00	**1.80**
UPE 88815	XC004	80-80-80/150	1⅜ x 3	3.75	**2.25**
UPE 128415	XC005	120-80-40/150	1⅜ x 3	3.70	**2.22**
UPE 2215C	XC006	20-20/150 20/25	1 x 2	2.20	**1.32**
UPE 4215C	XC007	40-20/150 20/25	1 x 2	2.30	**1.38**
UPE 4415C	XC008	40-40/150 20/25	1 x 2	2.40	**1.44**
UPE 4230C	XC009	40-20/300 20/25	1 x 2½	3.10	**1.86**
UPE 1030-6225	XC010	100/300 60-20/250	1⅜ x 4⅛	4.90	**2.94**
UPE 2030-2625	XC011	200/300 20-60/250	1⅜ x 5	5.45	**3.27**

HARDWARE FOR TYPE UP, UPT & UPE CAPACITORS

Part No.	Item	Description	List Price	Net Price
22272	Wrench for	Mtg. UP Units	$1.24	**$.74**
19891	Bakelite Washer	For ¾" UP	.07	**.04**
19884	Bakelite Washer	For 1" UP	.07	**.04**
19888	Bakelite Washer	For 1⅜" UP	.07	**.04**
19890	Metal Washer	For ¾" UP	.07	**.04**
19883	Metal Washer	For 1" UP	.07	**.04**
19887	Metal Washer	For 1⅜" UP	.07	**.04**
21368-1	Mounting Clip	For ¾" UP	.15	**.09**
21368-2	Mounting Clip	For 1" UP	.15	**.09**
21368-3	Mounting Clip	For 1⅜" UP	.15	**.09**
22153-1	Insulating Tube	For ¾" x 2" UP	.07	**.04**
22153-4	Insulating Tube	For 1" x 2" UP	.07	**.04**
22153-6	Insulating Tube	For 1" x 3" UP	.07	**.04**
22153-7	Insulating Tube	For 1⅜" x 2" UP	.07	**.04**
22153-9	Insulating Tube	For 1⅜" x 3" UP	.07	**.04**
30035	Bakelite Washer	For 1" UP in 1⅜" Hole Mtg.	.07	**.04**
30036	Metal Washer	For 1" UP in 1⅜" Hole Mtg.	.07	**.04**

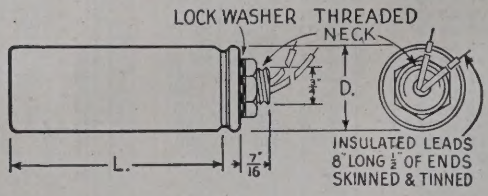
§For application data on C-D types UP, UPT and UPE Capacitors ask your jobber for C-D TELEVISION REPLACEMENT GUIDE, No. TVR7.

ROUND CAN-TYPE ELECTROLYTICS


ELECTROLYTIC CAPACITOR
EB 9080
8 MFD.
450 V.D.C.

TYPE EB

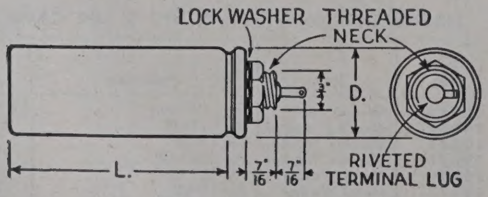
Type EB electrolytic capacitors are especially suited for replacement purposes in radio receivers to replace units of larger physical sizes. They are identical in mounting hole dimensions and general construction to Type WR capacitors except that they are provided with insulated color-coded wire leads 8″ long.


LOCK WASHER
THREADED NECK
3/4"
D.
L.
7/16"
INSULATED LEADS 8" LONG 1/2" OF ENDS SKINNED & TINNED

TYPE EB — 450 WVDC

Cat. No.	Cap. Mfd.	Size—Inches Dia. x Lgth.	List Price	Net Price
EB 9080	8	1⅜ x 4⅜	$2.20	**$1.32**
EB 9100	10	1⅜ x 4⅜	2.30	**1.38**
EB 9120	12	1½ x 4½	2.40	**1.44**
EB 9160	16	1½ x 4½	2.45	**1.47**
EB 9180	18	1½ x 4½	2.55	**1.53**
EB 9200	20	1½ x 4½	2.75	**1.65**
EB 8800	8–8	1½ x 4½	3.00	**1.80**

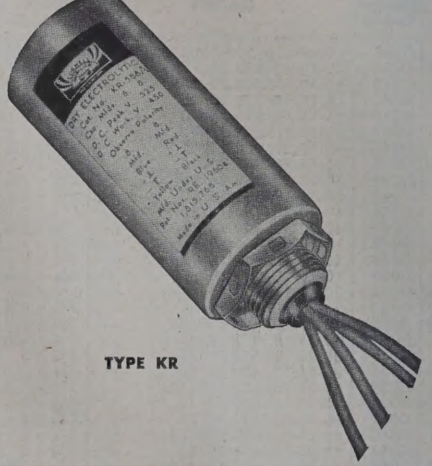
REPLACEMENTS FOR WET ELECTROLYTICS


LOCK WASHER
THREADED NECK
3/4"
D.
L.
7/16"
7/16"
RIVETED TERMINAL LUG

WET ELECTROLYTIC REPLACEMENT

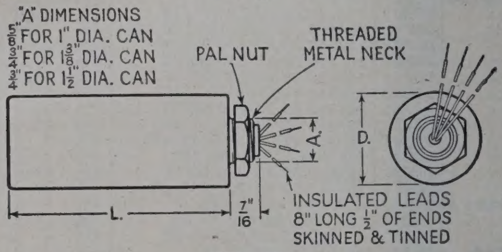
TYPE WR — 500 WVDC

Cat. No.	Cap. Mfd.	Replacement for	Size—Ins. Dia. x Lgth.	List Price	Net Price
WR 10	10	4 to 12 mfd.	1⅜ x 2½	$2.30	**$1.38**
WR 20	20	16 to 20 mfd.	1⅜ x 2½	2.70	**1.62**
WR 30	30	20 to 30 mfd.	1⅜ x 3¼	2.95	**1.77**
WR 40	40	30 to 40 mfd.	1⅜ x 3¼	3.15	**1.89**


DRY ELECTROLYTIC
Cat. No. KR
Mfd.
D.C. Peak V.
D.C. Work V.
Observe Polarity
Made in U. S. A.

TYPE KR

Types KR and KRC single-hole mounting units are compact etched foil type dry electrolytic capacitors furnished in round (inverted mounting) aluminum cans. Available in single, dual and triple sections with color-coded leads.


"A" DIMENSIONS
5/8" FOR 1" DIA. CAN
3/4" FOR 1 3/8" DIA. CAN
3/4" FOR 1 1/2" DIA. CAN
PAL NUT
THREADED METAL NECK
A
D.
L.
7/16"
INSULATED LEADS 8" LONG 1/2" OF ENDS SKINNED & TINNED

TYPE KR

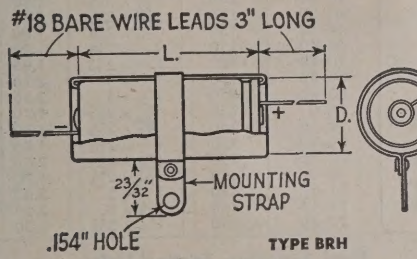
Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
KR 105	50	25	1 x 2½	$1.55	**$ .93**
KR 204	4	250	1 x 2½	1.40	**.84**
KR 208	8	250	1 x 2½	1.65	**.99**
KR 212	12	250	1 x 2½	1.75	**1.05**
KR 225	25	250	1 x 3½	2.00	**1.20**
KR 350	50	300	1⅜ x 3¾	3.15	**1.89**
KR 504	4	450	1 x 2½	2.05	**1.23**
KR 508	8	450	1 x 2½	2.20	**1.32**
KR 512A	12	450	1 x 2½	2.40	**1.44**
KR 516A	16	450	1 x 3½	2.45	**1.47**
KR 520	20	450	1⅜ x 2½	2.75	**1.65**
KR 530	30	450	1⅜ x 3½	3.00	**1.80**
KR 540	40	450	1⅜ x 4⅜	3.15	**1.89**
KR 604	4	600	1⅜ x 3½	2.95	**1.77**
KR 608	8	600	1⅜ x 4½	3.15	**1.89**
KR 616	16	600	1½ x 4½	3.75	**2.25**
Common Negative Units					
KRC 248	4–8	250	1 x 3	$2.30	**$1.38**
KRC 288	8–8	250	1 x 3	2.40	**1.44**
KRC 2888	8–8–8	250	1⅜ x 3	3.85	**2.31**
KRC 548	4–8	450	1 x 3	2.95	**1.77**
KRC 588	8–8	450	1⅜ x 2½	3.00	**1.80**
KRC 5116	16–16	450	1⅜ x 3½	3.55	**2.13**
KRC 5220	20–20	450	1⅜ x 4⅜	3.80	**2.28**
KRC 5888	8–8–8	450	1⅜ x 3½	5.00	**3.00**
Separate Section Units					
KR 248	4–8	250	1⅜ x 2¾	$2.90	**$1.74**
KR 288	8–8	250	1⅜ x 2¾	3.00	**1.80**
KR 2888	8–8–8	250	1⅜ x 3½	4.80	**2.88**
KR 2881	8–8–16	250	1⅜ x 3½	4.90	**2.94**
KR 2811	8–16–16	250	1⅜ x 3½	5.00	**3.00**
KR 548A	4–8	450	1⅜ x 3	3.70	**2.22**
KR 588A	8–8	450	1⅜ x 3	3.75	**2.25**
KR 5816A	8–16	450	1⅜ x 4½	4.10	**2.46**
KR 5888A	8–8–8	450	1⅜ x 4½	6.25	**3.75**

HIGH-CAPACITY LOW-VOLTAGE ELECTROLYTICS

TYPE BRH

TYPE FB ★

These compact tubular electrolytic capacitors have been especially designed for all applications requiring high capacity units operating in low voltage D.C. circuits. They are widely employed in portable radio power rectifying circuits, electric fence devices, telephone and D.C. timing circuits. Units are available in standard capacities and voltage ratings for all uses. Hermetically sealed in pure aluminum cans with an external cardboard insulating sleeve, these units are provided with metal mounting strap and bare wire leads for convenient wiring into any circuit assembly.



TYPE BRH

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Ins. Dia. x Lgth.	List Price	Net Price
BRH 601	100	6	⅝ x 1 1/16	$1.20	**$ .72**
BRH 6025	250	6	⅝ x 1 7/16	1.35	**.81**
BRH 605A	500	6	¾ x 1 11/16	1.55	**.93**
BRH 610	1000	6	⅞ x 2	1.90	**1.14**
BRH 620	2000	6	1 x 2½	2.30	**1.38**
BRH 121A	100	12	⅝ x 1 1/16	1.20	**.72**
BRH 1225A	250	12	¾ x 1 11/16	1.45	**.87**
BRH 125A	500	12	⅞ x 2	1.70	**1.02**
BRH 1210	1000	12	1 x 2	2.25	**1.35**
BRH 1220	2000	12	1 x 3	2.65	**1.59**
BRH 151A	100	15	⅝ x 1 1/16	1.25	**.75**
BRH 1525A	250	15	¾ x 1 11/16	1.55	**.93**
BRH 155A	500	15	⅞ x 2	1.75	**1.05**
BRH 1510	1000	15	1 x 2	2.30	**1.38**
BRH 1520	2000	15	1 x 3	3.20	**1.92**
BRH 251A	100	25	⅝ x 1 7/16	1.35	**.81**
BRH 2525A	250	25	⅞ x 1 11/16	1.70	**1.02**
BRH 255A	500	25	1 x 2	2.30	**1.38**
BRH 501	100	50	¾ x 2	1.40	**.84**
BRH 5015	150	50	⅞ x 2	1.55	**.93**
BRH 5025	250	50	1 x 2	1.75	**1.05**
BRH 5050	500	50	1 x 3	2.40	**1.44**

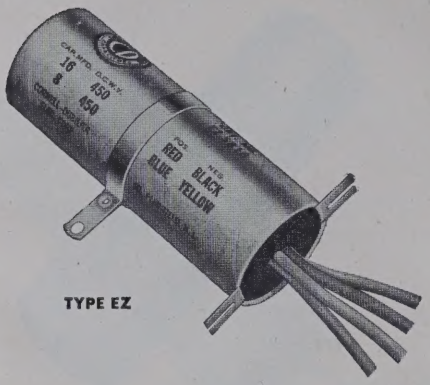
Type FB capacitors in round aluminum cans are designed for high capacity, low voltage applications, and are especially popular as replacements in motion picture sound equipment, and other low voltage circuits.

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
FB 1005	500	10	1⅜ x 2⅜	$3.10	**$1.86**
FB 1010	1000	10	1⅜ x 2⅜	3.55	**2.13**
FB 1015	1500	10	1⅜ x 2⅜	3.75	**2.25**
FB 1020	2000	10	1⅜ x 2⅝	3.95	**2.37**
FB 1030	3000	10	1⅜ x 3⅛	4.35	**2.61**
FB 1040	4000	10	1⅜ x 4⅛	4.75	**2.85**
FB 1050	5000	10	1¼ x 4⅛	5.15	**3.09**
FB 1060	6000	10	1¾ x 4⅛	5.55	**3.33**
FB 1205	500	12	1⅜ x 2⅜	3.20	**1.92**
FB 1210	1000	12	1⅜ x 2⅜	3.75	**2.25**
FB 1215	1500	12	1⅜ x 2⅝	3.95	**2.37**
FB 1220	2000	12	1⅜ x 3⅛	4.15	**2.49**
FB 1225	2500	12	1⅜ x 3⅛	4.85	**2.91**
FB 1230	3000	12	1⅜ x 4⅛	5.05	**3.03**
FB 1240	4000	12	1½ x 4⅛	5.25	**3.15**
FB 1260	6000	12	2 x 4⅛	5.50	**3.30**
FB 1505	500	15	1⅜ x 2⅜	3.25	**1.95**
FB 1510	1000	15	1⅜ x 2⅜	3.80	**2.28**
FB 1515	1500	15	1⅜ x 2⅝	4.00	**2.40**
FB 1520	2000	15	1⅜ x 3⅛	4.70	**2.82**
FB 1530	3000	15	1⅜ x 4⅛	5.15	**3.09**
FB 1540	4000	15	1½ x 4⅛	5.35	**3.21**
FB 1560	6000	15	2 x 4⅛	5.75	**3.45**
FB 1805	500	18	1⅜ x 2⅜	3.40	**2.04**
FB 1810	1000	18	1⅜ x 2⅜	3.90	**2.34**
FB 1820	2000	18	1⅜ x 3⅛	4.90	**2.94**
FB 1840	4000	18	1½ x 4⅛	5.75	**3.45**
FB 2005	500	20	1⅜ x 2⅜	3.40	**2.04**
FB 2010	1000	20	1⅜ x 3⅛	4.10	**2.46**
FB 2020	2000	20	1⅜ x 4⅛	5.20	**3.12**
FB 2040	4000	20	2 x 4⅛	5.95	**3.57**
FB 2505	500	25	1⅜ x 2⅜	3.55	**2.13**
FB 2510	1000	25	1⅜ x 3⅛	4.80	**2.88**
FB 2520	2000	25	1⅜ x 4⅛	7.20	**4.32**
FB 2530	3000	25	1¾ x 4⅛	8.95	**5.37**
FB 2540	4000	25	2 x 4⅛	6.45	**3.87**
FB 2550	5000	25	2½ x 4⅛	6.85	**4.11**
FB 3005	500	30	1⅜ x 3⅛	3.60	**2.16**
FB 3010	1000	30	1⅜ x 4⅛	4.90	**2.94**
FB 3020	2000	30	1¾ x 4⅛	7.40	**4.44**
FB 3030	3000	30	2 x 4⅛	7.95	**4.77**
FB 3040	4000	30	2½ x 4⅛	8.95	**5.37**
FB 3505	500	35	1⅜ x 3⅛	3.70	**2.22**
FB 3510	1000	35	1⅜ x 4⅛	5.00	**3.00**
FB 3520	2000	35	1¾ x 4⅛	8.00	**4.80**
FB 3530	3000	35	2 x 4⅛	9.50	**5.70**
FB 3540	4000	35	2½ x 4⅛	10.00	**6.00**
FB 4005	500	40	1⅜ x 3⅛	3.80	**2.28**
FB 4010	1000	40	1⅜ x 4⅛	6.50	**3.90**
FB 4020	2000	40	1¾ x 4⅛	9.00	**5.40**
FB 4030	3000	40	2 x 4⅛	10.50	**6.30**
FB 4040	4000	40	2½ x 4⅛	11.50	**6.90**
FB 5005	500	50	1⅜ x 3⅛	3.90	**2.34**
FB 5010	1000	50	1⅜ x 4⅛	8.00	**4.80**
FB 5020	2000	50	1¾ x 4⅛	10.00	**6.00**
FB 5030	3000	50	2 x 4⅛	11.50	**6.90**
FB 5040	4000	50	2½ x 4⅛	12.50	**7.50**

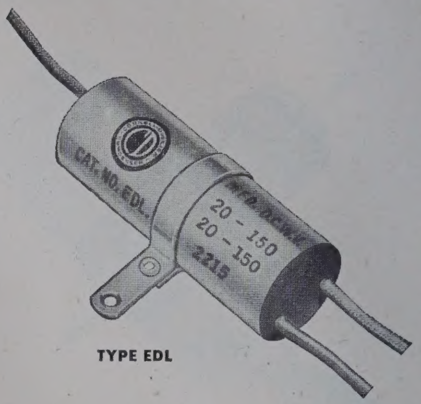
★When JAN-C-62 units must be supplied, order according to specific CE type designations.

CORNELL DUBILIER

CARDBOARD TUBE ELECTROLYTICS



TYPE EZ



TYPE EDL

Type EZ Capacitors are especially popular for radio servicing where low cost replacements are required. They are designed with mounting feet for upright mounting to replace inverted can-type units, spade-lug units.

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EZ 825	8	250	⅞ x 2½	$1.15	**$ .69**
EZ 1625	16	250	1 x 2¾	1.30	**.78**
EZ 2425	24	250	1 1/16 x 2¾	1.40	**.84**
EZ 835	8	350	15/16 x 2½	1.20	**.72**
EZ 1235	12	350	15/16 x 2¾	1.30	**.78**
EZ 1635	16	350	1 x 2¾	1.40	**.84**
EZ 2435	24	350	1 x 3½	1.55	**.93**
EZ 845	8	450	⅞ x 2¾	1.25	**.75**
EZ 1245	12	450	1 x 2¾	1.35	**.81**
EZ 1645	16	450	1 1/16 x 2¾	1.40	**.84**
EZ 3045	30	450	1¼ x 3½	1.70	**1.02**

Dual Common Negative Units

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EZ 2215	20–20	150	1 x 2½	$1.65	**$ .99**
EZ 3315	30–30	150	1 1/16 x 2¾	1.80	**1.08**
EZ 5515	50–50	150	1 1/16 x 3½	2.10	**1.26**
EZ 8825	8–8	250	1 x 2¾	1.60	**.96**
EZ 8835	8–8	350	15/16 x 3½	1.65	**.99**
EZ 8845	8–8	450	1 x 3½	1.70	**1.02**

Dual Separate Section Units

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EZ 288	8–8	250	1⅜ x 2¾	$2.00	**$1.20**
EZ 2116	16–16	250	1⅜ x 3¾	2.20	**1.32**
EZ 388	8–8	350	1⅜ x 3	2.05	**1.23**
EZ 3112	12–12	350	1⅜ x 3¾	2.20	**1.32**
EZ 3116	16–16	350	1⅜ x 4¾	2.70	**1.62**
EZ 588	8–8	450	1⅜ x 3	2.15	**1.29**
EZ 5816	8–16	450	1⅜ x 3¾	2.50	**1.50**
EZ 5112	12–12	450	1⅜ x 3¾	2.40	**1.44**
EZ 5116	16–16	450	1⅜ x 4¾	2.80	**1.68**

Triple Common Negative Units

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EZ 2215C	20–20/20	150/25	1 x 3	$2.05	**$1.23**
EZ 3215C	30–20/20	150/25	1 x 3	2.10	**1.26**
EZ 3115C	30–10/20	150/25	1 x 3	2.05	**1.23**
EZ 4215C	40–20/20	150/25	1 1/16 x 3	2.15	**1.29**
EZ 32115	30–20/10	150	1⅛ x 2¾	2.15	**1.29**
EZ 42215	40–20/20	150	1⅛ x 3	2.25	**1.35**
EZ 1A135C	15–10/20	350/25	1⅛ x 3½	2.35	**1.41**
EZ 2143C	20–10/20	400/350/25	1⅜ x 3⅛	2.40	**1.44**

Triple Separate Section Units*

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EZ 8825S	8–8/20	250/25	1⅜ x 3	$2.50	**$1.50**
EZ 8835S	8–8/20	350/25	1⅜ x 3¾	2.55	**1.53**
EZ 12D35S	12–12/20	350/25	1⅜ x 3¾	2.70	**1.62**
EZ 16D35S	16–16/20	350/25	1⅜ x 4¾	3.20	**1.92**
EZ 8845S	8–8/20	450/25	1⅜ x 3¾	2.65	**1.59**
EZ 12D45S	12–12/20	450/25	1⅜ x 4¾	2.90	**1.74**
EZ 88845	8–8–8	450	1⅜ x 3¾	2.85	**1.71**

Quadruple Common Negative Units

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EZ 8815CC	8–8/10–10	150/25	1 x 2¾	$2.50	**$1.50**
EZ 3215CC	30–20/10–10	150/25	1 3/16 x 2¾	2.70	**1.62**
EZ 42215C	40–20–20/20	150/25	1 3/16 x 3	2.85	**1.71**
EZ 53215C	50–30–20/20	150/25	1 3/16 x 3½	3.05	**1.83**
EZ 44315C	40–40–30/20	150/25	1 3/16 x 3½	3.10	**1.86**
EZ 55515C	50–50–50/20	150/25	1⅜ x 3½	3.45	**2.07**

***Only first section is separate—remainder common neg.**

Type EDL Capacitors are dual and triple common negative units in cardboard tube containers with wax-filled ends. Capacities, voltages and polarity of the leads are clearly defined by color coding stamped on the tube casing.

Dual Common Negative Units

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EDL 2202	20–20	25	⅝ x 2¼	$1.40	**$ .84**
EDL 115	10–10	50	⅝ x 2¼	1.40	**.84**
EDL 2115	20–10	150	13/16 x 2¼	1.55	**.93**
EDL 2215	20–20	150	⅞ x 2¼	1.65	**.99**
EDL 3215	30–20	150	⅞ x 2½	1.70	**1.02**
EDL 3315	30–30	150	⅞ x 2½	1.80	**1.08**
EDL 4215	40–20	150	⅞ x 2½	1.75	**1.05**
EDL 4315	40–30	150	15/16 x 2¾	1.80	**1.08**
EDL 4415	40–40	150	1 x 2¾	1.85	**1.11**
EDL 5315	50–30	150	1 x 2¾	1.95	**1.17**
EDL 5515	50–50	150	1 x 3	2.10	**1.26**
EDL 8415	80–40	150	1 1/16 x 3	2.25	**1.35**
EDL 16825	16–8	250	13/16 x 2½	1.70	**1.02**
EDL 16D25	16–16	250	⅞ x 2½	1.80	**1.08**
EDL 2225	20–20	250	1 x 2½	1.85	**1.11**
EDL 7V225	75–20	250	1 1/16 x 3½	2.60	**1.56**
EDL 8D45	8–8	450	15/16 x 2½	1.70	**1.02**
EDL 16845	16–8	450	1 x 3	2.00	**1.20**
EDL 16D45	16–16	450	1⅛ x 3	2.25	**1.35**
EDL 2245	20–20	450	1 3/16 x 3¼	2.50	**1.50**

Dual Separate Section Units

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EDL 2215SS	20–20	150	15/16 x 2⅝	$1.65	**$ .99**
EDL 3315SS	30–30	150	1 x 2⅝	1.80	**1.08**
EDL 4215SS	40–20	150	1 x 2⅝	1.75	**1.05**
EDL 4415SS	40–40	150	1 1/16 x 2⅞	1.85	**1.11**
EDL 5315SS	50–30	150	1 1/16 x 2⅞	1.95	**1.17**
EDL 5515SS	50–50	150	1⅛ x 3⅛	2.10	**1.26**
EDL 8415SS	80–40	150	1 3/16 x 3⅜	2.25	**1.35**

Triple Common Negative Units

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EDL 22215	20–20–20	150	1 5/16 x 2½	$2.20	**$1.32**
EDL 32V215	30–25–20	150	⅞ x 3	2.25	**1.35**
EDL 42215	40–20–20	150	1 x 2¾	2.25	**1.35**
EDL 43215	40–30–20	150	1 x 3	2.35	**1.41**
EDL 44215	40–40–20	150	1 x 3	2.35	**1.41**
EDL 44415	40–40–40	150	1 1/16 x 3	2.45	**1.47**
EDL 2215C	20–20, 20	150, 25	⅞ x 2½	2.05	**1.23**
EDL 3315C	30–30, 20	150, 25	15/16 x 2½	2.20	**1.32**
EDL 4215C	40–20, 20	150, 25	15/16 x 2½	2.15	**1.29**
EDL 4415C	40–40, 20	150, 25	1 x 2¾	2.25	**1.35**
EDL 5315C	50–30, 20	150, 25	1 x 2¾	2.35	**1.41**
EDL 5515C	50–50, 20	150, 25	1 x 3	2.50	**1.50**
EDL 8415C	80–40, 20	150, 25	1 1/16 x 3	2.65	**1.59**
EDL 3215C10	30–20, 100	150, 25	1 x 2¾	2.35	**1.41**
EDL 5315X20	50–30, 200	150, 10	1 x 3	2.55	**1.53**
EDL 5315C10	50–30, 100	150, 25	1 x 3	2.55	**1.53**
EDL 8215C10	80–20, 100	150, 25	1⅛ x 3	2.75	**1.65**
EDL 2225C	20–20, 20	250, 25	15/16 x 2¾	2.25	**1.35**
EDL 4225C	40–20, 20	250, 25	1 x 3	2.55	**1.53**
EDL 4425C	40–40, 20	250, 25	1⅛ x 3	2.90	**1.74**
EDL 7V4125	75–40–10	250	1¼ x 3½	3.45	**2.07**
EDL 16T45	16–16–16	450	1⅜ x 3	3.10	**1.86**
EDL 2245C	20–20, 20	450, 25	1 3/16 x 3¼	2.90	**1.74**

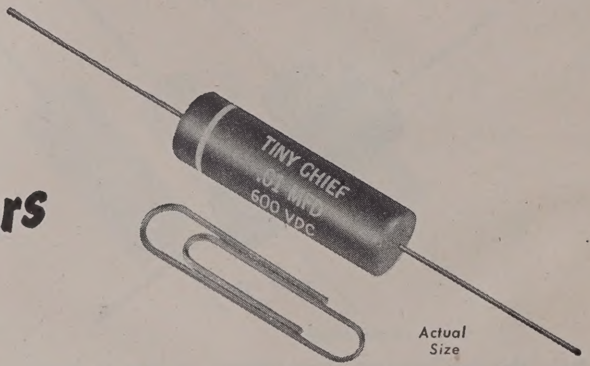
Quadruple Common Negative Units

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EDL 33215C	30–30–20, 20	150, 25	1 x 2¾	$2.90	**$1.74**
EDL 22245C	20–20–20, 20	450, 25	1⅜ x 3¾	4.05	**2.43**

CORNELL DUBILIER

"TINY-CHIEF" MOULDED PLASTIC CAPACITORS

The New Smallest-Size All-Purpose Moulded Tubulars



Actual Size

Cornell-Dubilier "TINY-CHIEFS" are the roughest, toughest little capacitors ever offered servicemen for all types of television, auto radios, and other compact electronic equipment. They are moulded in an extra hard thermosetting plastic which has all the qualities and electrical characteristics required for long lasting all-around satisfaction. Tested at twice their specified voltage rating, they have been especially designed to maintain stable capacity values under severe conditions of temperature, humidity, and physical stresses. Bare wire leads are firmly connected to the capacitor section, imbedded in the hard plastic casing and will not pull out.

Cat. No.	Cap. Mfd.	Size—Inches Dia. & Length	List Price	Net Price
		200 V. D.C.		
PJ 2S2	.02	5/16 x 1	$.25	**$.15**
PJ 2S5	.05	3/8 x 1 1/4	.25	**.15**
PJ 2P1	.1	7/16 x 1 1/4	.35	**.21**
PJ 2P25	.25	5/8 x 1 7/8	.45	**.27**
PJ 2P5	.5	5/8 x 1 7/8	.60	**.36**
PJ 2W1	1.0	3/4 x 2 1/4	.90	**.54**
		400 V. D.C.		
PJ 4S1	.01	5/16 x 1	.25	**.15**
PJ 4S2	.02	3/8 x 1 1/4	.25	**.15**
PJ 4S5	.05	7/16 x 1 1/4	.30	**.19**
PJ 4P1	.1	1/2 x 1 1/2	.35	**.21**
PJ 4P25	.25	5/8 x 1 7/8	.45	**.27**
PJ 4P5	.5	3/4 x 2 1/4	.60	**.36**
PJ 4W1	1.0	1 x 2 1/8	.90	**.54**
		600 V. D.C.		
PJ 6T5	.0005	5/16 x 1	.25	**.15**
PJ 6D1	.001	5/16 x 1	.25	**.15**
PJ 6D2	.002	5/16 x 1	.25	**.15**
PJ 6D3	.003	5/16 x 1	.25	**.15**
PJ 6D4	.004	5/16 x 1	.25	**.15**
PJ 6D5	.005	5/16 x 1	.25	**.15**
PJ 6D6	.006	3/8 x 1 1/4	.25	**.15**
PJ 6S1	.01	3/8 x 1 1/4	.30	**.18**
PJ 6S15	.015	3/8 x 1 1/4	.30	**.18**
PJ 6S2	.02	7/16 x 1 1/4	.30	**.18**
PJ 6S25	.025	7/16 x 1 1/4	.30	**.18**
PJ 6S3	.03	7/16 x 1 1/4	.35	**.21**
PJ 6S4	.04	1/2 x 1 1/2	.35	**.21**
PJ 6S5	.05	1/2 x 1 1/2	.40	**.24**
PJ 6P1	.1	5/8 x 1 7/8	.45	**.27**
PJ 6P25	.25	3/4 x 2 1/4	.55	**.33**
PJ 6P5	.5	1 x 2 1/8	.80	**.48**
		1600 V. D.C.		
PJ 16D1	.001	3/8 x 1 1/4	.65	**.39**
PJ 16D2	.002	3/8 x 1 1/4	.65	**.39**
PJ 16D3	.003	3/8 x 1 1/4	.65	**.39**
PJ 16D4	.004	3/8 x 1 1/4	.65	**.39**
PJ 16D5	.005	3/8 x 1 1/4	.65	**.39**
PJ 16D55	.0055	7/16 x 1 1/4	.65	**.39**
PJ 16D6	.006	7/16 x 1 1/4	.65	**.39**
PJ 16D7	.007	7/16 x 1 1/4	.65	**.39**
PJ 16D75	.0075	7/16 x 1 1/4	.65	**.39**
PJ 16D8	.008	7/16 x 1 1/4	.65	**.39**
PJ 16S1	.01	1/2 x 1 1/2	.70	**.42**
PJ 16S15	.015	1/2 x 1 1/2	.70	**.42**
PJ 16S2	.02	5/8 x 1 7/8	.70	**.42**
PJ 16S3	.03	5/8 x 1 7/8	.70	**.42**
PJ 16S4	.04	5/8 x 1 7/8	.70	**.42**

FEATURES OF C-D "TINY-CHIEFS"

• MECHANICAL •

Section and leads embedded in a red-colored solid thermosetting plastic.

A plastic material which has a cured tensile strength of 3,500 pounds per square inch. It will not soften on heating even up to 400°F.

Low pressure forming does not injure sections.

Leads held in exact center during embedment.

Leads tightly held and sealed by plastic housing.

Fast curing plastic does not expose section to a long cycle of high temperature.

No end fill to melt.

Each group size held to exact dimensions.

Tinned copper wire leads readily soldered.

Plastic will not melt when touched by soldering iron.

No surface wax.

• ELECTRICAL •

High quality specially developed materials provide long service life.

Cured plastic body provides excellent electrical insulation.

Body seal provides long humidity protection.

Leads soldered directly to foils of non-inductive section.

Lead size as below:

Capacitor Diameter	Lead Wire Size
5/16 - 3/8	#22
7/16 - 1/2	#20
5/8 - 1	#18

Temperature range —40°C. to +85°C.

Specified test voltage is two times rating. Power factor ½% - 1%.

Insulation resistance 2,000 megohm mfd. or 10,000 per unit, whichever is lower.

STANDARD CAPACITY TOLERANCES

Mfd.	Tolerance
1.0	+30% — 10%
.1 to .9	+40% — 10%
.01 to .09	+40% — 20%
.0005 to .009	+60% — 20%

Other tolerances available ±20% and ±10%.

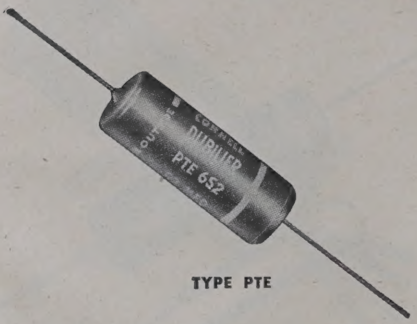
Permanence of capacity excellent due to solid plastic embedment.

New plastic will not track on arcing with excessive voltage.

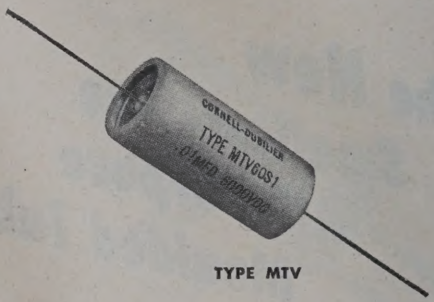
Capacitor stamping indicates capacity, voltage, and outside foil.

BLUE CUB MOLDED TUBULAR—HV TELEVISION

PHOTOFLASH ELECTROLYTIC



TYPE PTE



TYPE MTV

PTE—"Blue Cub" moulded plastic tubulars, are Vikane* impregnated to withstand high voltage breakdown at low power factor, humidity and temperatures up to 300° F.

Cat. No.	Cap. Mfd.	Size—Inches Dia. x Length	List Price	Net Price
		400 V. D.C.		
PTE 4S1	.01	11/32 x 1 1/16	$.25	**$.15**
PTE 4S2	.02	7/16 x 1 5/16	.25	**.15**
PTE 4S22	.022	7/16 x 1⅜	.25	**.15**
PTE 4S47	.047	½ x 1⅜	.30	**.18**
PTE 4S5	.05	½ x 1 5/16	.30	**.18**
PTE 4S68	.068	9/16 x 1 9/16	.35	**.21**
PTE 4P1	.1	9/16 x 1 9/16	.35	**.21**
PTE 4P15	.15	11/16 x 1 15/16	.35	**.21**
PTE 4P22	.22	11/16 x 1 15/16	.40	**.24**
PTE 4P25	.25	11/16 x 1 15/16	.40	**.24**
		600 V. D.C.		
PTE 6T25	.00025	11/32 x 1⅛	.25	**.15**
PTE 6T5	.0005	11/32 x 1⅛	.25	**.15**
PTE 6D1	.001	11/32 x 1 1/16	.25	**.15**
PTE 6D15	.0015	11/32 x 1⅛	.25	**.15**
PTE 6D2	.002	11/32 x 1 1/16	.25	**.15**
PTE 6D22	.0022	11/32 x 1⅛	.25	**.15**
PTE 6D3	.003	11/32 x 1 1/16	.25	**.15**
PTE 6D33	.0033	11/32 x 1⅛	.25	**.15**
PTE 6D4	.004	11/32 x 1 1/16	.25	**.15**
PTE 6D47	.0047	11/32 x 1⅛	.25	**.15**
PTE 6D5	.005	11/32 x 1 1/16	.25	**.15**
PTE 6D6	.006	7/16 x 1 5/16	.25	**.15**
PTE 6D68	.0068	7/16 x 1⅜	.30	**.18**
PTE 6S1	.01	7/16 x 1 5/16	.30	**.18**
PTE 6S15	.015	7/16 x 1 5/16	.30	**.18**
PTE 6S2	.02	½ x 1 5/16	.30	**.18**
PTE 6S22	.022	½ x 1⅜	.30	**.18**
PTE 6S3	.03	9/16 x 1 9/16	.35	**.21**
PTE 6S4	.04	9/16 x 1 9/16	.35	**.21**
PTE 6S47	.047	9/16 x 1 9/16	.40	**.24**
PTE 6S5	.05	9/16 x 1 9/16	.40	**.24**
PTE 6S6	.06	11/16 x 1 15/16	.40	**.24**
PTE 6S68	.068	11/16 x 1 15/16	.40	**.24**
PTE 6P1	.1	11/16 x 1 15/16	.45	**.27**
PTE 6P25	.25	⅞ x 2 1/16	.55	**.33**
		1600 V. D.C.		
PTE 16D1	.001	7/16 x 1⅜	.65	**.39**
PTE 16D2	.002	7/16 x 1⅜	.65	**.39**
PTE 16D22	.0022	7/16 x 1⅜	.65	**.39**
PTE 16D3	.003	7/16 x 1⅜	.65	**.39**
PTE 16D33	.0033	½ x 1⅜	.65	**.39**
PTE 16D4	.004	½ x 1⅜	.65	**.39**
PTE 16D47	.0047	½ x 1⅜	.65	**.39**
PTE 16D5	.005	½ x 1⅜	.65	**.39**
PTE 16D55	.0055	½ x 1⅜	.65	**.39**
PTE 16D6	.006	9/16 x 1 9/16	.65	**.39**
PTE 16D68	.0068	9/16 x 1 9/16	.65	**.39**
PTE 16D7	.007	9/16 x 1 9/16	.65	**.39**
PTE 16D75	.0075	9/16 x 1 9/16	.65	**.39**
PTE 16D8	.008	9/16 x 1 9/16	.65	**.39**
PTE 16S1	.01	9/16 x 1 9/16	.70	**.42**
PTE 16S15	.015	9/16 x 1 9/16	.70	**.42**
PTE 16S2	.02	11/16 x 1 15/16	.70	**.42**
PTE 16S25	.025	11/16 x 1 15/16	.70	**.42**
PTE 16S3	.03	11/16 x 1 15/16	.70	**.42**
PTE 16S4	.04	11/16 x 1 15/16	.70	**.42**
		6000 V. D.C.		
PTE 60T5	.0005	11/16 x 1 15/16	1.35	**.81**
PTE 60D1	.001	11/16 x 1 15/16	1.35	**.81**
PTE 60D5	.005	11/16 x 1 15/16	1.35	**.81**
		10000 V. D.C.		
PTE 100T5	.0005	11/16 x 1 15/16	1.50	**.90**

*Reg. U. S. Pat. Off.

Type MTV Capacitors are impregnated and filled with oil in hermetically sealed metal tube containers and provided with an insulating cardboard sleeve cover. They are small size units especially designed for use in assemblies where high temperatures are encountered, such as television receivers and similar high voltage equipment.

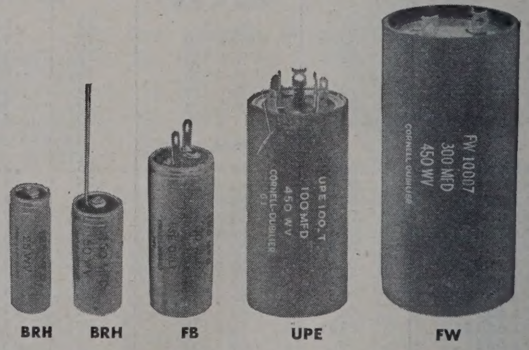
Cat. No.	Cap. Mfd.	Size—Inches Dia. x Length	List Price	Net Price
		6000 V. D.C.		
MTV 60T5	.0005	1 1/16 x 1 15/16	$2.35	**$1.41**
MTV 60D1	.001	1 1/16 x 1 15/16	2.35	**1.41**
MTV 60D5	.005	1 1/16 x 2 1/16	2.35	**1.41**
MTV 60S1	.01	1 1/16 x 2 7/16	2.35	**1.41**
MTV 60S2	.02	1 7/16 x 2 7/16	2.45	**1.47**
MTV 60S3	.03	1 7/16 x 2 13/16	2.60	**1.56**
MTV 60S5	.05	1 7/16 x 3 7/16	2.75	**1.65**

Mounting Clamps add 15¢ to list.

HEAVY WAXED PAPER TUBULAR CAPACITORS

GTV 60S1	.01	1 1/16 x 2⅛	$1.40	**$.84**
GTV 60S3	.03	1 1/16 x 2⅝	1.50	**.90**
GTV 60S5	.05	1 3/16 x 3⅛	1.60	**.96**

ELECTROLYTIC PHOTOFLASH CAPACITORS



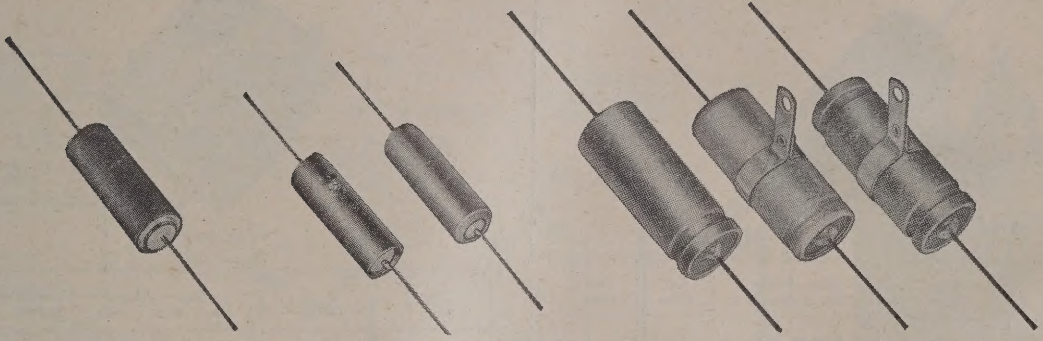
Cat. No.	Cap. Mfd.	Volts D.C.	Size—Inches Dia. x Length	List Price	Net Price
UPE 100T	100 (2 x 50)	450	1⅜" x 3" (1 17/32" x 3¼" over CB tube)	$5.50	**$3.30**
FB 10063	200	450	2 1/16" x 4½"	6.85	**4.11**
FW 10005	200	500	2 1/16" x 4 7/16"	10.50	**6.30**
FW 10007	300	450	2 1/16" x 4 7/16"	10.50	**6.30**
FWS 10000	300	450	2 1/16" x 4 7/16"	11.50	**6.90**
FA 10300	400	450	2 9/16" x 4½" (over CB tube)	17.95	**10.77**

LOW VOLTAGE PHOTOFLASH CAPACITORS

BRE 10001	40	150	¾" x 1 7/16"	$1.35	**$ .81**
FB 10077	100	30	1" x 2½"	3.35	**2.01**
BRH 10062	125	25	⅝" x 1 15/16"	1.35	**.81**
BRH 10067	150	50	¾" x 1 11/16"	1.35	**.81**
BRH 2525A	250	25	⅞" x 1 11/16"	1.70	**1.02**

CORNELL-DUBILIER

SMALL SIZE METALIZED-PAPER CAPACITORS



"PUP" "SEALPUPS" "METAPUPS"

Cornell-Dubilier improved, self-healing, metalized paper capacitors have better electrical characteristics and extra long service life. "PUP" units are light, compact with an operating temperature range of —40° to 60° C. without derating. Bare wire leads securely anchored in metal end-caps, wax-impregnated and dip-sealed against humidity. All units are extended foil—non-inductive wound for low impedance at high frequencies, have high insulation resistance, low power factor and small capacity change with temperature and life.

"METAPUPS" are one piece metal tubular cased, pressure sealed by spin-over on synthetic rubber gaskets. The operating temperature range of these units is —55° to 95° C. For temperatures higher than 60° C. voltage derating is necessary.

"SEALPUPS" are the highest quality metalized paper capacitor design for smallest size and positive seal against moisture. They are especially recommended for high grade military and commercial equipment. Temperature range —55° to +95° C.

For further data on C-D metalized capacitors, write for Bulletins 142-3-4.

"PUP" METAL END-CAP CARDBOARD TUBULARS

Cat. No.	Cap. Mfd.	Size—Inches Diam. x Length	List Price	Net Price
		200 V. D.C.		
MP 2S1	.01	3/8 x 5/8	$ .60	**$ .36**
MP 2S2	.02	3/8 x 5/8	.60	**.36**
MP 2S3	.03	3/8 x 5/8	.60	**.36**
MP 2S5	.05	3/8 x 5/8	.65	**.39**
MP 2P1	.1	3/8 x 5/8	.70	**.42**
MP 2P25	.25	15/32 x 5/8	.90	**.54**
MP 2P5	.5	15/32 x 1 1/8	1.05	**.63**
MP 2W1	1.0	9/16 x 1 1/8	1.30	**.78**
MP 2W2	2.0	5/8 x 1 5/8	1.80	**1.08**
		400 V. D.C.		
MP 4S1	.01	3/8 x 5/8	.65	**.39**
MP 4S2	.02	3/8 x 5/8	.65	**.39**
MP 4S3	.03	3/8 x 5/8	.65	**.39**
MP 4S5	.05	15/32 x 5/8	.70	**.42**
MP 4P1	.1	15/32 x 1 1/8	.80	**.48**
MP 4P25	.25	9/16 x 1 1/8	1.00	**.60**
MP 4P5	.5	5/8 x 1 5/8	1.15	**.69**
MP 4W1	1.0	23/32 x 2 1/8	1.60	**.96**
		600 V. D.C.		
MP 6S1	.01	3/8 x 5/8	.70	**.42**
MP 6S2	.02	3/8 x 5/8	.70	**.42**
MP 6S3	.03	15/32 x 5/8	.80	**.48**
MP 6S5	.05	15/32 x 5/8	.80	**.48**
MP 6P1	.1	15/32 x 1 1/8	.90	**.54**
MP 6P25	.25	5/8 x 1 1/8	1.10	**.66**
MP 6P5	.5	23/32 x 1 5/8	1.45	**.87**
MP 6W1	1.0	23/32 x 2 1/8	1.80	**1.08**

"METAPUP" ONE-PIECE METAL TUBULARS

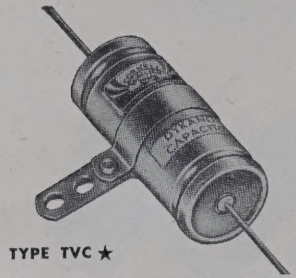
Cat. No.	Cap. Mfd.	Size—Inches Diam. x Length	List Price	Net Price
		150 V. D.C.		
MTM 1W3	3.0	3/4 x 1 15/16	$3.40	**$2.04**
MTM 1W4	4.0	13/16 x 1 15/16	4.35	**2.61**
MTM 1W6	6.0	1 x 1 15/16	5.30	**3.18**
		200 V. D.C.		
MTM 2S5	.05	3/8 x 15/16	1.40	**.84**
MTM 2P1	.1	7/16 x 15/16	1.45	**.87**
MTM 2P25	.25	1/2 x 15/16	1.60	**.96**
MTM 2P5	.5	1/2 x 1 1/4	1.70	**1.02**
MTM 2W1	1.0	5/8 x 1 7/16	2.10	**1.26**
MTM 2W2	2.0	5/8 x 1 15/16	2.60	**.56**
		400 V. D.C.		
MTM 4S3	.03	3/8 x 15/16	1.40	**.84**
MTM 4S5	.05	7/16 x 15/16	1.45	**.87**
MTM 4P1	.1	7/16 x 1 1/4	1.60	**.96**
MTM 4P25	.25	5/8 x 1 1/4	1.80	**1.08**
MTM 4P5	.5	5/8 x 1 15/16	2.00	**1.20**
MTM 4W1	1.0	3/4 x 2 7/16	2.50	**1.50**
MTM 4W2	2.0	1 x 2 7/16	3.60	**2.16**
		600 V. D.C.		
MTM 6S1	.01	3/8 x 15/16	1.40	**.84**
MTM 6S2	.02	7/16 x 15/16	1.45	**.87**
MTM 6S3	.03	7/16 x 15/16	1.50	**.90**
MTM 6S5	.05	1/2 x 15/16	1.55	**.93**
MTM 6P1	.1	1/2 x 1 7/16	1.70	**1.02**
MTM 6P25	.25	5/8 x 1 9/16	2.00	**1.20**
MTM 6P5	.5	3/4 x 1 15/16	2.40	**1.44**
MTM 6W1	1.0	13/16 x 2 7/16	3.00	**1.80**
MTM 6W2	2.0	1 1/4 x 2 7/16	4.00	**2.40**

"SEALPUP" GLASS-METAL END-SEALED TUBULARS

Cat. No.	Cap. Mfd.	Size—Inches Diam. x Length	List Price	Net Price
		200 V. D.C.		
MTW 2S1	.01	.175 x 11/16	$2.65	**$1.59**
MTW 2S2	.02	.235 x 11/16	2.70	**1.62**
MTW 2S4	.04	.235 x 11/16	2.80	**1.68**
MTW 2S5	.05	.235 x 11/16	2.85	**1.71**
MTW 2P1	.1	.312 x 11/16	2.95	**1.77**
MTW 2P2	.2	.312 x 1	3.15	**1.89**
MTW 2P25	.25	.312 x 1	3.40	**2.04**
MTW 2P5	.5	.400 x 1	4.00	**2.40**
MTW 2W1	1.0	.562 x 1 3/16	4.70	**2.82**
MTW 2W15	1.5	.562 x 1 11/16	5.40	**3.24**
MTW 2W2	2.0	.562 x 1 11/16	6.80	**4.08**
		400 V. D.C.		
MTW 4S1	.01	.235 x 11/16	2.85	**1.71**
MTW 4S2	.02	.235 x 11/16	2.90	**1.74**
MTW 4S4	.04	.312 x 11/16	3.00	**1.80**
MTW 4S5	.05	.400 x 11/16	3.10	**1.86**
MTW 4P1	.1	.400 x 1	3.30	**1.93**
MTW 4P2	.2	.500 x 1	3.70	**2.22**
MTW 4P25	.25	.562 x 1	3.95	**2.37**
MTW 4P5	.5	.562 x 1 11/16	4.85	**2.91**
MTW 4W1	1.0	.670 x 2 3/16	5.65	**3.39**
		600 V. D.C.		
MTW 6S1	.01	.312 x 11/16	2.90	**1.74**
MTW 6S2	.02	.312 x 11/16	2.95	**1.77**
MTW 6S4	.04	.400 x 11/16	3.15	**1.89**
MTW 6S5	.05	.400 x 11/16	3.25	**1.95**
MTW 6P1	.1	.500 x 1 3/16	3.65	**2.19**
MTW 6P2	.2	.670 x 1 5/16	4.00	**2.40**
MTW 6P25	.25	.670 x 1 5/16	4.50	**2.70**
MTW 6P5	.5	.750 x 1 11/16	5.85	**3.51**
MTW 6W1	1.0	.750 x 2 3/16	6.70	**4.02**

CORNELL DUBILIER

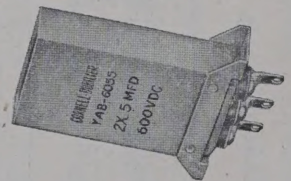
METAL CASED DYKANOL PAPER CAPACITORS



TYPE TVC ★

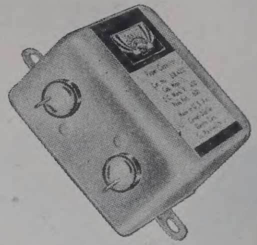
Cat. No.	Cap. Mfd.	Size—Inches Dia. x Length	List Price	Net Price
		400 V. D.C.		
TVC 4D5	.005	7/16 x 1 1/8	$1.00	**$ .60**
TVC 4S1	.01	7/16 x 1 1/8	1.00	**.60**
TVC 4S15	.015	7/16 x 1 1/8	1.10	**.66**
TVC 4S2	.02	7/16 x 1 1/4	1.10	**.66**
TVC 4S3	.03	7/16 x 1 3/8	1.15	**.69**
TVC 4S4	.04	17/32 x 1 1/4	1.15	**.69**
TVC 4S5	.05	17/32 x 1 3/8	1.15	**.69**
TVC 4P1	.1	5/8 x 1 11/16	1.30	**.78**
TVC 4P25	.25	3/4 x 2 1/16	1.60	**.96**
TVC 4P5	.5	1 x 2 1/16	1.90	**1.14**
		600 V. D.C.		
TVC 6D5	.005	7/16 x 1 1/8	1.05	**.63**
TVC 6S1	.01	7/16 x 1 1/8	1.05	**.63**
TVC 6S15	.015	7/16 x 1 1/8	1.10	**.66**
TVC 6S2	.02	7/16 x 1 1/8	1.15	**.69**
TVC 6S3	.03	17/32 x 1 1/8	1.25	**.75**
TVC 6S4	.04	9/16 x 1 1/8	1.25	**.75**
TVC 6S5	.05	9/16 x 1 1/4	1.25	**.75**
TVC 6P1	.1	5/8 x 1 1/2	1.40	**.84**
TVC 6P25	.25	3/4 x 1 13/16	1.90	**1.14**
TVC 6P5	.5	1 x 1 13/16	2.45	**1.47**
		1000 V. D.C.		
TVC 10D5	.005	17/32 x 1 1/8	1.25	**.75**
TVC 10S1	.01	17/32 x 1 1/8	1.25	**.75**
TVC 10S15	.015	17/32 x 1 1/8	1.35	**.81**
TVC 10S2	.02	17/32 x 1 1/4	1.35	**.81**
TVC 10S3	.03	17/32 x 1 3/8	1.35	**.81**
TVC 10S4	.04	17/32 x 1 1/2	1.35	**.81**
TVC 10S5	.05	9/16 x 1 5/8	1.45	**.87**
TVC 10P1	.1	5/8 x 2 1/16	1.65	**.99**
OIL-FILLED UNITS		**1600 V. D.C.**		
TVC 16D5	.005	5/8 x 1 5/16	1.35	**.81**
TVC 16S1	.01	5/8 x 1 5/16	1.35	**.81**
TVC 16S15	.015	5/8 x 1 9/16	1.40	**.84**
TVC 16S2	.02	5/8 x 1 11/16	1.45	**.87**
TVC 16S3	.03	5/8 x 2 1/16	1.45	**.87**
TVC 16S4	.04	3/4 x 1 13/16	1.45	**.87**
TVC 16S5	.05	7/8 x 1 11/16	1.55	**.93**

For units provided with insulating sleeve over metal tube add 10c to list price. When ordering add "–6" to Cat. No. (Example TVC 4D5-6).



TYPE YAB ★

Cat. No.	Cap. Mfd.	Size—Inches L. x W. x H.	List Price	Net Price
		600 V. D.C. Work.		
WAT or **WAB 6005**	.05	1 5/16 x 11/16 x 1 7/16	$3.85	**$2.31**
WAT or **WAB 6010**	.1	1 5/16 x 11/16 x 1 7/16	4.15	**2.49**
WAT or **WAB 6025**	.25	1 5/16 x 11/16 x 1 11/16	4.40	**2.64**
WAT or **WAB 6050**	.5	1 5/16 x 11/16 x 2 1/16	4.70	**2.82**
WAT or **WAB 6100**	1.0	1 5/16 x 11/16 x 2 1/2	5.25	**3.15**
		1000 V. D.C. Work.		
WAT or **WAB 10005**	.05	1 5/16 x 11/16 x 1 7/16	4.15	**2.49**
WAT or **WAB 10010**	.1	1 5/16 x 11/16 x 1 7/16	4.15	**2.49**
WAT or **WAB 10025**	.25	1 5/16 x 11/16 x 2 1/16	4.40	**2.64**
WAT or **WAB 10050**	.5	1 5/16 x 11/16 x 2 1/2	4.40	**2.64**



TYPE DYR ★

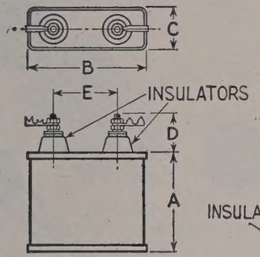
Cat. No.	Cap. Mfd.	Size—Inches Lth. x Wid. x Thick.	List Price	Net Price
		600 V. D.C. Work.		
DYR 6005	.05	1 13/16 x 1 x 3/4	$2.90	**$1.74**
DYR 6010	.1	1 13/16 x 1 x 3/4	2.95	**1.77**
DYR 6025	.25	1 13/16 x 1 x 3/4	3.10	**1.86**
DYR 6050	.5	1 13/16 x 1 x 7/8	3.30	**1.98**
DYR 6100	1	2 x 1 3/4 x 7/8	3.75	**2.25**
DYR 6200	2	2 x 2 x 1 1/8	5.00	**3.00**
DYR 60055	.05–.05	1 13/16 x 1 x 3/4	3.65	**2.19**
DYR 6011	.1–.1	1 13/16 x 1 x 3/4	3.70	**2.22**
DYR 6022	.25–.25	1 13/16 x 1 1/4 x 3/4	3.75	**2.25**
DYR 6055	.5–.5	2 x 1 3/4 x 7/8	4.30	**2.58**
DYR 6110	1.–1.	2 x 2 x 1 1/8	5.30	**3.18**
DYR 6111	.1–.1–.1	1 13/16 x 1 x 3/4	4.20	**2.52**
DYR 6222	.25–.25–.25	2 x 1 3/4 x 13/16	4.75	**2.85**
DYR 6555	.5–.5–.5	2 x 2 x 1 1/8	5.75	**3.45**
		1000 V. D.C. Work.		
DYR 10005	.05	1 13/16 x 1 x 3/4	3.05	**1.83**
DYR 10010	.1	1 13/16 x 1 x 3/4	3.15	**1.89**
DYR 10025	.25	1 13/16 x 1 x 3/4	3.25	**1.95**
DYR 10050	.5	2 x 1 3/4 x 13/16	3.55	**2.13**
DYR 10100	1	2 x 2 x 1 1/8	4.40	**2.64**
DYR 100055	.05–.05	1 13/16 x 1 x 3/4	3.85	**2.31**
DYR 10011	.1–.1	1 13/16 x 1 x 3/4	4.00	**2.40**
DYR 10022	.25–.25	2 x 1 3/4 x 13/16	4.20	**2.52**
DYR 10055	.5–.5	2 x 2 x 1 1/8	5.45	**3.27**
DYR 10111	.1–.1–.1	1 13/16 x 1 1/4 x 3/4	4.60	**2.76**
DYR 10222	.25–.25–.25	2 x 2 x 1 1/8	5.50	**3.30**

TYPE YAT ★

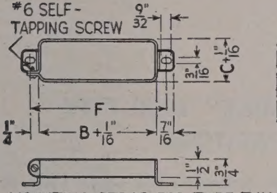
Cat. No.	Cap. Mfd.	Size—Inches L. x W. x H.	List Price	Net Price
		600 V. D.C. Work.		
YAT or **YAB 6005**	.05	1 3/4 x 9/16 x 1	$3.60	**$2.16**
YAT or **YAB 6010**	.1	1 3/4 x 9/16 x 1	3.60	**2.16**
YAT or **YAB 6025**	.25	1 3/4 x 9/16 x 1 1/2	3.85	**2.31**
YAT or **YAB 6050**	.5	1 3/4 x 9/16 x 1 7/8	4.15	**2.49**
YAT or **YAB 6100**	1.0	1 3/4 x 9/16 x 2 1/2	4.70	**2.82**
YAT or **YAB 60055**	.05–.05	1 3/4 x 9/16 x 1	3.65	**2.19**
YAT or **YAB 6011**	.1–.1	1 3/4 x 9/16 x 1 1/2	4.70	**2.82**
YAT or **YAB 6022**	.25–.25	1 3/4 x 9/16 x 1 7/8	4.70	**2.82**
YAT or **YAB 6055**	.5–.5	1 3/4 x 9/16 x 2 1/2	5.50	**3.30**
YAT or **YAB 60555**	.05–.05–.05	1 3/4 x 9/16 x 1	5.25	**3.15**
YAT or **YAB 6111**	.1–.1–.1	1 3/4 x 9/16 x 1 1/2	5.50	**3.30**
YAT or **YAB 6222**	.25–.25–.25	1 3/4 x 9/16 x 2 1/2	5.80	**3.48**
		1000 V. D.C. Work.		
YAT or **YAB 10005**	.05	1 3/4 x 9/16 x 1	3.70	**2.22**
YAT or **YAB 10010**	.1	1 3/4 x 9/16 x 1	4.00	**2.40**
YAT or **YAB 10025**	.25	1 3/4 x 9/16 x 1 7/8	4.15	**2.49**
YAT or **YAB 10050**	.5	1 3/4 x 9/16 x 2 1/2	4.40	**2.64**
YAT or **YAB 100055**	.05–.05	1 3/4 x 9/16 x 1 1/2	4.40	**2.64**
YAT or **YAB 10011**	.1–.1	1 3/4 x 9/16 x 1 1/2	4.95	**2.97**
YAT or **YAB 10022**	.25–.25	1 3/4 x 9/16 x 2 1/2	5.25	**3.15**
YAT or **YAB 100555**	.05–.05–.05	1 3/4 x 9/16 x 1 1/2	5.80	**3.48**
YAT or **YAB 10111**	.1–.1–.1	1 3/4 x 9/16 x 2 1/2	6.35	**3.81**

★When JAN-C-25 units must be supplied, order according to specific CP type designations listed in C-D Paper Capacitor Catalog No. 400.

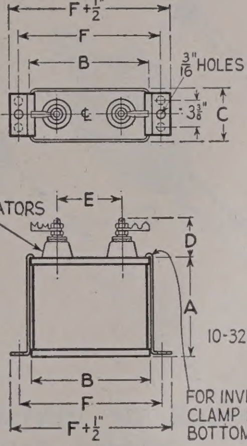
DYKANOL TRANSMITTING CAPACITORS



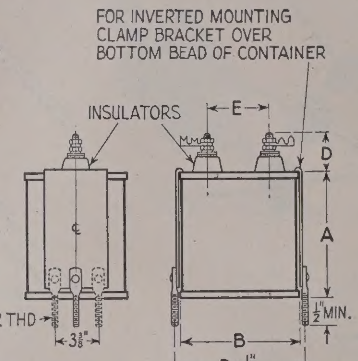
TYPE T
(WITHOUT MOUNTINGS)



MOUNTING STRAP FOR TYPE TJU
TYPE TJU
(WITH MOUNTING STRAP)


F+1/2"
F
B
3/16" HOLES
3⅜"
C
℄
INSULATORS
E
D
A
B
F
F+1/2"
FOR INVERTED MOUNTING CLAMP BRACKET OVER BOTTOM BEAD OF CONTAINER

TYPE TJL


FOR INVERTED MOUNTING CLAMP BRACKET OVER BOTTOM BEAD OF CONTAINER
INSULATORS
E
D
A
℄
10-32 THD
3⅜"
1/2" MIN.
B
B+1/4"

TYPE TJH

DYKANOL A
T 20010
1 MFD.
2000 V.D.C.

TYPE T ★
Provided with mounting brackets designated upon ordering as explained below.

Prices below include mounting brackets or universal mounting strap when ordered according to these type numbers.

TYPE DESIGNATIONS—Type T (basic units) are without mountings. To order Types TJH, TJL or TJU with mountings as shown above, add letter symbols of type mountings desired to Cat. No. as follows:

TYPE T—(Basic unit) without mountings.

TYPE TJH—With screw spade-lug brackets.

TYPE TJL—With mounting foot brackets.

TYPE TJU—With universal mounting strap.

Cat. No.	Cap. Mfd.	A	B	C	D	E	F	List Price	Net Price
					600 V. D.C. Working				
T 6005	.5	2⅛	1¹³⁄₁₆	1¹⁄₁₆	⅞	¹³⁄₁₆	2¼	$4.70	**$2.82**
T 6010	1	2⅛	1¹³⁄₁₆	1¹⁄₁₆	⅞	¹³⁄₁₆	2¼	5.80	**3.48**
T 6020	2	2⅞	1¹³⁄₁₆	1¹⁄₁₆	⅞	¹³⁄₁₆	2¼	7.15	**4.29**
T 6030	3	3⅞	1¹³⁄₁₆	1¹⁄₁₆	⅞	¹³⁄₁₆	2¼	8.25	**4.95**
T 6040	4	3⅜	2½	1³⁄₁₆	⅞	1⅛	3	9.10	**5.46**
T 6050	5	4¾	1¹³⁄₁₆	1¹⁄₁₆	⅞	¹³⁄₁₆	2¼	10.45	**6.27**
T 6060	6	4⅝	2½	1³⁄₁₆	⅞	1⅛	3	11.30	**6.78**
T 6080	8	3¹³⁄₁₆	3¾	1¼	⅞	2	4⅜	13.50	**8.10**
T 6100	10	4⅝	3¾	1¼	⅞	2	4⅜	15.15	**9.09**
					1000 V. D.C. Working				
T 10001	.1	2	1¹³⁄₁₆	1¹⁄₁₆	⅞	¹³⁄₁₆	2¼	4.15	**2.49**
T 100025	.25	2⅛	1¹³⁄₁₆	1¹⁄₁₆	⅞	¹³⁄₁₆	2¼	4.70	**2.82**
T 10005	.5	2⅛	1¹³⁄₁₆	1¹⁄₁₆	⅞	¹³⁄₁₆	2¼	4.95	**2.97**
T 10010	1	2⅛	1¹³⁄₁₆	1¹⁄₁₆	⅞	¹³⁄₁₆	2¼	6.35	**3.81**
T 10020	2	4	1¹³⁄₁₆	1¹⁄₁₆	⅞	¹³⁄₁₆	2¼	8.25	**4.95**
T 10030	3	3½	2½	1³⁄₁₆	⅞	1⅛	3	9.65	**5.79**
T 10040	4	4⅝	2½	1³⁄₁₆	⅞	1⅛	3	10.45	**6.27**
T 10050	5	3¹³⁄₁₆	3¾	1¼	⅞	2	4⅜	12.65	**7.59**
T 10060	6	4¾	3¾	1¼	⅞	2	4⅜	14.05	**8.43**
T 10080	8	4¾	3¾	1¼	⅞	2	4⅜	15.15	**9.09**
T 10100	10	4⅝	3¾	1¾	⅞	2	4⅜	16.80	**10.08**
T 10120	12	3¹³⁄₁₆	3¾	2¼	⅞	2	4⅜	18.15	**10.89**
T 10150	15	4¾	3¾	2½	⅞	2	4⅜	20.10	**12.06**
					1500 V. D.C. Working				
T 15005	.5	2⅞	1¹³⁄₁₆	1¹⁄₁₆	⅞	¹³⁄₁₆	2¼	6.35	**3.81**
T 15010	1	4	1¹³⁄₁₆	1¹⁄₁₆	⅞	¹³⁄₁₆	2¼	7.45	**4.47**
T 15020	2	4⅛	2½	1³⁄₁₆	⅞	1⅛	3	10.45	**6.27**
T 15030	3	4¾	2½	1³⁄₁₆	⅞	1⅛	3	12.40	**7.44**
T 15040	4	4⅝	3¾	1¼	⅞	2	4⅜	14.05	**8.43**
T 15050	5	4¾	3¾	1¾	⅞	2	4⅜	15.15	**9.09**
T 15060	6	4¾	3¾	1¾	⅞	2	4⅜	17.05	**10.23**
T 15080	8	4¾	3¾	2½	⅞	2	4⅜	20.90	**12.54**
***T 15100**	10	4¾	3¾	3³⁄₁₆	⅞	2	4⅜	25.05	**15.03**
***T 15120**	12	4¾	3¾	3³⁄₁₆	⅞	2	4⅜	27.25	**16.35**
†*T 15150	15	4¾	3¾	4⁹⁄₁₆	⅞	2	4⅜	30.00	**18.00**

NOTES—* Type TJU units are not furnished in these larger sizes.
† Types TJL and TJH units furnished with two mounting holes or spade lugs 3⅜" apart. All other units furnished with a single mounting hole or spade lug centered on each bracket.

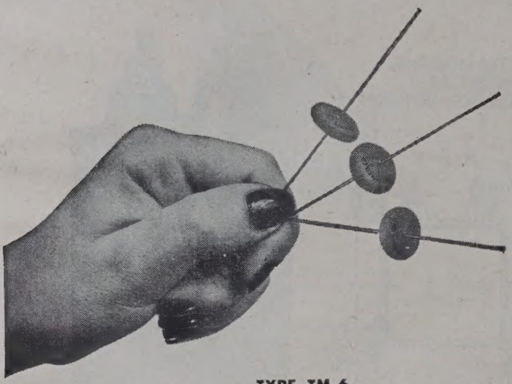
Cat. No.	Cap. Mfd.	A	B	C	D	E	F	List Price	Net Price
					2000 V. D.C. Working				
T 20001	.1	2⅛	1¹³⁄₁₆	1¹⁄₁₆	⅞	¹³⁄₁₆	2¼	$6.60	**$3.96**
T 200025	.25	2⅛	1¹³⁄₁₆	1¹⁄₁₆	⅞	¹³⁄₁₆	2¼	7.15	**4.29**
T 20005	.5	2⅞	1¹³⁄₁₆	1¹⁄₁₆	⅞	¹³⁄₁₆	2¼	7.45	**4.47**
T 20010	1	3⅜	2½	1³⁄₁₆	1¼	1⅛	3	9.10	**5.46**
T 20020	2	4	3¾	1¼	1¼	2	4⅜	10.75	**6.45**
T 20030	3	4¾	3¾	1¼	1¼	2	4⅜	13.20	**7.92**
T 20040	4	3¹³⁄₁₆	3¾	2¼	1¼	2	4⅜	15.15	**9.09**
T 20050	5	4¾	3¾	2¼	1¼	2	4⅜	16.80	**10.08**
***T 20060**	6	4¾	3¾	3³⁄₁₆	1¼	2	4⅜	20.10	**12.06**
***T 20080**	8	4¾	3¾	3³⁄₁₆	1¼	2	4⅜	25.05	**15.03**
†*T 20100	10	4¾	3¾	4⁹⁄₁₆	1¼	2	4⅜	30.55	**18.33**
†*T 20120	12	5⅜	3¾	4⁹⁄₁₆	1¼	2	4⅜	33.30	**19.98**
					2500 V. D.C. Working				
T 25005	.5	3½	3¾	1¼	1¼	2	4⅜	11.55	**6.93**
T 25010	1	3¼	3¾	1¾	1¼	2	4⅜	13.20	**7.92**
T 25020	2	4¾	3¾	1¾	1¼	2	4⅜	21.45	**12.87**
†*T 25040	4	4	3¾	4⁹⁄₁₆	1¼	2	4⅜	30.00	**18.00**
†*T 25100A	10	6⅜	3¾	4⁹⁄₁₆	1¼	2	4⅜	75.10	**45.06**
					3000 V. D.C. Working				
T 30001	.1	2	2½	1³⁄₁₆	1¼	1⅛	1	14.05	**8.43**
T 300025	.25	2½	2½	1³⁄₁₆	1¼	1⅛	3	14.85	**8.91**
T 30005	.5	3⅞	2½	1³⁄₁₆	1¼	1⅛	3	16.80	**10.08**
T 30010	1	3¹³⁄₁₆	3¾	2¼	1¼	2	4⅜	20.10	**12.06**
***T 30020**	2	4⅛	3¾	3³⁄₁₆	1¼	2	4⅜	25.05	**15.03**
†*T 30040	4	4¾	3¾	4⁹⁄₁₆	1¼	2	4⅜	36.85	**22.11**
					4000 V. D.C. Working				
T 40001	.1	2¾	3¾	2¼	2	2	4⅜	25.05	**15.03**
T 400025	.25	2¾	3¾	2¼	2	2	4⅜	26.40	**15.84**
T 40005	.5	4	3¾	2¼	2	2	4⅜	30.00	**18.00**
T 40010	1	5	3¾	2¼	2	2	4⅜	36.85	**22.11**
†*T 40020	2	5	3¾	4⁹⁄₁₆	2	2	4⅜	46.75	**28.05**
†*T 40040A	4	8	3¾	4⁹⁄₁₆	2	1¾	4⅜	66.85	**40.11**
					5000 V. D.C. Working				
T 50005	.5	4¼	3¾	2¼	2	2	4⅜	33.30	**19.98**
†*T 50010	1	4¼	3¾	4⁹⁄₁₆	2	2	4⅜	41.80	**25.08**
†*T 50020	2	6	3¾	4⁹⁄₁₆	2	2	4⅜	53.65	**32.19**
					6000 V. D.C. Working				
†*T 60010A	1	8	3¾	4⁹⁄₁₆	2	1¾	4⅜	83.60	**50.16**

For higher voltage units, from 6,000 to 25,000 v.d.c., write for data and prices on Type TK capacitors.

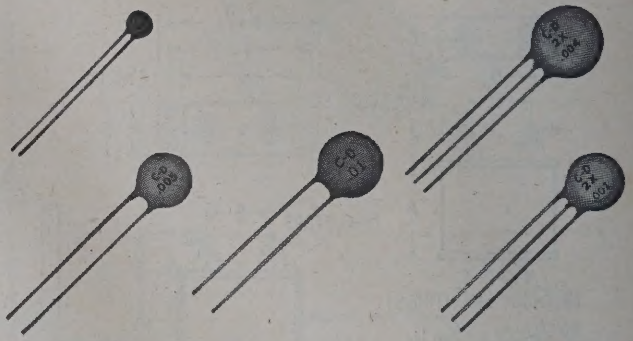
★When JAN-C-25 units must be supplied, order according to specific CP type designations listed in C-D Paper Capacitor Catalog No. 400.

CORNELL DUBILIER

"TINYMIKE" DISC-TYPE CERAMIC CAPACITORS



TYPE TM-6
(Axial Leads)



TYPE TM-5

TINY MIKE®

Miniature Ceramic Disc Capacitors

For Bypass and Coupling Applications in TV, FM, UHF, VHF, and Compact, Small-Size Equipment

500 Volts D. C. Working

Cat. No.	Cap. Mmf. ± 20%	Size—Inches Dia. x Thick	List Price	Net Price
TM 5Q5	50	19/32 x 5/32	$.25	**$.15**
TM 5Q75	75	19/32 x 5/32	.25	**.15**
TM 5T1	100	19/32 x 5/32	.25	**.15**
TM 5T12	120	19/32 x 5/32	.25	**.15**
TM 5T15	150	19/32 x 5/32	.25	**.15**
TM 5T2	200	19/32 x 5/32	.25	**.15**
TM 5T5	500	1/4 x 5/32	.25	**.15**
TM 5T8	800	1/4 x 5/32	.25	**.15**
TM 5D1	1000	1/4 x 5/32	.25	**.15**
TM 5D15	1500	19/32 x 5/32	.25	**.15**
TM 5D2	2000	19/32 x 5/32	.25	**.15**
TM 5D25	2500	19/32 x 5/32	.25	**.15**
TM 5D3	3000	19/32 x 5/32	.25	**.15**
TM 5D4	4000	19/32 x 5/32	.25	**.15**
TM 5D5	5000	19/32 x 5/32	.25	**.15**
TM 5S1	10000	3/4 x 5/32	.30	**.18**
TM 5DD1	2 x 1000	19/32 x 5/32	.40	**.24**
TM 5DD15	2 x 1500	19/32 x 5/32	.40	**.24**
TM 5DD2	2 x 2000	19/32 x 5/32	.40	**.24**
TM 5DD25	2 x 2500	19/32 x 5/32	.40	**.24**
TM 5DD3	2 x 3000	3/4 x 5/32	.45	**.27**
TM 5DD4	2 x 4000	3/4 x 5/32	.45	**.27**
TM 5DS1	2 x 10000	3/4 x 5/32	.45	**.27**

1000 Volts D. C. Working

TM 10Q18	18	19/32 x 5/32	$.40	**$.24**
TM 10Q22	22	19/32 x 5/32	.40	**.24**
TM 10Q33	33	19/32 x 5/32	.40	**.24**
TM 10Q47	47	19/32 x 5/32	.40	**.24**
TM 10Q56	56	19/32 x 5/32	.40	**.24**
TM 10Q62	62	19/32 x 5/32	.40	**.24**
TM 10Q68	68	19/32 x 5/32	.40	**.24**
TM 10Q75	75	19/32 x 5/32	.40	**.24**
TM 10Q82	82	19/32 x 5/32	.40	**.24**
TM 10Q91	91	19/32 x 5/32	.40	**.24**

6000 Volts D. C. Working

TM 60Q1	10	19/32 x 5/32	$.75	**$.45**
TM 60Q2	20	19/32 x 5/32	.75	**.45**
TM 60Q3	30	19/32 x 5/32	.75	**.45**
TM 60Q4	40	19/32 x 5/32	.75	**.45**
TM 60Q5	50	19/32 x 5/32	.75	**.45**

FEATURES OF "TINYMIKE" DISC-TYPE CERAMIC CAPACITORS

- **Small, space-saving and lightweight.**
- **Available in all popular capacities.**
- **Guaranteed minimum capacity tolerance.**
- **Adapted for wide variety of applications.**
- **Minimized eddy current losses due to construction.**
- **Low inductance, stable, dependable performance.**
- **Available with temperature compensating characteristics.**

C-D "TINYMIKES" are small, space-saving and lightweight, making them ideal for cramped chassis layouts. So light . . . far lighter than other capacitor types having equivalent electrical rating. Diminutive but easy-to-handle size, and parallel leads, permit easy, fast insertion to connections in tight assemblies, reducing labor cost while increasing productivity. Low cost of "TINYMIKES" shows direct saving over most other capacitor types of equivalent electrical ratings. Guaranteed Minimum Capacity over a temperature range of +10° C. to +65° C.

Minimized eddy current losses due to construction with only a single pair of silver electrodes per capacitor. Leads firmly solder-connected directly to the complete active area of capacitance provide positive contact.

Short current path and parallel leads reduce inductance to an unusually low level, the amount depending on lead length. Accurately positioned, parallel leads provide convenient connections. Excellent control of dielectric composition and manufacturing processes assures low power factor, high dielectric strength and high insulation resistance.

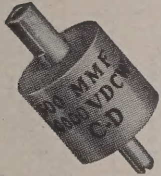
Constant, dependable service further assured by C-D quality construction such as firm bonding of high-purity silver electrodes to the flat ceramic disc, and soldering of the leads. Protected against effects of humidity by use of special phenolic coating and high-temperature wax impregnation. The coating also protects against grounds caused by contact with nearby components.

For quick identification all units of 1,000 mmf. (.001 mfd.) and higher are stamped with decimal in MFD.; units under 1,000 mmf. are stamped with whole number in mmf.

C-D has developed a special line of Temperature Compensating ceramic capacitors that offer the utmost in high stability, low drift, low power factor, high Q, high insulation resistance, and low inductance. C-D manufactures its own ceramic capacitor bodies under the strictest electronically controlled quality supervision which results in the desirable features inherent particularly in the temperature compensating types.

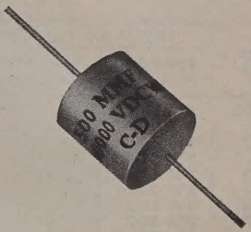
HIGH-VOLTAGE CERAMIC TELEVISION CAPACITORS

TYPE MM
WITH "A" TERMINALS

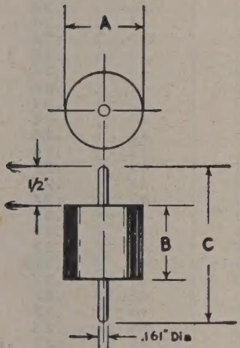


TYPE MM
WITH "B" TERMINALS

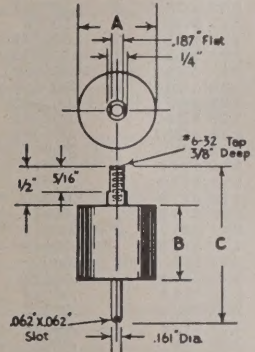
TYPE MM WITH
"C" OR "D" TERMINALS



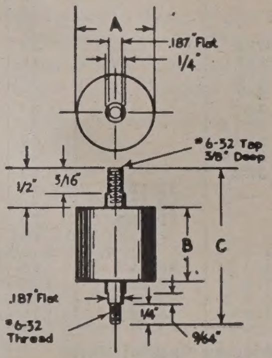
TYPE MM
WITH "E" TERMINALS



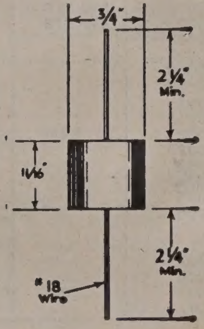
Plug-In Stud Terminals Specify "A" Terminals



Slotted Plug-In Stud & Tapped 6/32 Female Terminal Specify "B" Terminals



Tapped 6/32 Female Terminal & Threaded 6/32 Male Terminal Specify "C" Terminals; for Threaded 6/32 Female & Threaded 8/32 Male Terminal Specify "D" Terminals; for Both Terminals Threaded 8/32 Male, Specify "F" Terminals



Wire-Lead Terminals Specify "E" Terminals

MITY MIKE®

FEATURES OF "MITYMIKE" HIGH VOLTAGE CERAMIC CAPACITORS

- New, superior design and construction.
- Generous factor of safety permits use at FULL rated voltage.
- High insulation resistance, low power factor.
- Choice of terminal styles to meet all TV assembly requirements.

High-Voltage Television Ceramic Capacitors

Cat. No.	Cap. Mmfd.	Volts D.C.	Flash Test	Size—Inches A	B	C	List Price	Net Price
MM-†10T5	500	10,000	20,000	.750	11/16	1 21/32	$1.75	**$1.05**
MM-†20T5	500	20,000	30,000	.950	15/16	1 31/32	2.25	**1.35**

†Add letter specifying type of terminals (A, B, C, D, E or F) desired.

New, superior design and construction . . . with greater electrical advantages, dependability, and longer life than ever before achieved in TV high-voltage ceramic capacitors!

An original C-D engineering job inside and out . . . backed by C-D's decades of experience with high-voltage ceramic capacitors. These TV High-Voltage "MITYMIKES" will withstand higher peak voltages, and can be used at *full rated voltage*, as they are *conservatively* rated for DC Flash Test up to 1½x to 2x rated DC Working Voltage, as listed.

This generous factor of safety, due to the unique C-D design, assures long life and constant, dependable service with no deterioration in the ceramic composition despite the severe high voltage stress in TV operation.

High-purity silver electrodes are heat-bonded to the ceramic dielectric. The silver-plated brass terminals (or the #18, .040", tinned wire leads) are firmly solder-connected direct to the silver electrodes. The C-D ceramic design effectively reduces corona to a minimum, and in combination with the ceramic composition provides high insulation resistance and low power factor. The ceramic body is manufactured under strictest Quality Control standards to insure uniformity of physical and electrical characteristics in the finished capacitor.

Choice of terminal styles is shown in photos and outline drawings . . . every type to meet TV assembly requirements. Any combination of the above A, B, C, D, E or F terminals, can be furnished on order.

"MITYMIKES" are ideally suited for filter, bypass, and blocking, in TV high-voltage power supplies; in filter circuits employing cathode ray tubes; and in other applications, stationary and mobile equipment, where high-voltage rectified power supplies are used. These units can also be used to obtain higher voltages by means of series connections.

Capacity tolerance: +50%—20%. Power Factor: 1.5% maximum at 1 mc. or 1 kc. Leakage Resistance: 7,500 megohms minimum. Outer coating is distinctively colored for easy identification. All units are clearly stamped with capacity and voltage and are impregnated with high-temperature wax for additional protection against moisture absorption.

MOULDED MIDGET MICA & BAKELITE CAPACITORS

Cap. Mfd.	1000 V. D.C. Test—500 V. D.C. Work. Type 5W Cat. No.	Type 1W Cat. No.	Type 1D Cat. No.	List Price	Net Price
.000005	5W 5V5			$.25	$.15
.00001	5W 5Q1			.25	.15
.00002	5W 5Q2			.25	.15
.000025	5W 5Q25			.25	.15
.00003	5W 5Q3			.25	.15
.00004	5W 5Q4			.20	.12
.00005	5W 5Q5			.20	.12
.00007	5W 5Q7			.20	.12
.0001	5W 5T1			.20	.12
.00015	5W 5T15			.20	.12
.0002	5W 5T2			.20	.12
.00025	5W 5T25			.25	.15
.0003	5W 5T3			.25	.15
.0004	5W 5T4			.25	.15
.0005	5W 5T5			.25	.15
.0006		1W 5T6		.25	.15
.0007		1W 5T7		.25	.15
.0008		1W 5T8		.25	.15
.0009		1W 5T9		.25	.15
.001		1W 5D1		.30	.18
.0015		1W 5D15		.30	.18
.002		1W 5D2		.40	.24
.0025		1W 5D25		.45	.27
.003		1W 5D3		.50	.30
.004			1D 5D4	.55	.33
.005			1D 5D5	.60	.36
.006			1D 5D6	.75	.45
			600 V. D.C. Test 300 V. D.C. Working		
.007			1D 3D7	.90	.54
.008			1D 3D8	1.00	.60
.009			1D 3D9	1.00	.60
.01			1D 3S1	1.20	.72

Notes On Ordering Special Units

The listing above gives the range of capacities available from stock. Intermediate capacities, not exceeding the maximum as listed for each type, can also be furnished upon request.

Standard capacity tolerance is plus or minus 20%. Also available, on order, in plus or minus 10%, 5%, 3% and 2% tolerance ratings (or within 1 mmfd.—whichever is greater). For capacity tolerance of: 10% add 10% to list prices; 5% add 20% to list prices; 3% add 40% to list prices; 2% add 75% to list prices.

1500 Volts D. C. Working

Cat. No.	Cap. Mfd.	List Price	Net Price
5WP 15V5	.000005	$.30	$.18
5WP 15Q1	.00001	.30	.18
5WP 15Q25	.000025	.30	.18
5WP 15Q5	.00005	.30	.18
5WP 15Q75	.000075	.30	.18
5WP 15T1	.0001	.35	.21
5WP 15T15	.00015	.35	.21
5WP 15T2	.0002	.40	.24
5WP 15T25	.00025	.45	.27
5WP 15T3	.0003	.50	.30
5WP 15T35	.00035	.50	.30
5WP 15T4	.0004	.55	.33

1500 Volts D. C. Working

1WP 15T5	.0005	$ .70	$.42
1WP 15T75	.00075	.80	.48
1WP 15D1	.001	.90	.54
1WP 15D15	.0015	1.05	.63
1WP 15D2	.002	1.20	.72
1WP 15D24	.0024	1.35	.81

1000 Volts D. C. Working

1WP 10D15	.0015	$ .70	$.42
1WP 10D2	.002	.80	.48
1WP 10D25	.0025	1.00	.60
1WP 10D3	.003	1.10	.66
1WP 10D4	.004	1.30	.78
1WP 10D5	.005	1.60	.96

2000 Volts D. C. Working

3WP 20T5	.0005	$ .65	$.39
3WP 20T75	.00075	.75	.45
3WP 20D1	.001	.95	.57
3WP 20D15	.0015	1.25	.75

Standard tolerance ±20%.

TYPE 22R

Cat. No.	Cap. Mfd.	Volts D. C. W.	List Price	Net Price
22R 5V5	.000005	500	$.40	$.24
22R 5Q1	.00001	500	.40	.24
22R 5Q22	.000012	500	.40	.24
22R 5Q15	.000015	500	.40	.24
22R 5Q18	.000018	500	.40	.24
22R 5Q2	.00002	500	.40	.24
22R 5Q22	.000022	500	.40	.24
22R 5Q24	.000024	500	.40	.24
22R 5Q27	.000027	500	.40	.24
22R 5Q3	.00003	500	.40	.24
22R 5Q33	.000033	500	.40	.24
22R 5Q36	.000036	500	.40	.24
22R 5Q39	.000039	500	.40	.24
22R 5Q43	.000043	500	.40	.24
22R 5Q47	.000047	500	.40	.24
22R 5Q5	.00005	500	.40	.24
22R 5Q51	.000051	500	.40	.24
22R 5Q56	.000056	500	.40	.24
22R 5Q62	.000062	500	.40	.24
22R 5Q68	.000068	500	.40	.24
22R 5Q75	.000075	500	.40	.24
22R 5Q82	.000082	500	.40	.24
22R 5Q91	.000091	500	.40	.24
22R 5T1	.0001	500	.40	.24
22R 5T11	.00011	500	.45	.27
22R 5T12	.00012	500	.45	.27
22R 5T13	.00013	500	.45	.27
22R 5T15	.00015	500	.45	.27
22R 5T16	.00016	500	.45	.27
22R 5T18	.00018	500	.45	.27
22R 5T2	.0002	500	.45	.27
22R 5T22	.00022	500	.45	.27
22R 5T24	.00024	500	.45	.27
22R 5T25	.00025	500	.45	.27
22R 5T27	.00027	500	.55	.33
22R 5T3	.0003	500	.55	.33
22R 5T33	.00033	500	.55	.33
22R 5T36	.00036	500	.55	.33
22R 5T39	.00039	500	.65	.39
22R 5T42	.00042	500	.65	.39
22R 5T43	.00043	500	.65	.39
22R 3T47	.00047	300	.70	.42
22R 3T5	.0005	300	.70	.42
22R 3T51	.00051	300	.70	.42

Note: Standard tolerance ± 5%, but in no instance less than ± mmf. For capacity Tolerance of: 20% deduct 10% from List; 10% deduct 5% from List; 3% add 10% to List; 2% add 15% to List; 1% add 25% to List.

Cap. Mfd.	1000 V. D.C. Test—500 V. D.C. Work. Type 5R Cat. No.	Type 2R Cat. No.	Type 1R & 1DR Cat. No.	List Price	Net Price
.000005	5R 5V5			$ .45	$ .27
.00001	5R 5Q1			.40	.24
.00002	5R 5Q2			.40	.24
.000025	5R 5Q25			.40	.24
.00003	5R 5Q3			.40	.24
.00004	5R 5Q4			.40	.24
.00005	5R 5Q5			.40	.24
.00007	5R 5Q7			.40	.24
.0001	5R 5T1	2R 5T1		.40	.24
.00015	5R 5T15	2R 5T15		.45	.27
.0002	5R 5T2	2R 5T2		.45	.27
.00025	5R 5T25	2R 5T25		.45	.27
.0003	5R 5T3	2R 5T3		.55	.33
.0004	5R 5T4	2R 5T4		.65	.39
.0005	5R 5T5	2R 5T5		.70	.42
.0007		2R 5T7		.85	.51
.0008		2R 5T8		.95	.57
.0009		2R 5T9		1.00	.60
.001		2R 5D1	1R 5D1	1.10	.66
.0015			1R 5D15	1.35	.81
.002			1R 5D2	1.35	.81
.0025			1R 5D25	1.80	1.08
.003			1R 5D3	2.05	1.23
.004			1DR 5D4	2.15	1.29
.005			1DR 5D5	2.25	1.35

Notes On Ordering Special Units

The listing above gives range of capacities which are available from stock. Intermediate capacities, not exceeding the maximum as listed for each type, can also be furnished upon request.

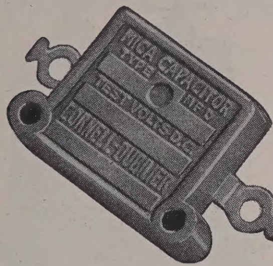
Standard capacity tolerance is 5%. Also available, on special order, in tolerance ratings of plus or minus 3%, add 10% to list prices, 2% add 15% to list prices and 1% add 25% to list prices, (or within 1 mmfd.—whichever is greater). All types can also be supplied in plus or minus 10% and 20% tolerances at lower prices.

*Reg. U.S. Pat. Off.

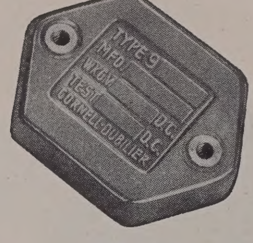
★When JAN-C-5 units must be supplied, order according to specific CM type designations listed in C-D Mica Capacitor Catalog No. 422.

CORNELL DUBILIER

MOULDED BAKELITE TRANSMITTING CAPACITORS



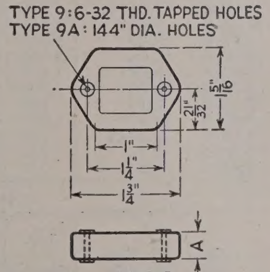
TYPE 4 ★



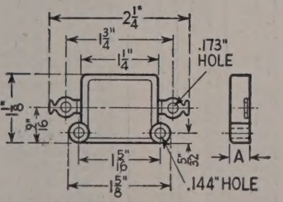
TYPE 9 ★

Notes on Ordering Special Capacitors

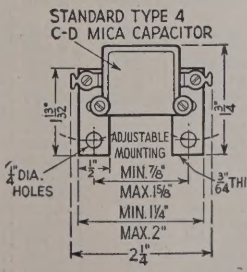
Type No. Suffix	
	STANDARD TOLERANCE is plus or minus 10%. Also available on order in plus or minus 5% and 2%. For capacity tolerance of: 5% add 15c to list prices; 2% add 40c to list prices.
"L"	MOULDED IN LOW-LOSS BAKELITE available on order. Add ''L'' to Cat. No. (example: 4L-22060; 9L-11010). Add 25c to list prices.
"S"	SPECIAL SALT WATER IMMERSION SEAL AGAINST HUMIDITY. To order, add ''S'' to Cat. No. (example: 4S-53010; 9S-12050). Add 10c to list prices.
"T"	HEAT AGEING TREATMENT for stabilizing capacity over extremely wide temperature changes, minus 40° C. to plus 70° C., furnished on special order. Add ''T'' to Cat. No. (example: 4T-12010; 9T-21020). Add 15c to list prices.
"LST"	TO ORDER A COMBINATION OF ABOVE FEATURES, add letters specified to Cat. No. (example: 4LST-12040; 9LST-13020). Add 50c to list prices.
	INSULATION RESISTANCE—Brown Bakelite, 20,000 megohms per unit—Low-Loss Bakelite, 40,000 megohms per unit. Low-Loss Bakelite provides higher Q and lowers the power factor.
"4E"	SMALL METER BRACKETS adapted for Weston Model 301 meters, add ''E'' to Cat. No. (example: 4E-22050). Add 20c to list prices.
"9A"	UNTAPPED MOUNTING HOLES. Standard units are tapped for 6-32 and furnished with round head screws. For untapped mounting hole, .144″ diameter (No. 6 clearance), add ''A'' to Cat. No. (example: 9A-11030).
"9F"	HIGHER VOLTAGE CONSTRUCTION, rated 6,000 v.d.c. test, 3,000 v.d.c.—1500 v.a.c. operating. Capacity range limited. Moulded in low-loss Bakelite, BM 262. The thickness of these units, or ''A'' dimension, is 7/16″ for capacities up to .002 mfd. and 3/4″ for capacities from .0022 to .005 mfd. max. To order, add ''F'' to Cat. No. (example: 9F-63050, the numeral ''6'' designating 6,000 volts test). Prices of ''9F'' units are double the list prices shown.
"9R"	HIGH STABILITY UNITS — Special high stability units, comprising low-loss Bakelite, BM 262, temperature aged and sealed construction for use as low power master oscillator tank capacitors or accessory positions. These units are fixed and permanent in characteristics, having a capacity-temperature coefficient of approximately plus .003% (30 parts per million) per degree C. To order, add ''R'' to Cat. No. (example: 9R-52020). Prices of 9R units are double the list prices shown.



TYPE 9



TYPE 4



TYPE 4E

C-D Mica Capacitors Types 4 and 9 are designed to meet the requirements of power amplifiers and low-power transmitters. They are principally employed for grid and plate blocking purposes and for r. f. by-pass functions.

TYPE 4

Cat. No.	Cap. Mfd.	List Price	Net Price
1200 V. D.C. Test— 600 V. D.C. Working			
4-14050	.00005	$1.20	**$ .72**
4-13010	.0001	1.20	**.72**
4-13020	.0002	1.20	**.72**
4-13025	.00025	1.20	**.72**
4-13030	.0003	1.20	**.72**
4-13040	.0004	1.20	**.72**
4-13050	.0005	1.20	**.72**
4-12010	.001	1.20	**.72**
4-12015	.0015	1.20	**.72**
4-12020 *	.002	1.30	**.78**
4-12025	.0025	1.30	**.78**
4-12030	.003	1.45	**.87**
4-12040	.004	1.50	**.90**
4-12050	.005	1.55	**.93**
4-12060	.006	1.80	**1.08**
4-12070	.007	1.85	**1.11**
4-12080	.008	1.90	**1.14**
4-11010	.01	2.15	**1.29**
4-11015	.015	2.65	**1.59**
4-11020	.02	3.05	**1.83**
4-11025 †	.025	3.60	**2.16**
4-11030	.03	4.45	**2.67**
2500 V. D.C. Test— 1200 V. D.C. Working			
4-24050	.00005	$1.60	**$ .96**
4-23010	.0001	1.60	**.96**
4-23020	.0002	1.60	**.96**
4-23025	.00025	1.60	**.96**
4-23030	.0003	1.60	**.96**
4-23050 *	.0005	1.60	**.96**
4-22010	.001	1.80	**1.08**
4-22015	.0015	2.30	**1.38**
4-22020	.002	2.40	**1.44**
4-22025	.0025	2.80	**1.68**
4-22030	.003	3.05	**1.83**
4-22040	.004	3.05	**1.83**
4-22050	.005	3.30	**1.98**
4-22060 †	.006	3.30	**1.98**
4-22080	.008	3.85	**2.31**
4-21010	.01	5.10	**3.06**
5000 V. D.C. Test— 2500 V. D.C. Working			
4-54050	.00005	$1.90	**$1.14**
4-53010	.0001	1.90	**1.14**
4-53020	.0002	1.90	**1.14**
4-53025	.00025	2.20	**1.32**
4-53030 *	.0003	2.25	**1.35**
4-53050	.0005	2.50	**1.50**
4-52010	.001	2.80	**1.68**
4-52015	.0015	3.55	**2.13**
4-52020	.002	4.15	**2.49**
4-52025	.0025	4.50	**2.70**
4-52030 †	.003	4.90	**2.94**
4-52040	.004	5.65	**3.39**
4-52050	.005	6.40	**3.84**

TYPE 9

Cat. No.	Cap. Mfd.	List Price	Net Price
1200 V. D.C. Test— 600 V. D.C. Working			
9-14050	.00005	$1.45	**$ .87**
9-13010	.0001	1.45	**.87**
9-13025	.00025	1.45	**.87**
9-13050	.0005	1.45	**.87**
9-12010	.001	1.45	**.87**
9-12020	.002	1.65	**.99**
9-12025	.0025	1.70	**1.02**
9-12030	.003	1.85	**1.11**
9-12040 *	.004	2.00	**1.20**
9-12050	.005	2.10	**1.26**
9-12060	.006	2.20	**1.32**
9-12080	.008	2.45	**1.47**
9-11010	.01	2.80	**1.68**
9-11015	.015	3.05	**1.83**
9-11020	.02	3.55	**2.13**
9-11025	.025	4.35	**2.61**
9-11030	.03	4.55	**2.73**
9-11040	.04	5.85	**3.51**
9-11050 †	.05	7.10	**4.26**
9-11060	.06	8.05	**4.83**
2500 V. D.C. Test— 1200 V. D.C. Working			
9-24050	.00005	$1.60	**$ .96**
9-23010	.0001	1.60	**.96**
9-23025	.00025	1.60	**.96**
9-23050	.0005	1.60	**.96**
9-22010	.001	1.90	**1.14**
9-22020	.002	2.50	**1.50**
9-22025 *	.0025	2.80	**1.68**
9-22030	.003	2.95	**1.77**
9-22040	.004	3.10	**1.86**
9-22050	.005	3.30	**1.98**
9-22060	.006	3.45	**2.07**
9-22080	.008	4.10	**2.46**
9-21010	.01	4.70	**2.82**
9-21015	.015	5.80	**3.48**
9-21020	.02	7.05	**4.23**
9-21025 †	.025	7.90	**4.74**
9-21030	.03	8.10	**4.86**
5000 V. D.C. Test— 2500 V. D.C. Working			
9-54050	.00005	$1.90	**$1.14**
9-53010	.0001	1.90	**1.14**
9-53025	.00025	2.15	**1.29**
9-53050	.0005	2.55	**1.53**
9-52010 *	.001	2.90	**1.74**
9-52020	.002	4.25	**2.55**
9-52025	.0025	4.60	**2.76**
9-52030	.003	5.10	**3.06**
9-52040	.004	5.65	**3.39**
9-52050	.005	6.20	**3.72**
9-52060	.006	6.35	**3.81**
9-52080 †	.008	6.85	**4.11**
9-51010	.01	7.30	**4.38**
9-51015	.015	8.05	**4.83**

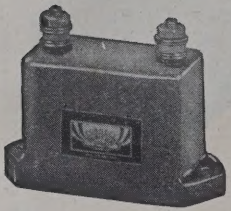
* Dimension "A" in diagram—for type 4 11/32″; for type 9 7/16″.

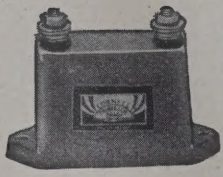
† Dimension "A" in diagram—for type 4 7/16″; for type 9 3/4″.

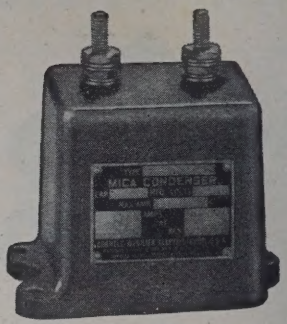
★ **When JAN-C-5 units must be supplied, order according to specific CM type designations listed in C-D Mica Capacitor Catalog No. 420.**

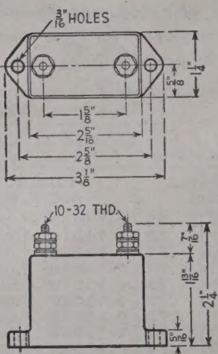
CORNELL DUBILIER

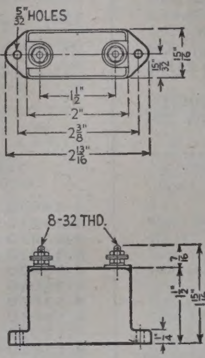
BAKELITE CASED MICA TRANSMITTING CAPACITORS

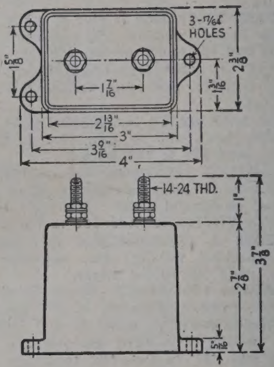

TYPE 6 ★


TYPE 15L ★


TYPE 30B







TYPE 6

Cat. No.	Cap. Mfd.	Test. Volt. Effective	Max. Oper. Cur. in Amps. 3000 kc.	1000 kc.	300 kc.	100 kc.	List Price	Net Price
390-6	.00005	5,000	1.5	.8	.2	.07	$17.30	**$10.38**
362-6	.0000625	5,000	1.8	.8	.2	.07	17.30	**10.38**
321-6	.0001	5,000	2	1	.3	.1	17.30	**10.38**
395-6	.00015	5,000	3	1.5	.5	.16	17.30	**10.38**
307-6	.0002	5,000	3.5	1.7	.7	.18	17.30	**10.38**
364-6	.00025	5,000	5	2.5	1	.3	17.30	**10.38**
294A-6	.0003	5,000	3.5	2	.8	.4	17.30	**10.38**
283-6	.0004	5,000	4	2.5	1	.5	17.30	**10.38**
272-6	.0005	5,000	4	2	1.4	.8	17.30	**10.38**
266-6	.0006	5,000	5	3	1.6	.8	17.30	**10.38**
654-6	.00075	5,000	5	3.5	2	1	17.30	**10.38**
599-6	.0008	5,000	6	4	2	1	17.30	**10.38**
246-6	.001	5,000	7	4	2	1	17.30	**10.38**
234-6	.0015	5,000	9	5	3	1.5	17.30	**10.38**
215-6	.002	3,000	6	3	1.5	.8	17.30	**10.38**
217-6	.002	6,000	9	6	4	2	17.30	**10.38**
473-6	.0025	5,000	9	6	4	2	17.30	**10.38**
197-6	.003	3,000	8	6	4	2	17.30	**10.38**
184-6	.004	3,000	8	6	5	2	$17.30	**$10.38**
173-6	.005	2,000	8	5	3	1.5	17.30	**10.38**
474-6	.005	3,000	9	6.5	4	2	17.30	**10.38**
565-6	.0075	2,000	10	8	5	3	17.30	**10.38**
476-6	.008	2,000	11	9	7	3	17.30	**10.38**
162-6	.008	3,000	10	8	5	3	17.30	**10.38**
151-6	.01	2,000	10	8	5	3.5	17.30	**10.38**
140-6	.015	1,500	12	10	7	4	17.30	**10.38**
784-6	.015	2,000	12	12	8	4	17.30	**10.38**
131-6	.02	2,000	12	11	10	7	17.30	**10.38**
479-6	.03	2,000	14	20	15	7	17.30	**10.38**
480-6	.04	1,500	12	13	11	6	17.30	**10.38**
118-6	.05	1,500	13	15	12	7	17.30	**10.38**
111-6	.1	500	17	20	15	8	19.20	**11.52**
406-6	.1	1,000	18	20	15	8	17.30	**10.38**
110-6	.1—.1	250	20	20	15	10	17.30	**10.38**
105-6	.2	250	18	20	16	12	25.25	**15.15**
885-6	.25	250	18	20	16	12	27.90	**16.74**

TYPE 15L

Cat. No.	Cap. Mfd.	Test. Volt. Effective	Max. Oper. Cur. in Amps. 3000 kc.	1000 kc.	300 kc.	100 kc.	List Price	Net Price
639-15L	.00005	3,000	1.2	.6	.15	.05	$12.60	**$7.56**
583-15L	.0001	3,000	2.2	.8	.3	.1	12.60	**7.56**
657-15L	.00015	3,000	2.3	1	.45	.15	12.60	**7.56**
582-15L	.0002	3,000	3	1.2	.6	.2	12.60	**7.56**
805-15L	.00025	3,000	3	2.5	1	.4	12.60	**7.56**
640-15L	.0003	3,000	3.5	2	.8	.4	12.60	**7.56**
641-15L	.0004	3,000	4	2	.9	.45	12.60	**7.56**
642-15L	.0005	3,000	4	2	1	.55	12.60	**7.56**
643-15L	.0006	3,000	4.5	2	1.2	.6	12.60	**7.56**
727-15L	.0008	3,000	4.5	2.5	1.5	.7	12.60	**7.56**
581-15L	.001	3,000	5	3	1.6	.8	12.60	**7.56**
679-15L	.0015	3,000	6	3.5	2	1	12.60	**7.56**
726-15L	.002	3,000	6.5	4	2.5	1.5	12.60	**7.56**
645-15L	.003	2,000	7.5	5	3	1.5	12.60	**7.56**
699-15L	.004	2,000	8	6	3.5	1.6	12.60	**7.56**
725-15L	.005	2,000	8.5	6.5	4	2	12.60	**7.56**
580-15L	.006	2,000	9	7.5	4.5	2.2	12.60	**7.56**
724-15L	.008	1,500	10	8	5	2.3	12.60	**7.56**
677-15L	.01	1,000	10	8	5	2.5	12.60	**7.56**
723-15L	.02	1,000	11	10	7	3	14.30	**8.58**
722-15L	.05	500	11	10	8	5	14.30	**8.58**
721-15L	.1	250	11	12	10	6	15.10	**9.06**

TYPE 30B

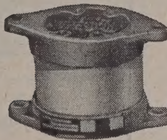
Cat. No.	Cap. Mfd.	Test. Volt. Effective	Max. Oper. Cur. in Amps. 3000 kc.	1000 kc.	300 kc.	100 kc.	List Price	Net Price
533-30B	.0001	4,000	(20 Amps. at 60 mc.)		(3 Amps. at 4 mc.)		$35.25	**$21.15**
958-30B	.00025	8,000	7	4.5	1.5	.5	35.25	**21.15**
959-30B	.0005	8,000	8.5	6	3	1	35.25	**21.15**
960-30B	.001	8,000	10	8.5	4.5	1.5	39.25	**23.55**
961-30B	.002	8,000	11	11	7.5	2.5	39.25	**23.55**
759-30B	.003	8,000	12	14	10	5	42.25	**25.35**
757-30B	.004	8,000	12	14	10	6	44.60	**26.76**
758-30B	.005	8,000	13	15	11	6	48.60	**29.16**
756-30B	.006	6,000	15	15	11	6	48.60	**29.16**
962-30B	.01	5,000	16	20	15	8	52.55	**31.53**
915-30B	.01	8,000	16	20	15	8	55.20	**33.12**
963-30B	.02	5,000	18	20	17	10	55.20	**33.12**
741-30B	.03	4,000	20	20	18	12	55.20	**33.12**
771-30B	.05	2,000	18	25	22	12	61.85	**37.11**
964-30B	.05	4,000	18	25	22	12	61.85	**37.11**
113-30B	.1	2,000	18	25	22	12	48.60	**29.16**
603-30B	.2	600	18	25	22	12	39.25	**23.55**
750-30B	.25	600	18	25	22	12	44.60	**26.76**
933-30B	.3	600	18	25	22	12	44.60	**26.76**
604-30B	.5	600	18	25	22	12	52.55	**31.53**
898-30B	1.0	600	18	25	22	12	81.85	**49.11**

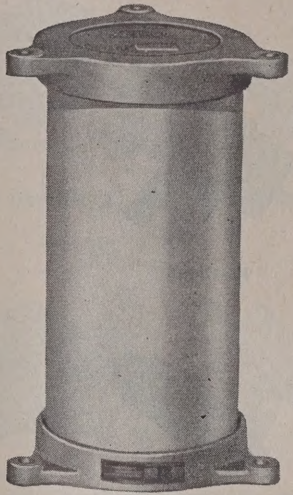
★When JAN-C-5 units must be supplied, order according to specific CM type designations listed in C-D Mica Capacitor Catalog No. 420.

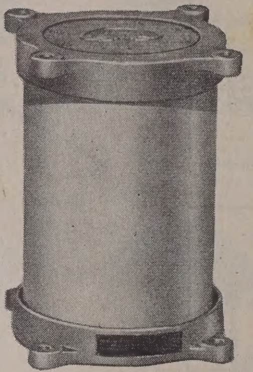
CORNELL DUBILIER

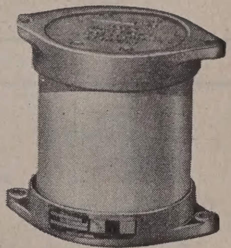
COMMERCIAL MICA TRANSMITTING CAPACITORS

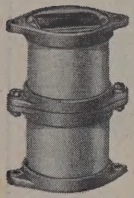
TYPE 59 ★

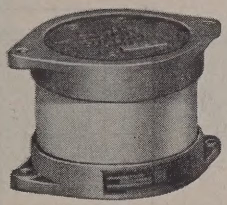

TYPE 50 ★


TYPE 57


TYPE 56 ★


TYPE 52 ★


2 TYPE 59 STACKED


TYPE 51 ★

TYPE 50—Size 5″ x 3½″ x 3″ high

Cat. No.	Cap. Mfd.	Test. Volt. Effective	List Price	Net Price
325-50	.0001	10,000	$65.55	**$39.33**
315A-50	.00015	10,000	65.55	**39.33**
308-50	.0002	10,000	65.55	**39.33**
278-50	.0005	10,000	65.55	**39.33**
259-50	.0008	10,000	65.55	**39.33**
250-50	.001	10,000	65.55	**39.33**
238-50	.0015	10,000	65.55	**39.33**
223-50	.002	10,000	65.55	**39.33**
191-50	.004	8,000	65.55	**39.33**
178-50	.005	5,000	65.55	**39.33**
155-50	.01	5,000	69.15	**41.49**
142-50	.015	4,000	69.15	**41.49**
136-50	.02	3,000	69.15	**41.49**

TYPE 51—Size 6½″ x 5″ x 4″ high

Cat. No.	Cap. Mfd.	Test. Volt. Effective	List Price	Net Price
335-51	.00005	20,000	$110.90	**$66.54**
323-51	.0001	25,000	126.00	**75.60**
316-51	.00015	20,000	126.00	**75.60**
310-51	.0002	20,000	131.10	**78.66**
280-51	.0005	20,000	137.15	**82.29**
260-51	.0008	20,000	137.15	**82.29**
252-51	.001	20,000	141.15	**84.69**
239-51	.0015	20,000	151.25	**90.75**
225-51	.002	12,000	141.15	**84.69**
193-51	.004	12,000	151.25	**90.75**
181-51	.005	10,000	151.25	**90.75**
158-51	.01	10,000	151.25	**90.75**
138-51	.02	3,000	151.25	**90.75**

TYPE 56—Size 9″ x 10″ high

Cat. No.	Cap. Mfd.	Test. Volt. Effective	List Price	Net Price
951-56	.0001	35,000	$464.00	**$278.40**
803-56	.0002	35,000	504.00	**302.40**
409-56	.0004	30,000	464.00	**278.40**
412-56	.0006	30,000	544.00	**326.40**
421-56	.001	30,000	544.00	**326.40**
559-56	.002	30,000	538.00	**322.80**
955-56	.003	25,000	548.00	**328.80**

TYPE 52—Size 6½″ x 5″ x 5¾″ high

Cat. No.	Cap. Mfd.	Test. Volt. Effective	List Price	Net Price
609-52	.00005	10,000	$151.25	**$ 90.75**
326-52	.0001	35,000	221.16	**132.70**
492-52	.00015	8,000 (30 Amps. at 20 Mc; 18 A. at 6 Mc)	167.90	**100.74**
298-52	.0003	30,000	221.16	**132.70**
286-52	.0004	30,000	221.16	**132.70**
281-52	.0005	30,000	221.16	**132.70**
261-52	.0008	30,000	221.16	**132.70**
253-52	.001	25,000	229.10	**137.46**
227-52	.002	20,000	229.10	**137.46**
462-52	.004	20,000	234.35	**140.61**
485-52	.005	20,000	252.25	**151.35**
164-52	.008	12,000	260.00	**156.00**
430-52	.01	15,000	272.44	**163.46**
523-52	.04	5,000	272.44	**163.46**

TYPE 59—Size 3$\frac{13}{16}$″ x 2$\frac{13}{16}$″ x 2½″ high

Cat. No.	Cap. Mfd.	Test. Volt. Effective	List Price	Net Price
573-59	.00005	6,000	$38.20	**$22.92**
542-59	.0001	6,000	40.60	**24.36**
543-59	.0002	6,000	40.60	**24.36**
620-59	.0003	6,000	40.60	**24.36**
544-59	.0005	6,000	46.65	**27.99**
545-59	.001	6,000	46.65	**27.99**
572-59	.002	6,000	69.15	**41.49**
595-59	.003	6,000	50.60	**30.36**
547-59	.005	5,000	48.90	**29.34**
548-59	.01	5,000	51.45	**30.87**
889-59	.02	3,000	51.45	**30.87**

TYPE 57—Size 8½″ x 14″ high

Cat. No.	Cap. Mfd.	Test. Volt. Effective	List Price	Net Price
402-57	.0006	30,000	$429.60	**$257.76**
676-57	.002	40,000	566.40	**339.84**
776-57	.004	25,000	644.40	**386.64**

For complete information on Cornell-Dubilier Mica Transmitting Capacitors see Catalog No. 420.

FARADON REPLACEMENT TRANSMITTING CAPACITORS

Cat. No.	Type Case	Cap. Mfds.	Volts D.C.W.	List Price	Net Price
UC 2325A	77	.001	15000	$129.94	**$77.96**
UC 2344	77	.0005	20000	129.94	**77.96**
UC 2360A	77	.004	12000	138.77	**83.26**
UC 2446	77	.05	3000	129.94	**77.96**
UC 2507A	140	.0002	30000	609.59	**365.75**
UC 2992	99	.05	2000	86.63	**51.98**
UC 3000	111	.02	5000	240.63	**144.38**
UC 3018A	140	.008	15000	657.71	**394.63**
UC 3031A	13B	.005	5000	94.64	**56.78**
UC 3035	140	.005	15000	657.71	**394.63**
UC 3047	13B	.003	5000	88.23	**52.94**
UC 3073	99	.001	10000	$ 78.29	**$ 46.97**
UC 3075	111	.001	20000	224.59	**134.75**
UC 3076	140	.001	40000	609.59	**365.75**
UC 3097	99	.0005	10000	78.29	**46.97**
UC 3099	111	.0005	25000	224.59	**134.75**
UC 3100	140	.0005	40000	609.59	**365.75**
UC 3117	99	.0002	10000	78.29	**46.97**
UC 3123	99	.00015	10000	78.29	**46.97**
UC 3127A	351	.0001	5000	23.27	**13.96**
UC 3245	358	.1	10000	2,085.41	**1,251.25**
UC 3260	366	.00005	20000	118.70	**71.22**

For complete information on C-D FARADON Capacitors refer to C-D Mica Catalog No. 420

★When JAN-C-5 units must be supplied, order according to specific CM type designations listed in C-D Mica Capacitor Catalog No. 420.

FEED-THRU AND NOISE FILTERS

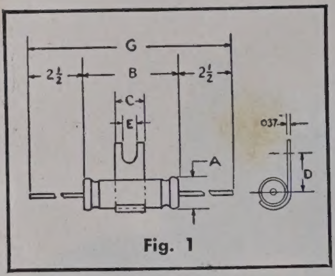
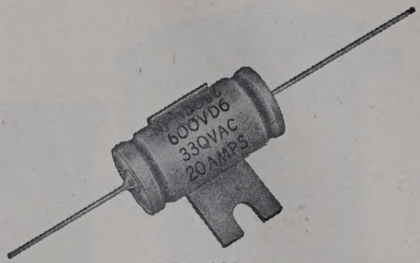


Fig. 1



NF-1D086

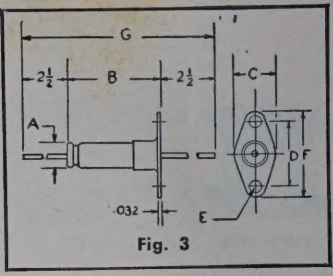


Fig. 3

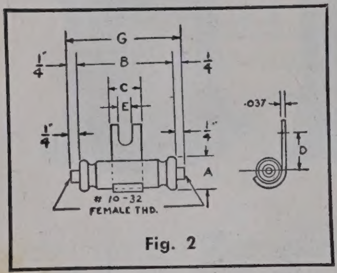
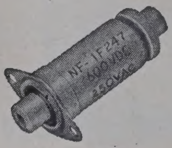


Fig. 2



NF-1F247

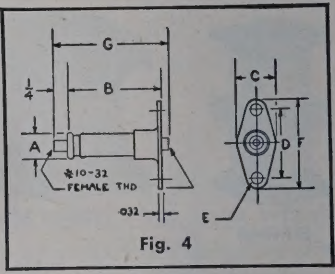


Fig. 4

These C-D Feed-Thru Capacitors are designed for installation in mobile, aircraft and marine equipment where high insertion loss over wide frequencies is required to reduce interference in television, sound and radio receivers.

Hermetically sealed in sturdy metal casings to withstand extreme conditions of humidity in marine and automotive equipment, they are also available in various voltage ratings, mountings and terminal types for all uses.

Cat. No.	Cap. Mfd.	VOLTAGE		Amps.	Fig.	DIMENSIONS—INCHES							List Price	Net Price
		A.C.	D.C.			A	B	C	D	E	F	G		
NF 1D248	.001	330	600	20	1	¼	1⅜	¼	9/32	.144	—	5⅜	$2.15	**$1.29**
NF 1D249	.005	330	600	20	1	¼	1⅝	¼	9/32	.144	—	5⅜	2.15	**1.29**
NF 1D085	.010	330	600	20	1	7/16	1¼	7/16	⅜	.170	—	5¼	2.35	**1.41**
NF 1D086	.10	330	600	20	1	11/16	1 7/16	⅝	⅝	7/32	—	5 7/16	2.40	**1.44**
NF 1D087	.25	330	600	20	1	¾	1 7/16	⅝	3/16	7/32	—	5 7/16	3.00	**1.80**
NF 1D088	.50	330	600	20	1	1	2 1/16	⅝	11/16	7/32	—	6 1/16	3.75	**2.25**
NF 1D247	.10	250	600	20	2	11/16	1 23/32	⅝	⅝	7/32	—	2 7/32	2.60	**1.56**
NF 1D246	.25	115	200	20	2	¾	1 23/32	⅝	9/16	7/32	—	2 7/32	2.60	**1.56**
NF 1D250	.50	115	200	20	2	1	1 13/16	⅝	11/16	7/32	—	2 5/16	3.15	**1.89**
NF 1F248	.001	330	600	20	3	¼	1⅜	⅜	9/16	.125	13/16	5⅜	2.40	**1.44**
NF 1F249	.005	330	600	20	3	¼	1⅝	⅜	9/16	.125	13/16	5⅝	2.40	**1.44**
NF 1F085	.01	330	600	20	3	7/16	1¼	⅝	15/16	.154	1 7/32	5¼	2.60	**1.56**
NF 1F086	.10	330	600	20	3	11/16	1 7/16	⅞	1 1/16	.154	1 11/32	5 7/16	2.80	**1.68**
NF 1F087	.25	330	600	20	3	¾	1 7/16	⅞	1⅛	.156	1 13/32	5 7/16	3.40	**2.04**
NF 1F088	.50	330	600	20	3	1	2 1/16	1⅛	1 7/16	.156	1 19/32	6 1/16	4.15	**2.49**
NF 1F247	.10	250	600	20	4	11/16	1 23/32	⅞	1 1/16	.154	1 11/32	2 7/32	2.95	**1.77**
NF 1F246	.25	115	200	20	4	¾	1 23/32	⅞	1⅛	.156	1 13/32	2 7/32	3.00	**1.80**
NF 1F250	.50	115	200	20	4	1	1 13/16	1⅛	1 7/16	.156	7 19/32	2 5/16	3.55	**2.13**

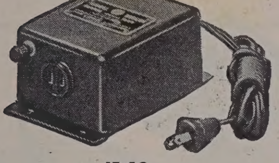
CARDBOARD TUBULAR RESONANT* FILTERS

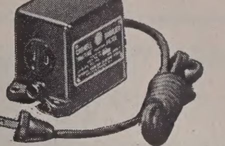
Cat. No.	Cap. Mfd.	VOLTAGE	Size—Inches Dia. x Length	List Price	Net Price
		D.C.			
NF 10170	.05	400	½ x 1⅛	$.60	**$.36**
NF 10178	.1	400	½ x 1⅝	.65	**.39**
NF 10137	.2	400	9/16 x 1⅞	.75	**.45**

*Resonant at 455 K.C.

CORNELL DUBILIER

"QUIETONE"® INTERFERENCE FILTERS


IF-18

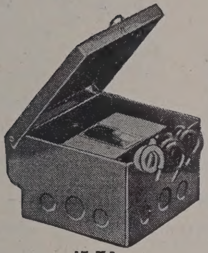

IF-19

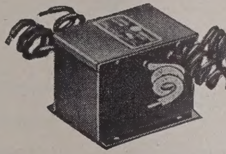
IF-6

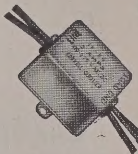
IF-4

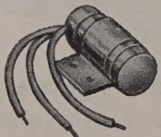
IF-22

QUIETONES FOR USE ON RADIOS AND HOME ELECTRICAL APPLIANCES


IF-7A


IF-27


IF-54


IF-25

IF-24

QUIETONES FOR USE ON INDUSTRIAL AND HEAVY-DUTY ELECTRICAL EQUIPMENT

Most satisfactory results are obtained when Quietones are installed at the source of the radio noise. This is because the high frequency disturbances caused by appliances are carried by the power lines.

A Quietone installed on an appliance corrects noise in all radio receivers, your neighbors, as well as your own.

RADIO AND APPLIANCE QUIETONES

Rating—110 V. A.C.-D.C.—5 amps.

Cat. No.	Radio and Electrical Appliance Uses	Case Color	List Price	Net Price
IF-4	Small radios, portables. Low intensity noise.	Ivory, Walnut, Green	$1.25	**$ .75**
IF-5	Small electric appliances. Low intensity interference.	Ivory, Walnut, Green	1.25	**.75**
IF-6	All home appliances. Low intensity interference.	Ivory, Walnut, Green	1.95	**1.17**
IF-18	All radios and appliances with severe interference	Walnut, Bakelite	9.20	**5.52**
IF-19	All types home appliances with severe interference.	Ivory, Walnut, Bakelite	7.70	**4.62**
IF-20	Small appliances with very low interference.	Ivory, Walnut, Bakelite	.85	**.51**
IF-21*	Electric barber clippers, shavers, small appliances.	Ivory, Walnut, Bakelite	4.40	**2.64**
IF-22-A or B	Schick, Knapp—IF-22-A. Rem. Rand, Packard, Zephyr, Ronson, etc.—IF-22-B.	Ivory, Black, Bakelite	3.05	**1.83**

*IF-21 rated at 1.6 amps.

INDUSTRIAL QUIETONES

Fluorescent Light Quietones

Cat. No.	Volts D.C.—A.C.	Connections	Housing	List Price	Net Price
IF-6	110	Plug-in	Metal	$1.95	**$1.17**
IF-24	110	Flex-Leads	Metal	1.25	**.75**
IF-54	110–220	Flex-Leads	Metal	2.50	**1.50**

Capacitive (CP) Quietones

Cat. No.	Volts D.C.—A.C.	Connections	Housing	List Price	Net Price
IF-25	110–220	Flex-Leads	Metal	$4.95	**$2.97**
IF-26	110–220	Flex-Leads	Metal	6.60	**3.96**
IF-11	110	BX	Cutout Box	13.20	**7.92**
IF-12	220	BX	Cutout Box	18.15	**10.89**
IF-14**	110–220	BX	Cutout Box	24.75	**14.85**

** IF-14 is for 2 or 3 phase circuits.

Capacitive-Inductive (CI) Quietones

Cat. No.	Volts D.C.—A.C.	Max. Amps.	Connections	Housing	List Price	Net Price
IF-7A§	110–220	5	BX	Cutout Box	$13.75	**$8.25**
IF-15	110–220	10	BX	Cutout Box	27.50	**16.50**
IF-16	110–220	20	BX	Cutout Box	38.50	**23.10**
IF-27	110	5	Flex-Leads	Steel Box	7.70	**4.62**
IF-28	110	10	Flex-Leads	Steel Box	13.75	**8.25**
IF-29	110	20	Flex-Leads	Steel Box	24.20	**14.52**

§For use on oil burners.

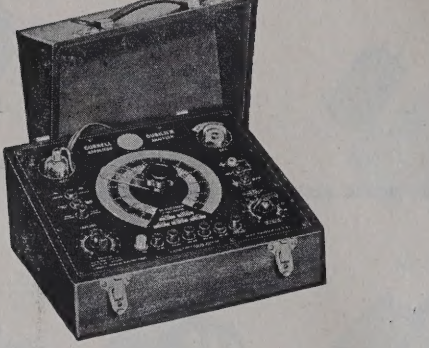
GUIDE TO THE SELECTION OF QUIETONES

For These Electrical Appliances	Best Type	Use These Quietones Also Satisfactory Types			
Adding Machines	IF-18	IF-19	IF-6	IF-54	IF-24
Addressing Machines	IF-18	IF-19	IF-6	IF-54	IF-24
Air Conditioners	IF-18	IF-19	IF-6	IF-25	IF-24
Automatic Towels	IF-18	IF-19	IF-6	IF-25	IF-24
Auto Call Systems	IF-18	IF-19	IF-26	IF-24	IF-54
Barbers Clippers	IF-21	IF-19	IF-6		IF-5
Battery Chargers:					
Mercury Arc	CP-Types*	IF-26			
Rotary Type	CI-Types*				
Vibrator Type	IF-18	IF-19	IF-6		
Billing Machines	IF-18	IF-19	IF-6	IF-24	IF-54
Calculating Machines	IF-18	IF-19	IF-6	IF-24	IF-54
Cash Registers	IF-18	IF-19	IF-6	IF-54	
Dental Machines	IF-19				
Dial Telephones		Call Tele	phone Co	mpany	
Diathermy	CI-Types*	Plus Shielding			
Dictating Machines	IF-19	IF-6	IF-24		
Dishwashers	IF-19	IF-19	IF-6	IF-54	
Drink Mixers	IF-19	IF-21	IF-6	IF-5	IF-20
Drills	IF-19	IF-6	IF-24	IF-54	
Elevator Motors	CI-Types*	CP-Types*	IF-26	IF-25	
Fans	IF-19	IF-21	IF-6	IF-25	IF-24
Floor Polishers	IF-18	IF-19	IF-6	IF-24	
Flour Bleachers	CI-Types*	CP-Types*			
Fluorescent Lamps	CI-Types*	CP-Types*	IF-54	IF-24	IF-6
Food Mixers	IF-19	IF-21	IF-6	IF-5	IF-20
Fruit Juice Extractors	IF-19	IF-21	IF-6	IF-5	IF-20
Hair Dryers	IF-6	IF-5	IF-20		
Heating Pads	IF-19	IF-6	IF-5	IF-20	
Humidifiers	IF-19	IF-6	IF-5	IF-20	
Massage Machines	IF-19	IF-21	IF-6	IF-5	IF-54
Motors	CI-Types*	CP-Types*	IF-54		
Motor Generators	CI-Types*	CP-Types*			
Oil Burners	IF-7A				
Ozonators	IF-19				
Radio Receivers	IF-18	IF-19	IF-4	IF-20	
Refrigerators	IF-18	IF-19	IF-6	IF-5	IF-20
Rotary Converters	CI-Types*	CP-Types*			
Sewing Machines	IF-19	IF-21	IF-6	IF-54	IF-20
Shavers	IF-21	IF-22	IF-20		
Sign Flashers	CI-Types*	CP-Types*	IF-54		
Stokers	CI-Types*	CP-Types*	IF-26	IF-25	IF-24
Vacuum Cleaners	IF-19	IF-21	IF-6	IF-5	
Washing Machines	IF-19	IF-6	IF-5		
X-Ray Equipment	CI-Types*	Plus Shielding			

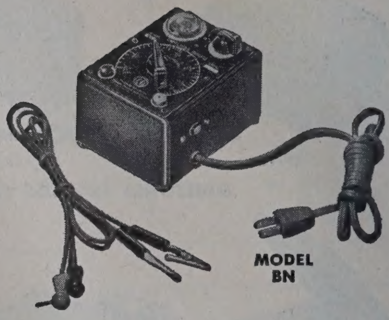
*Note: (CI) Capacitive-inductive and (CP) capacitive Quietones.

For additional applications write for complete data.

CAPACITOR TEST INSTRUMENTS



MODEL BF-50



MODEL BN

CAPACITOR ANALYZER

The Model BF-50 Capacitor Analyzer quickly and accurately measures all important characteristics of all types of capacitors. It offers the most accurate and thorough capacitor test of any instrument of its type, and may be operated on any 110-volt, 50-60 cycle power line.

The analyzer will determine the true condition of all paper, mica and electrolytic capacitors, including A.C. motor starting types.

Features of Model BF-50 Analyzer

1. Measures Capacity—Accurately measures capacity of paper, mica, air, electrolytic and motor-starting capacitors from .00001 to 240 mfd.
2. Measures Power Factor—Measurements of power factor from zero to 50 percent on all types of electrolytic capacitors including motor-starting types.
3. Employs Wien Bridge—Assures permanent accuracy of capacity and power factor measurements. Readings not affected by line voltage variations.
4. Indicates Insulation Resistance—Insulation resistance measurements of paper and mica capacitors up to 1500 megohms. Also measures many types of insulation.
5. Indicates Leakage—Measurements of leakage of electrolytic capacitors by means of built-in direct current power supply.
6. Visual Eye Leakage Indicator—Provides simplified and reliable leakage tests on all types of capacitors. Enables measurements to be made rapidly.
7. Detects Defective Capacitors—Character measurements, such as leaky, shorted, open, high and low capacity, and high power factor on all capacitors.
8. High Sensitivity on All Measurements—Amplifier for capacity, power factor and leakage tests provides sharp and accurate readings. Amplifier built-in Analyzer.
9. Balance Sensitivity Control—Provides sharp or broad balances for quick and accurate readings. All readings are made simply and directly.
10. Direct Reading Linear Scale Calibration—Provides simplified measurements. All scales on panel uniformly spaced, easy to read, thus avoiding possible errors in using multipliers or charts.
11. Push-Button Switching—For convenient and simplified adjustments, all tests and circuit changes are made by means of modern push-button switches.
12. Visual Eye Bridge Balance—Visual detector gives positive indication of bridge balance for convenient, simplified and accurate capacity and power factor measurements.
13. Six Color-Coded Scales—Accurately calibrated, six color-coded scales. Uniformly spaced over total spacing of sixty inches. Easy to read. No "blind" spots.
14. General Purpose Instrument—May be used to check continuity capacity between circuits, insulation of transformer windings and other types of coils, etc.
15. Self-Contained—Portable—An instrument complete in itself, requiring no external standard, headphones, meters or accessories. A portable unit, for 110 volt, 50-60 cycle operation, supplied in walnut cabinet, removable cover, with carrying handle. Size, 6½ x 12 x 9¾ inches. Weight, 9 pounds.

MODEL BF-50 CAPACITOR ANALYZER
Net Price complete with tubes........ **$46.92**

Replacement Tubes for Use in Model BF-50:
6E5—List Price $2.20—Net Price $1.32
12A7—List Price $3.20—Net Price $1.92

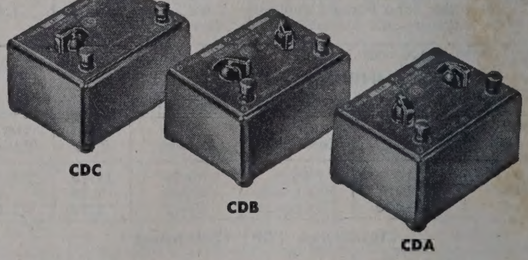
CAPACITOR BRIDGE

Features of Model BN Capacitor Bridge

1. Measures Capacity—Accurately measures capacity of paper, mica, electrolytic and air capacitors from .00001 mfd. to 50 mfds.
2. Indicates Power Factor—Power factor of electrolytic capacitor indicated by means of visual eye detector tube.
3. Detects Defective Capacitors—Detects open and short circuits, high and low capacity, and high power factor.
4. Checks Circuit Continuity—May be used as continuity meter. A handy instrument for checking circuits, coils, transformers and many other uses. For operation on 110 volts, 60 cycles.
5. Employs Wien Bridge—Employs Wien Bridge circuit for all measurements. Accuracy independent of line voltage variations.
6. Visual Eye Bridge Balance—Dual type visual bridge balance for accurate measurements facilitates quick tests on service jobs.
7. Direct Reading Scale—Direct reading ranges with all scale markings directly in microfarads. Clear reading dial scale. All capacity calibrations marked on panel. No charts or multipliers required.
8. Self-Contained—The Capacitor Bridge is complete in itself and requires no headphones, standards, external meters, etc.
9. Extremely Compact—The unusually small size of this bridge makes it particularly handy for portable use—3⅝" x 5" x 3" weight 2 pounds.
10. Attractive—Supplied in attractive walnut Bakelite case complete with detachable test leads and useful instruction booklet.

MODEL BN CAPACITOR BRIDGE
Net Price complete with tubes........ **$22.39**

Replacement tubes for use in Model BN Bridge:
6AF6G—List Price $2.65—Net Price $1.59
12A7—List Price $3.20—Net Price $1.92



CAPACITOR DECADES

C-D Capacitor Decades provide accurate standards over a wide range of capacity. May be used in groups of the three decades, shown above, or used individually for maximum flexibility. Each decade is furnished with calibration chart giving exact capacity values for all scale markings, extending use to more precise measurements.

Rated Voltage—600 D.C.—220 A.C.

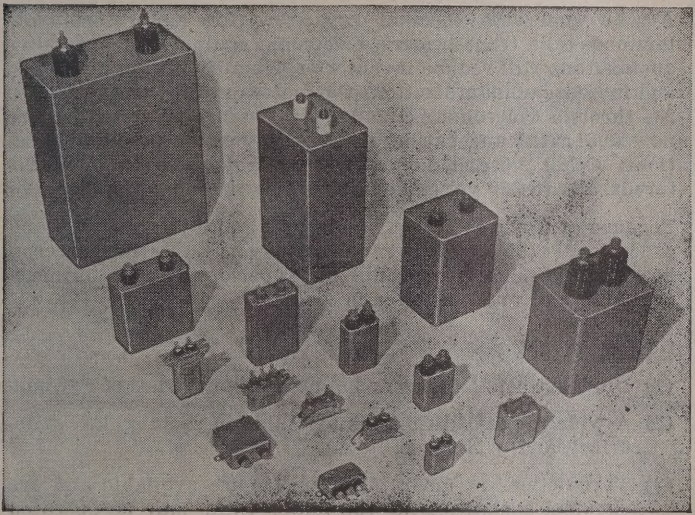
Model	Capacity	+ or — Tol.	Dielectric	Net Price
CDA-5	.011 mfd. in. .0001 mfd. steps	5%	Mica	**$9.35**
CDB-5	1.1 mfd. in. .01 mfd. steps	5%	Oil-Paper	**9.35**
CDB-3	1.1 mfd. in .01 mfd. steps	3%	Oil-Paper	**13.20**
CDC-5	10.0 mfd. in 1.0 mfd. steps	5%	Oil-Paper	**19.25**
CDC-3	10.0 mfd. in 1.0 mfd. steps	3%	Oil-Paper	**21.45**

PYRANOL* CAPACITORS

*Registered trade-mark of General Electric Co.

CAPACITORS TO MEET JOINT ARMY-NAVY SPECIFICATION JAN-C-25

100 to 12,500 Volts D-c — 0.01 to 15 Microfarads



CP 53, 54—Bathtub style CP 70—Large Rectangular
CP 61, 63, 65, 67, 69—Miniature Rectangular

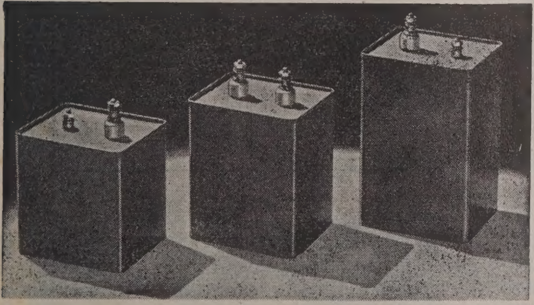
Intended primarily for feeder, by-pass, and blocking purposes, these units are qualified for applications where the alternating-current component of the impressed voltage is small with respect to the direct-current rating.

All case styles are available in Characteristics *D*, *E* and *F*. Single-section units are supplied with a capacitance tolerance of ±10 per cent (K), and two- and three-section units with a capacitance tolerance of +20 per cent, —10 per cent (V). Spade-lug and footed mounting brackets are available for use with capacitors on which the mounting bracket is not an integral part.

In addition to their regular applications, these units may also be used at higher temperatures, with higher voltages for short-life applications, and with a-c voltages.

Write for Bulletin GEC-810.

ENERGY-STORAGE DISCHARGE CAPACITORS



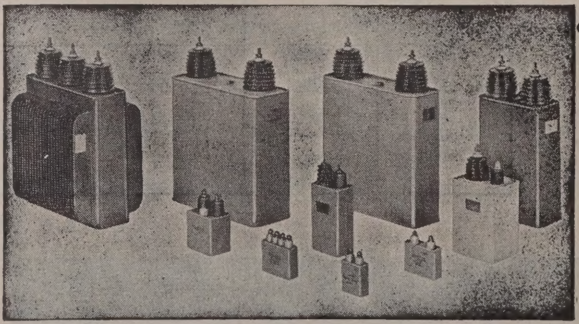
G-E light-duty energy-storage capacitors are made in a wide range of ratings to fit practically every requirement of high-speed flash photography, as well as home and industrial welders for light metals. Careful construction, high-quality materials, and skillful design contribute to long life and efficient operation.

Write for Bulletin GEA-4646.

STANDARD RATINGS

Max. D-c volts	Capacitance, Microfarads	Max. D-c volts	Capacitance, Microfarads
2000	28	4000	50
2500	14	4000	100
3000	60	5000	25/50
3500	12.5	6000	55
4000	25/50	6000	25

CAPACITOR NETWORKS



These capacitor networks are designed for radar and industrial equipment where the normal (exponential) capacitor discharge shape is not suitable and where an impulse having a definite energy content and duration is required.

General Electric pioneered in the development of mineral-oil-treated paper dielectric capacitor networks for air, sea, and land radar, and was a prime supplier for the government services. The products supplied varied from the miniature types used with aircraft and guided missiles to the large designs for land-based radar.

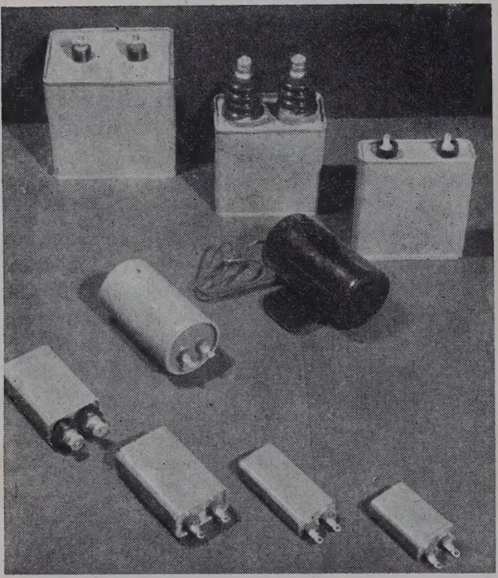
Write for Bulletin GEA-4996.

PYRANOL* CAPACITORS

*Registered trade-mark of General Electric Co.

STANDARD COMMERCIAL TYPES

For A-c and D-c Applications — Fixed Paper-dielectric Capacitors



A-c/d-c dual-rated Pyranol capacitors for motors, controls luminous-tube transformers, electronic equipments, and other applications will reduce inventories, simplify design problems, and increase standardization. Capacitors in the voltage ranges 236 through 660 volts, a-c, and 400 through 1500 volts, d-c, are now dual-rated and can be used for either a-c or d-c applications. Other a-c and d-c ratings available: 0.01 to 75 microfarads, 236 to 660 volts, a-c, and 400 to 100,000 volts, d-c.

Because of the high dielectric strength, high permittivity, and exceptional stability of Pyranol, its use as a treating material has made possible a capacitor far superior to those formerly available and much smaller in size.

Design Advantages

(1) Units are small and compact, because of the use of Pyranol.

(2) A wide range of ratings is available in rectangular, cylindrical, and oval cases.

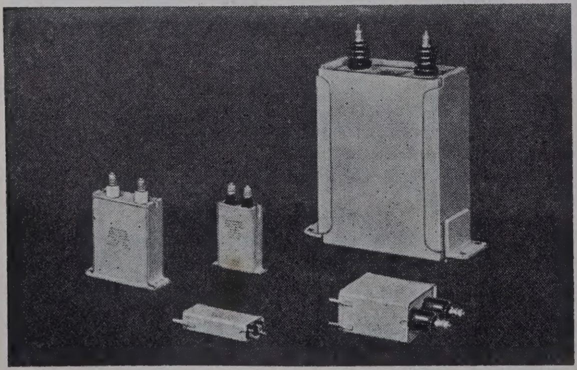
(3) Three styles of mounting brackets are available and are supplied separate from the units. Units may be operated in any position.

Write for Bulletin GEC-809.

STANDARD RATING RANGE

Rated Voltage 60 Cycles		Capacitance Ratings — Microfarads			
A-c	D-c	Case Style 60	Case Style 70	Fabricated Rectangular	Drawn Oval
236	400	2	4-16	—	—
330	—	—	—	1-50	1.25-12
330	600	0.25-1	1-50	—	—
440	—	—	—	28	—
440	1000	0.1-0.5	1-15	—	—
660	—	—	—	2-6	—
660	1500	0.01-0.05	1-15	—	—
—	2000-100,000	—	0.05-75	—	—

Case Style 70



Case Style 70 units with various types of terminals and removable mounting brackets

These Pyranol fixed paper-dielectric capacitors in Case Style 70 are hermetically sealed in rectangular cases. This line includes standard ratings, ranging from very small units weighing only three ounces to large high-voltage units weighing up to 175 pounds.

All are of single-action construction, with a capacitance tolerance of ±10 per cent. Cases are isolated and the two bushings are brought out through the cover. Units in 600-, 1000-, and 1500-volt ratings are available with either solder-lug terminals or with pillar-insulator terminals. All higher-voltage ratings have pillar-insulator terminals. These units may be operated in altitudes up to 7500 feet.

Up to 600 volts d-c, bushings with solder-lug terminals are made of G-E silicone; above this rating, they are of phenolic-cup construction. Bushings with pillar-

PYRANOL* CAPACITORS

*Registered trade-mark of General Electric Co.

Case Style 70 (Cont.)

insulator terminals are made of molded phenolic or porcelain of the highest quality. All bushings are thoroughly bonded to the container to provide a permanent liquid-tight seal.

All units can be supplied with removable mounting brackets. Both spade-lug and L-type are available. Brackets can be attached to either the top or the bottom of the units to permit upright or inverted mounting.

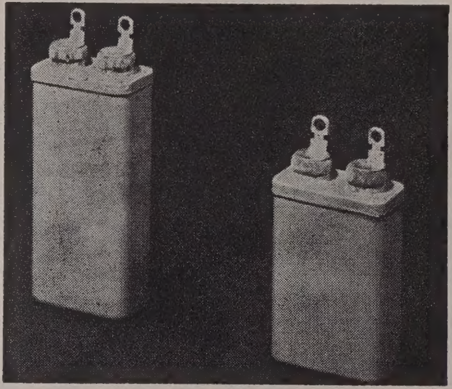
Write for Bulletin GEC-809.

STANDARD RATINGS

Nominal Direct Voltage Rating	Capacitance Ratings, Microfarads
2000	0.10, 0.25, 0.50, 1.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0
2500	0.50, 1.0, 2.0 4.0, 10.0, 20.0, 25.0, 55.0, 75.0
3000	0.10, 0.25, 0.50, 1.0, 2.0, 4.0, 8.0, 12.0, 20.0, 45.0, 60.0
4000	0.10, 0.25, 0.50, 1.0, 2.0, 4.0, 6.0, 7.0, 13.0, 20.0, 30.0
5000	0.05, 0.10, 0.25, 0.50, 1.0, 2.0, 4.0, 6.0, 8.0, 14.0, 18.0
6000	0.10, 1.0, 2.0, 4.0, 5.0, 10.0, 14.0
7500	0.10, 0.25, 0.50, 1.0, 2.0, 3.0, 7.0, 9.0
10,000	0.10, 0.25, 0.50, 1.0, 1.5, 2.0, 3.5, 5.0
12,500	0.05, 0.10, 0.25, 0.50, 0.75, 1.0, 1.2, 2.5, 3.3
15,000	0.25, 0.50, 0.75, 0.90, 1.75, 2.25
20,000	0.15, 0.25, 0.50, 1.0, 1.25, 3.0
25,000	0.10, 0.25, 0.60, 1.0
30,000	0.25, 0.5, 0.75
40,000	0.10, 0.20, 0.25, 0.35
50,000	0.17, 0.25
75,000*	0.25
100,000*	0.125

*Mid-point connected to case.

Case Style 60



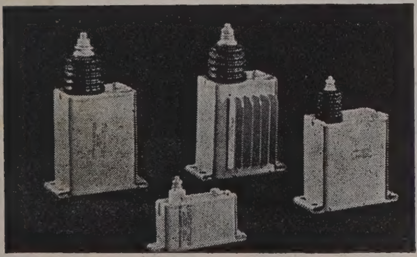
These small rectangular-case fixed-paper-dielectric units are of narrower width than the "bathtub" units, and will fit into a very restricted panel surface, where case height is not the limiting dimension. Mounting lugs, of either the removable or attached type, are of very sturdy construction.

These units have solder-lug terminals, and are available in either single- or dual-section construction for all circuit diagrams.

The metallic containers are hermetically sealed, and of deep drawn construction.

Case Style 60 units have no brackets, but removable brackets of either the footed or spade-lug type can be supplied.

CAPACITORS FOR OSCILLATOR TANK CIRCUITS



This line of fixed paper-dielectric capacitors has been developed primarily for grid and plate blocking service in the electronic oscillator circuits of high-frequency induction-heating equipments. They can also be used to advantage in other high-frequency oscillator circuits of a similar nature.

G-E high-voltage paper-dielectric capacitors are of relatively high capacitance (0.01 mu f) for high-frequency units, yet they are more economical than conventional high-frequency units of considerably smaller capacitance values. They can, therefore, be applied with savings in cost as well as reduced losses and lower voltage drop across the capacitor.

features

- Hermetically sealed in metallic cases.
- Single-bushing construction for minimum size.
- Removable mounting brackets.
- Internal lead connections arranged for minimum inductance.

Write for Bulletin GEA-4388.

STANDARD RATINGS

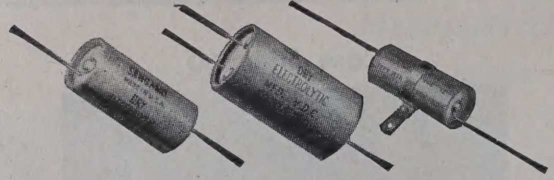
D-c Voltage Rating	Microfarad Rating
5000	0.01
15,000	0.01
20,000	0.01
20,000*	0.01

* With cooling fins for higher current-carrying capacity.
Capacitance tolerance ±10%.

SANGAMO CAPACITORS

ELECTROLYTIC CAPACITORS

TYPE MT-MTD-MTH *Chieftain*



SANGAMO Type MT "Chieftain" electrolytics are especially designed for television and other electronic applications where operation at 85°C. temperatures is required. They are hermetically sealed in round aluminum containers which are encased in heavy insulating sleeves on which polarity is clearly indicated. Being small in physical size they are most popular where mounting in limited space is required — They will fit anywhere and can be mounted in almost any position. Double-thick paper spacers assure adequate breakdown characteristics and all sections are tightly held in place within the container. Multiple staking connects the terminal tabs to the electrodes and provides permanent low resistance contact throughout the life of the capacitor. Low voltage units utilize etched cathodes to maintain uniform capacity when they are subjected to combined conditions of heat and high ripple currents.

Single Units

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
MT-0210	10	25	⅝ x 1 1/16	$1.00	$0.60
MT-0225	25	25	⅝ x 1 1/16	1.00	.60
MT-0250	50	25	⅝ x 1 5/16	1.10	.66
MT-0510	10	50	⅝ x 1 1/16	1.00	.60
MT-0525	25	50	⅝ x 1 5/16	1.05	.63
MT-0550	50	50	¾ x 1 9/16	1.20	.72
MT-1504	4	150	⅝ x 1 1/16	1.00	.60
MT-1508	8	150	⅝ x 1 5/16	1.05	.63
MT-1512	12	150	⅝ x 1 5/16	1.10	.66
MT-1516	16	150	⅝ x 1 9/16	1.15	.69
MT-1520	20	150	⅝ x 1 9/16	1.20	.72
MT-1530	30	150	¾ x 1 9/16	1.30	.78
MT-1540	40	150	¾ x 1 13/16	1.35	.81
MT-1550	50	150	⅞ x 1 13/16	1.40	.84
MT-2508	8	250	⅝ x 1 9/16	1.15	.69
MT-2512	12	250	⅝ x 1 13/16	1.25	.75
MT-2516	16	250	¾ x 1 9/16	1.30	.78
MT-2520	20	250	¾ x 1 13/16	1.35	.81
MT-2540	40	250	⅞ x 2 5/16	1.55	.93
MT-3508	8	350	¾ x 1 9/16	1.20	.72
MT-3512	12	350	¾ x 1 13/16	1.30	.78
MT-3516	16	350	⅞ x 1 13/16	1.40	.84
MT-4504	4	450	⅝ x 1 5/16	1.15	.69
MT-4508	8	450	¾ x 1 9/16	1.25	.75
MT-4510	10	450	¾ x 1 9/16	1.30	.78
MT-4512	12	450	⅞ x 1 9/16	1.35	.81
MT-4516	16	450	⅞ x 1 13/16	1.40	.84
MT-4520	20	450	1 x 1 13/16	1.55	.93
MT-4530	30	450	1 x 2 5/16	1.70	1.02
MT-4540	40	450	1 x 2⅞	1.80	1.08

Dual Units

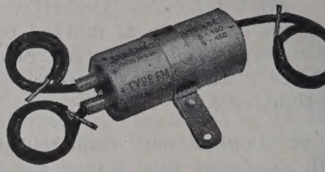
Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
MTD-0210	10-10	25	⅞ x 1 1/16	$1.40	$0.84
MTD-0220	20-20	25	⅞ x 1 1/16	1.40	.84
MTD-1520	20-20	150	¾ x 1 9/16	1.65	.99
MTD-1530	30-30	150	⅞ x 1 9/16	1.80	1.08
MTD-301	50-30	150	1 x 1 13/16	1.95	1.17
MTD-302	40-20	150	1 x 1 13/16	1.75	1.05
MTD-1540	40-40	150	1 x 1 13/16	1.85	1.11
MTD-1550	50-50	150	1 x 2 5/16	2.10	1.26
MTD-2520	20-20	250	1 x 1 13/16	1.85	1.11
MTD-3520	20-20	350	1 x 2⅞	2.25	1.35
MTD-4508	8- 8	450	⅞ x 1 13/16	1.70	1.02
MTD-4510	10-10	450	1 x 1 13/16	1.85	1.11
MTD-4520	20-20	450	1 x 2⅞	2.50	1.50

NOTE: All Dual units furnished with metal mounting strap. Straps for other sizes are available at extra cost.
NOTE: Packaging: 10, 25, or 50 capacitors per display carton.
NOTE: Diagram dimensions are for metal tubes. Add 1/16" to diameter and 3/16" to length for dimensions over cardboard insulating tubes.

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
MTH-0610	100	6	⅝ x 1 1/16	$1.20	$0.72
MTH-0625	250	6	⅝ x 1 9/16	1.35	.81
MTH-0650	500	6	¾ x 2 5/16	1.55	.93
MTH-06100	1000	6	1 x 1 13/16	1.90	1.14
MTH-06150	1500	6	1 x 2 5/16	2.10	1.26
MTH-1210	100	12	⅝ x 1 9/16	1.20	.72
MTH-1225	250	12	¾ x 1 13/16	1.45	.87
MTH-1250	500	12	⅞ x 2 5/16	1.70	1.02
MTH-1510	100	15	⅝ x 1 9/16	1.25	.75
MTH-1525	250	15	¾ x 1 13/16	1.55	.93
MTH-1550	500	15	⅞ x 2 5/16	1.75	1.05
MTH-2510	100	25	¾ x 1 9/16	1.35	.81
MTH-2525	250	25	⅞ x 1 13/16	1.70	1.02
MTH-2550	500	25	1 x 2 5/16	2.30	1.38
MTH-5010	100	50	⅞ x 1 9/16	1.40	.84

NOTE: Dimensions are for metal tubes. Add 1/16" to diameter and 3/16" to length for dimensions over cardboard insulating tube.
NOTE: Packaging 10, 25, or 50 capacitors per display carton.

TYPE FM *Arrowhead*



The SANGAMO Type FM "Arrowhead" electrolytic capacitors are similar in design to the Type MT "Chieftain" in every respect except leads. The Type FM is equipped with flexible, insulated wire leads and stud terminals eliminating the problem of crossed wires and the necessity for the use of insulating sleeves. They are much smaller than the wax-end filled types with insulated leads. The capacitors themselves are housed in round aluminum containers which are encased in heavy insulating sleeves. They are especially designed for the rugged television requirements where 85°C. operating temperatures are encountered.

Dual Units

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
FMD-0210	10-10	25	⅞ x 1 1/16	$1.50	$0.90
FMD-0510	10-10	50	⅞ x 1 5/16	1.50	.90
FMD-1520	20-20	150	¾ x 1 9/16	1.75	1.05
FMD-305	30-20	150	⅞ x 1 9/16	1.80	1.08
FMD-1530	30-30	150	⅞ x 1 9/16	1.90	1.14
FMD-302	40-20	150	1 x 1 13/16	1.85	1.11
FMD-304	40-30	150	1 x 1 13/16	1.90	1.14
FMD-1540	40-40	150	1 x 1 13/16	1.95	1.17
FMD-301	50-30	150	1 x 1 13/16	2.05	1.23
FMD-1550	50-50	150	1 x 2 1/16	2.20	1.32
FMD-4508	8- 8	450	⅞ x 1 13/16	1.80	1.08
FMD-308	8-16	450	1 x 1 13/16	2.10	1.26
FMD-4520	20-20	450	1 x 2⅞	2.60	1.56

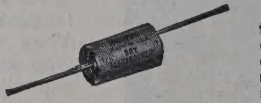
Triple Units

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
FMT-1520	20-20-20	150	⅞ x 1 9/16	$2.30	$1.38
FMT-1530	30-30-30	150	⅞ x 2 5/16	2.45	1.47
FMT-310	40-20-20	150	⅞ x 2 5/16	2.35	1.41
FMT-312	40-30-20	150	⅞ x 2 5/16	2.45	1.47
FMT-1540	40-40-40	150	1 x 2 5/16	2.55	1.53
FMT-315	50-30-20	150	1 x:2 5/16	2.55	1.53

NOTE: All units are supplied with mounting strap attached.
NOTE: Packaging: 10, 25, or 50 capacitors per display carton.
NOTE: Diagram dimensions are for metal tubes. Add 1/16" to diameter and 3/16" to length for dimensions over cardboard insulating tube.

TYPE MMT

MINIATURE TUBES



SANGAMO Type MMT miniature tubular electrolytic capacitors are designed for use in miniaturized equipment and are ideally suited to meet the precise operating requirements of low voltage circuits. They are small in physical size and are self supporting by means of strong bare tinned copper wire leads. The Type MMT capacitors are contained in drawn aluminum tubes encased in a fitted cardboard insulating sleeve. Polarity of all units is clearly marked on the cardboard sleeve.

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
MMT-605	5	6	⅜ x 1 1/16	$0.80	$0.48
MMT-0505	5	50	⅜ x 1 1/16	1.00	.60
MMT-0210	10	25	⅜ x 1 1/16	1.00	.60
MMT-0510	10	50	⅜ x 1 1/16	1.00	.60
MMT-0220	20	25	⅜ x 1 1/16	1.00	.60
MMT-325	25	3	⅜ x 1 1/16	.85	.51
MMT-625	25	6	⅜ x 1 1/16	.85	.51
MMT-350	50	3	⅜ x 1 1/16	.95	.57
MMT-650	50	6	⅜ x 1 1/16	.95	.57
MMT-1505	5	150	⅜ x 1 1/16	1.00	.60
MMT-4301	1	450	⅜ x 1 1/16	1.00	.60

NOTE: Diagram dimensions are for metal tubes. Add 1/16 inch to diameter and 3/16 inch to length for dimensions over cardboard insulating tube.

SANGAMO CAPACITORS

ELECTROLYTIC CAPACITORS

TYPE PL

FOR TELEVISION AND OTHER ELECTRONIC APPLICATIONS . . .

The SANGAMO Type PL "Warrior" electrolytic capacitors are specially designed for all television and electronic applications requiring long life and dependable performance at 85°C under conditions of extreme ripple currents and hugh surge voltages. They are sealed in round aluminum cans and have twist-prong tabs for washer or direct chassis mounting. The capacitor element current carrying tabs are securely clamped and staked to the terminal lugs, providing permanent, low resistance connections. In all cases the aluminum can is negative and the mounting ring provides the negative electrical connection.

The Type PL has been specially engineered for the rigid TV replacement applications found in all of the leading television receivers manufactured in the industry.

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
PL-7001	2000	6	1⅜ x 2	$2.55	$1.53
PL-7002	1000	10	1 x 3	2.55	1.53
PL-700	3000	10	1⅜ x 3	2.90	1.74
PL-701	1000	15	1 x 3	2.55	1.53
PL-703	2000	15	1⅜ x 3	3.45	2.07
PL-0240	40	25	1 x 2	1.35	.81
PL-02100	100	25	1 x 2	1.60	.96
PL-02500	500	25	1 x 3	2.55	1.53
PL-705	1000	25	1⅜ x 3	3.55	2.13
PL-0525	25	50	¾ x 2	1.35	.81
PL-05150	150	50	1 x 2	1.80	1.08
PL-05500	500	50	1⅜ x 3	2.65	1.59
PL-1520	20	150	1 x 2	1.45	.87
PL-1530	30	150	1 x 2	1.55	.93
PL-1540	40	150	1 x 2	1.60	.96
PL-1550	50	150	1 x 2	1.65	.99
PL-1580	80	150	1 x 2	1.85	1.11
PL-15100	100	150	1 x 3	2.00	1.20
PL-15120	120	150	1⅜ x 2	2.10	1.26
PL-15140	140	150	1⅜ x 2½	2.15	1.29
PL-15150	150	150	1⅜ x 2½	2.15	1.29
PL-15200	200	150	1⅜ x 3	2.45	1.47
PL-15300	300	150	1⅜ x 2½	2.80	1.68
PL-2040	40	200	1 x 2	1.70	1.02
PL-2515	15	250	1 x 2	1.55	.93
PL-2520	20	250	1 x 2	1.60	.96
PL-2530	30	250	1 x 2	1.70	1.02
PL-2540	40	250	1 x 2	1.80	1.08
PL-2550	50	250	1 x 2½	1.95	1.17
PL-2560	60	250	1 x 2½	2.05	1.23
PL-2580	80	250	1 x 3	2.15	1.29
PL-25150	150	250	1⅜ x 3	3.10	1.86
PL-3015	15	300	1 x 2	1.60	.96
PL-3030	30	300	1 x 2	1.75	1.05
PL-3050	50	300	1 x 2½	2.05	1.23
PL-3060	60	300	1 x 3	2.10	1.26
PL-3080	80	300	1 x 3	2.55	1.53
PL-30100	100	300	1⅜ x 3	2.90	1.74
PL-30125	125	300	1⅜ x 3	3.50	2.10
PL-30150	150	300	1⅜ x 3½	3.50	2.10
PL-3520	20	350	1 x 2	1.75	1.05
PL-3030	30	350	1 x 2½	1.90	1.14
PL-3540	40	350	1 x 2½	2.00	1.20
PL-3550	50	350	1 x 3	2.10	1.26
PL-3580	80	350	1⅜ x 2½	2.85	1.71
PL-35125	125	350	1⅜ x 3	3.65	2.19
PL-4050	50	400	1 x 2	2.20	1.32
PL-4080	80	400	1⅜ x 2½	2.95	1.77
PL-4504	4	450	1 x 2	1.50	.90
PL-4510	10	450	1 x 2	1.55	.93
PL-4515	15	450	1 x 2	1.70	1.02
PL-4520	20	450	1 x 2	1.80	1.08
PL-4530	30	450	1 x 2½	1.95	1.17
PL-4540	40	450	1 x 3	2.05	1.23
PL-4550	50	450	1 x 3½	2.35	1.41
PL-4580	80	450	1⅜ x 3	3.05	1.83
PL-45100	100	450	1⅜ x 3½	3.50	2.10
PL-45125	125	450	1⅜ x 4	3.85	2.31
PL-4730	30	475	1 x 3	2.00	1.20
PL-4740	40	475	1⅜ x 2	2.50	1.50
PL-4790	90	475	1⅜ x 3½	3.50	2.10
PL-5010	10	500	1 x 2½	1.60	.96
PL-5020	20	500	1 x 3	1.85	1.11
PLD-7057	250-50	6	1 x 2	2.50	1.50
PLD-7059	100-100	10	1 x 2	1.75	1.05
PLD-706	1000-1000	15	1⅜ x 2½	4.40	2.64
PLD-0240	40-40	25	1 x 2	1.60	.96
PLD-7065	150-50	25	1 x 2	1.90	1.14
PLD-0550	50-50	50	1 x 2	1.70	1.02
PLD-7067	100-25	50	1 x 2	1.80	1.08
PLD-1520	20-20	150	1 x 2	1.70	1.02
PLD-707	30-15	150	1 x 2	1.75	1.05
PLD-1530	30-30	150	1 x 2	1.85	1.11
PLD-712	40-20	150	1 x 2	1.80	1.08
PLD-1540	40-40	150	1 x 2	1.90	1.14
PLD-716	50-30	150	1 x 2	2.00	1.20
PLD-1550	50-50	150	1 x 2½	2.15	1.29
PLD-7163	60-20	150	1 x 3	2.00	1.20
PLD-1560	60-60	150	1 x 3	2.35	1.41
PLD-7165	80-40	150	1 x 3	2.30	1.38
PLD-7166	200-125	150	1⅜ x 3½	3.75	2.25
PLD-15200	200-200	150	1⅜ x 4	4.00	2.40
PLD-20100	100-100	200	1⅜ x 3	3.45	2.07
PLD-2510	10-10	250	1 x 2	1.70	1.02
PLD-2520	20-20	250	1 x 2	1.90	1.14
PLD-2540	40-40	250	1 x 3	2.55	1.53
PLD-3010	10-10	300	1 x 2	1.75	1.05
PLD-3015	15-15	300	1 x 2	1.90	1.14
PLD-3040	40-40	300	1⅜ x 2½	3.00	1.80
PLD-3060	60-60	300	1⅜ x 3	3.40	2.04
PLD-7167	80-40	300	1⅜ x 3	3.55	2.13
PLD-3080	80-80	300	1⅜ x 3½	4.05	2.43
PLD-715	120-20	300	1⅜ x 3½	3.80	2.28
PLD-3515	15-15	350	1 x 2	2.25	1.35
PLD-3520	20-20	350	1 x 2½	2.30	1.38
PLD-7175	30-20	350	1 x 3	2.60	1.56
PLD-7177	50-30	350	1⅜ x 2½	3.15	1.89
PLD-3580	80-80	350	1⅜ x 4	4.70	2.82
PLD-4015	15-15	400	1 x 2½	2.25	1.35
PLD-4040	40-40	400	1⅜ x 3	3.30	1.98
PLD-4060	60-60	400	1⅜ x 3½	4.40	2.64
PLD-717	80-10	400	1⅜ x 3	3.40	2.04
PLD-4510	10-10	450	1 x 2	1.90	1.14
PLD-718	15-10	450	1 x 3	2.25	1.35
PLD-7185	20-10	450	1 x 3	2.25	1.35
PLD-4520	20-20	450	1 x 3	2.55	1.53
PLD-7186	25-20	450	1 x 3	2.65	1.59
PLD-4530	30-30	450	1⅜ x 2½	3.05	1.83
PLD-7187	40-20	450	1⅜ x 2½	3.00	1.80
PLD-4540	40-40	450	1⅜ x 3	3.45	2.07
PLD-7188	60-40	450	1⅜ x 3	3.95	2.37
PLD-719	80-10	450	1⅜ x 3	3.60	2.16
PLD-7193	80-30	450	1⅜ x 4	4.20	2.52
PLD-7195	80-40	450	1⅜ x 4	4.35	2.61
PLD-4720	20-20	475	1 x 3	2.80	1.68
PLD-4740	40-40	475	1⅜ x 3	4.30	2.58
PLD-5020	20-20	500	1⅜ x 2½	2.85	1.71
PLD-5040	40-40	500	1⅜ x 3½	4.30	2.58
PLD-7196	500/50	5/150	1 x 3	2.45	1.47
PLD-7197	250/1000	10/6	1⅜ x 2	2.85	1.71
PLD-7198	40/20	150/25	1 x 2	1.70	1.02
PLD-7199	40/150	150/25	1 x 2	2.05	1.23
PLD-1995	150/100	150/25	1⅜ x 2½	2.70	1.62
PLD-71997	40/25	250/25	1 x 2½	1.70	1.02
PLD-720	20/20	300/25	1 x 2	1.85	1.11
PLD-7201	20/60	300/350	1⅜ x 2½	2.85	1.71
PLD-7202	20/20	350/25	1 x 2	1.90	1.14
PLD-7203	20/30	350/250	1 x 3	2.30	1.38
PLD-7204	60/80	350/250	1⅜ x 3½	3.45	2.07
PLD-72045	20/10	350/300	1 x 2	2.05	1.23
PLD-7205	30/30	350/300	1 x 3	2.65	1.59
PLD-7207	10/20	450/25	1 x 2	1.90	1.14
PLD-7209	20/20	450/25	1 x 2½	2.00	1.20
PLD-7215	40/20	450/25	1 x 3	2.35	1.41
PLD-725	80/10	450/25	1⅜ x 3	3.40	2.04
PLD-726	80/50	450/50	1⅜ x 3	3.50	2.10
PLD-7261	20/100	450/100	1⅜ x 2½	2.65	1.59
PLD-7263	30/40	450/150	1⅜ x 2	2.50	1.50
PLD-7275	40/150	450/150	1⅜ x 3	3.45	2.07
PLD-7267	80/50	450/150	1⅜ x 3	3.75	2.25
PLD-721	20/80	450/350	1⅜ x 3½	3.65	2.19
PLD-7217	25/15	450/350	1 x 3	2.55	1.53
PLD-722	40/10	450/350	1⅜ x 2	2.60	1.56
PLD-7225	40/20	450/350	1⅜ x 2½	2.85	1.71
PLD-727	20/100	475/300	1⅜ x 3½	3.95	2.37
PLD-728	40/50	500/200	1⅜ x 3½	3.35	2.01
PLT-0220	20-20-20	25	1 x 2	1.95	1.17
PLT-0240	40-40-40	25	1 x 2	2.15	1.27
PLT-0530	30-30-30	50	1 x 2	2.15	1.27
PLT-1520	20-20-20	150	1 x 2	2.30	1.38
PLT-730	30-30-10	150	1 x 2	2.35	1.41
PLT-7305	40-20-10	150	1 x 2	2.35	1.41
PLT-731	40-20-20	150	1 x 2	2.40	1.44
PLT-738	40-30-20	150	1 x 2	2.50	1.50
PLT-1540	40-40-40	150	1 x 3	2.60	1.56
PLT-1550	50-50-50	150	1 x 3	3.00	1.80
PLT-7385	80-40-20	150	1 x 3	2.90	1.74
PLT-1580	80-80-80	150	1⅜ x 3	3.75	2.25
PLT-7387	120-80-40	150	1⅜ x 3½	3.80	2.28
PLT-739	10-15-15	250	1 x 2	2.45	1.47
PLT-7393	20-20-10	250	1 x 2½	2.50	1.50

SANGAMO CAPACITORS

TYPE PL ELECTROLYTIC CAPACITORS (Continued)

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
PLT-7395	35-15-10	250	1 x 2½	$2.70	$1.62
PLT-7397	40-20-10	250	1⅜ x 2	2.85	1.71
PLT-740	40-20-20	250	1 x 3	2.90	1.74
PLT-3010	10-10-10	300	1 x 2	2.40	1.44
PLT-3020	20-20-20	300	1 x 3	3.10	1.86
PLT-3510	10-10-10	350	1 x 2	2.40	1.44
PLT-7407	60-40-20	350	1⅜ x 3	4.25	2.55
PLT-7409	80-60-60	350	1⅜ x 5	5.60	3.36
PLT-4010	10-10-10	400	1 x 2½	2.40	1.44
PLT-4510	10-10-10	450	1 x 2½	2.60	1.56
PLT-741	15-15-10	450	1 x 3	2.95	1.77
PLT-7412	20-10-10	450	1 x 3	2.95	1.77
PLT-4520	20-20-20	450	1⅜ x 2½	3.60	2.16
PLT-7413	30-20-20	450	1⅜ x 3	3.85	2.31
PLT-7414	30-30-20	450	1⅜ x 3	4.10	2.46
PLT-4530	30-30-30	450	1⅜ x 3	4.35	2.61
PLT-74145	40-30-20	450	1⅜ x 3	4.30	2.58
PLT-7415	40-40-10	450	1⅜ x 3	4.15	2.49
PLT-4540	40-40-40	450	1⅜ x 3½	4.90	3.54
PLT-7417	60-30-10	450	1⅜ x 3	4.50	2.70
PLT-7419	80-40-20	450	1⅜ x 4	5.40	3.24
PLT-4710	10-10-10	475	1 x 3	2.70	1.62
PLT-742	30-30-20	475	1⅜ x 3	4.45	2.67
PLT-4730	30-30-30	475	1⅜ x 3½	4.65	2.79
PLT-5010	10-10-10	500	1 x 3	2.70	1.62
PLT-7425	30-20-20	500	1⅜ x 3	4.20	2.52
PLT-745	20/250-100	150/15-15	1⅜ x 2	2.90	1.74
PLT-746	100/50/25	150/50/25	1⅜ x 3	3.00	1.80
PLT-747	30-20/100	150-150/6	1 x 2	2.40	1.44
PLT-7471	30-20/100	150-150/10	1 x 2	2.40	1.44
PLT-7473	30-30/200	150-150/10	1 x 2	2.50	1.50
PLT-7475	40-20/150	150-150/10	1 x 2	2.40	1.44
PLT-7477	40-20/200	150-150/10	1 x 2	2.56	1.50
PLT-748	20-20/20	150-150/25	1 x 2	2.20	1.32
PLT-750	30-20/20	150-150/25	1 x 2	2.25	1.35
PLT-751	30-30/20	150-150/25	1 x 2	2.30	1.38
PLT-749	40-20/20	150-150/25	1 x 2	2.30	1.38
PLT-7517	40-20/100	150-150/25	1 x 2½	2.50	1.50
PLT-7519	40-20/200	150-150/25	1 x 2½	2.70	1.62
PLT-752	40-30/20	150-150/25	1 x 2	2.35	1.41
PLT-7521	40-30/25	150-150/25	1 x 2½	2.35	1.41
PLT-7525	40-40/20	150-150/25	1 x 2½	2.40	1.44
PLT-7526	40-40/40	150-150/25	1 x 2½	2.45	1.47
PLT-7527	50-30/20	150-150/25	1 x 2	2.50	1.50
PLT-753	50-30/100	150-150/25	1 x 2½	2.70	1.62
PLT-754	50-50/20	150-150/25	1 x 2½	2.65	1.59
PLT-7541	60-40/25	150-150/25	1 x 2½	2.65	1.59
PLT-7543	120-60/20	150-150/25	1⅜ x 2½	3.35	2.01
PLT-7545	30-20/20	200-200/25	1 x 2½	2.55	1.53
PLT-7547	100-10/40	200-200/50	1⅜ x 2½	3.15	1.89
PLT-757	15-15/20	250-250/25	1 x 2	2.35	1.41
PLT-7575	20-15/20	250-250/25	1 x 2	2.35	1.41
PLT-758	30-30/20	250-250/25	1 x 2½	2.80	1.68
PLT-7585	70-70/20	250-250/50	1⅜ x 3	3.90	2.34
PLT-7587	40-20/10	250-250/150	1⅜ x 2	2.75	1.65
PLT-7588	40-40/10	250-250/200	1⅜ x 3	2.10	1.86
PLT-759	80-80/60	250-250/200	1⅜ x 3½	4.50	2.70
PLT-7593	30/20/20	250/350/25	1 x 3	2.80	1.68
PLT-7595	100/60/20	300/150/25	1⅜ x 3	4.20	2.52
PLT-7597	100/60-20	300/250-250	1⅜ x 3½	4.90	2.94
PLT-762	20-20/20	300-300/25	1 x 2½	2.75	1.65
PLT-763	40-15/20	300-300/25	1 x 3	2.95	1.77
PLT-7631	40-20/20	300-300/25	1⅜ x 2	3.10	1.86
PLT-7632	30-30/25	300-300/50	1 x 3	2.90	1.74
PLT-7635	10-10/15	300-300/250	1 x 2	2.45	1.47
PLT-7633	20/100/100	350/100/50	1⅜ x 3	3.45	2.07
PLT-7636	10/50/100	350/100/75	1 x 3	3.05	1.83
PLT-7638	10/50/100	350/150/50	1 x 3½	2.85	1.71
PLT-76385	20/30/20	350/250/25	1 x 3	2.80	1.68
PLT-760	30/20-10	350/250-250	1 x 3	3.00	1.80
PLT-7639	30/20/20	350/300/25	1 x 3	3.15	1.89
PLT-7605	20/40/10	350/300/150	1 x 3½	3.15	1.89
PLT-764	40/20/10	350/300/200	1⅜ x 2	3.30	1.98
PLT-7645	30/20/20	350/300/250	1 x 3	3.30	1.98
PLT-765	10-10/20	350-350/25	1 x 2	2.25	1.35
PLT-7655	10-15/20	350-350/25	1 x 2	2.50	1.50
PLT-766	15-15/20	350-350/25	1 x 2½	2.70	1.62
PLT-7665	20-10/20	350-350/25	1 x 2½	2.55	1.53
PLT-7671	20-20/20	350-350/25	1 x 2½	2.80	1.68
PLT-7672	30-10/20	350-350/25	1 x 2½	2.85	1.71
PLT-767	30-20/20	350-350/25	1 x 3	3.10	1.86
PLT-7674	30-30/20	350-350/25	1⅜ x 2½	3.40	2.04
PLT-76745	40-40/50	350-350/25	1⅜ x 2½	3.75	2.25
PLT-7675	10-5/150	350-350/50	1 x 3	2.70	1.62
PLT-76755	40-20/10	350-350/100	1⅜ x 2	2.85	1.71
PLT-7677	20-10/5	350-350/250	1 x 2½	2.55	1.53
PLT-7679	30-10/20	350-350/250	1 x 3	3.05	1.83
PLT-768	60/40/20	400/300/25	1⅜ x 3	4.20	2.52
PLT-7681	10/40/10	400/300/150	1⅜ x 2	2.90	1.74
PLT-7682	80/20-10	400/300-300	1⅜ x 3½	4.25	2.55
PLT-7687	10/50/30	400/350/25	1 x 3½	$3.10	$1.86
PLT-7688	40/10/100	400/350/50	1⅜ x 3	3.40	2.04
PLT-7689	60/20-20	400/350-350	1⅜ x 3	4.30	2.58
PLT-769	15-15/40	400-400/25	1 x 2½	2.80	1.68
PLT-770	20-20/20	400-400/25	1 x 3	2.85	1.71
PLT-7707	40-40/20	400-400/300	1⅜ x 3½	4.15	2.49
PLT-771	30/100-25	450/25-25	1⅜ x 2	3.00	1.80
PLT-7712	40/40/130	450/150/50	1⅜ x 3	3.65	2.19
PLT-7714	40/100/50	450/150/50	1⅜ x 3	2.40	1.44
PLT-7715	40/90-50	450/150-150	1⅜ x 2½	4.50	2.70
PLT-77152	20/80/50	450/200/50	1⅜ x 2½	3.00	1.80
PLT-7716	20/60/100	450/250/25	1⅜ x 2½	4.30	2.58
PLT-77165	20/80/10	450/250/200	1⅜ x 3	3.35	2.01
PLT-77168	10/80-80	450/250-250	1⅜ x 4	4.20	2.52
PLT-7717	20/40-10	450/250-250	1⅜ x 2	3.15	1.89
PLT-7719	20/15-10	450/300-300	1 x 3½	2.85	1.71
PLT-772	10/10/20	450/350/25	1 x 2	2.30	1.38
PLT-773	10/10/50	450/350/25	1 x 3	2.40	1.44
PLT-7735	20/80/100	450/350/50	1⅜ x 3½	4.50	2.70
PLT-774	15/20/20	450/350/250	1⅜ x 2	3.00	1.80
PLT-7745	20/80/10	450/350/300	1⅜ x 3	4.30	2.58
PLT-775	10/30/30	450/400/300	1⅜ x 2½	3.35	2.01
PLT-776	10-10/10	450-450/25	1 x 2½	2.40	1.44
PLT-777	10-10/20	450-450/25	1 x 2½	2.40	1.44
PLT-779	15-15/20	450-450/25	1 x 3	2.75	1.65
PLT-778	20-10/20	450-450/25	1 x 3	2.70	1.62
PLT-780	20-15/20	450-450/25	1 x 3	2.90	1.74
PLT-782	20-20/20	450-450/25	1 x 3	3.05	1.83
PLT-7825	30-20/20	450-450/25	1⅜ x 2½	3.30	1.98
PLT-783	30-30/20	450-450/25	1⅜ x 2½	3.55	2.13
PLT-7831	40-40/20	450-450/25	1⅜ x 3	3.95	2.37
PLT-7832	40-40/40	450-450/25	1⅜ x 3	4.00	2.40
PLT-7834	80-40/100	450-450/25	1⅜ x 4	5.10	3.06
PLT-7835	10-10/40	450-450/50	1 x 2½	2.75	1.65
PLT-7837	20-10/50	450-450/50	1 x 3	2.85	1.71
PLT-78375	30-30/40	450-450/50	1⅜ x 3	3.65	2.19
PLT-78377	40-10/40	450-450/50	1⅜ x 2½	3.25	1.95
PLT-7839	40-40/40	450-450/50	1⅜ x 3	4.00	2.40
PLT-78395	40-40/100	450-450/50	1⅜ x 3½	4.30	2.58
PLT-784	40-40/40	450-450/150	1⅜ x 3½	4.15	2.49
PLT-785	40-10/80	450-450/200	1⅜ x 3	3.90	2.34
PLT-7855	40-10/100	450-450/200	1⅜ x 3½	4.15	2.49
PLT-7857	40-40/100	450-450/200	1⅜ x 4	4.95	2.97
PLT-7859	15-10/120	450-450/300	1⅜ x 3½	4.70	2.82
PLT-786	15-15/10	450-450/300	1 x 3	2.85	1.71
PLT-7865	15-5/15	450-450/350	1 x 3	2.85	1.71
PLT-787	20-20/60	450-450/350	1⅜ x 3½	4.05	2.43
PLT-789	40-10/10	450-450/350	1⅜ x 3	3.30	1.98
PLT-7895	10/100/40	475/200/50	1⅜ x 2½	3.35	2.01
PLT-7897	40/40-10	475/250-250	1⅜ x 3	4.05	2.43
PLT-790	20/20/40	475/300/25	1⅜ x 2	3.10	1.86
PLT-792	40/40/25	475/400/50	1⅜ x 3	4.30	2.58
PLT-793	40/20-20	475/450-450	1⅜ x 3	4.50	2.70
PLT-794	20-20/60	475-475/400	1⅜ x 3½	4.80	2.88
PLT-7945	40/40/100	500/250/50	1⅜ x 3	4.30	2.58
PLT-795	20/20/40	500/300/25	1⅜ x 2	3.10	1.86
PLT-7955	10-10/100	500-500/50	1 x 3	2.85	1.71
PLT-796	30-10/20	500-500/50	1⅜ x 2½	3.10	1.86
PLT-7965	10-10/4	500-500/350	1 x 3	2.50	1.50
PLQ-797	40-40-40-30	150	1⅜ x 2	3.35	2.01
PLQ-798	40-40-20-10	300	1⅜ x 3½	4.55	2.73
PLQ-7981	30-30-20-20	400	1⅜ x 3½	4.85	2.91
PLQ-7983	80-10-10-10	400	1⅜ x 3½	4.70	2.82
PLQ-7984	80-25-10-10	400	1⅜ x 4	5.25	3.15
PLQ-4510	10-10-10-10	450	1⅜ x 2	3.35	2.01
PLQ-7986	20-10-10-10	450	1⅜ x 2½	3.70	2.22
PLQ-4520	20-20-20-20	450	1⅜ x 3	4.70	2.82
PLQ-799	30-15-15-15	450	1⅜ x 3	4.45	2.67
PLQ-800	30-30-15-10	450	1⅜ x 3½	4.70	2.82
PLQ-8002	40-10-10-10	450	1⅜ x 3	4.15	2.49
PLQ-8004	40-20-10-10	450	1⅜ x 3	4.45	2.67
PLQ-8006	40-40-40-40	450	1⅜ x 5	6.45	3.87
PLQ-4710	10-10-10-10	475	1⅜ x 5	3.50	2.10
PLQ-801	40-20-10-10	475	1⅜ x 3	5.10	3.06
PLQ-8012	40-40/100-100	150-150/25-25	1⅜ x 2	3.35	2.01
PLQ-8013	30-20-20/200	150-150-150/10	1⅜ x 2	3.10	1.86
PLQ-8015	60-40-20/200	150-150-150/10	1⅜ x 3	3.50	2.10
PLQ-802	30-30-30/40	150-150-150/25	1⅜ x 2	3.10	1.86
PLQ-803	40-40-30/20	150-150-150/25	1⅜ x 2	3.10	1.86
PLQ-8035	40-40-40/20	150-150-150/25	1⅜ x 2	3.15	1.89
PLQ-804	40-40-40/100	150-150-150/25	1⅜ x 2	3.35	2.01
PLQ-805	50-50-50/20	150-150-150/25	1⅜ x 2	3.55	2.13
PLQ-8050	80-40-40/40	150-150-150/25	1⅜ x 3	3.60	2.15
PLQ-80502	80-40-40/100	150-150-150/25	1⅜ x 2½	3.75	2.25
PLQ-8011	150-150/20/100	150-150/300/50	1⅜ x 3½	5.30	3.18
PLQ-8051	40-20-10/20	200-200-200/25	1⅜ x 2	3.20	1.92
PLQ-8052	100-40-10/100	250-250-250/50	1⅜ x 3½	5.15	3.09
PLQ-8054	80-60-40/20	250-250-250/150	1⅜ x 3½	5.15	3.06
PLQ-8055	100/40/80-20	300/50/25-25	1⅜ x 3½	4.55	2.73
PLQ-8057	120/20/20/100	300/250/25/50	1⅜ x 4	5.05	3.03

SANGAMO CAPACITORS

TYPE PL ELECTROLYTIC CAPACITORS (Continued)

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
PLQ-8059	200/20/20/100	300/250/25/50	1⅜ x 5	$5.45	$3.27
PLQ-806	10-10-10/20	300-300-300/25	1⅜ x 2	2.95	1.77
PLQ-808	60-40-20/50	300-300-300/25	1⅜ x 3½	4.70	2.82
PLQ-8085	40-40-40/20	300-300-300/150	1⅜ x 3	4.90	2.94
PLQ-809	15/80-40/200	350/200-200/25	1⅜ x 3	4.50	2.70
PLQ-810	40/40-20/20	350/300-300/25	1⅜ x 3	4.50	2.70
PLQ-8105	30-30/15/20	350-350/300/25	1⅜ x 3	4.15	2.49
PLQ-811	10-10/10-10	300-350/300-300	1⅜ x 2	3.10	1.86
PLQ-8113	20-10-5/10	350-350-350/25	1⅜ x 2	3.10	1.86
PLQ-8115	20-10-5/20	350-350-350/25	1⅜ x 2	3.10	1.86
PLQ-8116	40-20-20/25	350-350-350/25	1⅜ x 2½	4.25	2.55
PLQ-8117	40-40-40/40	350-350-350/25	1⅜ x 3½	5.20	3.12
PLQ-8119	40-40-40/150	350-350-350/50	1⅜ x 4	5.70	3.42
PLQ-81195	80/40-20-10	400/300-300-300	1⅜ x 4	5.55	3.33
PLQ-81197	20/40/100-10	400/350/50-50	1⅜ x 3	4.20	2.52
PLQ-812	40/10/80-10	400/350/250-250	1⅜ x 3½	4.65	2.79
PLQ-8125	10-10/25-25	400-400/25-25	1⅜ x 2	2.80	1.68
PLQ-8127	40-10/80-10	400-400/250-250	1⅜ x 3½	4.70	2.82
PLQ-814	20-20-20/20	400-400-400/25	1⅜ x 2½	3.85	2.31
PLQ-8145	20/80-20/50	450/200-200/50	1⅜ x 3	4.15	2.49
PLQ-8147	40/40-40/20	450/250-250/25	1⅜ x 3	4.55	2.73
PLQ-8149	10/10/60/100	450/300/200/50	1⅜ x 2½	3.80	2.28
PLQ-815	20/15-15/20	450/350-350/25	1⅜ x 2	3.80	2.28
PLQ-8152	10/60-40/25	450/350-350/25	1⅜ x 3½	4.60	2.76
PLQ-8154	10/100-10/20	450/350-350/25	1⅜ x 3½	5.25	3.15
PLQ-8156	30/40-40/10	450/350-350/200	1⅜ x 3½	5.15	3.09
PLQ-8158	80/10/30/40	450/400/300/150	1⅜ x 4	5.25	3.15
PLQ-8159	10-10/20-20	450-450/25-25	1⅜ x 2	2.95	1.77
PLQ-816	20-15/20-20	450-450/25-25	1⅜ x 2	3.45	2.07
PLQ-817	20-20/20-20	450-450/25-25	1⅜ x 2	3.60	2.16
PLQ-8175	40-40/10/50	450-450/300/50	1⅜ x 3	4.75	2.85
PLQ-818	20-20/30-30	450-450/300-300	1⅜ x 3	4.50	2.70
PLQ-819	40-10/35-10	450-450/350-350	1⅜ x 3½	4.60	2.76
PLQ-8195	40-40/30-30	450-450/350-350	1⅜ x 4	5.90	3.54
PLQ-820	10-10-10/20	450-450-450/25	1⅜ x 2	3.15	1.89
PLQ-8202	20-10-10/100	450-450-450/25	1⅜ x 2½	3.70	2.22
PLQ-8205	20-20-20/20	450-450-450/25	1⅜ x 2½	4.15	2.49
PLQ-82055	30-20-20/20	450-450-450/25	1⅜ x 3	4.40	2.64
PLQ-82057	30-30-10/20	450-450-450/25	1⅜ x 3	4.35	2.61
PLQ-8206	30-30-20/20	450-450-450/25	1⅜ x 3	4.65	2.79
PLQ-8207	40-10-10/250	450-450-450/25	1⅜ x 3	4.25	2.55
PLQ-82075	40-15-10/20	450-450-450/25	1⅜ x 3	4.10	2.46
PLQ-8208	40-20-20/20	450-450-450/25	1⅜ x 3	4.60	2.76
PLQ-8209	40-20-20/40	450-450-450/25	1⅜ x 3	$4.65	$2.70
PLQ-821	40-30-10/20	450-450-450/25	1⅜ x 3	4.50	2.70
PLQ-8215	40-40-10/20	450-450-450/25	1⅜ x 3	4.70	2.82
PLQ-8216	40-40-40/40	450-450-450/25	1⅜ x 4	5.50	3.30
PLQ-8217	20-20-20/100	450-450-450/50	1⅜ x 3	4.55	2.73
PLQ-822	30-30-15/30	450-450-450/50	1⅜ x 3	4.15	2.49
PLQ-8225	40-20-10/100	450-450-450/50	1⅜ x 3½	4.65	2.79
PLQ-8226	40-40-10/25	450-450-450/50	1⅜ x 3½	4.70	2.82
PLQ-8227	40-40-10/100	450-450-450/100	1⅜ x 4	5.35	3.21
PLQ-823	10-10-10/10	450-450-450/150	1⅜ x 2	3.15	1.89
PLQ-8235	20-10-10/10	450-450-450/150	1⅜ x 3	3.50	2.10
PLQ-824	60-10-10/20	450-450-450/150	1⅜ x 3	4.60	2.76
PLQ-8240	40/40/50/80	475-250/150/50	1⅜ x 3½	5.05	3.03
PLQ-8241	20/40/100/80	475/300/50/25	1⅜ x 3	4.50	2.70
PLQ-8242	10/10/80/50	475/450/200/60	1⅜ x 3	3.85	2.31
PLQ-8243	25/20/20/100	475/450/300/50	1⅜ x 3	4.60	2.76
PLQ-8244	25/20/40/100	475/450/300/50	1⅜ x 3½	4.95	2.97
PLQ-8246	10/60/30/125	475/450/400/50	1⅜ x 4	5.45	3.27
PLQ-8247	15-15/80/40	475-475/300/50	1⅜ x 3	4.80	2.88
PLQ-8249	10-5/80/40	475-475/450/50	1⅜ x 3½	4.95	2.97
PLQ-8250	30-30-10/20	475-475-475/25	1⅜ x 3	4.55	2.73
PLQ-825	40-20-10/10	475-475-475/25	1⅜ x 3	4.85	2.91
PLQ-826	20-20-10/10	475-475-475/300	1⅜ x 2½	4.30	2.58

NOTE: Maximum operating temperature for 475 and 500 volt units is 65°C.

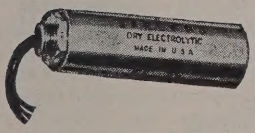
NOTE: Each unit is supplied with a bakelite and a metal mounting plate. Additional hardware available at extra cost.

NOTE: Packaging: Individual display carton.

CARDBOARD INSULATING TUBES

Catalog Number	Description	List Price	Resale Net Price
KCT-1	For 1″ x 2″ can	$0.06	$0.03
KCT-2	For 1″ x 2½″ can	.06	.03
KCT-3	For 1″ x 3″ can	.06	.03
KCT-4	For 1″ x 4″ can	.06	.03
KCT-5	For 1⅜″ x 2″ can	.06	.03
KCT-6	For 1⅜″ x 2½″ can	.06	.03
KCT-7	For 1⅜″ x 3″ can	.06	.03
KCT-8	For 1⅜″ x 3½″ can	.06	.03
KCT-9	For 1⅜″ x 4″ can	.06	.03

TYPE SL



Designed primarily as replacements for wet electrolytics, the Type SL electrolytic capacitors are assembled in round aluminum cans with threaded necks providing easy mounting to a chassis with the aid of a palnut which is supplied. The Type SL is completely insulated from the container, the negative connection being made to one of the insulated leads extending through the threaded neck of the can.

Single Section

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
SL-2512	12	250	1 x 2½	$1.75	$1.05
SL-2525	25	250	1 x 3½	1.95	1.17
SL-4508	8	450	1⅜ x 2½	2.20	1.32
SL-4512	12	450	1⅜ x 2½	2.40	1.44
SL-4516	16	450	1⅜ x 2½	2.45	1.47
SL-4520	20	450	1⅜ x 2½	2.70	1.62
SL-4530	30	450	1⅜ x 3½	3.00	1.80
SL-4540	40	450	1⅜ x 4¼	3.15	1.89

Common Negative Section

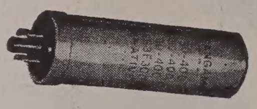
Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
SLD-4508	8- 8	450	1⅜ x 3½	$3.00	$1.80
SLD-4516	16-16	450	1⅜ x 3½	3.55	2.13
SLT-4508	8-8-8	450	1⅜ x 3½	5.00	3.00

High Voltage, Series Wound Sections

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
SL-6004	4	600	1⅜ x 3½	$2.95	$1.77
SL-6008	8	600	1⅜ x 4¼	3.15	1.89
SL-6016	16	600	1⅜ x 4⅛	3.75	2.25

NOTE: Packaging: Individual carton.

TYPE TS



Ideally suited for all applications where quick capacitor changes are required, the SANGAMO Type TS units are equipped with a four-pin octal base mounting for use with standard octal base tube sockets. The special design of the bakelite octal base insures that the aluminum container will not contact the mounting surface and the connections to the brass pin terminals are imbedded in this bakelite base. The base pins are nickel-plated to prevent corrosion and insure good contact with the socket terminals.

Single Section

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
TS-1520	20	150	1⅜ x 2½	$3.95	$2.37
TS-1540	40	150	1⅜ x 2½	4.10	2.46
TS-4510	10	450	1⅜ x 2½	4.05	2.43
TS-4520	20	450	1⅜ x 2½	4.30	2.58
TS-4540	40	450	1⅜ x 2½	4.55	2.73
TS-4580	80	450	1⅜ x 4¼	5.55	3.33

Dual Sections

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
TSD-1520	20-20	150	1⅜ x 2½	$4.20	$2.52
TSD-1540	40-40	150	1⅜ x 2½	4.40	2.64
TSD-4510	10-10	450	1⅜ x 2½	4.40	2.64
TSD-4520	20-20	450	1⅜ x 2⅛	5.05	3.03

Multiple Sections

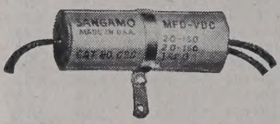
Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
TST-4510	10-10-10	450	1⅜ x 2½	$5.10	$3.06
TST-901	20-20-20	450-450-25	1⅜ x 2½	5.55	3.33

NOTE: Not normally carried in stock. Available on special order only.
NOTE: Packaging: Individual carton.

SANGAMO CAPACITORS

ELECTROLYTIC CAPACITORS

TYPE CS *Tomahawk*



The SANGAMO Type CS "Tomahawk" electrolytic capacitors are contained in wax-filled cardboard tubes with insulated leads approximately 8 inches in length extending from both ends of the unit. Capacity, voltage and polarity of each section is clearly indicated by color of the lead wires; coding information necessary to identify the individual sections is clearly stamped on the tube. Each unit is supplied with a mounting strap to facilitate mounting to the chassis.

Dual Common Negaitve Units

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	Net Price	Resale Net Price
CSD-0210	10-10	25	⅝ x 2⅜	$1.40	$0.84
CSD-0510	10-10	50	⅝ x 2⅜	1.40	.84
CSD-1508	8- 8	150	⅝ x 2⅜	1.50	.90
CSD-1516	16-16	150	¾ x 2½	1.80	1.08
CSD-1520	20-20	150	¾ x 2½	1.65	.99
CSD-500	30-20	150	⅞ x 2½	1.70	1.02
CSD-1530	30-30	150	⅞ x 2½	1.80	1.08
CSD-505	40-20	150	1 x 2½	1.75	1.05
CSD-506	40-30	150	1 x 2½	1.80	1.08
CSD-1540	40-40	150	1 x 2½	1.85	1.11
CSD-512	50-30	150	1 x 2½	1.95	1.17
CSD-1550	50-50	150	1 x 3	2.10	1.26
CSD-2516	16-16	250	1 x 2½	1.75	1.05
CSS-4508	8- 8	450	1 x 3⅛	1.70	1.02
CSD-522	8-16	450	1 x 2⅞	2.00	1.20
CSD-4520	20-20	450	1 x 3⅝	2.50	1.50

Dual Separate Sections

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	Net Price	Resale Net Price
CSS-1520	20-20	150	1 x 2½	$2.05	$1.23
CSS-4508	8- 8	450	1 x 3⅛	2.15	1.29
CSS-4516	16-16	450	1¼ x 3⅛	2.80	1.68

Triple Common Negative Units

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	Net Price	Resale Net Price
CST-1520	20-20-20	150	1 x 2⅞	$2.20	$1.32
CST-523	40-20-20	150	1 x 2⅞	2.25	1.35
CST-524	40-30-20	150	1 x 2⅞	2.35	1.41
CST-1540	40-40-40	150	1 x 3⅛	2.45	1.47
CST-526	20-20-20	150-150-25	1 x 2½	2.05	1.23
CST-527	40-20-20	150-150-25	1 x 2⅞	2.15	1.29
CST-528	40-30-20	150-150-25	1 x 2⅞	2.20	1.32
CST-532	50-30-20	150-150-25	1 x 2⅞	2.35	1.41
CST-533	50-30-100	150-150-25	1 x 3⅛	2.55	1.53
CST-534	80-40-20	150-150-25	1 x 3⅛	2.60	1.56
CST-535	12-12-20	450-450-25	1 x 2⅞	2.30	1.38
CST-537	20-20-20	450-450-25	1¼ x 3⅛	2.90	1.74

NOTE: Packaging: 10, 25, or 50 per display carton.

COLOR CODE OF WIRE LEADS FOR TYPES CS, AND SL CAPACITORS

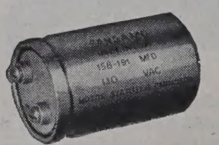
Black	Common negative
Orange	Positive, highest voltage or capacity
Red	Positive, next highest voltage or capacity
Blue	Positive, next highest voltage or capacity
Yellow	Positive, next highest voltage or capacity
Brown	Negative, in separate section unit

NOTE: Lead colors are determined by the rated working voltages. Where there are two or more sections of different voltages and the same capacity, the lead color will designate the voltage; with the same voltages and unequal capacities, the lead color will designate the capacity. If there are two sections with equal capacities and voltages the two lead wires will be in the same color.

NOTE: Based upon proposed R.T.M.A. Color code.

TYPE EM (MOTOR STARTING)

Trailblazer



The SANGAMO Type EM electrolytic capacitor is a standard universal replacement for all motor starter types presently in use, and its dimensions are comparable in every respect. The Type EML is provided with solder lug terminals, the Type EMS being equipped with screw types; otherwise the two units are identical in construction and operational characteristics. Insulating tubes are supplied with both types.

110 Volts A.C.

EML Catalog Number	Capacity, mfds. Range	Nominal	Can Size, less insulating tube. Dia. Len.	List Price	Resale Net Price
EML-1120	20- 24	20	1⅜ x 3⅛	$2.05	$1.43
EML-1126	26- 30	26	1⅜ x 3⅛	2.10	1.47
EML-1132	32- 36	32	1⅜ x 3⅛	2.10	1.47
EML-1138	38- 42	38	1⅜ x 3⅛	2.10	1.47
EML-1143	43- 48	43	1⅜ x 3⅛	2.10	1.47
EML-1153	53- 60	53	1⅜ x 3⅛	2.15	1.50
EML-1164	64- 72	64	1⅜ x 3⅛	2.25	1.57
EML-1170	70- 78	70	1⅜ x 3⅛	2.30	1.61
EML-1175	75- 84	75	1⅜ x 3⅛	2.30	1.61
EML-1186	86- 96	86	1⅜ x 3⅛	2.60	1.82
EML-1197	97-107	97	1⅜ x 3⅛	2.65	1.85
EML-11108	108-120	108	1⅜ x 3⅛	2.85	1.99
EML-11124	124-138	124	1⅜ x 3⅛	2.95	2.06
EML-11145	145-162	145	1⅜ x 3⅛	3.20	2.24
EML-11161	161-180	161	1⅜ x 4⅛	3.25	2.27
EML-11161	161-180	161	2 x 3⅛	3.25	2.27
EML-11189	189-216	189	2 x 3⅛	3.75	2.62
EML-11216	216-240	216	2 x 3⅛	4.05	2.83
EML-11243	243-270	243	2 x 3⅛	4.70	3.29
EML-11270	270-300	270	2 x 3⅛	4.75	3.32
EML-11324	324-360	324	2 x 4⅛	5.40	3.78
EML-11378	378-420	378	2 x 4⅛	6.00	4.20
EML-11400	400-480	400	2 x 4⅛	6.05	4.23

220 Volts A.C.

EML Catalog Number	Capacity, mfds. Range	Nominal	Can Size, less insulating tube. Dia. Len.	List Price	Resale Net Price
EML-2220	20-24	20	1⅜ x 3⅛	$2.91	$2.03
EML-2226	26-30	26	1⅜ x 3⅛	3.35	2.34
EML-2232	32-36	32	2 x 4⅛	3.79	2.65
EML-2238	38-42	38	2 x 4⅛	4.30	3.01
EML-2243	43-48	43	2 x 4⅛	4.55	3.18
EML-2253	53-60	53	2 x 4⅛	5.19	3.63

110 Volts A.C.

EMS Catalog Number	Capacity, mfds. Range	Nominal	Can Size, less insulating tube. Dia. Len.	List Price	Resale Net Price
EMS-1120	20- 24	20	1⅜ x 3⅛	$2.05	$1.43
EMS-1126	26- 30	26	1⅜ x 3⅛	2.10	1.47
EMS-1132	32- 36	32	1⅜ x 3⅛	2.10	1.47
EMS-1138	38- 42	38	1⅜ x 3⅛	2.10	1.47
EMS-1143	43- 48	43	1⅜ x 3⅛	2.10	1.47
EMS-1153	53- 60	53	1⅜ x 3⅛	2.15	1.50
EMS-1164	64- 72	64	1⅜ x 3⅛	2.25	1.57
EMS-1170	70- 78	70	1⅜ x 3⅛	2.30	1.61
EMS-1175	75- 84	75	1⅜ x 3⅛	2.30	1.61
EMS-1186	86- 96	86	1⅜ x 3⅛	2.60	1.82
EMS-1197	97-107	97	1⅜ x 3⅛	2.65	1.85
EMS-11108	108-120	108	1⅜ x 3⅛	2.85	1.99
EMS-11124	124-138	124	1⅜ x 3⅛	2.95	2.06
EMS-11145	145-162	145	1⅜ x 3⅛	3.20	2.24
EMS-11161	161-180	161	1⅜ x 4⅛	3.25	2.27
EMS-11161	161-180	161	2 x 3⅛	3.25	2.27
EMS-11189	189-216	189	2 x 3⅛	3.75	2.62
IMS-11216	216-240	216	2 x 3⅛	4.05	2.83
EMS-11243	243-270	243	2 x 3⅛	4.70	3.29
EMS-11270	270-300	270	2 x 3⅛	4.75	3.32
EMS-11324	324-360	324	2 x 4⅛	5.40	3.78
EMS-11378	378-420	378	2 x 4⅛	6.00	4.20
EMS-11400	400-480	400	2 x 4⅛	6.05	4.23

220 Volts A.C.

EMS Catalog Number	Capacity, mfds. Range	Nominal	Can Size, less insulating tube. Dia. Len.	List Price	Resale Net Price
EMS-2220	20-24	20	1⅜ x 3⅛	$2.96	$2.06
EMS-2226	26-30	26	1⅜ x 3⅛	3.40	2.37
EMS-2232	32-36	32	2 x 4⅛	3.84	2.68
EMS-2238	38-42	38	2 x 4⅛	4.35	3.04
EMS-2243	43-48	43	2 x 4⅛	4.60	3.21
EMS-2253	53-60	53	2 x 4⅛	5.24	3.66

NOTE: For insulating tube dimensions add $\frac{1}{16}$" to the can diameter and ⅝" to the can length.

NOTE: Packaging: Individual display carton.

SANGAMO CAPACITORS

ELECTROLYTIC CAPACITORS

TYPE BTE

50 MFD 150 WVDC

The SANGAMO Type BTE electrolytic capacitor is ideally suited for filter and bypass circuits in marine, aircraft, geophysical and many other applications. The Type BTE cartridges are first sealed in aluminum tubes and then encased in sturdy-corrosion-resistant, hot tinned steel cases providing a complete hermetic seal under extremes of weather conditions. All units are equipped with glass-to-metal sealed terminals. Mounting flanges with 3/16" holes are provided at each end.

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Width	Length	Height	List Price	Resale Net Price
BTE-0225	25	25	1	1 13/16	15/16	$4.50	$2.70
BTE-0250	50	25	1	1 13/16	15/16	4.60	2.76
BTE-0275	75	25	1	1 13/16	15/16	4.65	2.79
BTE-0525	25	50	1	1 13/16	15/16	4.55	2.73
BTE-0550	50	50	1	1 13/16	15/16	4.70	2.82
BTE-1510	10	150	1	1 13/16	15/16	4.65	2.79
BTE-1520	20	150	1	1 13/16	15/16	4.70	2.82
BTE-2510	10	250	1	1 13/16	15/16	4.50	2.70
BTE-2512	12	250	1	1 13/16	15/16	4.65	2.79
BTE-3508	8	350	1	1 13/16	15/16	4.75	2.85
BTE-4504	4	450	1	1 13/16	15/16	5.50	3.30

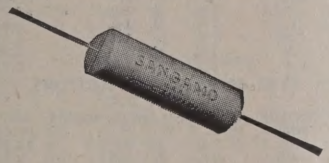
Designed and fabricated to conform to all physical and performance requirements of the CE63 style capacitor of Joint Armed Services Specification JAN-C-62.

Similar designs in case styles CE61, CE62, and CE64 may be furnished upon request.

PAPER CAPACITORS

Redskin

PLASTIC MOLDED TUBULAR



The SANGAMO "Redskin" is molded in a hard-thermosetting plastic providing more stable capacity values, excellent seal characteristics, and satisfactory operation up to 85°C. temperature. Small in physical size, and rugged in construction, this pioneer tubular is especially adaptable to television, auto radio, small AC-DC set, and other uses. The leads are firmly imbedded in the hard plastic case and have been especially designed to resist breakage. The "Redskin" assures operating dependability under extremes of heat, humidity and physical stress.

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
300221	.001	200	5/16 x 1	$0.25	$0.15
300225	.005	200	5/16 x 1	.25	.15
300211	.01	200	⅜ x 1⅛	.25	.15
300212	.02	200	⅜ x 1⅛	.25	.15
3002147	.047	200	7/16 x 1¼		
300215	.05	200	7/16 x 1¼	.30	.18
300201	.1	200	½ x 1½	.35	.21
3002015	.15	200	9/16 x 1⅝	.35	.21
3002022	.22	200	9/16 x 2	.40	.24
3002025	.25	200	⅝ x 2	.45	.27
3002047	.47	200	¾ x 2	.60	.36
300205	.5	200	¾ x 2	.60	.36
300210	1.0	200	1 x 2⅛	.90	.54
300421	.001	400	5/16 x 1	.25	.15
300425	.005	400	5/16 x 1	.25	.15
300411	.01	400	⅜ x 1⅛	.25	.15
300412	.02	400	7/16 x 1 3/16	.25	.15
3004122	.022	400	7/16 x 1 3/16	.25	.15
3004147	.047	400	15/32 x 1½	.30	.18
300415	.05	400	15/32 x 1½	.30	.18
3004168	.068	400	½ x 1½	.35	.21
300401	.1	400	9/16 x 1⅝	.35	.21
3004015	.15	400	9/16 x 2	.35	.21
300402	.2	400	⅝ x 2	.40	.24
3004022	.22	400	⅝ x 2	.40	.24
3004025	.25	400	⅝ x 2	.45	.27
300405	.5	400	⅞ x 2	.60	.36
300410	1.0	400	1 1/16 x 2½	.90	.54

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
300635	.0005	600	5/16 x 1	$0.25	$0.15
300621	.001	600	5/16 x 1	.25	.15
3006215	.0015	600	5/16 x 1	.25	.15
300622	.002	600	5/16 x 1	.25	.15
3006222	.0022	600	5/16 x 1	.25	.15
300623	.003	600	5/16 x 1	.25	.15
300624	.004	606	5/16 x 1	.25	.15
3006247	.0047	600	5/16 x 1	.25	.15
300625	.005	600	5/16 x 1	.25	.15
300626	.006	600	⅜ x 1⅛	.25	.15
3006268	.0068	600	⅜ x 1⅛	.30	.18
300611	.01	600	7/16 x 1 3/16	.30	.18
3006115	.015	600	7/16 x 1 3/16	.30	.18
300612	.02	600	7/16 x 1¼	.30	.18
3006122	.022	600	7/16 x 1¼	.30	.18
300613	.03	600	15/32 x 1½	.35	.21
300614	.04	600	½ x 1½	.35	.21
3006147	.047	600	½ x 1½	.40	.24
300615	.05	600	½ x 1½	.40	.24
300616	.06	600	9/16 x 1⅝	.40	.24
300601	.1	600	9/16 x 2	.45	.27
300602	.2	600	¾ x 2	.55	.33
3006025	.25	600	¾ x 2	.55	.33
300605	.5	600	1 x 2⅛	.80	.48
300610	1.0	600	1⅜ x 2⅝	1.25	.75
301635	.0005	1600	7/16 x 1¼	.60	.36
301621	.001	1600	7/16 x 1¼	.60	.36
3016215	.0015	1600	7/16 x 1¼	.60	.36
301622	.002	1600	7/16 x 1¼	.65	.39
3016222	.0022	1600	7/16 x 1¼	.65	.39
3016225	.0025	1600	7/16 x 1¼	.65	.39
301623	.003	1600	7/16 x 1¼	.65	.39
3016233	.0033	1600	7/16 x 1¼	.65	.39
301624	.004	1600	7/16 x 1¼	.65	.39
3016247	.0047	1600	7/16 x 1¼	.65	.39
301625	.005	1600	7/16 x 1¼	.65	.39
301626	.006	1600	7/16 x 1¼	.65	.39
3016268	.0068	1600	½ x 1½	.65	.39
301627	.007	1600	½ x 1½	.65	.39
3016275	.0075	1600	½ x 1½	.65	.39
301628	.008	1600	½ x 1½	.65	.39
301611	.01	1600	½ x 1½	.70	.42
3016115	.015	1600	½ x 1½	.70	.42
301612	.02	1600	9/16 x 1⅝	.70	.42
3016122	.022	1600	9/16 x 1⅝	.70	.42
3016125	.025	1600	9/16 x 1⅝	.70	.42
301613	.03	1600	⅝ x 2	.70	.42
301614	.04	1600	⅝ x 2	.70	.42
301615	.05	1600	⅝ x 2	.80	.48

NOTE: Additional capacity values in the 200 and 400 volt ratings can be supplied on request.

NOTE: Packaging: 20, 50, or 100 per display carton.

NOTE: Standard capacity tolerance:

.0005 mfd......±60% —25
.001 mfd. to .01 mfd.......±40% —20
.01 mfd. to .15 mfd......±20%
.15 mfd. and up......±20% —10

SANGAMO CAPACITORS

PAPER CAPACITORS

TYPE 50 *Pathfinder*

The Type 50 paper capacitors are primarily intended for bypass application. They are non-inductively wound, are supplied in fractional capacity values, and will provided efficient and continuous operation in R.F. and A.F. bypass, audio frequency coupling, and other A.C. circuits. These units are impregnated and filled with mineral oil and may be operated under severe humidity conditions at temperatures up to +85°C.

600 W.V. D.C.

Catalog Number	Capacity mfd.	Dimensions — Inches L	W	H	List Price	Resale Net Price
5006-.05	.05	1 13/16	1	¾	$2.90	$1.74
5006-.1	.1	1 13/16	1	¾	2.95	1.77
5006-.25	.25	1 13/16	1	¾	3.10	1.86
5006-.5	.5	1 13/16	1	1	3.30	1.98
5006-1	1.0	2	1¾	⅞	3.75	2.25
5006-2	2.0*	2	2	1⅛	5.00	3.00
5006-.05x2	.05-.05	1 13/16	1	¾	3.65	2.19
5006-.1x2	.1-.1	1 13/16	1	¾	3.70	2.22
5006-.25x2	.25-.25	1 13/16	1	⅞	3.75	2.25
5006-.5x2	.5-.5	2	1¾	⅞	4.30	2.58
5006-1x2	1.0-1.0*	2	2	1⅛	5.30	3.18
5006-.1x3	.1-.1 .1	1 13/16	1	¾	4.20	2.52
5006-.25x3	.25-.25-.25	2	1¾	⅞	4.75	2.85
5006-.5x3	.5-.5-.5*	2	2	1⅛	5.75	3.45

1000 W.V. D.C.

Catalog Number	Capacity mfd.	Dimensions — Inches L	W	H	List Price	Resale Net Price
5010-.05	.05	1 13/16	1	¾	$3.05	$1.83
5010-.1	.1	1 13/16	1	¾	3.15	1.89
5010-.25	.25	1 13/16	1	⅞	3.25	1.95
5010-.5	.5	2	1¾	⅞	3.55	2.13
5010-1	1.0*	2	2	1⅛	4.40	2.64
5010-.05x2	.05-.05	1 13/16	1	¾	3.85	2.31
5010-.1x2	.1-.1	1 13/16	1	⅞	4.00	2.40
5010-.25x2	.25-.25	2	1¾	⅞	4.20	2.52
5010-.5x2	.5-.5*	2	2	1⅛	5.45	3.27
5010-.1x3	.1-.1-.1	2	1¾	⅞	4.60	2.76
5010-.25x3	.25-.25-.25*	2	2	1⅛	5.50	3.00

NOTE: *For bottom or top terminal, case size becomes 2" x 2" x 1¼"

NOTE: Packaging: Individual display carton.

NOTE: The above units built to comply with the electrical requirements of specification JAN-C-25 Style CP-53-54-55.

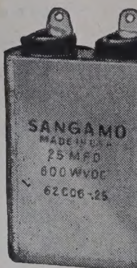
NOTE: Standard capacity tol. ±20% —10%.

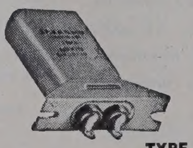
TYPE 40-41 *Pueblo*

The SANGAMO Types 40 and 41 diaclor impregnated and filled paper capacitors are ideal for use in high voltage filter applications. Enclosed in aluminum containers, they facilitate convenient mounting to the chassis, an insulating washer and spade lug being provided for this purpose. In the Type 40 one connection is provided by an insulated terminal and the other is provided by the case. In the Type 41 both terminals are completely insulated from the case.

NOTE: These units built to comply with the electrical requirements of specification JAN-C-25 Style CP-40-41.

TYPE 62-64 *Scout*





The Types 62 and 64 SANGAMO non-inductively wound paper capacitors are impregnated and filled with mineral oil and are hermetically sealed in seamless drawn-steel cases. The mineral oil impregnant assures dependable service betwen the wide temperature limits of —55°C. and +85°C. Standard capacitors are supplied with top terminals and brackets for upright mounting. When bottom terminals and inverted mounting are required, add the letter "B" to the end of the catalog number.

TYPE 62 PAPER CAPACITORS

600 W.V. D.C.

Catalog Number	Capacity mfd.	Dimensions incldg. bracket L	W	H	List Price	Resale Net Price
62B06-.01	.01	1⅜	11/16	1 5/32	$3.65	$2.19
62B06-.05	.05	1⅜	11/16	1 5/32	3.65	2.19
62B06-.1	.1	1⅜	11/16	1 5/32	3.65	2.19
62B06-.25	.25	1⅜	11/16	1 5/32	3.90	2.34
62C06-.5	.5	1⅜	11/16	1 27/32	4.20	2.52
62A06-1.	1.0	1⅜	11/16	2¼	4.65	2.79
62A06-2.	2.0	1⅜	1¼	2 5/16	6.10	3.66

1000 W.V. D.C.

Catalog Number	Capacity mfd.	Dimensions incldg. bracket L	W	H	List Price	Resale Net Price
62B10-.05	.05	1⅜	11/16	1 5/32	$3.75	$2.25
62B10-.1	1.	1⅜	11/16	1 5/32	4.00	2.40
62C10-.25	.25	1⅜	11/16	1 27/32	4.20	2.52
62A10-.5	.5	1⅜	11/16	2¼	4.45	2.67
62A10-1.	1.0	1⅜	1¼	2 5/16	5.20	3.12

TYPE 64 PAPER CAPACITORS

600 W.V. D.C.

Catalog Number	Capacity mfd.	Dimensions incldg. bracket L	W	H	List Price	Resale Net Price
64A06-.01	.01	2 5/16	11/16	2 5/16	$3.55	$2.13
64A06-.05	.05	2 5/16	11/16	2 5/16	3.55	2.13
64A06-.1	.1	2 5/16	11/16	2 5/16	3.55	2.13
64A06-.25	.25	2 5/16	11/16	2 5/16	3.85	2.31
64A06-.5	.5	2 5/16	11/16	2 5/16	4.10	2.46
64A06-1.	1.0	2 5/16	11/16	2 5/16	4.70	2.82
64A06-2.	2.0	1⅞	1 5/16	2 11/32	6.05	3.63

1000 W.V. D.C.

Catalog Number	Capacity mfd.	Dimensions incldg. bracket L	W	H	List Price	Resale Net Price
64A10.05	.05	2 5/16	11/16	2 5/16	$3.70	$2.22
64A10-.1	.1	2 5/16	11/16	2 5/16	3.95	2.37
64A10-.25	.25	2 5/16	11/16	2 5/16	4.15	2.49
64A10-.5	.5	2 5/16	11/16	2 5/16	4.40	2.64
64A10-1.	1.0	1⅞	1 5/16	2 11/32	5.15	3.09

NOTE: Not normally carried in stock. Available on special order only.

NOTE: Packaging: Individual display carton.

NOTE: The above units built to comply with the electrical requirements of specification JAN-C-25 Style CP-61-63-65-67-69.

TYPE 40 PAPER CAPACITORS

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
4006-1	1.	600	1½ x 1⅝	$3.85	$2.31
4006-2	2.	600	1½ x 2⅜	4.60	2.76
4006-4	4.	600	1½ x 3⅝	6.30	3.78
4010-1	1.	1000	1½ x 2⅜	4.20	2.52
4010-2	2.	1000	1½ x 3⅝	5.45	3.27
4015-.25	.25	1500	1½ x 1⅝	4.85	2.91
4015-.5	.5	1500	1½ x 2⅜	5.00	3.00
4015-1	1.	1500	1½ x 3⅜	5.45	3.27

TYPE 41 PAPER CAPACITORS

Catalog Number	Capacity mfd.	Working Volts D.C.	— Size — Dia. Len.	List Price	Resale Net Price
4106-1	1.	600	1½ x 1⅝	$4.70	$2.82
4106-2	2.	600	1½ x 2⅜	5.40	3.24
4106-4	4.	600	1½ x 3⅝	7.10	4.26
4110-1	1.	1000	1½ x 2⅜	5.00	3.00
4110-2	2.	1000	1½ x 3⅝	6.30	3.78
4115-.25	.25	1500	1½ x 1⅝	5.65	3.39
4115-.5	.5	1500	1½ x 2⅜	5.85	3.51
4115-1	1.	1500	1½ x 3⅜	6.30	3.78

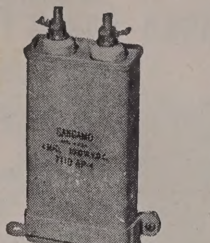
NOTE: Packaging: Individual display carton.

SANGAMO CAPACITORS

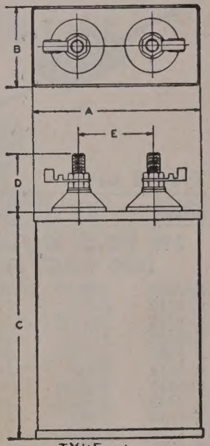
PAPER CAPACITORS

TYPE 71 *Seminole*

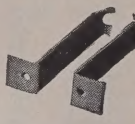
SANGAMO Type 71 diaclor impregnated and filled paper capacitors have the advantage of light weight, and are smaller than the case size specified by JAN-C-25. Diaclor* is a specially compounded, chemically purified chlorinated dielectric oil. This synthetic impregnant, whose characteristics can be controlled with great uniformity, possesses a high dielectric constant, high volume resistivity, low power factor, high dielectric strength, and is non-inflammable and non-explosive. Type A mounting brackets are supplied with each capacitor as standard equipment. If Type B or C brackets are required, they must be specified when ordering. Either composition rivet or stand-off porcelain terminals can be supplied, and the type desired should be specified.



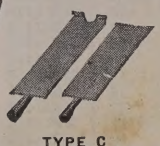
TYPE A BRACKET



TYPE 71



TYPE B BRACKET



TYPE C BRACKET

600 V. D.C. Working

Catalog Number	Capacity mfd.	Dimensions — Inches A	B	C	D	E	F	List Price	Resale Net Price
7106-.5	.5	1 13/16	1 1/16	1 5/8	7/8	13/16	2 1/4	$4.70	$2.82
7106-1	1.	1 13/16	1 1/16	2	7/8	13/16	2 1/4	5.80	3.48
7106-2	2.	1 13/16	1 1/16	2 3/4	7/8	13/16	2 1/4	7.15	4.29
7106-4	4.	2 1/2	1 3/16	2 7/8	7/8	1 1/8	3	9.10	5.46
7106-6	6.	2 1/2	1 3/16	3 3/4	7/8	1 1/8	3	11.30	6.78
7106-8	8.	3 3/4	1 1/4	3 1/4	7/8	2	4 3/8	13.50	8.10
7106-10	10.	3 3/4	1 1/4	3 7/8	7/8	2	4 3/8	15.15	9.09

1000 V. D.C. Working

Catalog Number	Capacitv mfd.	Dimensions — Inches A	B	C	D	E	F	List Price	Resale Net Price
7110-.1	.1	1 13/16	1 1/16	1 5/8	7/8	13/16	2 1/4	$4.15	$2.49
7110-.25	.25	1 13/16	1 1/16	1 5/8	7/8	13/16	2 1/4	4.70	2.82
7110-.5	.5	1 13/16	1 1/16	2	7/8	13/16	2 1/4	4.95	2.97
7100-1	1.	1 13/16	1 1/16	2 1/8	7/8	13/16	2 1/4	6.35	3.81
7110-2	2.	1 13/16	1 1/16	3 7/8	7/8	13/16	2 1/4	8.25	4.95
7110-4	4.	2 1/2	1 3/16	4 1/8	7/8	1 1/8	3	10.45	6.27
7110-6	6.	3 3/4	1 1/4	3 7/8	7/8	2	4 3/8	14.05	8.43
7110-8	8.	3 3/4	1 1/4	4 5/8	7/8	2	4 3/8	15.15	9.09
7110-10	10.	3 3/4	1 3/4	4 1/4	7/8	2	4 3/8	16.80	10.08
7110-12	12.	3 3/4	2 1/4	3 7/8	7/8	2	4 3/8	18.15	10.89
7110-15	15.	3 3/4	2 1/2	4 5/8	7/8	2	4 3/8	20.10	12.06

1500 V. D.C. Working

Catalog Number	Capacity mfd.	Dimensions — Inches A	B	C	D	E	F	List Price	Resale Net Price
7115-.5	.5	1 13/16	1 1/16	2 1/4	7/8	13/16	2 1/4	$6.35	$3.81
7115-1	1.	1 13/16	1 1/16	3 1/4	7/8	13/16	2 1/4	7.45	4.47
7115-2	2.	2 1/2	1 3/16	3 5/8	7/8	1 1/8	3	10.45	6.27
7115-4	4.	3 3/4	1 1/4	4 1/4	7/8	2	4 3/8	14.05	8.43
7115-6	6.	3 3/4	1 3/4	4 1/2	7/8	2	4 3/8	17.05	10.23
7115-8	8.	3 3/4	2 1/2	4 5/8	7/8	2	4 3/8	20.90	12.54
7115-10	10.	3 3/4	3 3/16	4 1/8	7/8	2	4 3/8	25.05	15.03
7115-12	12.	3 3/4	3 3/16	4 3/4	7/8	2	4 3/8	27.25	16.35
7115-15	15.	3 3/4	4 9/16	4 1/4	7/8	2	4 3/8	30.00	18.00

NOTE: Standard tolerance ±10%.
NOTE: Brackets supplied at no extra cost.

2000 V. D.C. Working

Catalog Number	Capacity mfd.	Dimensions — Inches A	B	C	D	E	F	List Price	Resale Net Price
7120-.1	.1	1 13/16	1 1/16	1 5/8	1 3/8	13/16	2 1/4	$6.60	$3.96
7120-.25	.25	1 13/16	1 1/16	2	1 3/8	13/16	2 1/4	7.15	4.29
7120-.5	.5	1 13/16	1 1/16	2 7/8	1 3/8	13/16	2 1/4	7.45	4.47
7120-1	1.	2 1/2	1 3/16	3 1/4	1 3/8	1 1/8	3	9.10	5.46
7120-2	2.	3 3/4	1 1/4	3 3/4	1 3/8	2	4 3/4	10.75	6.45
7120-4	4.	3 3/4	2 1/4	3 3/4	1 3/4	2	4 3/8	15.15	9.09
7120-6	6.	3 3/4	2 1/2	4 3/4	1 3/4	2	4 3/8	20.10	12.06
7120-8	8.	3 3/4	3 3/16	4 3/4	1 3/4	2	4 3/8	25.05	15.03
7120-10	10.	3 3/4	4 9/16	4 3/4	1 3/4	2	4 3/8	30.55	18.33
7120-12	12.	3 3/4	4 9/16	5 1/8	1 3/4	2	4 3/8	33.30	19.98

2500 V. D.C. Working

Catalog Number	Capacity mfd.	Dimensions — Inches A	B	C	D	E	F	List Price	Resale Net Price
7125-.5	.5	2 1/2	1 3/16	2 7/8	1 3/4	1 1/8	3	$11.55	$6.93
7125-1	1.	3 3/4	1 1/4	3 1/4	1 3/4	2	4 3/8	13.20	7.92
7125-2	2.	3 3/4	1 3/4	4 3/4	1 3/4	2	4 3/8	21.45	12.87
7125-4	4.	3 3/4	2 1/4	5 1/8	1 3/4	2	4 3/8	30.00	18.00
7125-10	10.	3 3/4	4 9/16	6	1 3/4	2	4 3/8	75.10	45.06

3000 V. D.C. Working

Catalog Number	Capacity mfd.	Dimensions — Inches A	B	C	D	E	F	List Price	Resale Net Price
7130-.1	.1	2 1/2	1 3/16	2	1 3/4	1 1/8	3	$14.05	$8.43
7130-.25	.25	2 1/2	1 3/16	2 1/2	1 3/4	1 1/8	3	14.85	8.91
7130-.5	.5	2 1/2	1 3/16	3 3/4	1 3/4	1 1/8	3	16.80	10.08
7130-1	1.	3 3/4	1 1/4	4 1/4	1 3/4	2	4 3/8	20.10	12.06
7130-2	2.	3 3/4	2 1/4	4 1/2	1 3/4	2	4 3/8	25.05	15.03
7130-4	4.	3 3/4	4 9/16	4 1/4	1 3/4	2	4 3/8	36.85	22.11

TYPE 21 *Chippewa*

Hermetically sealed in metal tubes, the SANGAMO Type 21 paper capacitor is primarily designed for bypass and coupling applications. They are non-inductively wound; and, impregnated and filled with mineral oil assuring greatest stability of capacity and low power factor over the wide range of temperatures from —55°C. to +85°C. These units are built to comply with the electrical requirements of Specification JAN-C-25 Style CP 25-26-27-28-29.

TYPE 21 METAL CASES MINERAL OIL PAPER CAPACITORS

600 W.V. D.C.

Catalog Number	Capacity mfd.	— Size — Dia. Len.	List Price	Resale Net Price
2106-.006	.006	1/2 x 1 5/16	$0.95	$0.57
2106-.01	.01	1/2 x 1 5/16	.95	.57
2106-.02	.02	1/2 x 1 9/16	1.05	.63
2106-.03	.03	1/2 x 1 9/16	1.10	.66
2106-.05	.05	3/4 x 1 9/16	1.10	.66
2106-.06	.06	3/4 x 1 9/16	1.10	.66
2106-.1	.1	3/4 x 1 13/16	1.25	.75
2106-.25	.25	13/16 x 2 5/16	1.70	1.02
2106-.5	.5	1 1/16 x 2 5/16	2.20	1.32

1000 W.V. D.C.

Catalog Number	Capacity mfd.	— Size — Dia. Len.	List Price	Resale Net Price
2110-.006	.006	1/2 x 1 5/16	$1.10	$0.66
2110-.01	.01	1/2 x 1 9/16	1.10	.66
2110-.05	.05	3/4 x 1 11/16	1.30	.78
2110-.1	.1	13/16 x 2 1/16	1.50	.90
2110-.25	.25	1 1/16 x 2 5/16	2.30	1.38

1600 W.V. D.C.

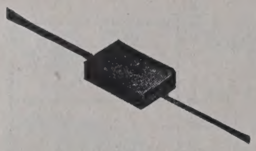
Catalog Number	Capacity mfd.	— Size — Dia. Len.	List Price	Resale Net Price
2116-.0005	.0005	3/4 x 1 5/16	$1.10	$0.66
2116-.001	.001	3/4 x 1 5/16	1.10	.66
2116-.002	.002	3/4 x 1 5/16	1.10	.66
2116-.005	.005	3/4 x 1 7/16	1.20	.72
2116-.01	.01	3/4 x 1 7/16	1.20	.72
2116-.02	.02	3/4 x 1 9/16	1.30	.78
2116-.05	.05	13/16 x 2 1/16	1.30	.78
2116-.1	.1	1 1/16 x 2 1/16	2.10	1.26

2000 W.V. D.C.

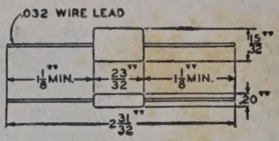
Catalog Number	Capacity mfd.	— Size — Dia. Len.	List Price	Resale Net Price
2106-.003	.003	1/2 x 1 5/16	$0.95	$0.57
2120-.0005	.0005	13/16 x 1 7/16	1.25	.75
2120-.001	.001	13/16 x 1 7/16	1.25	.75
2120-.005	.005	13/16 x 1 9/16	1.25	.75
2120-.01	.01	13/16 x 1 9/16	1.25	.75
2120-.02	.02	13/16 x 1 13/16	1.30	.78
2120-.05	.05	13/16 x 2 5/16	1.45	.87

SANGAMO CAPACITORS

TYPE K Mica Capacitor



TYPE KR Silvered Mica



Type K Mica

Catalog Number	Capacity Mfd.	List Price	Net Price
500 V.D.C. Working— 1000 V.D.C. Test			
K-1550	.000005	$0.25	$0.15
K-1410	.00001	.25	.15
K-1415	.000015	.25	.15
K-1420	.00002	.25	.15
K-1425	.000025	.25	.15
K-1430	.00003	.25	.15
K-1439	.000039	.25	.15
K-1443	.000043	.20	.12
K-1450	.00005	.20	.12
K-1475	.000075	.20	.12
K-1310	.0001	.20	.12
K-1315	.00015	.20	.12
K-1320	.0002	.20	.12
K-1325	.00025	.25	.15
K-1330	.0003	.25	.15
K-1340	.0004	.25	.15
K-1350	.0005	.25	.15
K-1370	.0007	.35	.21
K-1380	.0008	.35	.21
K-1210	.001	.35	.21

Standard tolerance, ±20%, B characteristic.

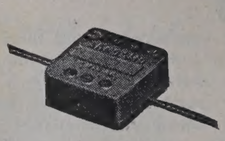
Type KR Silvered Mica

Catalog Number	Capacity Mfd.	List Price	Net Price
500 V.D.C. Working— 1000 V.D.C. Test			
KR-1550	.000005	$0.45	$0.27
KR-1410	.00001	.40	.24
KR-1415	.000015	.40	.24
KR-1420	.00002	.40	.24
KR-1425	.000025	.40	.24
KR-1430	.00003	.40	.24
KR-1439	.000089	.40	.24
KR-1443	.000043	.40	.24
KR-1450	.00005	.40	.24
KR-1475	.000075	.40	.24
KR-1310	.0001	.40	.24
KR-1315	.00015	.45	.27
KR-1320	.0002	.45	.27
KR-1325	.00025	.45	.27
KR-1330	.0003	.55	.33
KR-1340	.0004	.65	.39
KR-1350	.0005	.70	.42
KR-1370	.0007	.75	.45
KR-1380	.0008	.80	.48
KR-1210	.001	.90	.54

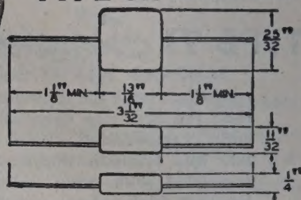
Standard tolerance, ±5%, C characteristic.

Inquiry should be directed to the factory as to the availability of capacities and voltages other than those listed.

TYPE C Mica Capacitor



TYPE CR Silvered Mica



Type C Mica

Catalog Number	Capacity Mfd.	List Price	Net Price
500 V.D.C. Working— 1000 V.D.C. Test			
C-1350	.0005	$0.25	$0.15
C-1362	.00062	.25	.15
C-1875	.00075	.25	.15
C-1380	.0008	.25	.15
C-1390	.0009	.25	.15
C-1210	.001	.30	.18
C-1215	.0015	.30	.18
C-1220	.002	.40	.24
C-1225	.0025	.45	.27
*C-1230	.003	.50	.30
*C-1240	.004	.50	.30
*C-1250	.005	.65	.39
*C-1260	.006	.65	.39
300 V.D.C. Working— 600 V.D.C. Test			
*C-06275	.0075	.90	.54
*C-06280	.008	1.00	.60
*C-06290	.009	1.00	.60
*C-06110	.01	1.20	.72

Standard tolerance, ±20%, B characteristic. *Thickness 11/32"

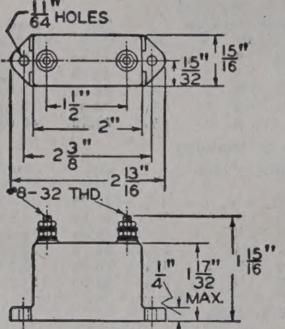
Type CR Silvered Mica

Catalog Number	Capacity Mfd.	List Price	Net Price
500 V.D.C. Working— 1000 V.D.C. Test			
CR-1350	.0005	$0.70	$0.42
CR-1362	.00062	.80	.48
CR-1375	.00075	.85	.51
CR-1380	.0008	.95	.57
CR-1390	.0009	1.00	.60
CR-1210	.001	1.10	.66
CR-1215	.0015	1.35	.81
CR-1220	.002	1.35	.81
CR-1225	.0025	1.80	1.08
*CR-1230	.003	2.05	1.23
*CR-1240	.004	2.15	1.29
*CR-1250	.005	2.25	1.35
*CR-1260	.006	2.40	1.44
300 V.D.C. Working— 600 V.D.C. Test			
*CR-06275	.0075	2.45	1.47
*CR-06280	.008	2.80	1.68
*CR-06290	.009	2.95	1.77
*CR-06110	.01	3.20	1.92

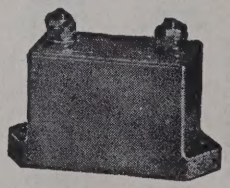
Standard tolerance, ±5%, C characteristic. *Thickness 11/32"

Inquiry should be directed to the factory as to the availability of capacities and voltages other than those listed.

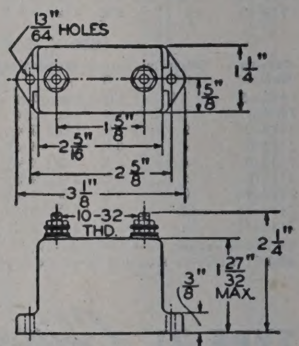
TYPES F1 AND F2 MICA CAPACITORS



TYPE F1



Types F1 and F2 capacitors, the smallest of the Sangamo line of transmitting types, possess a range of voltage and current ratings suitable for many applications. They are housed in low loss molded bakelite cases. The mica and foil sections are permanently clamped, vacuum impregnated, and installed in the case in such a manner as to provide stable characteristics and adequate moisture proofing.



TYPE F2

TYPE F1 MICA CAPACITORS

Catalog Number	Capacity Mfd.	Test Volts Effective Peak Wkg.	List Price	Net Price
F1-331	.0001	3000	$12.60	$7.56
F1-332	.0002	3000	12.60	7.56
F1-3325	.00025	3000	12.60	7.56
F1-335	.0005	3000	12.60	7.56
F1-321	.001	3000	12.60	7.56
F1-322	.002	3000	12.60	7.56
F1-223	.003	2000	12.60	7.56
F1-224	.004	2000	12.60	7.56
F1-225	.005	2000	12.60	7.56
F1-226	.006	2000	12.60	7.56
F1-1528	.008	1500	12.60	7.56
F1-111	.01	1000	12.60	7.56
F1-112	.02	1000	14.30	8.58
F1-0215	.05	250	14.30	8.58
F1-0201	.1	250	15.10	9.06

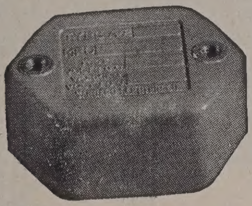
TYPE F2 MICA CAPACITORS

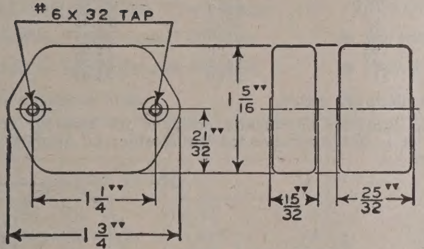
Catalog Number	Capacity Mfd.	Test Volts Effective Peak Wkg.	List Price	Net Price
F2-531	.0001	5000	$17.30	$10.38
F2-5325	.00025	5000	17.30	10.38
F2-535	.0005	5000	17.30	10.38
F2-536	.0006	5000	17.30	10.38
F2-521	.001	5000	17.30	10.38
F2-522	.002	5000	17.30	10.38
F2-523	.003	5000	17.30	10.38
F2-325	.005	3000	17.30	10.38
F2-326	.006	3000	17.30	10.38
F2-211	.01	2000	17.30	10.38
F2-212	.02	2000	17.30	10.38
F2-1515	.05	1500	17.30	10.38
F2-0501	.1	500	19.20	11.52
F2-0202	.2	250	25.25	15.15
F2-02025	.25	250	27.90	16.74

Standard tolerance ±5%, B characteristic.
Inquiry should be directed to the factory for availability of capacities and voltages other than those listed above.
Prices subject to change without notice.

SANGAMO CAPACITORS

TYPE A MICA CAPACITORS





TYPE A THIN AND THICK

600 W.V.D.C.— 1200 T.V.D.C.

Catalog Number	Capacity Mfd.	List Price	Net Price
A-T1450	.00005	$1.45	$0.87
A-T1310	.0001	1.45	.87
A-T1315	.00015	1.45	.87
A-T1320	.0002	1.45	.87
A-T1325	.00025	1.45	.87
A-T1350	.0005	1.45	.87
A-T1210	.001	1.45	.87
A-T1220	.002	1.65	.99
A-T1225	.0025	1.70	1.02
A-T1230	.003	1.85	1.11
A-T1240	.004	2.00	1.20
A-T1250	.005	2.10	1.26
A-T1260	.006	2.20	1.32
A-T1280	.008	2.45	1.47
A-T1110	.01	2.80	1.68
A-T1115	.015	3.05	1.83
A-T1120	.02	3.55	2.13
A-T1125	.025	4.35	2.61
A-T1130	.03	4.55	2.73
A-K1140	.04	5.85	3.51
A-K1150	.05	7.10	4.26
A-K1160	.06	8.05	4.83

1200 W.V.D.C.— 2500 T.V.D.C.

Catalog Number	Capacity Mfd.	List Price	Net Price
A-T2450	.00005	$1.60	$0.96
A-T2310	.0001	1.60	.96
A-T2315	.00015	1.60	.96
A-T2320	.0002	1.60	.96
A-T2325	.00025	1.60	.96
A-T2350	.0005	1.60	.96
A-T2210	.001	1.90	1.14
A-T2220	.002	2.50	1.50
A-T2225	.0025	2.80	1.68
A-T2230	.003	2.95	1.77
A-T2240	.004	3.10	1.86
A-T2250	.005	3.30	1.98
A-T2260	.006	3.45	2.07
A-T2280	.008	4.10	2.46
A-T2110	.01	4.70	2.82
A-K2115	.015	5.80	3.48
A-K2120	.02	7.05	4.23
A-K2125	.025	7.90	4.74
A-K2130	.03	8.10	4.86

2500 W.V.D.C.— 5000 T.V.D.C.

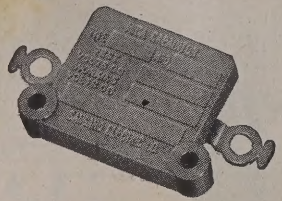
Catalog Number	Capacity Mfd.	List Price	Net Price
A-T5450	.00005	$1.90	$1.14
A-T5310	.0001	1.90	1.14
A-T5325	.00025	2.15	1.29
A-T5350	.0005	2.55	1.53
A-T5210	.001	2.90	1.74
A-T5220	.002	4.25	2.55
A-T5225	.0025	4.60	2.76
A-T5230	.003	5.10	3.06
A-T5240	.004	5.65	3.39
A-K5250	.005	6.20	3.72
A-K5260	.006	6.35	3.81
A-K5280	.008	6.85	4.11
A-K5110	.01	7.30	4.38
A-K5115	.015	8.05	4.83

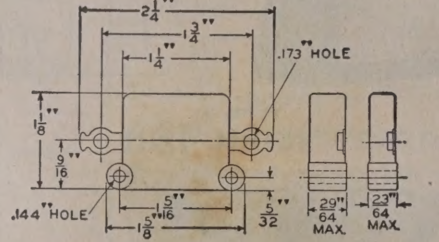
*Thickness 25/32" — Standard Insulators are available if desired. If .144" clearance holes are required, designate by adding letter "A" to Type No. (AA).

Standard tolerance ±20%, B Characteristic, unless otherwise specified.

Inquiry should be directed to the factory as to the availability of capacities and voltages other than those listed above.

TYPE H MICA CAPACITORS





TYPE H THICK AND THIN

600 W.V.D.C.— 1200 T.V.D.C.

Catalog Number	Capacity Mfd.	List Price	Net Price
H-T1450	.00005	$1.20	$0.72
H-T1310	.0001	1.20	.72
H-T1320	.0002	1.20	.72
H-T1325	.00025	1.25	.72
H-T1330	.0003	1.20	.72
H-T1340	.0004	1.20	.72
H-T1350	.0005	1.20	.72
H-T1210	.001	1.20	.72
H-T1215	.0015	1.20	.72
H-T1220	.002	1.30	.78
H-T1225	.0025	1.30	.78
H-T1230	.003	1.45	.87
H-T1240	.004	1.50	.90
H-T1250	.005	1.55	.93
H-T1260	.006	1.80	1.08
H-T1270	.007	1.85	1.11
H-T1280	.008	1.90	1.14
H-T1110	.01	2.15	1.29
H-K1115	.015	2.65	1.59
H-K1120	.02	3.05	1.83
H-K1125	.025	3.60	2.16
H-K1130	.03	4.45	2.67

1200 W.V.D.C.— 2500 T.V.D.C.

Catalog Number	Capacity Mfd.	List Price	Net Price
H-T2450	.00005	$1.60	$0.96
H-T2310	.0001	1.60	.96
H-T2320	.0002	1.60	.96
H-T2325	.00025	1.60	.96
H-T2330	.0003	1.60	.96
H-T2340	.0004	1.60	.96
H-T2350	.0005	1.60	.96
H-T2210	.001	1.80	1.08
H-T2215	.0015	2.30	1.38
H-T2220	.002	2.40	1.44
H-T2225	.0025	2.80	1.68
H-T2230	.003	3.05	1.83
H-K2240	.004	3.05	1.83
H-K2250	.005	3.30	1.98
H-K2260	.006	3.30	1.98
H-K2280	.008	3.85	2.31
H-K2110	.01	5.10	3.06

2500 W.V.D.C.— 5000 T.V.D.C.

Catalog Number	Capacity Mfd.	List Price	Net Price
H-T5450	.00005	$1.90	$1.14
H-T5310	.0001	1.90	1.14
H-T5320	.0002	1.90	1.14
H-T5325	.00025	2.20	1.32
H-T5330	.0003	2.25	1.35
H-T5340	.0004	2.30	1.38
H-T5350	.0005	2.40	1.44
H-T5210	.001	2.80	1.68
H-T5215	.0015	3.55	2.13
H-K5220	.002	4.15	2.49
H-K5230	.003	4.90	2.94
H-K5240	.004	5.65	3.39
H-K5250	.005	6.40	3.84

*Thickness 29/64". For meter mounting bracket add letter "E" to Type designation; if assembled add 30 cents to list price; if unassembled add 20 cents and specify case size.

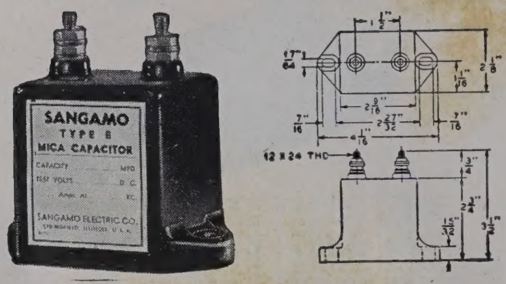
Standard tolerance ±20%, B Characteristic, unless otherwise specified.

Inquiry should be directed to the factory as to the availability of capacities and voltages other than those listed above.

Prices subject to change without notice.

SANGAMO CAPACITORS

TYPE E MICA CAPACITORS



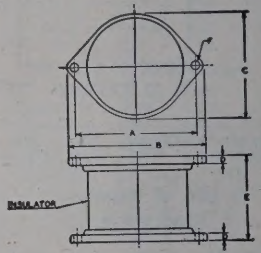
TYPE E

Catalog Number	Capacity Mfd.	Test Volts D.C.	List Price	Resale Net Price
E-1245	.00005	12500	$11.00	$ 6.60
E-1231	.0001	12500	11.00	6.60
E-12325	.00025	12500	11.00	6.60
E-1235	.0005	12500	11.00	6.60
E-1221	.001	12500	11.00	6.60
E-12215	.0015	12500	13.05	7.83
E-1222	.002	12500	15.00	9.00
E-1023	.003	10000	18.05	10.83
E-1024	.004	10000	19.05	11.43
E-1025	.005	10000	20.05	12.03
E-721	.001	7000	10.05	6.03
E-722	.002	7000	13.05	7.83
E-723	.003	7000	14.05	8.43
E-711	.01	7000	21.05	12.63
E-3524	.004	3500	14.05	8.43
E-3525	.005	3500	13.05	7.83
E-3511	.01	3500	20.05	12.03
E-3512	.02	3500	20.05	12.03
E-3515	.05	3500	23.05	13.83
E-215	.05	2000	20.05	12.03
E-201	.1	2000	23.05	13.83

Standard tolerance ±20%.

This type capacitor specifically designed for amateur transmitters. It is not recommended for commercial applications.

TYPES G1, G2, G3 AND G4 MICA CAPACITORS



TYPE G1, 2, 3 and 4

TYPE G1

Catalog Number	Capacity Mfd.	Peak Wkg. Volts	List Price	Resale Net Price
G1-641	.00001	6000	$35.45	$21.27
G1-645	.00005	6000	38.20	22.92
G1-631	.0001	6000	40.60	24.36
G1-632	.0002	6000	40.60	24.36
G1-634	.0004	6000	44.35	26.61
G1-635	.0005	6000	46.65	27.99
G1-621	.001	6000	46.65	27.99
G1-6215	.0015	6000	48.90	29.34
G1-622	.002	6000	48.90	29.34
G1-623	.003	6000	50.60	30.36
G1-624	.004	6000	50.60	30.36
G1-625	.005	6000	50.60	30.36
G1-526	.006	5000	51.45	30.87
G1-511	.01	5000	51.45	30.87
G1-4115	.015	4000	51.45	30.87
G1-312	.02	3000	51.45	30.87

TYPE G2

Catalog Number	Capacity Mfd.	Peak Wkg. Volts	List Price	Resale Net Price
G2-1031	.0001	10000	$65.55	$39.33
G2-10315	.00015	10000	65.55	39.33
G2-1032	.0002	10000	65.55	39.33
G2-10325	.00025	10000	65.55	39.33
G2-1035	.0005	10000	65.55	39.33
G2-1021	.001	10000	65.55	39.33
G2-10212	.0012	10000	65.55	39.33
G2-10215	.0015	10000	65.55	39.33
G2-1022	.002	10000	65.55	39.33
G2-823	.003	8000	65.55	39.33
G2-824	.004	8000	65.55	39.33
G2-525	.005	5000	65.55	39.33
G2-526	.006	5000	69.15	41.49
G2-511	.01	5000	69.15	41.49
G2-4115	.015	4000	69.15	41.49
G2-312	.02	3000	69.15	41.49

Type G ceramic cased capacitors are intended for service where highest voltage and R.F. current ratings are required, such as in commercial transmitting or induction heating applications. All possible steps are taken in design and manufacturing operations to insure permanence of quality. Current ratings of these four sizes as well as detailed information on the Type G5 will be supplied upon request. Terminal plates are designed to permit any usual connecting or mounting practices.

TYPE G3

Catalog Number	Capacity Mfd.	Peak Wkg. Volts	List Price	Resale Net Price
G3-2045	.00005	20000	$110.90	$66.54
G3-2031	.0001	20000	121.00	72.60
G3-2032	.0002	20000	131.10	78.66
G3-20325	.00025	20000	131.10	78.66
G3-2033	.0003	20000	131.10	78.66
G3-2035	.0005	20000	137.15	82.29
G3-2038	.0008	20000	137.15	82.29
G3-2021	.001	20000	141.15	84.69
G3-15215	.0015	15000	143.20	85.92
G3-1522	.002	15000	143.20	85.92
G3-1523	.003	15000	151.25	90.75
G3-1524	.004	15000	151.25	90.75
G3-1025	.005	10000	151.25	90.75
G3-1026	.006	10000	151.25	90.75
G3-1028	.008	10000	151.25	90.75
G3-1011	.01	10000	151.25	90.75
G3-512	.02	5000	151.25	90.75
G3-313	.03	3000	151.25	90.75

TYPE G4

Catalog Number	Capacity Mfd.	Peak Wkg. Volts	List Price	Resale Net Price
G4-3043	.00003	30000	$167.90	$100.74
G4-3045	.00005	30000	167.90	100.74
G4-3031	.0001	30000	210.30	126.18
G4-30315	.00015	30000	210.30	126.18
G4-30325	.00025	30000	221.16	132.69
G4-3035	.0005	30000	221.16	132.69
G4-3038	.0008	30000	221.16	132.69
G4-3021	.001	30000	229.10	137.46
G4-25215	.0015	25000	229.10	137.46
G4-2022	.002	20000	229.10	137.46
G4-2023	.003	20000	229.10	137.46
G4-2024	.004	20000	234.35	140.61
G4-1525	.005	15000	242.00	145.20
G4-1526	.006	15000	252.25	151.35
G4-1228	.008	12000	260.00	156.00
G4-1011	.01	10000	272.44	163.46
G4-612	.02	6000	272.44	163.46
G4-514	.04	5000	272.44	163.46

Standard tolerance ±5%, B characteristic.

TYPE G MICA CAPACITOR DIMENSIONS — INCHES

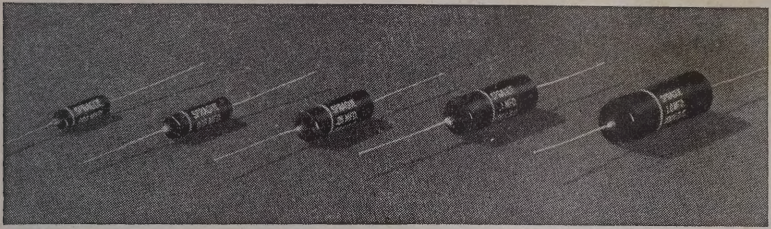
Type	A	B	C	D	E	F
G1	3¼	3 13/16	2 13/16	¼	2½	17/64
G2	4¼	5	3½	¼	3	9/32
G3	5¾	6½	5	⅜	4	.377
G4	5¾	6½	5	⅜	5¾	.377

Inquiry as to the availability of capacities and voltages other than those listed above should be directed to the factory.

Prices subject to change without notice.

SPRAGUE CAPACITORS

TELECAP® BLACK BEAUTY® MOLDED TUBULARS

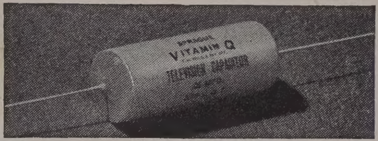


- Premium Quality at No Extra Cost
- Made Under Exclusive "Dry" Process, just like Costly Metal-Encased Oil Units
- Molded in Tough Bakelite Phenolic
- Non-Flammable Case
- Only Telecaps are Oil-impregnated in Ratings from 600 to 12,500 WVDC
- Extremely High Insulation Resistance
- Withstand Severe Heat, Moisture, Shock
- Rated for 85°C Operation

Mfd.	D. x L.	Cat. No.	List
	200 WVDC		
.02	⅜ x 1¼	2TM-S2	$ .25
.047	⅜ x 1¼	2TM-S47	.25
.05	⅜ x 1¼	2TM-S5	.25
.1	7/16 x 1¼	2TM-P1	.35
.15	½ x 1½	2TM-P15	.35
.22	⅝ x 1⅞	2TM-P22	.40
.25	⅝ x 1⅞	2TM-P25	.40
.47	⅝ x 1⅞	2TM-P47	.60
.5	⅝ x 1⅞	2TM-P5	.60
1.0	¾ x 2¼	2TM-M1	.90
	400 WVDC		
.01	5/16 x 1	4TM-S1	.25
.02	⅜ x 1¼	4TM-S2	.25
.022	⅜ x 1¼	4TM-S22	.25
.047	7/16 x 1¼	4TM-S47	.30
.05	7/16 x 1¼	4TM-S5	.30
.068	½ x 1½	4TM-S68	.35
.1	½ x 1½	4TM-P1	.35
.15	⅝ x 1⅞	4TM-P15	.35
.22	⅝ x 1⅞	4TM-P22	.40
.25	⅝ x 1⅞	4TM-P25	.40
.5	¾ x 2¼	4TM-P5	.60
	600 WVDC		
.0001	5/16 x 1	6TM-T1	.25
.00025	5/16 x 1	6TM-T25	.25
.0004	5/16 x 1	6TM-T4	.25
.0005	5/16 x 1	6TM-T5	.25
.001	5/16 x 1	6TM-D1	.25
.0015	5/16 x 1	6TM-D15	.25
.002	5/16 x 1	6TM-D2	.25
.0022	5/16 x 1	6TM-D22	.25
.003	5/16 x 1	6TM-D3	.25
.004	5/16 x 1	6TM-D4	.25
.0047	5/16 x 1	6TM-D47	.25
.005	⅜ x 1¼	6TM-D5	.25
.006	⅜ x 1¼	6TM-D6	.25
.0068	⅜ x 1¼	6TM-D68	.30
01	⅜ x 1¼	6TM-S1	.30
.015	⅜ x 1¼	6TM-S15	.30
.02	7/16 x 1¼	6TM-S2	.30
.022	7/16 x 1¼	6TM-S22	.30
.03	7/16 x 1¼	6TM-S3	.35
.04	½ x 1½	6TM-S4	$ .35
.047	½ x 1½	6TM-S47	.40
.05	½ x 1½	6TM-S5	.40
.06	⅝ x 1⅞	6TM-S6	.40
.1	⅝ x 1⅞	6TM-P1	.45
.25	¾ x 2¼	6TM-P25	.55
.5	13/16 x 2⅛	*TC-5	.80
1.0	1 x 2⅝	*TC-10	1.25
	1600 WVDC		
.0005	⅜ x 1¼	MB-T5	.65
.001	⅜ x 1¼	MB-D1	.65
.0015	⅜ x 1¼	MB-D15	.65
.002	⅜ x 1¼	MB-D2	.65
.0022	⅜ x 1¼	MB-D22	.65
.003	⅜ x 1¼	MB-D3	.65
.0033	⅜ x 1¼	MB-D33	.65
.004	⅜ x 1¼	MB-D4	.65
.0047	7/16 x 1¼	MB-D47	.65
.005	7/16 x 1¼	MB-D5	.65
.006	7/16 x 1¼	MB-D6	.65
.0068	7/16 x 1¼	MB-D68	.65
.007	7/16 x 1¼	MB-D7	.65
.0075	7/16 x 1¼	MB-D75	65
.008	½ x 1½	MB-D8	.65
.01	½ x 1½	MB-S1	.70
.015	½ x 1½	MB-S15	.70
.02	⅝ x 1⅞	MB-S2	.70
.022	⅝ x 1⅞	MB-S22	.70
.03	⅝ x 1⅞	MB-S3	70
.04	¾ x 2¼	MB-S4	.70
.05	¾ x 2⅛	*TR-15	.70
2 x .015	¾ x 2	*TR-215	.80
	6000 WVDC		
.0005	½ x 1½	TVM-356	1.35
.001	½ x 1½	TVM-216	1.35
.005	⅝ x 1⅞	TVM-256	1.35
	10,000 WVDC		
.0005	⅝ x 1⅞	TVM-351	1.50
	12,500 WVDC		
.00025	⅝ x 1⅞	12TVM-325	1.70

*Supplied in waxed cardboard units pending completion of molds.

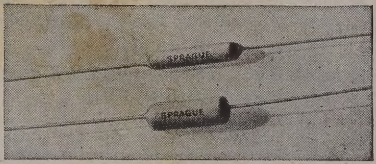
TVQ VITAMIN Q® TUBULARS



- High Voltage Units that are Amazingly Small in Size
- High Insulation Resistance
- Exclusive Internal Humidity Barrier
- Heavy Outer Wax Coating

Mfd.	WVDC	Dia. x Length	Cat. No.	List
.01	6000	13/16 x 2	TVQ-116	$1.40
.03	6000	1 x 2⅝	TVQ-136	1.50
.05	6000	1 3/16 x 3	TVQ-156	1.60

68P MIDGET® TUBULARS

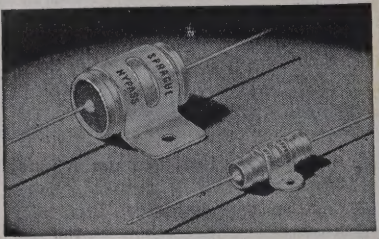


- Smallest Reliable Paper Tubular
- Fit Tight Spots in Pocket and Auto Radios
- Outstanding Humidity Performance
- Rated for 85°C Operation

Mfd.	Dia. x Length	Cat. No.	List
	100 WVDC		
.25	15/32 x 1⅛	68P19	$ .70
.5	⅝ x 1⅛	68P20	.80
	200 WVDC		
.005	¼ x 11/16	68P11	.35
.006	¼ x 11/16	68P12	.35
.01	9/32 x 11/16	68P14	.40
.02	9/32 x 13/16	68P15	.45
.05	5/16 x 1	68P16	.50
.1	13/32 x 1	68P17	.60
.2	15/32 x 1⅛	68P18	.65
.25	17/32 x 1⅛	68P24	.70
.5	⅝ x 1⅜	68P25	.80
	400 WVDC		
.001	¼ x 11/16	68P1	.35
.003	¼ x 11/16	68P3	.35
.004	¼ x 11/16	68P4	.35
.005	¼ x 13/16	68P5	.35
.006	¼ x 13/16	68P6	.35
.01	5/16 x 13/16	68P8	.40
.02	5/16 x 1	68P9	.45
.05	13/32 x 1	68P10	.50
.1	15/32 x 1⅛	68P21	.65
.2	⅝ x 1⅛	68P38	.70
.25	⅝ x 1⅜	68P22	.75
.5	⅝ x 2 5/16	68P23	.85
	600 WVDC		
.001	¼ x 11/16	68P26	.35
.002	¼ x 11/16	68P27	.35
.003	9/32 x 11/16	68P28	.35
.004	9/32 x 13/16	68P29	.35
.005	9/32 x 13/16	68P30	.40
.006	5/16 x 13/16	68P31	.40
.008	5/16 x 1	68P32	.40
.01	5/16 x 1	68P33	.45
.02	11/32 x 1	68P34	.50
.05	15/32 x 1⅛	68P35	.55
.1	⅝ x 1⅛	68P36	.70
.2	⅝ x 1 11/16	68P40	.80
.25	⅝ x 2	68P37	.80

SPRAGUE CAPACITORS

HYPASS® CAPACITORS



- Exclusive Sprague 3-terminal Network Feed-thru Capacitors
- Bypass V-H-F Currents Where Ordinary Capacitors are Ineffective
- Suppress TVI from Short-wave Transmitters, Diathermy Machines, Electronic Heating Apparatus, etc.
- Eliminate Interference caused by Line-conducted Radiation Between Neighboring TV Sets
- Install Leads in Series with Circuit Being Filtered and Ground the Case

Mfd.	Dia. x Length	Cat. No.	List
250 WVAC			
.1	11/16 x 1 13/16	*48P9	$2.60
600 WVDC			
.005	1/4 x 1 5/8	46P8	2.15
.01	7/16 x 1 1/4	47P6	2.35
1000 WVDC			
.005	7/16 x 1 1/4	47P12	2.40
.01	7/16 x 1 1/2	47P13	2.60
2500 WVDC			
.005	1 x 1 9/16	47P14	2.90
.01	1 x 1 9/16	47P15	3.10
5000 WVDC			
.002	1 x 1 9/16	47P16	3.20

*Has female screw terminals

72P RESONANT CAPACITORS

SPRAGUE
MADE IN U.S.A.
RESONANT CAPACITOR

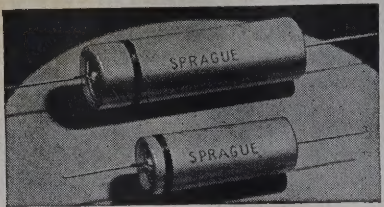
PEP UP OLD RADIO SETS!

- Stabilize Any ac-dc "Squealer" Receiver
- Stop Self-oscillation, Permitting "On-the-nose" alignment
- Very Low Impedance at 465 KC Intermediate Frequency
- By-pass Unwanted I-F Signals
- Improve Set Performance

Mfd.	WVDC	Dia. x Length	Cat. No.	List
.05	400	1/2 x 1 1/8	72P51	$ .50
.1	400	1/2 x 1 5/8	72P52	.65
.2	400	9/16 x 1 7/8	72P53	.70

PX METAL TUBULARS

HERMETICALLY SEALED

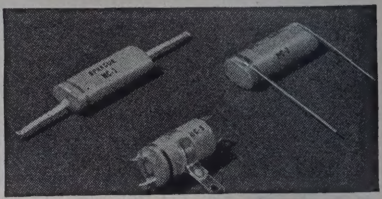


- Non-inductively Wound
- Oil-filled
- Oil-impregnated
- Insulating Cardboard Sleeve

Mfd.	Dia. x Length	Cat. No.	List
600 WVDC			
.0001	1/2 x 1 1/4	PX-316	$ .95
.00025	1/2 x 1 1/4	PX-3256	.95
.0005	1/2 x 1 1/4	PX-356	.95
.001	1/2 x 1 1/4	PX-216	.95
.002	1/2 x 1 1/4	PX-226	.95
.003	1/2 x 1 1/4	PX-236	.95
.004	1/2 x 1 1/4	PX-246	.95
.005	1/2 x 1 1/4	PX-256	.95
.006	1/2 x 1 1/4	PX-266	.95
.007	1/2 x 1 1/4	PX-276	.95
.008	1/2 x 1 1/4	PX-286	.95
.009	1/2 x 1 1/4	PX-296	.95
.01	1/2 x 1 1/4	PX-116	.95
.02	1/2 x 1 3/4	PX-126	1.05
.03	5/8 x 1 5/8	PX-136	1.10
.04	5/8 x 1 5/8	PX-146	1.10
.05	5/8 x 1 5/8	PX-156	1.10
.06	11/16 x 1 5/8	PX-166	1.20
.08	11/16 x 1 7/8	PX-186	1.20
.1	11/16 x 1 7/8	PX-16	1.25
.25	13/16 x 2 13/16	PX-26	1.70
.5	1 1/16 x 2 13/16	PX-56	2.20
1.0	1 1/16 x 3 11/16	PX-106	3.00
1000 WVDC			
.0001	11/16 x 1 1/4	PX-311	1.10
.00025	11/16 x 1 1/4	PX-3251	1.10
.0005	11/16 x 1 1/4	PX-351	1.10
.001	11/16 x 1 1/4	PX-211	1.10
.002	11/16 x 1 1/4	PX-221	1.10
.003	11/16 x 1 1/4	PX-231	1.10
.004	11/16 x 1 1/4	PX-241	1.10
.005	11/16 x 1 1/4	PX-251	1.10
.006	11/16 x 1 1/4	PX-261	1.10
.007	11/16 x 1 1/4	PX-271	1.10
.008	11/16 x 1 1/4	PX-281	1.10
.009	11/16 x 1 1/4	PX-291	1.10
.01	11/16 x 1 1/4	PX-111	1.10
.02	5/8 x 1 5/8	PX-121	1.20
.03	11/16 x 1 3/4	PX-131	1.20
.04	11/16 x 1 3/4	PX-141	1.20
.05	11/16 x 1 3/4	PX-151	1.30
.06	1 1/16 x 2	PX-161	1.35
.08	1 1/16 x 2	PX-181	1.40
.1	1 1/16 x 2	PX-11	1.50
.25	1 1/16 x 2 13/16	PX-21	2.00
.5	1 1/16 x 3 11/16	PX-51	2.85
1500 WVDC			
.002	5/8 x 1 1/4	PX-2215	1.20
.005	5/8 x 1 1/4	PX-2515	1.20
.01	11/16 x 1 5/8	PX-1115	1.20
.02	11/16 x 1 5/8	PX-1215	1.30
2000 WVDC			
.0005	13/16 x 1 3/8	PX-352	1.25
.001	13/16 x 1 3/8	PX-212	1.25
.005	13/16 x 1 3/4	PX-252	1.25
.006	13/16 x 1 3/4	PX-262	1.25
.0075	13/16 x 1 3/4	PX-2752	1.25
.01	13/16 x 1 3/4	PX-112	1.25
.02	13/16 x 2 1/8	PX-122	1.35
.03	13/16 x 2 1/8	PX-132	1.40
.04	13/16 x 2 1/2	PX-142	1.40
.05	13/16 x 2 1/2	PX-152	1.45

HC HASH CAPACITORS

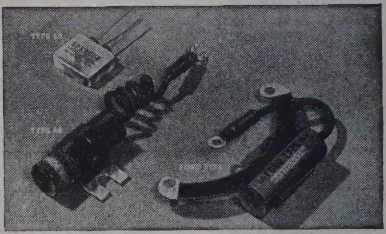
FOR AUTOMOBILE RADIOS



- HC-1—Braided leads for Low R-F Resistance
- HC-2—Radial Side Leads
- HC-3—Flat Strap Leads for Minimum R-F Impedance

Mfd.	WVDC	Size	Cat. No.	List
.5	120	7/16 x 3/4 x 2 (oval tube)	HC-1	$ .90
.5	120	5/16 x 3/4 x 2 (oval tube)	HC-2	.90
.5	120	3/4 x 1 3/8 (round tube)	HC-3	1.10

AR & LR AUTO GENERATOR AND VIBRATOR TYPES



AR LR FORD

- Exceptionally Sturdy Design
- Withstand Bouncing and Vibration
- Oil-impregnated, Metal Encased
- Resist Heat and Humidity

Mfd.	WVDC	Size	Cat. No.	List
AR (GENERATOR TYPES)				
1.0		1 x 2 3/16	AR-1	$1.75
.5		11/16 x 1 1/8	AR-2	.90
.5+.5		1 x 2 3/16	AR-25	3.25
.5		11/16 x 1 7/8	AR-Ford	1.45
LR (VIBRATOR TYPES)				
.01	1600	1/4 x 7/8 x 1 1/16	LR-11	$2.00
.02	1600	1/4 x 7/8 x 1 1/16	LR-12	2.90
.007	1600	1/4 x 7/8 x 1 1/16	LR-27	2.65

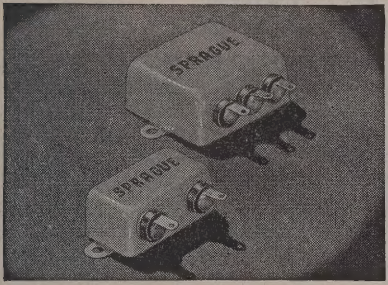
SPECIAL AUTO TYPES

Cat. No.	Mfd.	WVDC	D. X L.	List
DL-1 Dome Light Filter	.2	200	1 x 2 3/16	$4.20
GG-5 Gas Gauge Filter	.05	200	7/16 x 1 7/32	1.20
OG-50 Oil Gauge Filter	.25	200	11/16 x 1 7/8	1.40
P-2077 Ford Replacement	.5	200	11/16 x 1 7/8	1.25
P-3402 Ammeter Capacitor	.5	200	11/16 x 2	.90
P-2153 Motorola Replacement	.0008+.0008	1000	3/4 x 1 3/8	.80

All prices subject to change without notice.

SPRAGUE CAPACITORS

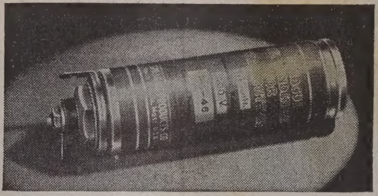
BP BATHTUB UNITS



- Hermetically Sealed
- Drawn Can
- Oil-impregnated
- Oil-filled

Mfd.	L. x W. x H.	Cat. No.	List
	400 WVDC		
.1	1 13/16 x 1 x ¾	BP-1	$2.20
.25	1 13/16 x 1 x ¾	BP-25	2.50
.5	1 13/16 x 1 x ⅞	BP-50	2.65
1.0	2 x 1¾ x ⅞	BP-10	3.15
.1 + .1	1 13/16 x 1 x ¾	BP-21	3.30
.25 + .25	1 13/16 x 1 x ⅞	BP-225	3.60
.5 + .5	2 x 1¾ x ⅞	BP-250	4.15
.1 + .1 + .1	1 13/16 x 1 x ¾	BP-31	4.00
	600 WVDC		
.05	1 13/16 x 1 x ¾	BP-56	2.90
.1	1 13/16 x 1 x ¾	BP-16	2.95
.25	1 13/16 x 1 x ¾	BP-256	3.10
.5	1 13/16 x 1 x ⅞	BP-506	3.30
1.0	2 x 1¾ x ⅞	BP-106	3.75
2.0	2 x 2 x 1⅛	BP-206	5.00
.05 + .05	1 13/16 x 1 x ¾	BP-2056	3.65
.1 + .1	1 13/16 x 1 x ¾	BP-216	3.70
.25 + .25	1 13/16 x 1 x ⅞	BP-2256	3.75
.5 + .5	2 x 1¾ x ⅞	BP-2506	4.30
1.0 + 1.0	2 x 2 x 1⅛	BP-116	5.30
.1 + .1 + .1	1 13/16 x 1 x ¾	BP-316	4.20
.25 + .25 + .25	2 x 1¾ x ⅞	BP-3256	4.75
.5 + .5 + .5	2 x 2 x 1⅛	BP-356	5.75
	1000 WVDC		
.05	1 13/16 x 1 x ¾	BP-51	3.05
.1	1 13/16 x 1 x ¾	BP-11	3.15
.25	1 13/16 x 1 x ¾	BP-251	3.25
.5	2 x 1¾ x ⅞	BP-501	3.55
1.0	2 x 2 x 1⅛	BP-101	4.40
.05 + .05	1 13/16 x 1 x ¾	BP-2051	3.85
.1 + .1	1 13/16 x 1 x ¾	BP-211	4.00
.25 + .25	2 x 1¾ x ⅞	BP-2251	4.20
.5 + .5	2 x 2 x 1⅛	BP-2501	5.45
.1 + .1 + .1	1 13/16 x 1 x ⅞	BP-311	4.60
.25 + .25 + .25	2 x 2 x 1⅛	BP-3251	5.50

PC TRANSMITTING TYPES



- Oil-impregnated
- Oil-filled
- Screwbase Can
- Fit Tight Spaces
- "Lifeguard" Protective Caps

Mfd.	Dia. x Length	Cat. No.	List
	600 WVDC		
2.0	1½ x 2⅞	PC-26	$5.40
3.0	1½ x 3½	PC-36	6.15
4.0	1½ x 4½	PC-46	7.10
	1000 WVDC		
1.0	1½ x 2⅞	PC-11	5.00
2.0	1½ x 4½	PC-21	6.30
	1500 WVDC		
0.5	1½ x 2⅜	PC-515	5.85
1.0	1½ x 3⅞	PC-115	6.30

OT TRANSMITTING TYPES

- Oil-impregnated and Filled
- Hermetically Sealed
- Ceramic Terminals
- "Lifeguard" Protective Caps

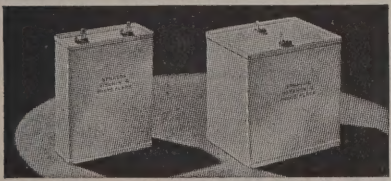
Mfd.	Dia. x Length	Cat. No.	List
	600 WVDC		
2	2 x 2 15/32	OT-26	$5.45
	1000 WVDC		
1	2 x 2 15/32	OT-11	4.65
2	2 x 3 3/32	OT-21	6.30
4	2 x 5 3/32	OT-41	8.00
	1500 WVDC		
0.5	2 x 2 15/32	OT-515	5.05
1	2 x 2 21/32	OT-115	5.85
2	2 x 4 15/32	OT-215	8.00
	2000 WVDC		
1	2 x 4 3/32	OT-12	7.55
2	2½ x 4 15/32	OT-22	8.40
	3000 WVDC		
1	2½ x 4 23/32	OT-13	15.15

CR TRANSMITTING TYPES

- Oil-Filled
- Hermetically Sealed
- High Insulation Resistance
- Universal Mounting
- "Lifeguard" Protective Caps

Mfd.	T. x W. x L.	Cat. No.	List
	600 WVDC		
.5	1 1/16 x 1 13/16 x 2¼	CR-056	$4.70
1.0	1 1/16 x 1 13/16 x 2¼	CR-16	5.80
2.0	1 1/16 x 1 13/16 x 2⅞	CR-26	7.15
3.0	1 1/16 x 1 13/16 x 3¼	CR-36	8.25
4.0	1 3/16 x 2½ x 3½	CR-46	9.10
6.0	1 3/16 x 2½ x 4¾	CR-66	11.30
8.0	1¼ x 3¾ x 3⅞	CR-86	13.50
10.0	1¼ x 3¾ x 4¾	CR-106	15.15
	1000 WVDC		
.1	1 1/16 x 1 13/16 x 1⅝	CR-011	4.15
.25	1 1/16 x 1 13/16 x 2¼	CR-0251	4.70
.5	1 1/16 x 1 13/16 x 2¼	CR-051	4.95
1.0	1 1/16 x 1 13/16 x 2¼	CR-11	6.35
2.0	1 1/16 x 1 13/16 x 3⅞	CR-21	8.25
4.0	1 3/16 x 2½ x 4¾	CR-41	10.45
8.0	1¼ x 3¾ x 4¾	CR-81	15.15
10.0	1¾ x 3¾ x 4¾	CR-101	16.80
12.0	2¼ x 3¾ x 4½	CR-121	18.15
15.0	2½ x 3¾ x 4¾	CR-151	20.10
	1500 WVDC		
.5	1 1/16 x 1 13/16 x 2⅞	CR-0515	6.35
1.0	1 1/16 x 1 13/16 x 3⅞	CR-115	7.45
2.0	1 3/16 x 2½ x 4¼	CR-215	10.20
4.0	1¼ x 3¾ x 4¾	CR-415	14.05
5.0	1¼ x 3¾ x 4¾	CR-515	15.15
8.0	2½ x 3¾ x 4¾	CR-815	20.90
10.0	3 3/16 x 3¾ x 4¾	CR-1015	25.05
	2000 WVDC		
.1	1 3/16 x 2½ x 2½	CR-012	6.60
.25	1 3/16 x 2½ x 2½	CR-0252	7.15
.5	1 3/16 x 2½ x 2⅞	CR-052	7.45
1.0	1 3/16 x 2½ x 3½	CR-12	9.10
2.0	1¼ x 3¾ x 4¼	CR-22	10.75
3.0	1¼ x 3¾ x 4¾	CR-32	13.20
4.0	2¼ x 3¾ x 3⅞	CR-42	15.15
6.0	3 3/16 x 3¾ x 4½	CR-62	20.10
10.0	4 9/16 x 3¾ x 4¾	CR-102	30.55
	2500 WVDC		
.1	1 3/16 x 2½ x 2½	CR-0125	10.15
.5	1¼ x 3¾ x 3¼	CR-0525	11.55
1.0	1¾ x 3¾ x 3¼	CR-125	13.20
2.0	1¾ x 3¾ x 4¾	CR-225	21.45
4.0	4 9/16 x 3¾ x 4⅜	CR-425	30.00
	3000 WVDC		
.1	1 3/16 x 2½ x 2½	CR-013	14.05
.25	1 3/16 x 2½ x 2⅞	CR-0253	14.85
.5	1 3/16 x 2½ x 4¼	CR-053	16.80
1.0	2¼ x 3¾ x 3⅞	CR-13	20.10
2.0	3 3/16 x 3¾ x 4½	CR-23	25.05
4.0	4 9/16 x 3¾ x 4¾	CR-43	36.85
	4000 WVDC		
.1	2¼ x 3¾ x 2¾	CR-014	18.00
.25	2¼ x 3¾ x 2¾	CR-0254	20.00
.5	2¼ x 3¾ x 3⅞	CR-054	23.00
1.0	2¼ x 3¾ x 5⅛	CR-14	29.00
2.0	4 9/16 x 3¾ x 5⅛	CR-24	39.00
	5000 WVDC		
.2	1¾ x 3¾ x 3⅞	CR-025	20.00
.5	2¼ x 3¾ x 4½	CR-055	25.00
1.0	4 9/16 x 3¾ x 4⅜	CR-15	34.00
2.0	4 9/16 x 3¾ x 6	CR-25	52.00
	6000 WVDC		
.1	2¼ x 3¾ x 3⅜	CR-0160	27.00
.2	1¾ x 3¾ x 4¼	CR-0260	30.00
1.0	4 9/16 x 3¾ x 7½	CR-160	49.00
	7500 WVDC		
.1	2¼ x 3¾ x 3⅞	CR-0175	29.00
.2	1¾ x 3¾ x 4¾	CR-0275	33.00

PQ PHOTOFLASH CAPACITORS



DESIGNED EXPRESSLY FOR PHOTOFLASH USE ONLY

NOT COMPARABLE TO STANDARD HEAVY DUTY CAPACITORS SUCH AS THE CR TYPES

- Oil-impregnated
- Hermetically Sealed
- Oil Filled
- High Insulation Resistance
- Smallest Construction with Maximum Dependability—Uniform Energy Storage.

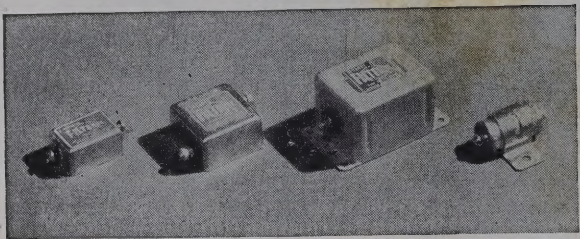
Mfd.	DC Peak* Photoflash Volts	Watt/Sec. Total	Dimensions T. x W. x H.	Weight lbs.	Cat. No.	List Price
10	2500	31	2¼ x 3¾ x 4½	1¾	PQ-2510	$17.00
15	2500	47	3 3/16 x 3¾ x 4⅝	2½	PQ-2515	20.00
25	2500	78	4 9/16 x 3¾ x 5¼	4¼	PQ-2525	26.50
35	2500	109	4 9/16 x 3¾ x 7	6	PQ-2535	32.50
15	3000	67	3 3/16 x 3¾ x 4⅞	3	PQ-315	24.50
25	4000	200	4 9/16 x 3¾ x 9¼	7¼	PQ-425	42.50

*Do not exceed Peak Voltage Rating under highest line voltage condition

All prices subject to change without notice.

SPRAGUE FILTERS

FILTEROL® TYPES



Filterol 1 Filterol 2 Filterol 3 Filterol 4

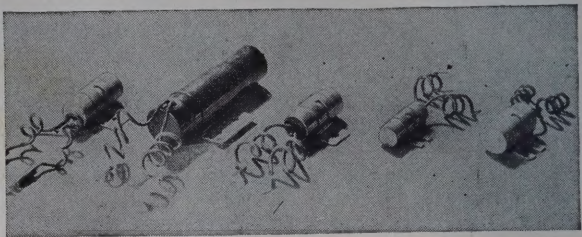
- Suppress Man-made Radio and TV Interference
- Small, Completely Self-contained
- Quickly, Easily Installed

Filterol Types 1, 2, and 3—Designed for connection in series with power supply lines to interference-producing devices . . . A 3-terminal network with the case as one terminal . . . The selected filter should have a rating higher than the continuous operating current of the offending device . . . A single Filterol connected to the high side of the line is usually sufficient . . . In severe cases a Filterol in each leg of the power line may be necessary . . . For three or four-wire systems, a Filterol in each wire is necessary.

Filterol Type 4—A new, exclusive Sprague development incorporating a Sprague HYPASS® Capacitor . . . Provides exceptionally high attenuation at frequencies above 5 megacycles . . . Intended for small devices with continuous current ratings up to 20 amperes.

Cat. No.	Amps.	Volts AC or DC	Size	List
Filterol 1	1	115	7/8 x 1¼ x 1¾	$13.50
Filterol 2	10	115	1⅛ x 2 x 2	14.80
Filterol 3	35	115	1⅞ x 2⅞ x 3⅛	27.40
Filterol 4	20	115	1″ dia. x 1 13/16″ long	3.05

IF TYPES



IF-15 IF-11 IF-21 IF-S1 IF-37

IF-15—TRIPLE-SECTION FILTER for all small motor-operated devices such as food and drink mixers, vacuum cleaners, fans, drills, etc. Especially designed to prevent accidental shocks from discharge of filter capacitors.

IF-11—DUAL HIGH-CAPACITY FILTER with completely enclosed safety construction. Designed for use on motors over 1 horsepower and up to 220 volts AC or DC. Also used on high-current arcing or sparking devices.

IF-21—COMPACT DUAL FILTER for use across brushes of fractional horsepower motors with the can grounded to motor frame. May also be used across line terminals of motors.

IF-S1—SINGLE SECTION 2-LEAD FILTER with can completely insulated. For use across make-and-break contacts, such as thermostats, circuit breakers, door-bells, buzzers, relays, etc.

IF-37—3-SECTION DELTA-CONNECTED FILTER especially designed for fluorescent fixtures. Only one IF-37 required for each offending fixture. Also effective on make-and-break governor-type motors. Underwriters' Laboratories approved.

Cat. No.	Volts AC or DC	Dia. x Length	List
IF-15	220	1 x 2 3/16	$2.60
IF-11	220	1⅜ x 3½	7.80
IF-21	220	1 x 2 3/16	1.75
IF-S1	220	¾ x 2 1/16	1.15
IF-37	220	1 x 2 7/16	2.25

SPRAGUE TO-3 DELUXE TEL-OHMIKE®

UNIVERSAL CAPACITOR and RESISTOR ANALYZER with BUILT-IN D-C VOLT-MILLIAMMETER

SPRAGUE
TEL-OHMIKE

$73.50
net

The most comprehensive capacitor analyzer available . . . A sturdy reliable instrument designed to simplify electronic servicing . . . Exclusive "Speedy-check" design locates most open, intermittent, or shorted capacitors WITHOUT REMOVING THEM FROM CIRCUIT . . . A boon to the busy service technician! Also measures insulation resistance of motors, transformers, etc.

SPECIFICATIONS

Capacity: .00001-2,000 Mfd. in 4 ranges.

Power Factor: 0-50% at 60 cycles.

Insulation Resistance: 0-2500 Megohms (Direct reading on the meter).

Electrolytic Leakage: Measured in Ma. at rated D-C voltage. Capacity and power factor of electrolytic condensers measured with rated polarizing voltage applied.

Resistance: 2.5 Ohms-25 Megs. in 3 ranges.

D.C. Meter Range: 0-15, 150, 750 volts—0-1.5, 15, 75 Milliamperes.

Size: 13¼″ wide, 10⅛″ high,—5″ deep.

Power: 35 watts at 115 volts—60 cycles.

Shipping Weight: 15 lbs.

SPRAGUE CAPACITORS

TVL TWIST-LOK* ELECTROLYTICS

- Especially Designed for Tough TV Replacement Applications
- Hermetically Sealed in Aluminum Cans for Long Life
- The Most Dependable Electrolytic in Such Compact Size
- Stand Up Under Extremely High Temperatures, High Ripple Currents, High Surge Voltages
- Easy to Mount—A Twist of the Tabs Locks Unit in Place
- Complete with Bakelite and Metal Washers, They're ideal for Above-chassis Mounting
- Designed for 85°C Operation, Up to 450 WVDC

★ Trademark

SPRAGUE
600 LINE
DRY ELECTROLYTIC CAPACITOR
TVL-4415
30-30-30-40 MFD
150-25 VDC

Mfd.@WVDC	Dia. x Length	Cat. No.	List
SINGLE UNITS			
.5 ohm@15.75 KC@3 N.P.	1 x 2	TVL-1010	$2.10
1 ohm@60 CPS@3 N.P.	1⅜ x 2½	TVL-1015	3.20
2000@6	1⅜ x 2	TVL-1115	2.55
3000@10	1⅜ x 2½	TVL-1140	2.90
1000@15	1 x 2½	TVL-1165	2.55
2000@15	1⅜ x 2	TVL-1168	3.45
40@25	¾ x 2	TVL-1210	1.35
100@25	¾ x 2	TVL-1215	1.60
500@25	1 x 2	TVL-1220	2.55
1000@25	1⅜ x 2	TVL-1230	3.55
150@50	¾ x 2½	TVL-1320	1.80
500@50	1⅜ x 2½	TVL-1330	2.65
20@150	1 x 2	TVL-1405	1.45
30@150	1 x 2	TVL-1408	1.55
40@150	1 x 2	TVL-1412	1.60
50@150	1 x 2	TVL-1415	1.65
80@150	1 x 2½	TVL-1420	1.85
80@150	1⅜ x 2	TVL-1421	1.85
140@150	1⅜ x 3	TVL-1428	2.15
150@150	1⅜ x 3	TVL-1430	2.15
200@150	1⅜ x 4	TVL-1431	2.45
300@150	1⅜ x 3½	TVL-1434	2.80
40@200	1 x 2	TVL-1460	1.70
15@250	1 x 2	TVL-1505	1.55
20@250	1 x 2	TVL-1509	1.60
30@250	1 x 2	TVL-1516	1.70
40@250	1 x 2	TVL-1519	1.80
50@250	1 x 2½	TVL-1522	1.95
60@250	1 x 3	TVL-1525	2.05
80@250	1 x 3½	TVL-1530	2.15
100@250	1 x 3	TVL-1535	2.70
150@250	1⅜ x 3	TVL-1540	3.10
15@300	1 x 2	TVL-1560	1.60
30@300	1 x 2	TVL-1563	1.75
50@300	1 x 2½	TVL-1567	2.05
60@300	1 x 3	TVL-1570	2.10
80@300	1 x 3½	TVL-1573	2.55
100@300	1 x 4	TVL-1578	2.90
125@300	1⅜ x 3½	TVL-1580	3.50
150@300	1⅜ x 3½	TVL-1584	3.50
40@350	1 x 2	TVL-1621	2.00
50@350	1 x 3	TVL-1622	2.10
80@350	1⅜ x 3	TVL-1630	2.85
125@350	1⅜ x 3½	TVL-1638	3.95
10@400	1 x 2	TVL-1655	1.50
20@400	1 x 2	TVL-1660	1.75
80@400	1⅜ x 3	TVL-1675	2.95
10@450	1 x 2	TVL-1705	1.55
15@450	1 x 2	TVL-1709	1.70
20@450	1 x 2	TVL-1714	$1.80
30@450	1 x 2½	TVL-1720	1.95
40@450	1 x 3	TVL-1725	2.05
125@450	1⅜ x 4	TVL-1760	3.85
30@475	1 x 3	TVL-1810	2.00
40@475	1⅜ x 2	TVL-1820	2.50
90@475	1⅜ x 3½	TVL-1850	3.50
10@525	1 x 2	TVL-1940	1.70
DUAL UNITS			
.5 ohm@15.75 KC/ 2.5 ohm@60 CPS	1⅜ x 2	TVL-2010	3.60
1000+500@6 N.P.	1⅜ x 2	TVL-2120	3.90
250@10/1000@6	1⅜ x 2	TVL-2140	2.85
1000+1000@15	1 x 3½	TVL-2160	4.40
40+40@25	1 x 2	TVL-2210	1.60
150+50@25	1 x 2	TVL-2230	1.90
50+50@50	1 x 2	TVL-2320	1.70
20+20@150	1 x 2	TVL-2415	1.70
30+15@150	1 x 2	TVL-2418	1.75
30+30@150	1 x 2	TVL-2422	1.85
40+20@150	1 x 2	TVL-2425	1.85
40+40@150	1 x 2½	TVL-2428	1.90
50+30@150	1 x 2½	TVL-2432	2.00
50+50@150	1 x 2½	TVL-2435	2.15
60+60@150	1 x 3½	TVL-2438	2.35
80+40@150	1⅜ x 2½	TVL-2442	2.30
200+125@150	1⅜ x 3½	TVL-2445	3.75
200+200@150	1⅜ x 4	TVL-2447	4.00
40+40@200	1 x 3	TVL-2460	2.30
40@250/25@25	1 x 2½	TVL-2505	2.00
10+10@250	1 x 2	TVL-2510	1.70
20+20@250	1 x 2	TVL-2515	1.90
40+40@250	1 x 3½	TVL-2520	2.50
150+150@250	1⅜ x 4	TVL-2535	5.15
20@300/20@25	1 x 2	TVL-2555	1.85
10+10@300	1 x 2	TVL-2565	1.75
15+15@300	1 x 2	TVL-2568	1.90
40+40@300	1⅜ x 2½	TVL-2575	3.00
60+60@300	1⅜ x 2½	TVL-2579	3.40
80+40@300	1⅜ x 2½	TVL-2582	3.55
80+80@300	1⅜ x 3½	TVL-2585	4.05
120+20@300	1⅜ x 3½	TVL-2588	4.00
20@350/30@250	1 x 3	TVL-2615	2.30
60@350/80@250	1⅜ x 2½	TVL-2618	3.45
30@350/30@300	1 x 3½	TVL-2621	2.65
30+20@350	1 x 3½	TVL-2627	2.60
80+80@350	1⅜ x 4	TVL-2635	4.70
15+15@400	1 x 2½	TVL-2660	2.25
30+10@400	1 x 3	TVL-2663	2.35

All prices subject to change without notice.

SPRAGUE CAPACITORS

TVL TWIST-LOK ELECTROLYTICS, continued

Mfd.@WVDC	Dia. x Length	Cat. No.	List
60+60@400	1⅜ x 4	TVL-2668	$4.40
80+10@400	1⅜ x 3½	TVL-2672	3.40
80+40@400	1⅜ x 4	TVL-2675	4.10
80@450/10@25	1⅜ x 3	TVL-2705	3.40
80+450/50@50	1⅜ x 3	TVL-2710	3.50
20@450/80@350	1⅜ x 3½	TVL-2730	3.65
40@450/10@350	1⅜ x 2½	TVL-2735	2.60
10+10@450	1 x 2	TVL-2750	1.90
15+10@450	1 x 2½	TVL-2752	2.25
20+20@450	1 x 3	TVL-2755	2.55
30+30@450	1⅜ x 2½	TVL-2759	3.05
40+40@450	1⅜ x 3	TVL-2764	3.45
60+40@450	1⅜ x 3½	TVL-2770	3.95
80+10@450	1⅜ x 3	TVL-2776	3.60
80+30@450	1⅜ x 4	TVL-2777	4.20
20@475/100@300	1⅜ x 3½	TVL-2810	3.95
40+40@475	1⅜ x 3	TVL-2830	4.30
40@500/50@200	1⅜ x 3	TVL-2920	3.35

TRIPLE UNITS

Mfd.@WVDC	Dia. x Length	Cat. No.	List
20+20+20@25	1 x 2	TVL-3210	1.95
40+40+40@25	1 x 2	TVL-3230	2.15
30+30+30@50	1 x 2	TVL-3320	2.15
20@150/250+100@15	1⅜ x 2	TVL-3403	2.90
100@150/50@50/25@25	1 x 3	TVL-3407	3.00
30+20@150/100@6	1 x 2	TVL-3412	2.40
20+20@150/20@25	1 x 2	TVL-3415	2.20
30+20@150/20@25	1 x 2	TVL-3417	2.25
30+30@150/20@25	1 x 2	TVL-3419	2.30
40+20@150/20@25	1 x 2½	TVL-3422	2.30
40+30@150/20@25	1 x 2	TVL-3424	2.35
40+30@150/25@25	1 x 2½	TVL-3425	2.35
50+30@150/100@25	1 x 3	TVL-3427	2.70
50+50@150/20@25	1 x 3	TVL-3430	2.65
20+20+20@150	1 x 2½	TVL-3433	2.30
30+30+10@150	1 x 2	TVL-3435	2.35
40+20+20@150	1 x 2½	TVL-3437	2.40
40+40+40@150	1 x 3½	TVL-3440	2.60
50+50+50@150	1 x 3	TVL-3442	3.00
80+80+80@150	1⅜ x 3	TVL-3446	3.75
120+80+40@150	1⅜ x 3½	TVL-3448	3.80
70+70@250/20@50	1⅜ x 3	TVL-3470	3.90
100+10@200/40@50	1⅜ x 2	TVL-3475	3.15
15+15@250/20@25	1 x 2	TVL-3510	2.35
30+30@250/20@25	1 x 3	TVL-3513	2.80
40+20@250/10@150	1⅜ x 2	TVL-3517	2.75
80+80@250/60@200	1⅜ x 3½	TVL-3525	4.50
15+15+10@250	1 x 2	TVL-3530	2.45
30+15+10@250	1 x 2½	TVL-3534	2.70
40+20+20@250	1 x 3½	TVL-3540	2.90
100@300/60@150/20@25	1⅜ x 3	TVL-3560	4.20
100@300/60+20@250	1⅜ x 4	TVL-3562	4.90
200@300/60+20@250	1⅜ x 4	TVL-3563	5.50
20+20@300/20@25	1 x 2½	TVL-3565	2.75
40+15@300/20@25	1 x 3	TVL-3570	2.95
40+20@300/20@25	1⅜ x 2	TVL-3573	3.10
10+10@300/15@250	1 x 2	TVL-3578	2.45
10+10+10@300	1 x 2	TVL-3580	2.40
120+50+50@300	1⅜ x 4	TVL-3585	5.85
10@350/50@150/100@50	1 x 3½	TVL-3608	2.85
20@350/30@250/20@25	1 x 3	TVL-3612	2.80
30@350/20+10@250	1 x 3½	TVL-3615	3.00
20@350/40@300/10@150	1 x 3½	TVL-3619	3.15
30@350/30@300/20@25	1 x 3	TVL-3620	3.15
40@350/20@300/10@200	1⅜ x 2	TVL-3623	3.30
10+10@350/20@25	1 x 2	TVL-3628	3.25
15+10@350/20@25	1 x 2½	TVL-3630	2.50
15+15@350/20@25	1 x 2½	TVL-3632	2.70
20+10@350/20@25	1 x 2½	TVL-3634	2.55
30+20@350/20@25	1 x 3½	TVL-3636	$3.10
10+5@350/150@50	1 x 3	TVL-3638	2.70
60+40+20@350	1⅜ x 4	TVL-3640	4.25
80+60+60@350	1⅜ x 4	TVL-3642	5.55
10@400/40@300/10@150	1⅜ x 2	TVL-3665	2.90
10@400/50@350/30@25	1 x 3½	TVL-3670	3.10
15+15@400/40@25	1 x 3	TVL-3675	2.80
20+20@400/20@25	1 x 3	TVL-3678	2.85
80+40@400/150@50	1⅜ x 4	TVL-3684	5.25
10+10+10@400	1 x 2½	TVL-3690	2.40
30@450/100+25@25	1⅜ x 2	TVL-3703	2.95
40@450/40@150/130@50	1⅜ x 3	TVL-3706	3.70
40@450/90+50@150	1⅜ x 3	TVL-3708	4.00
20@450/80@200/50@50	1⅜ x 2½	TVL-3709	3.40
20@450/60@250/100@25	1⅜ x 2½	TVL-3711	3.65
10@450/80+80@250	1⅜ x 4	TVL-3712	4.15
20@450/40+10@250	1⅜ x 2	TVL-3713	3.15
20@450/15+10@300	1 x 3½	TVL-3716	2.85
10@450/10@350/20@25	1 x 2½	TVL-3719	2.30
10@450/10@350/50@25	1 x 3	TVL-3721	2.40
20@450/80@350/100@50	1⅜ x 3½	TVL-3722	4.50
30@450/40@350/50@25	1 x 4	TVL-3723	3.70
15@450/20@350/20@250	1⅜ x 2	TVL-3724	2.95
60@450/20+20@350	1⅜ x 3½	TVL-3725	4.30
10@450/30@400/30@300	1⅜ x 2½	TVL-3726	3.35
10+10@450/10@25	1 x 2½	TVL-3729	2.40
10+10@450/20@25	1 x 2½	TVL-3731	2.40
15+15@450/20@25	1 x 3	TVL-3733	2.70
20+10@450/20@25	1 x 3	TVL-3735	2.70
20+15@450/20@25	1 x 3½	TVL-3737	2.90
20+20@450/20@25	1 x 3½	TVL-3739	3.05
30+30@450/20@25	1⅜ x 2½	TVL-3741	3.55
80+40@450/100@25	1⅜ x 4	TVL-3746	5.05
10+10@450/40@50	1 x 2½	TVL-3749	2.50
20+10@450/50@50	1 x 3	TVL-3751	2.85
30+15@450/150@50	1⅜ x 2½	TVL-3753	3.70
40+10@450/40@50	1⅜ x 2½	TVL-3754	3.25
40+40@450/40@150	1⅜ x 3½	TVL-3758	4.15
40+10@450/80@200	1⅜ x 3	TVL-3761	3.90
40+10@450/100@200	1⅜ x 3½	TVL-3762	4.15
40+40@450/100@200	1⅜ x 4	TVL-3764	4.95
15+10@450/120@300	1⅜ x 3½	TVL-3765	4.70
15+15@450/10@300	1 x 3½	TVL-3766	2.85
15+5@450/15@350	1 x 3	TVL-3768	2.85
20+20@450/60@350	1⅜ x 3½	TVL-3770	5.05
40+10@450/10@350	1⅜ x 3	TVL-3772	3.30
10+10+10@450	1 x 3	TVL-3776	2.60
15+15+10@450	1 x 3½	TVL-3778	2.95
20+20+20@450	1⅜ x 2½	TVL-3780	3.60
30+30+30@450	1⅜ x 3½	TVL-3782	4.35
40+40+10@450	1⅜ x 3½	TVL-3785	4.15
40+40+40@450	1⅜ x 3½	TVL-3787	4.90
60+30+10@450	1⅜ x 3	TVL-3790	4.50
80+40+10@450	1⅜ x 4	TVL-3792	5.05
10@475/100@200/40@50	1⅜ x 2½	TVL-3800	3.35
20@475/20@300/40@25	1⅜ x 2	TVL-3805	3.10
40@475/40@400/25@50	1⅜ x 3	TVL-3813	4.30
20+10@475/100@50	1⅜ x 2	TVL-3817	3.25
20+20@475/60@400	1⅜ x 3½	TVL-3820	4.80
10+10+10@475	1 x 3	TVL-3835	2.70
30+30+20@475	1⅜ x 3	TVL-3840	4.45
40+30+30@475	1⅜ x 4	TVL-3843	5.15

QUADRUPLE UNITS

Mfd.@WVDC	Dia. x Length	Cat. No.	List
30+30+30@150/40@25	1⅜ x 2	TVL-4415	3.10
40+40+30@150/20@25	1⅜ x 2	TVL-4420	3.10
50+50+50@150/20@25	1⅜ x 2	TVL-4425	3.55
40+20+10@200/20@25	1⅜ x 2	TVL-4470	3.20
100+40+10@250/100@50	1⅜ x 3½	TVL-4516	5.15
80+60+40@250/20@150	1⅜ x 4	TVL-4524	5.10

All prices subject to change without notice.

SPRAGUE CAPACITORS

Mfd.@WVDC	Dia. x Length	Cat. No.	List
100@300/40@50/ 80+20@25	1⅜ x 3	TVL-4555	$4.55
120@300/20@250/20@25/ 100@30	1⅜ x 3½	TVL-4562	5.25
10+10+10@300/20@25	1⅜ x 2	TVL-4565	2.95
60+40+20@300/50@25	1⅜ x 3½	TVL-4570	4.70
40+40+40@300/20@150	1⅜ x 3	TVL-4575	4.90
40+40+20+10@300	1⅜ x 3½	TVL-4579	4.55
20@350/150+80@150/ 20@25	1⅜ x 3	TVL-4603	4.55
40@350/40+20@300/ 20@25	1⅜ x 3½	TVL-4605	4.50
10+10@350/10+10@300	1⅜ x 2	TVL-4612	3.10
20+10+5@350/10@25	1⅜ x 2	TVL-4620	3.10
40+40+40@350/150@50	1⅜ x 4	TVL-4628	5.65
80@400/40+20+10@300	1⅜ x 3½	TVL-4641	5.55
20@400/10@350/ 10@200/20@25	1⅜ x 2	TVL-4652	3.20
40@400/10@350/ 80+10@250	1⅜ x 4	TVL-4657	4.65
10+10@400/25+25@25	1⅜ x 2	TVL-4662	2.80
20+20+20@400/20@25	1⅜ x 2½	TVL-4667	3.85
80+10+10+10@400	1⅜ x 3½	TVL-4675	4.70
80+25+10+10@400	1⅜ x 4	TVL-4680	5.25
10@450/80+40@200/ 100@50	1⅜ x 3	TVL-4700	4.25
20@450/80+20@200/ 50@50	1⅜ x 3	TVL-4701	4.10
10@450/10@300/ 60@200/100@50	1⅜ x 2½	TVL-4705	3.80
10@450/100+10@350/ 20@25	1⅜ x 3	TVL-4706	5.20
10@450/60+40@350/ 25@25	1⅜ x 4	TVL-4707	4.60
20@450/15+15@350/ 20@25	1⅜ x 2½	TVL-4708	3.80
80@450/10@400/ 30@300/40@150	1⅜ x 4	TVL-4710	5.25
20+15@450/20+20@25	1⅜ x 2	TVL-4712	3.45
20+20@450/30+30@300	1⅜ x 3½	TVL-4715	4.50
40+10@450/35+10@350	1⅜ x 3½	TVL-4718	4.60
40+40@450/30+30@350	1⅜ x 4	TVL-4720	5.90
10+10+10@450/20@25	1⅜ x 2	TVL-4723	3.15
40+10+10@450/250@25	1⅜ x 3	TVL-4726	4.70
40+15+10@450/20@25	1⅜ x 3	TVL-4729	4.10
40+20+20@450/40@25	1⅜ x 3	TVL-4732	$4.65
40+30+10@450/20@25	1⅜ x 3½	TVL-4734	4.50
40+40+10@450/20@25	1⅜ x 3½	TVL-4736	4.70
40+40+40@450/40@25	1⅜ x 4	TVL-4739	5.50
30+30+15@450/30@50	1⅜ x 3	TVL-4742	4.55
40+40+10@450/25@50	1⅜ x 3½	TVL-4745	4.70
40+40+10@450/ 100@100	1⅜ x 3½	TVL-4747	5.55
10+10+10@450/10@150	1⅜ x 2	TVL-4750	3.15
60+10+10@450/20@150	1⅜ x 3	TVL-4753	4.55
10+10+10+10@450	1⅜ x 2	TVL-4760	3.35
20+20+20+20@450	1⅜ x 3	TVL-4763	4.70
30+15+15+15@450	1⅜ x 3	TVL-4766	4.45
30+30+15+10@450	1⅜ x 3½	TVL-4769	4.70
20@475/40@300/ 100@50/80@25	1⅜ x 3	TVL-4800	4.45
10@475/10@450/ 80@200/50@60	1⅜ x 3	TVL-4806	3.85
25@475/20@450/ 20@300/100@50	1⅜ x 3	TVL-4809	4.60
10@475/60@450/ 30@400/125@50	1⅜ x 4	TVL-4811	5.55
10@475/50+30@450/ 30@25	1⅜ x 3	TVL-4813	4.75
15+15@475/80@300/ 40@50	1⅜ x 3	TVL-4815	4.80
40+10@475/4@350/ 40@300	1⅜ x 3	TVL-4817	4.95
10+5@475/80@450/ 40@50	1⅜ x 3½	TVL-4819	4.90
40+20+10@475/10@25	1⅜ x 3	TVL-4822	4.85
20+20+10@475/10@300	1⅜ x 2½	TVL-4826	4.30
50+30+10@475/20@300	1⅜ x 3½	TVL-4827	5.60
10+10+10+10@475	1⅜ x 2	TVL-4830	3.50
40+20+10+10@475	1⅜ x 3	TVL-4840	5.10

INSULATING TUBES

These closed-top black insulating sleeves are made of tightly fitting Kraftboard. Order with capacitors as required.

Cat. No.	Description	Cat. No.	Description
HKT-1	For 1″ x 2″ can	HKT-6	For 1⅜″ x 2½″ can
HKT-2	For 1″ x 2½″ can	HKT-7	For 1⅜″ x 3″ can
HKT-3	For 1″ x 3″ can	HKT-8	For 1⅜″ x 3½″ can
HKT-4	For 1″ x 4″ can	HKT-9	For 1⅜″ x 4″ can
HKT-5	For 1⅜″ x 2″ can		

PHOTOFLASH ELECTROLYTICS and ACCESSORIES

Build your own Electronic Flash!

Now you can build up-to-the-minute electronic photoflash units using the very latest low voltage circuits. These units are comparable to commercially manufactured gear in size, weight, and efficiency, yet can be built for considerably less than ready-made units. Your electronic flash eliminates flash bulb costs, too, and it stops action with better results. Sprague Booklet C-703 gives you step-by-step instructions for building four different models. Every detail is clearly illustrated and explained, making it easy to put one together in several hours. Photoflash accessories, listed below, are fully described and illustrated in this invaluable guide.

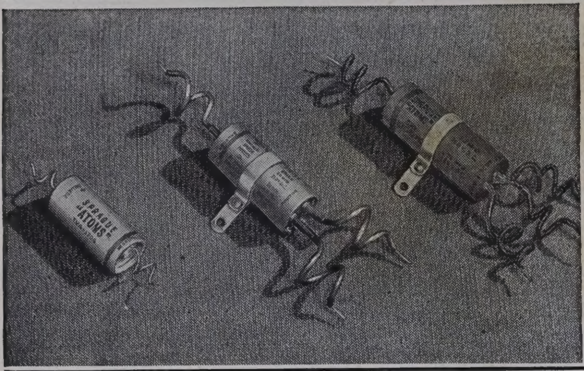
Description	Cat. No.	Dealer's Net
Sprague Photoflash Booklet	C-703	$ .35
Plug-in base with built-in trigger coil, 100 w-s nominal rating, Kemlite Type DX, for 450 V operation	FA-100	12.00
Reflector for Type DX lamp as used with vertical adapter	FA-101	2.75
Vertical adapter for medium Edison base sockets with cable	FA-102	2.60
Jaidinger miniature relay for 5-25 m-s delay synchronization from 3 to 4½ V cell flashguns	FA-103	3.50
"U" lamp, 100 w-s nominal rating, wafer base, for 450 V operation, Kemlite "U-5W," interchangeable with GE FT-105	FA-104	7.50
Reflector for Kemlite U-5W or GE FT-105	FA-105	3.50

SPRAGUE
FF-1
525 MFD. 450 W.V.D.C.

- Ultra-low Leakage for Either Dry Battery or A-C Operated Power Supplies—Eliminate Rectifier Burnouts
- Weighs Only 11 oz.
- One-half the Size of Competitive Capacitors which Have More Than Twice the Leakage Current
- Highly Stable Film Formation Assures Long Life
- Designed Especially for Photoflash Circuits—Do Not Apply More Than 450 V Under Highest Line Voltage on which A-C Supplies Will Be Used

Mfd.	WVDC	Watt/Sec.	D. x L.	Cat. No.	List
525	450	53	2⅛ x 4⁷⁄₁₆	FF-1	$22.50

SPRAGUE CAPACITORS



ATOM® ELECTROLYTICS

- The Smallest Dependable Dry Electrolytic—the Only Small Size Capacitor Designed for 85°C. operation in Voltages from 6 to 450 WVDC
- Whether for AC-DC Sets, Auto Radios, Home Radio-phono Combinations, or TV Sets, the SPRAGUE Line Will Handle All your Replacement Requirements—No Dual Inventory Problems
- Small Enough to Fit Anywhere, Work Anywhere
- Guaranteed to Have Low Leakage and Long Shelf Life
- Will Withstand High Temperatures, High Ripple Currents, High Surge Voltages

Mfd. @ WVDC	Dia. x Length	Cat. No.	List
SINGLE UNITS			
50@6	3/8 x 1 1/8	TVA-1100	$ .95
100@6	1/2 x 1 1/8	TVA-1101	1.20
250@6	5/8 x 1 7/16	TVA-1102	1.35
500@6	5/8 x 2 3/16	TVA-1103	1.55
1000@6	11/16 x 2 3/16	TVA-1104	1.90
1500@6	13/16 x 2 11/16	TVA-1105	2.10
2000@6	13/16 x 2 15/16	TVA-1106	2.30
100@12	9/16 x 1 3/16	TVA-1130	1.20
250@12	5/8 x 1 11/16	TVA-1131	1.45
500@12	3/4 x 1 11/16	TVA-1132	1.70
1000@12	13/16 x 2 3/16	TVA-1133	2.25
100@15	5/8 x 1 3/16	TVA-1160	1.25
250@15	5/8 x 1 11/16	TVA-1161	1.55
500@15	11/16 x 2 3/16	TVA-1162	1.75
1000@15	7/8 x 2 3/16	TVA-1163	2.30
2@25	3/8 x 1 1/8	TVA-1201	.90
5@25	3/8 x 1 1/8	TVA-1203	1.00
10@25	3/8 x 1 1/8	TVA-1204	1.00
25@25	3/8 x 1 1/8	TVA-1205	1.00
50@25	9/16 x 1 3/16	TVA-1206	1.10
100@25	9/16 x 1 11/16	TVA-1207	1.35
250@25	3/4 x 1 11/16	TVA-1208	1.70
500@25	7/8 x 2 3/16	TVA-1209	2.30
1@50	3/8 x 1 1/8	TVA-1300	.90
2@50	3/8 x 1 1/8	TVA-1301	.90
5@50	3/8 x 1 1/8	TVA-1303	1.00
10@50	3/8 x 1 1/8	TVA-1304	1.00
25@50	7/16 x 1 7/16	TVA-1306	1.05
50@50	9/16 x 1 11/16	TVA-1308	1.20
100@50	5/8 x 1 11/16	TVA-1310	1.40
150@50	3/4 x 1 11/16	TVA-1311	1.55
250@50	15/16 x 1 11/16	TVA-1312	1.75
4@150	3/8 x 1 1/8	TVA-1402	1.00
8@150	3/8 x 1 5/8	TVA-1405	1.05
10@150	3/8 x 1 5/8	TVA-1406	1.05
12@150	3/8 x 1 5/8	TVA-1407	1.10
16@150	9/16 x 1 11/16	TVA-1409	1.15
20@150	9/16 x 1 11/16	TVA-1410	1.20
30@150	5/8 x 1 11/16	TVA-1412	1.30
40@150	3/4 x 1 11/16	TVA-1413	1.35
50@150	13/16 x 1 11/16	TVA-1414	1.40
80@150	7/8 x 1 15/16	TVA-1418	1.60
100@150	7/8 x 2 3/16	TVA-1420	1.75
150@150	1 x 2 3/16	TVA-1422	1.90
4@250	7/16 x 1 5/8	TVA-1501	1.00
8@250	1/2 x 1 5/8	TVA-1503	1.15
10@250	9/16 x 1 11/16	TVA-1504	1.20
12@250	9/16 x 1 11/16	TVA-1505	1.25
16@250	5/8 x 1 11/16	TVA-1507	1.30
20@250	11/16 x 1 11/16	TVA-1508	$1.35
30@250	11/16 x 2 3/16	TVA-1510	1.45
40@250	3/4 x 2 3/16	TVA-1511	1.55
4@350	1/2 x 1 5/8	TVA-1601	1.05
8@350	5/8 x 1 11/16	TVA-1603	1.20
10@350	11/16 x 1 11/16	TVA-1604	1.25
12@350	11/16 x 1 11/16	TVA-1605	1.30
16@350	3/4 x 1 11/16	TVA-1607	1.40
20@350	13/16 x 1 11/16	TVA-1608	1.45
30@350	13/16 x 2 3/16	TVA-1610	1.65
40@350	7/8 x 2 7/16	TVA-1611	1.75
60@350	1 x 2 7/16	TVA-1613	1.95
2@450	7/16 x 1 5/8	TVA-1701	1.10
4@450	9/16 x 1 11/16	TVA-1702	1.15
8@450	11/16 x 1 11/16	TVA-1704	1.25
10@450	11/16 x 1 11/16	TVA-1705	1.30
12@450	3/4 x 1 11/16	TVA-1706	1.35
16@450	3/4 x 2 3/16	TVA-1708	1.40
20@450	3/4 x 2 3/16	TVA-1709	1.55
30@450	7/8 x 2 3/16	TVA-1711	1.70
40@450	7/8 x 2 11/16	TVA-1712	1.80
50@450	7/8 x 3 3/16	TVA-1713	2.10
80@450	1 x 3 11/16	TVA-1716	2.80
10@475	3/4 x 1 15/16	TVA-1802	1.35
20@475	7/8 x 2 7/16	TVA-1804	1.60
8@500	7/8 x 1 11/16	TVA-1902	1.30
16@500	15/16 x 2 3/16	TVA-1905	1.50
20@500	1 x 2 3/16	TVA-1906	1.60
DUAL UNITS			
COMMON NEGATIVE—3 LEADS			
10+10@25	7/8 x 1 7/16	TVA-2210	$1.40
10+10@50	7/8 x 1 7/16	TVA-2315	1.40
8+ 8@150	7/8 x 1 7/16	TVA-2415	1.50
16+16@150	7/8 x 1 7/16	TVA-2420	1.80
20+12@150	7/8 x 1 7/16	TVA-2425	1.60
20+20@150	7/8 x 1 7/16	TVA-2428	1.65
30+20@150	7/8 x 1 11/16	TVA-2421	1.70
30+30@150	7/8 x 1 11/16	TVA-2434	1.80
40+20@150	7/8 x 1 11/16	TVA-2438	1.75
40+30@150	7/8 x 1 15/16	TVA-2442	1.80
40+40@150	7/8 x 1 15/16	TVA-2445	1.85
50+30@150	7/8 x 1 15/16	TVA-2450	1.95
50+50@150	7/8 x 2 7/16	TVA-2453	2.10
80+30@150	7/8 x 2 7/16	TVA-2460	2.20

All prices subject to change without notice.

SPRAGUE CAPACITORS

Mfd. @ WVDC	Dia. x Length	Cat. No.	List
16+ 8@200	¾ x 2⅜	TA-816	$1.55
16+16@250	¹⁵⁄₁₆ x 2⅜	AT-261	1.70
20+20@250	⅞ x 1¹⁵⁄₁₆	TVA-2515	1.85
40+10@250	⅞ x 2³⁄₁₆	TVA-2520	2.05
80+10@250	¹⁵⁄₁₆ x 3³⁄₁₆	TVA-2525	2.55
8+ 8@450	⅞ x 1¹¹⁄₁₆	TVA-2720	1.70
10+10@450	⅞ x 1¹⁵⁄₁₆	TVA-2722	1.85
16+ 8@450	⅞ x 2³⁄₁₆	TVA-2725	2.00
20+20@450	⅞ x 2¹⁵⁄₁₆	TVA-2730	2.50
30+30@450	1 x 3³⁄₁₆	TVA-2735	3.00
40+40@450	1 x 3¹⁵⁄₁₆	TVA-2740	3.40
SEPARATE SECTIONS—4 LEADS			
20+20@150	1 x 2⅜	TU-220	2.05
40+20@150	1¹⁄₁₆ x 2⅝	TU-420	2.20
16+16@250	1 x 2⅞	TU-216	2.20
8+ 8@450	1¹⁄₁₆ x 3⅜	TU-88	2.15
16+16@450	1⅜ x 3⅛	TU-1616	2.80

Mfd. @ WVDC	Dia. x Length	Cat. No.	List
TRIPLE UNITS			
20+20@150/20@25	⅞ x 2⅜	TVA-3415	$2.05
30+30@150/100@12	⅞ x 2⅞	TVA-3419	2.30
40+30@150/20@25	⅞ x 2⅞	TVA-3423	2.20
40+40@150/100@25	¹⁵⁄₁₆ x 3⅜	TVA-3427	2.45
50+30@150/20@25	¹⁵⁄₁₆ x 2⅞	TVA-3430	2.35
50+30@150/200@25	1 x 3⅜	TVA-3433	2.75
50+50@150/20@25	1 x 2⅞	TVA-3436	2.50
20+20+20@150	¹⁵⁄₁₆ x 2⅜	TVA-3440	2.20
30+30+30@150	1 x 2⅞	TVA-3444	2.35
40+30+20@150	1 x 2⅝	TVA-3448	2.35
40+40+40@150	⅞ x 3⅞	TVA-3451	2.45
80+40+20@150	1 x 3⅞	TVA-3455	2.75
12+12@450/20@25	1 x 2⅞	TVA-3716	2.30

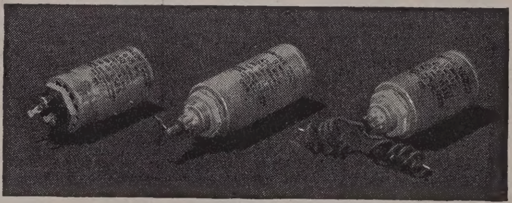
HLV 'LYTICS

HIGH CAPACITY
LOW VOLTAGE

- Especially Designed for Filter Circuits in Motion Picture Amplifiers and Other Critical Equipment
- Eliminates All Hum
- Compact Construction
- Hermetically Sealed in Aluminum Can
- Has Outer Insulating Cardboard Tube

Mfd.	WVDC	Dia. x Length	Cat. No.	List
500	6	1 x 2⅛	HLV-506	$3.05
1000	6	1⅜ x 2¼	HLV-106	3.40
1500	6	1⅜ x 2¾	HLV-156	3.60
2000	6	1⅜ x 3¼	HLV-206	3.80
500	12	1⅜ x 2¼	HLV-5012	3.20
1000	12	1⅜ x 2¼	HLV-1012	3.75
1500	12	1⅜ x 2¾	HLV-1512	3.95
2000	12	1⅜ x 3¼	HLV-2012	4.15
500	15	1⅜ x 2¼	HLV-5015	3.25
1000	15	1⅜ x 2¼	HLV-1015	3.80
1500	15	1⅜ x 3¼	HLV-1515	4.00
2000	15	1½ x 3¾	HLV-2015	4.70
500	25	1⅜ x 2¼	HLV-525	3.80
1000	25	1⅜ x 3¼	HLV-1025	4.80
2000	25	1¾ x 4¼	HLV-2025	5.75

SCREWBASE ELECTROLYTICS



Type PLS—Capacitor sections have separate positive leads and common negative lead

Type LS—Positive terminal is lug connection, can is negative terminal

Type SC—For use where high peaks may occur . . . Lug connection is positive, can is negative

Type CL—Same as Type SC, but with can insulated from Sections . . . Separate positive and negative leads

Type WR—Designed to replace wet electrolytics . . . Will withstand A-C ripples that may break down ordinary drys . . . Has lug terminals

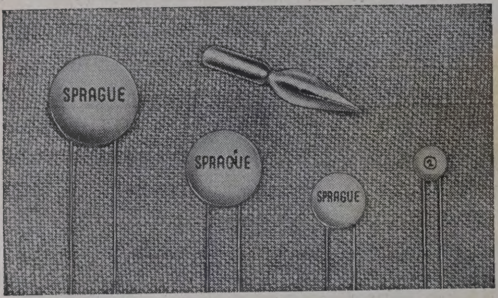
Type AP—For high voltage applications . . . Sections are connected in series . . . Insulated leads

Mfd.	Dia. x Length	Cat. No.	List
TYPE PLS—450 WVDC, 525 V Surge			
4	1⅜ x 2⁷⁄₁₆	PLS-4	$2.00
8	1⅜ x 2⁷⁄₁₆	PLS-8	2.20
12	1⅜ x 2⁷⁄₁₆	PLS-12	2.40
16	1⅜ x 2⁷⁄₁₆	PLS-16	2.45
20	1⅜ x 2⁷⁄₁₆	PLS-20	2.70
25	1⅜ x 3⁷⁄₁₆	PLS-25	2.90
30	1⅜ x 3⁷⁄₁₆	PLS-30	3.00
40	1⅜ x 3¹⁵⁄₁₆	PLS-40	3.15
4+8	1⅜ x 2¹⁵⁄₁₆	PLS-48	2.95
8+8	1½ x 2¹⁵⁄₁₆	PLS-88	3.00
8+16	1½ x 2¹⁵⁄₁₆	PLS-816	3.30
16+16	1½ x 3¹⁵⁄₁₆	PLS-216	3.55
8+8+8	1½ x 2¹⁵⁄₁₆	PLS-888	5.00
TYPE LS—450 WVDC, 525 V Surge			
8	1⅜ x 2¹⁵⁄₁₆	LS-8	$2.20
12	1⅜ x 2¹⁵⁄₁₆	LS-12	2.40
16	1⅜ x 2¹⁵⁄₁₆	LS-16	2.45
20	1⅜ x 2¹⁵⁄₁₆	LS-20	2.70
25	1⅜ x 3⁷⁄₁₆	LS-25	2.90
30	1⅜ x 3⁷⁄₁₆	LS-30	3.00
40	1⅜ x 3¹⁵⁄₁₆	LS-40	3.15
8+8	1⅜ x 2¼-	LS-88	3.00

Mfd.	Dia. x Length	Cat. No	List
TYPE SC—475 WVDC, 600 V Surge			
4	1 x 3⁷⁄₁₆	SC-4	$2.55
8	1⅜ x 4⁷⁄₁₆	SC-8	2.75
12	1⅜ x 4⁷⁄₁₆	SC-12	2.95
16	1½ x 4⁷⁄₁₆	SC-16	3.15
8+8	1⅜ x 4¼	SC-88	4.10
TYPE CL—475 WVDC, 600 V Surge			
8	1⅜ x 4⁷⁄₁₆	CL-8	2.75
16	1½ x 4⁷⁄₁₆	CL-16	3.15
8+8	1½ x 4¹⁵⁄₁₆	CL-88	4.10
TYPE WR—500 WVDC, 600 V Surge			
8	1⅜ x 3¹⁵⁄₁₆	WR-8	2.85
16	1⅜ x 4⁷⁄₁₆	WR-16	3.30
25	1½ x 5⁷⁄₁₆	WR-25	3.75
TYPE AP—600 WVDC, 800 V Surge			
4	1 x 4⁷⁄₁₆	AP-46	2.95
8	1⅜ x 4⁷⁄₁₆	AP-86	3.15
16	1½ x 4⁷⁄₁₆	AP-16	3.75

All prices subject to change without notice.

SPRAGUE CAPACITORS



Cera-mite® DISC CERAMICS

- Tiny, Tough, Dependable in Every Application
- Low Self-inductance of Silvered Flat-plate Design means Very High By-pass Efficiency in All V-H-F Circuits
- Moisture-resistant Insulating Coating
- Ceramite Disc Ceramics Easily Fit into Tight Spaces
- Rated at 500 WVDC, 1000 VDC Test under 85°C Continuous Operation

NPO TYPES

- Zero Temperature-coefficient Capacitors
- Used Where Capacitance Change with Temperature is Undesirable
- Superior to Silvered-mica Types in Stability, High "Q", and Insulation Resistance

MMF	Dia. x Thick.	Cat. No.	List
**			
10	3/8 x 5/32	5TCC-Q1	$.50
15	3/8 x 5/32	5TCC-Q15	.50
20	3/8 x 5/32	5TCC-Q2	.50
22	19/32 x 5/32	5TCC-Q22	.50
25	19/32 x 5/32	5TCC-Q25	.50
33	19/32 x 5/32	5TCC-Q33	.50
39	19/32 x 5/32	5TCC-Q39	.55
47	19/32 x 5/32	5TCC-Q47	.55
50	19/32 x 5/32	5TCC-Q5	.55
68	3/4 x 5/32	5TCC-Q68	.55
75	3/4 x 5/32	5TCC-Q75	.55
100	3/4 x 5/32	5TCC-T1	.55
120	3/4 x 5/32	5TCC-T12	.60
150	3/4 x 13/64	5TCC-T15	.60
175	3/4 x 13/64	5TCC-T175	.60
220	29/32 x 13/64	5TCC-T22	.80
270	29/32 x 13/64	5TCC-T27	.70

N750 TYPES

- Used For Temperature Compensation to Eliminate Frequency Drifts
- Negative Temperature Coefficient is 750 ppm/°C.
- Often Used in Combination with NPO Types

MMF	Dia. x Thick.	Cat. No.	List
**			
10	3/8 x 5/32	5TCU-Q1	$.50
15	3/8 x 5/32	5TCU-Q15	.50
20	3/8 x 5/32	5TCU-Q2	.50
22	3/8 x 5/32	5TCU-Q22	.50
25	3/8 x 5/32	5TCU-Q25	.50
33	3/8 x 5/32	5TCU-Q33	.50
47	3/8 x 5/32	5TCU-Q47	.50
68	19/32 x 5/32	5TCU-Q68	.50
75	19/32 x 5/32	5TCU-Q75	.50
100	19/32 x 5/32	5TCU-T1	.50
150	19/32 x 5/32	5TCU-T15	.50
200	3/4 x 5/32	5TCU-T2	.50
220	3/4 x 5/32	5TCU-T22	.50
330	29/32 x 5/32	5TCU-T33	.50

G-A TYPES

- Ideal Where Temperature Coefficient is Not Important, such as By-pass and Coupling Uses
- Alternates for Foil-micas and Tubular Ceramics

MMF	Dia. x Thick.	Cat. No.	List
5	3/8 x 5/32	5GA-V5	$ .25
10	3/8 x 5/32	5GA-Q1	.25
12	3/8 x 5/32	5GA-Q12	.25
15	3/8 x 5/32	5GA-Q15	.25
18	3/8 x 5/32	5GA-Q18	.25
20	3/8 x 5/32	5GA-Q2	.25
22	3/8 x 5/32	5GA-Q22	.25
25	3/8 x 5/32	5GA-Q25	.25
27	3/8 x 5/32	5GA-Q27	.25
30	3/8 x 5/32	5GA-Q3	.25
33	3/8 x 5/32	5GA-Q33	.25
39	3/8 x 5/32	5GA-Q39	.25
47	3/8 x 5/32	5GA-Q47	.25
50	3/8 x 5/32	5GA-Q5	.25
56	3/8 x 5/32	5GA-Q56	.25
68	3/8 x 5/32	5GA-Q68	.25
82	3/8 x 5/32	5GA-Q82	.25
100	3/8 x 5/32	5GA-T1	.25
120	3/8 x 5/32	5GA-T12	.25
150	3/8 x 5/32	5GA-T15	.25
180	3/8 x 5/32	5GA-T18	.25
200	3/8 x 5/32	5GA-T2	.25
220	3/8 x 5/32	5GA-T22	.25
250	3/8 x 5/32	5GA-T25	.25
270	3/8 x 5/32	5GA-T27	.25
300	3/8 x 5/32	5GA-T3	.25
330	3/8 x 5/32	5GA-T33	.25
390	3/8 x 5/32	5GA-T39	.25
470	3/8 x 5/32	5GA-T47	.25
500	3/8 x 5/32	5GA-T5	.25
560	3/8 x 5/32	5GA-T56	.25
680	3/8 x 5/32	5GA-T68	.25
750	3/8 x 5/32	5GA-T75	.25
1000	19/32 x 5/32	5GA-D1	.25
1200	19/32 x 5/32	5GA-D12	.25
1500	19/32 x 5/32	5GA-D15	.25
1800	19/32 x 5/32	5GA-D18	.25
2000	19/32 x 5/32	5GA-D2	.25
2200	19/32 x 5/32	5GA-D22	.25
2500	3/4 x 5/32	5GA-D25	.25
2700	3/4 x 5/32	5GA-D27	.25
3000	3/4 x 5/32	5GA-D3	.25
3300	3/4 x 5/32	5GA-D33	.25
4700	29/32 x 5/32	5GA-D47	.30
5000	29/32 x 5/32	5GA-D5	.30

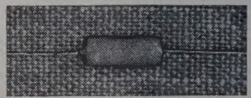
HIGH-K TYPES

- Designed Specifically for Minimum Capacitance Requirements
- Intended for By-pass and Coupling Applications where Additional Capacitance is Not Important

MF	Dia. x Thick.	Cat. No.	List
SINGLE UNITS			
.001	19/32 x 5/32	5HK-D1	$.25
.0015	19/32 x 5/32	5HK-D15	.25
.002	19/32 x 5/32	5HK-D2	.25
.0022	19/32 x 5/32	5HK-D22	.25
.0025	19/32 x 5/32	5HK-D25	.25
.0033	19/32 x 5/32	5HK-D33	.25
.004	19/32 x 5/32	5HK-D4	.25
.0047	19/32 x 5/32	5HK-D47	.25
.005	19/32 x 5/32	5HK-D5	.25
.0068	3/4 x 5/32	5HK-D68	.25
.01	3/4 x 5/32	5HK-S1	.30
.015	29/32 x 13/64	5HK-S15	.40
.02	29/32 x 13/64	5HK-S2	.60
.03	29/32 x 13/64	5HK-S3	.65
DUAL UNITS			
2 x .001	19/32 x 5/32	5HK-2D1	$.40
2 x .0015	19/32 x 5/32	5HK-2D15	.40
2 x .002	19/32 x 5/32	5HK-2D2	.40
2 x .0022	19/32 x 5/32	5HK-2D22	.40
2 x .004	3/4 x 5/32	5HK-2D4	.45
2 x .0047	3/4 x 5/32	5HK-2D47	.45
2 x .01	3/4 x 5/32	5HK-2S1	.50
2 x .02	29/32 x 13/64	5HK-2S2	.70

BULPLATE® CERAMICS

LOW VOLTAGE



- These tiny Bulplates meet the same requirements of disc ceramics, but rectangular plates are used instead of round discs. Numbers 5TCCB are NPO Types, and 5TCUB is Type N750.

MMF	WVDC	L. x W. x T.	Cat. No.	List
1.0	500	5/8 x 1/4 x 5/32	5TCCB-V1	$.50
1.5	500	5/8 x 1/4 x 5/32	5TCCB-V15	.50
2.2	500	5/8 x 1/4 x 5/32	5TCCB-V22	.50
3.3	500	5/8 x 1/4 x 5/32	5TCCB-V33	.50
4.7	500	5/8 x 1/4 x 5/32	5TCCB-V47	.50
5.0	500	5/8 x 1/4 x 5/32	5TCUB-V5	.50
6.8	500	5/8 x 1/4 x 5/32	5TCCB-V68	.50

**For Ratings lower than 10 MMF, see Bulplate Low Voltage Ceramics.

DOORKNOB CERAMIC

MOLDED RUBBER

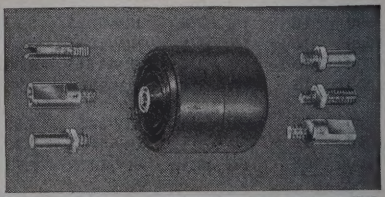
- Ceramic Slug Encased in Molded Rubber Jacket
- Will Withstand Corona Atmosphere
- Self-grommet for Easy Mounting

MMF	WVDC	Dia. x Length	Cat. No.	List
500	15,000	1 x 31/32	510C1	$2.00

DOORKNOB CERAMIC (Molded Plastic)

WITH INTERCHANGEABLE TERMINALS

- Furnished With Various Styles of Pin Terminals—There's One for Every Application
- Reduces Inventory Problems—No Need to Stock More Than One Type
- New, Improved Design—Outstanding Quality Construction

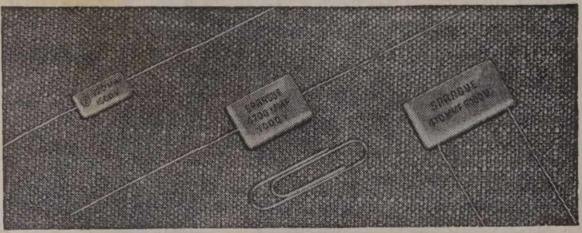


MMF	WVDC	Dia. x Length	Cat. No.	List
500	20,000	1 x 1 31/32	20DK-T5	$2.25

SPRAGUE CAPACITORS

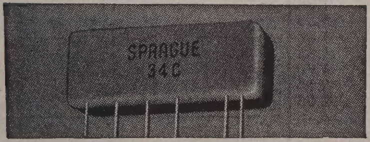
BULPLATE® HIGH-VOLTAGE CERAMICS

- Another FIRST in the Ceramic Field
- Amazingly Small in Size—Can Be Used Almost Anywhere
- Ideal for Replacing Older Types of General Application Capacitors such as Molded Micas, Tubular Ceramics, and Paper Tubulars
- Heavy Moisture-resistant Insulating Coating
- Designed for 85°C. Operation

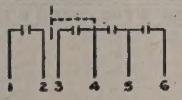


MMF	L. x W. x T.	Cat. No.	List
1000 WVDC			
4.7	5/8 x 1/4 x 5/32	10GAB-V47	$.30
10	5/8 x 1/4 x 5/32	10GAB-Q1	.30
22	5/8 x 1/4 x 5/32	10GAB-Q22	.30
33	5/8 x 1/4 x 5/32	10GAB-Q33	.30
47	5/8 x 1/4 x 5/32	10GAB-Q47	.30
68	5/8 x 1/4 x 5/32	10GAB-Q68	.30
100	5/8 x 1/4 x 5/32	10GAB-T1	.35
150	5/8 x 1/4 x 5/32	10GAB-T15	.35
220	5/8 x 1/4 x 5/32	10GAB-T22	.35
270	5/8 x 1/4 x 5/32	10GAB-T27	.40
330	5/8 x 1/4 x 5/32	10GAB-T33	.40
390	5/8 x 1/4 x 5/32	10GAB-T39	.40
470	5/8 x 1/4 x 5/32	10GAB-T47	.45
680	7/16 x 5/8 x 5/32	10GAB-T68	.55
1000	25/32 x 5/8 x 5/32	10GAB-D1	$.55
1500	25/32 x 5/8 x 5/32	10GAB-D15	.65
2200	25/32 x 5/8 x 5/32	10GAB-D22	.85
3300	25/32 x 5/8 x 5/32	10GAB-D33	1.05
4700	25/32 x 5/8 x 5/32	10HKB-D47	1.40
1500 WVDC			
4.7	5/8 x 1/4 x 5/32	15GAB-V47	.30
10	5/8 x 1/4 x 5/32	15GAB-Q1	.30
15	5/8 x 1/4 x 5/32	15GAB-Q15	.30
22	5/8 x 1/4 x 5/32	15GAB-Q22	.30
33	5/8 x 1/4 x 5/32	15GAB-Q33	.30
47	5/8 x 1/4 x 5/32	15GAB-Q47	.30
68	5/8 x 1/4 x 5/32	15GAB-Q68	.30
100	5/8 x 1/4 x 5/32	15GAB-T1	.35
150	5/8 x 1/4 x 5/32	15GAB-T15	$.35
180	5/8 x 1/4 x 5/32	15GAB-T18	.35
220	5/8 x 1/4 x 5/32	15GAB-T22	.40
6000 WVDC			
4.7	1 1/8 x 5/8 x 5/32	60GAB-V47	1.00
10	1 1/8 x 5/8 x 5/32	60GAB-Q1	1.00
15	1 1/8 x 5/8 x 5/32	60GAB-Q15	1.00
18	1 1/8 x 5/8 x 5/32	60GAB-Q18	1.00
22	1 1/8 x 5/8 x 5/32	60GAB-Q22	1.00
30	1 1/8 x 5/8 x 5/32	60GAB-Q3	1.00
33	1 1/8 x 5/8 x 5/32	60GAB-Q33	1.00
47	1 1/8 x 5/8 x 5/32	60HKB-Q47	1.00
100	1 1/8 x 5/8 x 5/32	60HKB-T1	1.00
470	1 1/8 x 5/8 x 5/32	60HKB-T47	1.00

BULPLATE® MULTIPLE CERAMICS

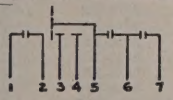


- These Rugged Units Combine in One Compact Assembly All the Capacitors Used in One or More Stages of a Radio Circuit
- Fit Tight Spaces in Miniature Sets
- Rated at 500 WVDC, 1000 VDC Test



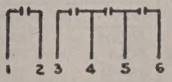
	MFD.
1&2	.002 $^{+100}_{-25}$%
3&4	.00022 ±50%
4&5	.00022 ±50%
5&6	.005 $^{+100}_{-25}$%

Cat. No.	L. x W. x T.	List
34C3	1 1/8 x 5/8 x 5/32	$ .75



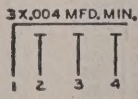
	MFD.
1&2	.002 $^{+100}_{-25}$%
3&5	.00015 $^{+100}_{-0}$%
4&5	.005 MIN.
5&6	.0001 $^{+75}_{-25}$%
6&7	.005 $^{+100}_{-25}$%

Cat. No.	L. x W. x T.	List
34C4	1 1/8 x 5/8 x 5/32	$ .90



	MFD.
1&2	.002 $^{+100}_{-25}$%
3&4	.005 MIN.
4&5	.0001 $^{+75}_{-25}$%
5&6	.005 $^{+100}_{-25}$%

Cat. No.	L. x W. x T.	List
34C5	1 1/8 x 5/8 x 5/32	$ .75

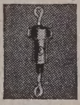


MFD.
3 x .004

Cat. No.	L. x W. x T.	List
34C6	1 1/8 x 5/8 x 5/32	$ .65

BUTTON CERAMICS

501C

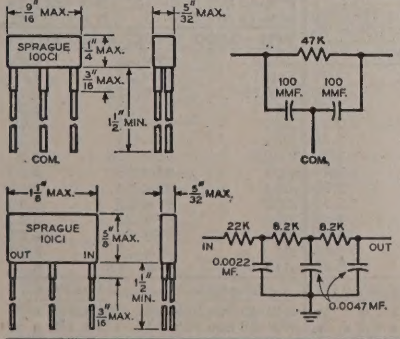

503C

505C, 506C

507C, 508C

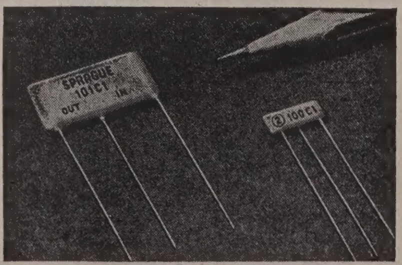
- Designed for Ultra-high-frequency TV Receivers and Electronic Equipment
- Flat Disc Design Means Low Self-inductance and High Self-resonant Frequency—Superior to Similar Units using Tubular Ceramic Elements
- Capacitor Element Sealed in Top of Ferrule or Screwhead with Plastic Resin
- 503C are Feed-thru Capacitors Intended for Filtering Leads thru Chassis—Ferrule Shank fits Standard Push Clip
- Stand-off Capacitors for By-pass Applications: 501C has Ferrule Shank to fit Standard Push Clip, 505C has Self-tapping 6-32 Thread, 507C has Standard 6-32 Thread, 506C has Self-tapping 10-32 Thread, 508C has Standard 10-32 Thread—All Screw-mounting Types Have Hexagon Heads
- Order by Type, Capacitance, Voltage, Characteristic—Units Listed Below are Characteristic HK

TYPE	MMF	WVDC	List
501C	1000(MRC)	500	$.70
503C	1500(MRC)	500	.75
505C	1000(MRC)	500	.70
506C	1500(MRC)	500	.75
507C	1000(MRC)	500	.90
508C	1500(MRC)	500	.95



BULPLATE® PRINTED CIRCUITS

- Especially Designed to Save Space and Reduce Assembly Time
- A Combination of Resistors and Capacitors of Maximum Compactness
- Integral Connections are "Printed" and Brought Out to External Leads Which Are Anchored to the Basic Ceramic Plate
- Completed Unit is Protected by a Moisture-proof Coating
- Cat. No. 100C1 (upper schematic) is a Balanced Diode Filter Plate Which Lists at $.60
- Cat. No. 101C1 (lower schematic) is a Vertical Integrator Plate Which Lists at $1.10



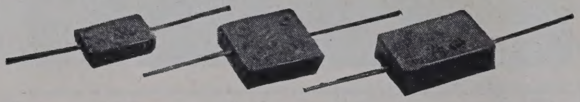
All prices subject to change without notice.

SPRAGUE CAPACITORS

MICA TYPES

- Each Mica Capacitor Section Receives a Radio Frequency Test Before Molding
- Careful Selection and Electrical Grading of Raw Mica Assures Maximum Quality
- Section Foils on Foil Micas are Connected to Terminals through Special Low-resistance R-F Bonds
- R-F Current Tested for Peak Ratings After Impregnation and Molding

TYPES MS & 1FM



TYPE MS—SILVERED MICA

(Standard Capacity Tolerance ± 5%)

Mfd.	Cat. No.	List
500 WVDC, 1000 V TEST		
.000005	MS-55	$ .45
.00001	MS-41	.40
.000015	MS-415	.40
.00002	MS-42	.40
.000025	MS-425	.40
.00003	MS-43	.40
.00004	MS-44	.40
.00005	MS-45	.40
.00006	MS-46	.40
.00007	MS-47	.40
.0001	MS-31	.40
.0002	MS-32	.45
.0003	MS-33	.55
.0004	MS-34	.65
.0005	MS-35	.70
.0006	MS-36	.80
.0007	MS-37	.85
.0008	MS-38	.95
.0009	MS-39	1.00
.001	MS-21	1.10
.002	MS-22	1.35
.003	MS-23	2.05
.004	MS-24	2.15
.005	MS-25	2.25
.006	MS-26	2.40
300 WVDC, 600 V TEST		
.007	MS-27	2.60
.008	MS-28	2.80
.009	MS-29	3.10
.01	MS-11	3.40

Catalog Nos.	L x W x T
MS-55 through MS-35	21/32 x 13/32 x 7/32
MS-36 through MS-23	25/32 x 25/32 x 9/32
MS-24 through MS-28	25/32 x 25/32 x 11/32
MS-29 through MS-11	1 x 5/8 x 5/16

TYPE 1FM

(Standard Capacity Tolerance ± 20%)

Mfd.	Cat. No.	List
500 WVDC, 1000 V TEST		
.00001	1FM-41	$ .25
.00002	1FM-42	.25
.00004	1FM-44	.25
.00005	1FM-45	.20
.000075	1FM-475	.20
.0001	1FM-31	.20
.00015	1FM-315	.20
.0002	1FM-32	.20
.00025	1FM-325	.25
.00035	1FM-335	.25
.0004	1FM-34	.25
.0005	1FM-35	.25
.0007	1FM-37	.25
.001	1FM-21	.30
.0015	1FM-215	.30
.002	1FM-22	.40
.003	1FM-23	.50
.004	1FM-24	.55
.005	1FM-25	.60
.006	1FM-26	.65
300 WVDC, 600 V TEST		
.007	1FM-27	$ .85
.008	1FM-28	1.00
.009	1FM-29	1.00
.01	1FM-11	1.20

Catalog Nos.	L x W x T
1 FM-44 through 1 FM-35	51/64 x 15/32 x 7/32
1 FM-37 through 1 FM-23	53/64 x 53/64 x 9/32
1 FM-24 through 1 FM-28	53/64 x 53/64 x 11/32
1 FM-29 through 1 FM-11	1 x 5/8 x 5/16

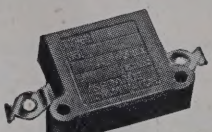
TYPES 3AFM, 3BFM, & 3CFM

(Standard Capacity Tolerance ± 10%)

Mfd.	Cat. No.	List
3AFM—300 WVDC, 600 V TEST		
.005	3AFM-25	$ .65
.006	3AFM-26	.70
.007	3AFM-27	.95
.008	3AFM-28	1.10
.01	3AFM-11	1.30
.015	3AFM-115	1.35
3BFM—500 WVDC, 1000 V TEST		
.0001	3BFM-31	.30
.0002	3BFM-32	.30
.00025	3BFM-325	.30
.0003	3BFM-33	.30
.0004	3BFM-34	.30
.0005	3BFM-35	.30
.001	3BFM-21	.35
.0015	3BFM-215	.35
.002	3BFM-22	$ .45
.0025	3BFM-225	.50
.003	3BFM-23	.55
.004	3BFM-24	.60
.005	3BFM-25	.65
.006	3BFM-26	.75
.007	3BFM-27	1.00
.008	3BFM-28	1.15
3CFM—1000 WVDC, 2000 V TEST		
.00005	3CFM-45	1.00
.0001	3CFM-31	1.00
.0002	3CFM-32	1.00
.00025	3CFM-325	1.00
.0003	3CFM-33	1.00
.0004	3CFM-34	1.00
.0005	3CFM-35	1.00
.001	3CFM-21	1.25
.0015	3CFM-215	1.50
.002	3CFM-22	1.50
.0025	3CFM-225	1.50

Catalog Nos.	L x W x T
3AFM Types	1 x 5/8 x 5/16
3BFM Types	1 x 5/8 x 5/16
3CFM Types	1 x 5/8 x 5/16

TYPES XFM, YFM & ZFM



(Standard Capacity Tolerance ±10%)

Mfd.	Cat. No.	List
XFM—600 WVDC, 1200 V TEST		
.00005	XFM-45	$1.20
.0001	XFM-31	1.20
.0002	XFM-32	1.20
.00025	XFM-325	1.20
.0003	XFM-33	1.20
.0004	XFM-34	1.20
.0005	XFM-35	1.20
.001	XFM-21	1.20
.0015	XFM-215	1.20
.002	XFM-22	1.30
.0025	XFM-225	1.30
.003	XFM-23	1.45
.004	XFM-24	1.50
.005	XFM-25	1.55
.006	XFM-26	1.80
.007	XFM-27	1.85
.008	XFM-28	1.90
.01	XFM-11	2.15
.02	XFM-12	3.05
.03	XFM-13	4.45

Catalog Nos.	L x W x T
XFM-45 thru XFM-11	1⅝ x 1⅛ x 11/32
XFM-12 thru XFM-13	1⅝ x 1⅛ x 7/16

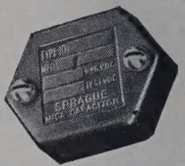
Mfd.	Cat. No.	List
YFM—1200 WVDC, 2500 V TEST		
.00005	YFM-45	1.60
.0001	YFM-31	1.60
.0002	YFM-32	1.60
.00025	YFM-325	1.60
.0003	YFM-33	1.60
.0004	YFM-34	1.60
.0005	YFM-35	1.60
.001	YFM-21	1.80
.0015	YFM-215	2.30
.002	YFM-22	2.40
.0025	YFM-225	2.80
.003	YFM-23	3.05
.004	YFM-24	3.05
.005	YFM-25	3.30
.006	YFM-26	3.30
.007	YFM-27	3.45
.008	YFM-28	3.85
.01	YFM-11	5.10

Catalog Nos.	L x W x T
YFM-45 thru YFM-24	1⅝ x 1⅛ x 11/32
YFM-25 thru YFM-11	1⅝ x 1⅛ x 7/16

Mfd.	Cat. No.	List
ZFM—2500 WVDC, 5000 V TEST		
.00005	ZFM-45	1.90
.0001	ZFM-31	1.90
.0002	ZFM-32	1.90
.00025	ZFM-325	2.20
.0003	ZFM-33	2.25
.0004	ZFM-34	2.30
.0005	ZFM-35	2.40
.001	ZFM-21	2.80
.0015	ZFM-215	3.55
.002	ZFM-22	4.15
.003	ZFM-23	4.90
.004	ZFM-24	5.65
.005	ZFM-25	6.40

Catalog Nos.	L x W x T
ZFM-45 thru ZFM-22	1⅝ x 1⅛ x 11/32
ZFM-23 thru ZFM-25	1⅝ x 1⅛ x 7/16

TYPES 7FM, 8FM & 9FM



(Standard Capacity Tolerance ±10%)

Mfd.	Cat. No.	List
7FM—600 WVDC, 1200 V TEST		
.00005	7FM-45	$1.45
.0001	7FM-31	1.45
.00015	7FM-315	1.45
.0002	7FM-32	1.45
.00025	7FM-325	1.45
.0005	7FM-35	1.45
.001	7FM-21	1.45
.002	7FM-22	1.65
.0025	7FM-225	1.70
.003	7FM-23	1.85
.004	7FM-24	2.00
.005	7FM-25	2.10
.006	7FM-26	2.20
.008	7FM-28	2.45
.01	7FM-11	2.80
.015	7FM-115	3.05
.02	7FM-12	3.55
.03	7FM-13	4.55
.04	7FM-14	5.85
.05	7FM-15	7.10
.06	7FM-16	8.05

Catalog Nos.	L x W x T
7FM-45 thru 7FM-13	1¾ x 1 5/16 x 7/16
7FM-14 thru 7FM-16	1¾ x 1 5/16 x ¾

Mfd.	Cat. No.	List
8FM—1200 WVDC, 2500 V TEST		
.00005	8FM-45	1.60
.0001	8FM-31	1.60
.00015	8FM-315	1.60
.0002	8FM-32	1.60
.00025	8FM-325	1.60
.0005	8FM-35	1.60
.001	8FM-21	1.90
.002	8FM-22	2.50
.0025	8FM-225	2.80
.003	8FM-23	2.95
.004	8FM-24	3.10
.005	8FM-25	3.30
.006	8FM-26	3.45
.008	8FM-28	4.10
.01	8FM-11	4.70
.015	8FM-115	5.80
.02	8FM-12	7.05
.025	8FM-125	7.90
.03	8FM-13	8.10

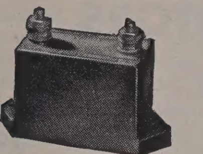
Catalog Nos.	L x W x T
8FM-45 thru 8FM-115	1¾ x 1 5/16 x 7/16
8FM-12 thru 8FM-13	1¾ x 1 5/16 x ¾

Mfd.	Cat. No.	List
9FM—2500 WVDC, 5000 V TEST		
.00005	9FM-45	1.90
.0001	9FM-31	1.90
.00025	9FM-325	2.15
.0005	9FM-35	2.55
.001	9FM-21	2.90
.002	9FM-22	4.25
.0025	9FM-225	4.60
.003	9FM-23	5.10
.004	9FM-24	5.65
.005	9FM-25	6.20
.006	9FM-26	6.35
.008	9FM-28	6.85
.01	9FM-11	7.30
.015	9FM-115	8.05

Catalog Nos.	L x W x T
9FM-45 thru 9FM-26	1¾ x 1 5/16 x 7/16
9FM-28 thru 9FM-115	1¾ x 1 5/16 x ¾

SPRAGUE CAPACITORS

TYPES 1MC & 2MC



Standard Capacity Tolerance ±5%)

TYPE 1MC

Mfd.	VAC Peak	Cat. No.	List
.00005	3000	1MC-45	$12.60
.0001	3000	1MC-31	12.60
.00015	3000	1MC-315	12.60
.0002	3000	1MC-32	12.60
.00025	3000	1MC-325	12.60
.0003	3000	1MC-33	12.60
.0004	3000	1MC-34	12.60
.0005	3000	1MC-35	12.60
.0006	3000	1MC-36	12.60
.0007	3000	1MC-37	12.60
.0008	3000	1MC-38	12.60
.001	3000	1MC-21	12.60
.0015	3000	1MC-215	12.60
.002	3000	1MC-22	12.60
.003	2000	1MC-23	12.60
.004	2000	1MC-24	12.60
.005	2000	1MC-25	12.60
.006	2000	1MC-26	12.60
.007	2000	1MC-27	12.60
.008	1500	1MC-28	12.60
.01	1000	1MC-11	12.60
.015	1000	1MC-115	12.60
.02	1000	1MC-12	14.30
.03	500	1MC-13	14.30
.04	500	1MC-14	14.30
.05	250	1MC-15	14.30
.1	250	1MC-1	15.10

	L x W x H
1MC Dimensions	2 x 15/16 x 1 19/32

TYPE 2MC

Mfd.	VAC Peak	Cat. No.	List
.00005	5000	2MC-45	17.30
.0001	5000	2MC-31	17.30
.00015	5000	2MC-315	17.30
.0002	5000	2MC-32	17.30
.00025	5000	2MC-325	17.30
.0003	5000	2MC-33	17.30
.0004	5000	2MC-34	17.30
.0005	5000	2MC-35	17.30
.0006	5000	2MC-36	17.30
.0007	5000	2MC-37	17.30
.0008	5000	2MC-38	17.30
.001	5000	2MC-21	17.30
.0015	5000	2MC-215	17.30
.002	5000	2MC-22	17.30
.003	3000	2MC-23	17.30
.004	3000	2MC-24	17.30
.005	3000	2MC-25	17.30
.006	3000	2MC-26	17.30
.007	3000	2MC-27	17.30
.008	2000	2MC-28	17.30
.01	2000	2MC-11	17.30
.015	2000	2MC-115	17.30
.02	2000	2MC-12	17.30
.03	1500	2MC-13	17.30
.04	1500	2MC-14	17.30
.05	1500	2MC-15	17.30
.06	1000	2MC-16	18.60
.07	1000	2MC-17	18.60
.08	500	2MC-18	19.20
.1	500	2MC-1	19.20

	L x W x H
2MC Dimensions	2¼ x 1¼ x 1 13/16

TYPES 1CC, 2CC, 3CC & 4CC

(Standard Capacity Tolerance ±5%)

TYPE 1CC

6000 VAC Peak

Mfd.	Cat. No.	List
.00005	1CC-45	$38.20
.000075	1CC-475	40.00
.0001	1CC-31	40.60
.00015	1CC-315	40.60
.0002	1CC-32	40.60
.00025	1CC-325	40.60
.0003	1CC-33	44.35
.0004	1CC-34	44.35
.0005	1CC-35	46.65
.0006	1CC-36	46.65
.0007	1CC-37	46.65
.0008	1CC-38	46.65
.001	1CC-21	46.65
.0015	1CC-215	48.90
.002	1CC-22	48.90
.003	1CC-23	50.60
.004	1CC-24	50.60

4000 VAC Peak

Mfd.	Cat. No.	List
.005	1CC-25	50.60
.006	1CC-26	51.45
.007	1CC-27	51.45
.008	1CC-28	51.45
.01	1CC-11	51.45

3000 VAC Peak

Mfd.	Cat. No.	List
.015	1CC-115	51.45

2000 VAC Peak

Mfd.	Cat. No.	List
.02	1CC-12	51.45
.025	1CC-125	51.80

1500 VAC Peak

Mfd.	Cat. No.	List
.03	1CC-13	55.75
.04	1CC-14	58.50
.05	1CC-15	60.75
.06	1CC-16	62.80

1000 VAC Peak

Mfd.	Cat. No.	List
.07	1CC-17	64.25
.08	1CC-18	65.75
.1	1CC-1	68.50

	Dia. x Height
1CC Dimensions	2 13/16 x 2½

TYPE 2CC

10,000 VAC Peak

Mfd.	Cat. No.	List
.00005	2CC-45	65.55
.000075	2CC-475	65.55
.0001	2CC-31	65.55
.00015	2CC-315	65.55
.0002	2CC-32	65.55
.0003	2CC-33	65.55
.0004	2CC-34	65.55
.0005	2CC-35	65.55
.0006	2CC-36	65.55
.0007	2CC-37	65.55
.0008	2CC-38	65.55
.001	2CC-21	65.55
.0015	2CC-215	65.55
.002	2CC-22	65.55

8000 VAC Peak

Mfd.	Cat. No.	List
.003	2CC-23	65.55
.004	2CC-24	65.55

6000 VAC Peak

Mfd.	Cat. No.	List
.005	2CC-25	65.55

5000 VAC Peak

Mfd.	Cat. No.	List
.006	2CC-26	69.15
.007	2CC-27	69.15
.008	2CC-28	69.15
.01	2CC-11	69.15

4000 VAC Peak

Mfd.	Cat. No.	List.
.015	2CC-115	$ 69.15

3000 VAC Peak

Mfd.	Cat. No.	List.
.02	2CC-12	69.15
.025	2CC-125	72.00

2000 VAC Peak

Mfd.	Cat. No.	List.
.03	2CC-13	73.50
.04	2CC-14	77.80
.05	2CC-15	80.75
.06	2CC-16	83.00

1500 VAC Peak

Mfd.	Cat. No.	List.
.07	2CC-17	85.00
.08	2CC-18	86.50
.1	2CC-1	90.00

	Dia. x Height
2CC Dimensions	3½ x 3

TYPE 3CC

20,000 VAC Peak

Mfd.	Cat. No.	List.
.00005	3CC-45	110.90
.000075	3CC-475	121.00
.0001	3CC-31	121.00
.00015	3CC-315	131.10
.0002	3CC-32	131.10
.0003	3CC-33	131.10
.0004	3CC-34	137.15
.0005	3CC-35	137.15
.0006	3CC-36	137.15
.0007	3CC-37	137.15
.0008	3CC-38	137.15
.001	3CC-21	141.15

15,000 VAC Peak

Mfd.	Cat. No.	List.
.0015	3CC-215	143.20
.002	3CC-22	143.20

12,000 VAC Peak

Mfd.	Cat. No.	List.
.003	3CC-23	151.25
.004	3CC-24	151.25

10,000 VAC Peak

Mfd.	Cat. No.	List.
.005	3CC-25	151.25
.006	3CC-26	151.25
.007	3CC-27	151.25
.008	3CC-28	151.25

8000 VAC Peak

Mfd.	Cat. No.	List.
.01	3CC-11	151.25

5000 VAC Peak

Mfd.	Cat. No.	List.
.015	3CC-115	151.25
.02	3CC-12	151.25

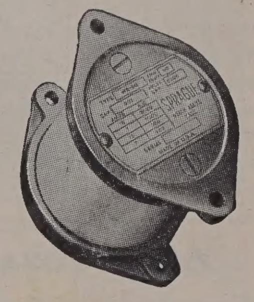
3000 VAC Peak

Mfd.	Cat. No.	List.
.025	3CC-125	151.25
.03	3CC-13	151.25
.04	3CC-14	151.25
.05	3CC-15	151.25
.06	3CC-16	158.50

2000 VAC Peak

Mfd.	Cat. No.	List.
.07	3CC-17	164.00
.08	3CC-18	172.00
.1	3CC-1	182.00

	Dia. x Height
3CC Dimensions	5 x 4



(Standard Capacity Tolerance ± 5%)

TYPE 4CC

30,000 VAC Peak

Mfd.	Cat. No.	List
.0001	4CC-31	$210.30
.00015	4CC-315	210.30
.0002	4CC-32	221.16
.0003	4CC-33	221.16
.0004	4CC-34	221.16
.0005	4CC-35	221.16
.0006	4CC-36	221.16
.0007	4CC-37	221.16
.0008	4CC-38	221.16
.001	4CC-21	229.10

25,000 VAC Peak

Mfd.	Cat. No.	List
.0015	4CC-215	229.10

20,000 VAC Peak

Mfd.	Cat. No.	List
.002	4CC-22	229.10
.003	4CC-23	229.10

15,000 VAC Peak

Mfd.	Cat. No.	List
.004	4CC-24	234.35
.005	4CC-25	242.00
.006	4CC-26	252.25
.007	4CC-27	260.00

12,000 VAC Peak

Mfd.	Cat. No.	List
.008	4CC-28	260.00
.009	4CC-29	260.00

10,000 VAC Peak

Mfd.	Cat. No.	List
.01	4CC-11	272.44

8000 VAC Peak

Mfd.	Cat. No.	List
.015	4CC-115	272.44

6000 VAC Peak

Mfd.	Cat. No.	List
.02	4CC-12	272.44
.03	4CC-13	272.44

5000 VAC Peak

Mfd.	Cat. No.	List
.04	4CC-14	272.44
.05	4CC-15	272.44
.06	4CC-16	290.00

4000 VAC Peak

Mfd.	Cat. No.	List
.07	4CC-17	300.00

3000 VAC Peak

Mfd.	Cat. No.	List
.08	4CC-18	308.00
.1	4CC-1	326.00

	Dia. x Height
4CC Dimensions	5 x 5¾

All prices subject to change without notice.

SPRAGUE CAPACITORS

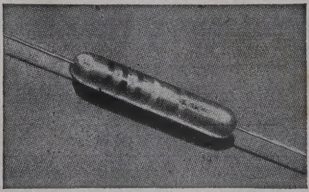
MILITARY-GRADE PAPER CAPACITORS IN STOCK AT SPRAGUE INDUSTRIAL DISTRIBUTORS

Always in stock to meet your emergency needs are the Sprague Military-Grade Paper-Dielectric Capacitors listed on these pages. Types and ratings carried here are those we have found to be in greatest demand to meet circuit design problems as they arise in laboratory work.

A stock of these military-quality capacitors, made by the world's largest capacitor manufacturer, is ready for delivery by any Sprague Industrial Distributor.

Of course, when time is not of the essence you can order from the whole broad range of Sprague Military capacitors. But when you need capacitors "yesterday," you'll do well to draw on our "emergency" stock as shown here.

65P PROKAR® CAPACITORS



Subminiature molded capacitors unmatched by any other supplier. Special impregnation gives excellent capacitance stability and high insulation resistance. Operating temperature range is −55°C. to +85°C. The 200 V units may be sed at 125°C. if derated to 150V. Tolerance is ±5%.

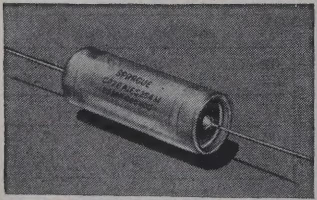
Mfd.	WVDC	Dia. x Length	Cat. No.	List
.01	200	.195 x 1 1/16	65P10352	$2.00
.015	200	.195 x 1 1/16	65P15352	2.00
.02	200	.250 x 1 1/16	65P20352	2.20
.022	200	.250 x 1 1/16	65P22352	2.25
.03	200	.250 x 1 1/16	65P30352	2.25
.033	200	.250 x 1 1/16	65P33352	2.25
.039	200	.375 x 1 1/16	65P39352	2.50
.047	200	.375 x 1 1/16	65P47352	2.50
.051	200	.375 x 1 1/16	65P51352	2.50
.056	200	.375 x 1 1/16	65P56352	2.50
.062	200	.375 x 1 1/16	65P62352	2.50
.082	200	.375 x 1 1/16	65P82352	2.50
.091	200	.375 x 1 1/16	65P91352	2.50
.1	200	.375 x 1 1/16	65P10452	2.50
.001	300	.175 x 1 1/16	65P10253	2.00
.0015	300	.175 x 1 1/16	65P15253	2.00
.002	300	.175 x 1 1/16	65P20253	2.00
.0034	300	.175 x 1 1/16	65P39253	2.00
.0047	300	.175 x 1 1/16	65P47253	2.00
.0051	300	.175 x 1 1/16	65P51253	2.00
.0056	300	.175 x 1 1/16	65P56253	2.00
.0068	300	.175 x 1 1/16	65P68253	2.00
.0082	300	.195 x 1 1/16	65P82253	2.00
.0091	300	.195 x 1 1/16	65P91253	2.00

96P VITAMIN Q® SUBMINIATURES

These super-JAN capacitors are designed to operate from −55°C. to +125°C. Capacitance tolerance on these glass-to-metal seal high I-R units is ±10%. Terminals are insulated from case. Exclusive Vitamin Q impregnation means unmatched performance at high temperatures.

Mfd.	WVDC	Dia. x Length	Cat. No.	List
.10	100	.312 x 13/16	96P10491S2	$5.06
.47	100	.362 x 1 1/16	96P47491S2	5.94
.10	200	.400 x 13/16	96P10492S2	5.28
.47	200	.562 x 1 5/16	96P47492S2	6.38
.10	400	.400 x 1 5/16	96P10494S2	5.72
.22	400	.562 x 1 5/16	96P22494S2	6.38
.47	400	.670 x 1 13/16	96P47494S2	7.37
.001	600	.235 x 11/16	96P10296S2	4.95
.0022	600	.235 x 11/16	96P22296S2	4.95
.0047	600	.235 x 11/16	96P47296S2	5.00
.0068	600	.235 x 11/16	96P68296S2	5.00
.01	600	.312 x 13/16	96P10396S2	5.17
.022	600	.312 x 13/16	96P22396S2	5.28
.047	600	.400 x 1 1/16	96P47396S2	5.55
.068	600	.400 x 1 5/16	96P68396S2	5.77
.10	600	.562 x 1 1/16	96P10496S2	6.16
.22	600	.562 x 1 13/16	96P22496S2	6.82
.47	600	.750 x 2 1/16	96P47496S2	7.97

TYPE CP26 OIL-FILLED TUBULARS



Hermetically sealed, mineral oil impregnated to meet Characteristic E requirements for operation from −55°C. to +85°C. Capacitor section is insulated from case. Units have plastic outer insulating tube. Capacitance tolerances: K, ±10%; M, ±20%; V, −10% +20%.

Mfd.	WVDC	Dia. x Length	Cat. No.	List
.5	200	1 1/16 x 2 5/16	SP—CP26A1EC504K	$2.60
.006	600	1/2 x 1 5/16	SP—CP26A1EF602M	1.55
.01	600	1/2 x 1 5/16	SP—CP26A1EF103V	1.55
.02	600	1/2 x 1 13/16	SP—CP26A1EF203K	1.80
.05	600	11/16 x 1 11/16	SP—CP26A1EF503K	1.90

TYPE CP28 TUBULARS

Similar to Type CP26, except for addition of radial mounting bracket. This is usually necessary for higher capacitance range tubulars if capacitor is to withstand equipment vibration tests. Units listed below have ±10% capacitance tolerance. These units are oil-filled and oil-impregnated to meet Characteristic E requirements.

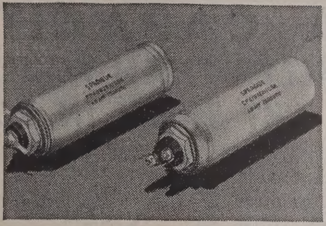
Mfd.	WVDC	Dia. x Length	Cat. No.	List
.1	600	11/16 x 2 1/16	SP—CP28A1EF104K	$2.15
.25	600	1 1/16 x 2 5/16	SP—CP28A1EF254K	2.70
.5	600	1 1/16 x 2 13/16	SP—CP28A1EF504K	3.30

All prices subject to change without notice.

SPRAGUE CAPACITORS

SCREWBASE TYPES CP40, 41

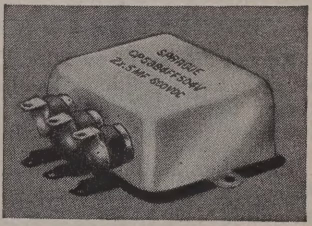
These cylindrical capacitors are easily mounted in small power supplies. They are mineral oil impregnated to meet Characteristic E requirements. Designed to operate from −55°C. to +85°C. The capacitance tolerance for these metal-encased units is ±10°.



Mfd.	WVDC	Dia. x Length	Cat. No.	List
TYPE CP40—GROUNDED CASE				
2	600	1½ x 3⅜	SP—CP40C2EF205K	$5.10
4	600	1½ x 5¼	SP—CP40C2EF405K	6.95
TYPE CP41—INSULATED CASE				
2	600	1½ x 3⅜	SP—CP41B1EF205K	$5.60
4	600	1½ x 5¼	SP—CP41B1EF405K	7.45

"BATHTUB" TYPE CP53

Drawn-shell case with silicone rubber side-terminal bushings. Will meet Characteristic E requirements. Can is grounded on triple section units. Capacitance tolerances: K, ±10%. V, −10+20%.



Mfd.	WVDC	L. x W. x H.	Cat. No.	List
.1	600	1 13/16 x 1 x ¾	SP—CP53B1EF104K	$3.25
.25	600	1 13/16 x 1 x ¾	SP—CP53B1EF254K	3.40
.5	600	1 13/16 x 1 x 1	SP—CP53B1EF504K	3.65
1.0	600	2 x 1¾ x 1	SP—CP53B1EF105K	4.15
2.0	600	2 x 2 x 1⅛	SP—CP53B1EF205K	5.50
.1-.1	600	1 13/16 x 1 x ¾	SP—CP53B4EF104V	4.10
.25-.25	600	1 13/16 x 1 x 1	SP—CP53B4EF254V	4.15
.5-.5	600	2 x 1¾ x 1	SP—CP53B4EF504V	4.75
.1-.1-.1	600	2 x 1¾ x ⅞	SP—CP53B5EF104V	4.60
.25	1000	1 13/16 x 1 x ⅞	SP—CP53B1EG254K	3.60
.5	1000	2 x 1¾ x ⅞	SP—CP53B1EG504K	3.90
1.0	1000	2 x 2 x 1⅛	SP—CP53B1EG105K	4.85
.25-.25	1000	2 x 1¾ x ⅞	SP—CP53B4EG254V	4.60

TYPE CP61 RECTANGULARS

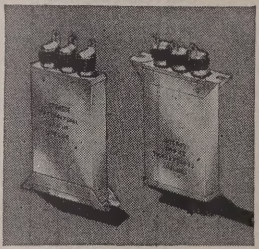
Characteristic E impregnation for −55°C. to +85°C. operation. Capacitance tolerance: K, ±10%; V, −10+20%. Silicone rubber terminal bushings. Can is grounded on dual units. Spade brackets may be mounted so terminals project through chassis or far above it. List price for all brackets: $.25 each, when ordered with capacitors.

Mfd.	WVDC	W. x T. x H.	Cat. No.	List
.05	600	1 5/16 x ⅝ x 1 1/16	SP—CP61B1EF503K	$4.10
.1	600	1 5/16 x ⅝ x 1⅜	SP—CP61B1EF104K	4.40
.25	600	1 5/16 x ⅝ x 1⅝	SP—CP61B1EF254K	4.70
.5	600	1 5/16 x ⅝ x 2	SP—CP61B1EF504K	5.00
1.0	600	1 5/16 x ⅝ x 2¾	SP—CP61B1EF105K	5.65
.1-.1	600	1 5/16 x ⅝ x 1⅝	SP—CP61B6EF104V	5.50
.25-.25	600	1 5/16 x ⅝ x 2	SP—CP61B6EF254V	5.65
.5-.5	600	1 5/16 x ⅝ x 2¾	SP—CP61B6EF504V	6.50

BRACKETS

Case Height	Cat. No.	Case Height	Cat. No.
1 1/16	SP—CP06SA1	2	SP—CP06SA4
1⅜	SP—CP06SA2	2¾	SP—CP06SA6
1⅝	SP—CP06SA3		

TYPES CP67, 69 RECTANGULARS

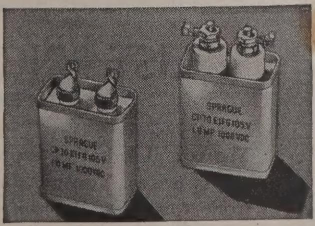


Channel-bracket mounting capacitors impregnated with mineral oil to meet Characteristic E requirements. Silicone-rubber terminal bushings insure continued hermetic seal. Capacitance tolerance is ±10%

Mfd.	WVDC	W. x T. x H.	Cat. No.	List
TYPE CP67—Mounting Bracket Away from Terminal				
.1	600	1¾ x 9/16 x 1 1/16	SP—CP67B1EF104K	$3.95
.25	600	1¾ x 9/16 x 1½	SP—CP67B1EF254K	4.25
.5	600	1¾ x 9/16 x 2	SP—CP67B1EF504K	4.55
1.0	600	1¾ x 9/16 x 2¾	SP—CP67B1EF105K	5.15
TYPE CP69—Mounting Bracket at Terminal End				
.05	600	1¾ x 9/16 x 1 1/16	SP—CP69B1EF503K	$3.95
.1	600	1¾ x 9/16 x 1 1/16	SP—CP69B1EF104K	3.95
.25	600	1¾ x 9/16 x 1½	SP—CP69B1EF254K	4.25
.5	600	1¾ x 9/16 x 2	SP—CP69B1EF504K	4.55
1.0	600	1¾ x 9/16 x 2¾	SP—CP69B1EF105K	5.15

TYPE CP70 RECTANGULARS

Soldered "squeeze-seam" metal case filter capacitors for power supplies. Units are mineral oil impregnated for −55°C. to +85°C. operation. Capacitance tolerance is ±10%.



BRACKETS: List price for all footed brackets: $.60 pr. when supplied with capacitors. Order separately as indicated.

Mfd.	WVDC	W. x T. x H.	Cat. No.	List
SILICONE RUBBER BUSHINGS				
2	600	1 13/16 x 1 1/16 x 3¼*	SP—CP70B1EF205K	$ 8.30
4	600	2½ x 1 3/16 x 3⅞†	SP—CP70B1EF405K	10.65
6	600	3¾ x 1¼ x 4⅜‡	SP—CP70B1EF605K	13.35
10	600	3¾ x 1¾ x 4 #	SP—CP70B1EF106K	17.95
.5	1000	1 13/16 x 1 1/16 x 2¼§	SP—CP70B1EG504K	5.65
1.0	1000	1 13/16 x 1 1/16 x 2⅞★	SP—CP70B1EG105K	7.35
2.0	1000	1 13/16 x 1 1/16 x 4¾◆	SP—CP70B1EG205K	9.65
4.0	1000	3¾ x 1¼ x 3⅞°	SP—CP70B1EG405K	12.30
CERAMIC STANDOFF BUSHINGS				
.1	1500	1 13/16 x 1 1/16 x 2¼§	SP—CP70E1EH104K	$ 6.60
.5	1500	1 13/16 x 1 1/16 x 2⅞★	SP—CP70E1EH504K	8.15
1.0	1500	1 13/16 x 1 1/16 x 4¾◆	SP—CP70E1EH105K	9.00

*CP07FA4	§CP07FA2	‡CP07FC2	◆CP07FA6
†CP07FB4	★CP07FA3	#CP07FD3	°CP07FC2

ARCO ELECTRONICS, INC.

EL-MENCO CAPACITORS

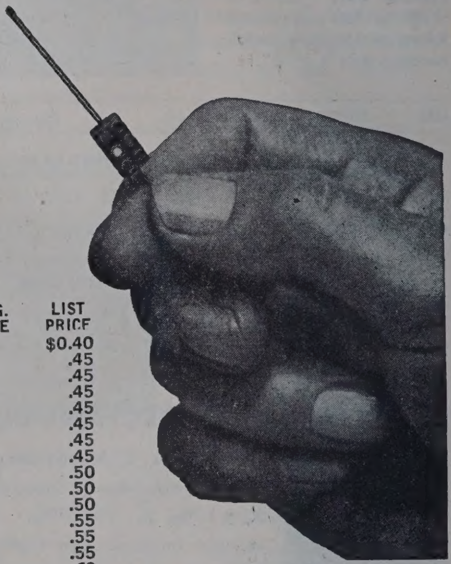
MINIATURE MICA CAPACITORS

Known the world over for their reliability under all operating conditions, EL-MENCO CAPACITORS are chosen by manufacturers who want successful performance and long life from their products.

SMALLER THAN YOUR FINGERNAIL BUT SKY HIGH IN PERFORMANCE

EL-MENCO fixed mica dielectric capacitors are compact, precision made Manufactured in accordance with American military standards to meet Army and Navy JAN-C-5 Specifications. All impregnated and JAN, RMA and RCM color coded. Standard specification limits are shown below.

Moulded in low loss bakelite, tested at double the working voltage. Tests for dielectric strength, insulation resistance, temperature co-efficient and capacitance drift, humidity and life tests according to JAN and RCM STANDARDS. All units are wax dipped for salt water immersion seal.



Actual Size
1-300 mmf.
9/32" x ½" x 3/16"
301-510 mmf.
9/32" x ½" x 7/32"
For Television, Radio and other Electronic Applications.
1 - 420 mmf. cap. at 500v DCW.
1 - 510 mmf. cap. at 300v DCW.
Temperature Co-efficient ±50 parts per million per degree C for most capacity values.
6-dot color coded.

TYPE CM-15

TYPE DESIGNATION	CAP. MMF.	DC WKG. VOLTAGE	LIST PRICE	TYPE DESIGNATION	CAP. MMF.	DC WKG. VOLTAGE	LIST PRICE
CM-15-C-010-M	1	500	$0.50	CM-15-E-750-J	75	500	$0.40
CM-15-C-020-M	2	500	.50	CM-15-E-820-J	82	500	.45
CM-15-C-030-M	3	500	.50	CM-15-E-910-J	91	500	.45
CM-15-C-050-K	5	500	.40	CM-15-E-101-J	100	500	.45
CM-15-C-100-J	10	500	.40	CM-15-E-111-J	110	500	.45
CM-15-C-120-J	12	500	.40	CM-15-E-121-J	120	500	.45
CM-15-C-150-J	15	500	.40	CM-15-E-131-J	130	500	.45
CM-15-C-180-J	18	500	.40	CM-15-E-151-J	150	500	.45
CM-15-C-200-J	20	500	.40	CM-15-E-161-J	160	500	.50
CM-15-C-220-J	22	500	.40	CM-15-E-181-J	180	500	.50
CM-15-E-240-J	24	500	.40	CM-15-E-201-J	200	500	.50
CM-15-E-270-J	27	500	.40	CM-15-E-221-J	220	500	.55
CM-15-E-300-J	30	500	.40	CM-15-E-241-J	240	500	.55
CM-15-E-330-J	33	500	.40	CM-15-E-251-J	250	500	.55
CM-15-E-360-J	36	500	.40	CM-15-E-271-J	270	500	.60
CM-15-E-390-J	39	500	.40	CM-15-E-301-J	300	500	.60
CM-15-E-430-J	43	500	.40	CM-15-E-331-J	330	500	.65
CM-15-E-470-J	47	500	.40	CM-15-E-361-J	360	500	.70
CM-15-E-500-J	50	500	.40	CM-15-E-391-J	390	500	.70
CM-15-E-510-J	51	500	.40	CM-15-E-431-J	430	300	.75
CM-15-E-560-J	56	500	.40	CM-15-E-471-J	470	300	.80
CM-15-E-620-J	62	500	.40	CM-15-E-501-J	500	300	.80
CM-15-E-680-J	68	500	.40	CM-15-E-511-J	510	300	.80

All the above are silver mica only. Temperature Co-efficient: 50 Parts per Million per degree C. (Characteristic "E"). Standard Tolerance: ±5%. Closest Tolerance: ±.5 mmfd.

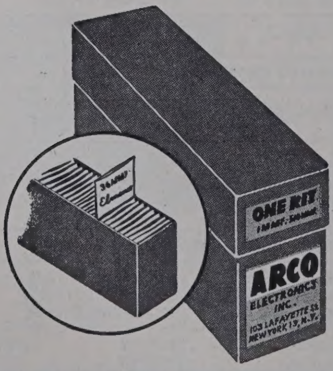
Special! — HANDY KIT

FOR EXPERIMENTAL WORK

Don't Get Caught Short . . .

ALWAYS HAVE THE CORRECT CAPACITY ON HAND

This Handy Kit consists of 46 most commonly used Capacitors . . . five of each capacity packed in moisture-proof transparent cellophane envelope, properly identified for permanent use.


ONE KIT
ARCO
ELECTRONICS INC.
103 LAFAYETTE ST.
NEW YORK 13, N.Y.

LIST PRICE ONLY $90.00

The complete set of capacitors amounts to $106.00 at list prices. You get the entire set during this introductory offer, *for only* $90.00.

THESE MINIATURES FIT INTO THE SMALLEST AREA CAPACITOR SIZE (9/32" x ½" x 3/16")

COMPARE COST!

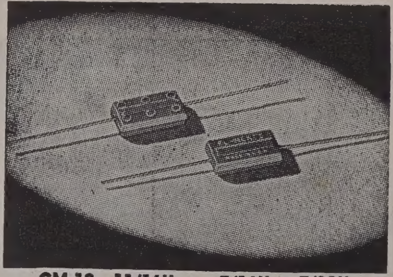
ARCO ELECTRONICS, INC.

EL-MENCO CAPACITORS

MICA CAPACITORS

CM-19 & CM-20

TYPE DESIGNATION	CAP. MMF.	DC WKG. VOLTAGE	LIST PRICE REGULAR MICA	LIST PRICE SILVERED MICA
CM-20-050	5	500	$0.30	$0.40
CM-20-100	10	500	.30	.40
CM-20-120	12	500	.30	.40
CM-20-150	15	500	.30	.40
CM-20-180	18	500	.30	.40
CM-20-200	20	500	.30	.40
CM-20-220	22	500	.30	.40
CM-20-240	24	500	.30	.40
CM-20-270	27	500	.30	.40
CM-20-300	30	500	.30	.40
CM-20-330	33	500	.20	.40
CM-20-360	36	500	.20	.40
CM-20-390	39	500	.20	.40
CM-20-430	43	500	.20	.40
CM-20-470	47	500	.20	.40
CM-20-500	50	500	.20	.40
CM-20-510	51	500	.20	.40
CM-20-560	56	500	.20	.40
CM-20-620	62	500	.20	.40
CM-20-680	68	500	.20	.40
CM-20-750	75	500	.20	.40
CM-20-820	82	500	.20	.40
CM-20-910	91	500	.20	.40
CM-20-101	100	500	.20	.40
CM-20-111	110	500	.20	.45
CM-20-121	120	500	.20	.45
CM-20-131	130	500	.25	.45
CM-20-151	150	500	.25	.45
CM-20-161	160	500	.25	.45
CM-20-181	180	500	.25	.45
CM-20-201	200	500	.25	.45
CM-20-221	220	500	.25	.45
CM-20-241	240	500	.30	.55
CM-20-251	250	500	.30	.55
CM-20-271	270	500	.30	.55
CM-20-301	300	500	.30	.55
CM-20-331	330	500	.30	.55
CM-20-361	360	500	.30	.55
CM-20-391	390	500	.30	.65
CM-20-431	430	500	.30	.65
CM-20-471	470	500	.30	.70
CM-20-501	500	500	.30	.70
CM-20-511	510	500	.30	.70
CM-20-561	560	500	.35	.75
CM-20-621	620	500	.35	.80
CM-20-681	680	500	.35	.85
CM-20-751	750	500	.35	.90
CM-20-821	820	500	.40	.95
CM-20-911	910	500	.45	1.00
CM-20-102	1000	500	.45	1.10
CM-20-112†	1100	500	.50	1.20
CM-20-122†	1200	500	.50	1.30
CM-20-132†	1300	500	.50	1.40
CM-20-152†	1500	500	.60	1.50
CM-20-162†	1600	500	.60	1.60
CM-20-182†	1800	500	.70	1.70
CM-20-202†	2000	500	.75	



CM-19—11/16" x 7/16" x 7/32"
CM-20—25/32" x 7/16" x 7/32"
CM-25— 7/16" x 1-7/64" x 7/32"

CM-25

TYPE DESIGNATION	CAP. MMF.	DC WKG. VOLTAGE	LIST PRICE REGULAR MICA	LIST PRICE SILVERED MICA
CM-25-510	51	500	$0.25	$0.40
CM-25-560	56	500	.25	.40
CM-25-620	62	500	.25	.40
CM-25-680	68	500	.25	.40
CM-25-750	75	500	.25	.40
CM-25-820	82	500	.25	.40
CM-25-910	91	500	.25	.40
CM-25-101	100	500	.25	.40
CM-25-111	110	500	.25	.45
CM-25-121	120	500	.25	.45
CM-25-131	130	500	.25	.45
CM-25-151	150	500	.25	.45
CM-25-161	160	500	.25	.45
CM-25-181	180	500	.25	.45
CM-25-201	200	500	.25	.45
CM-25-221	220	500	.25	.45
CM-25-241	240	500	.30	.55
CM-25-251	250	500	.30	.55
CM-25-271	270	500	.30	.55
CM-25-301	300	500	.30	.55
CM-25-331	330	500	.30	.55
CM-25-361	360	500	.30	.55
CM-25-391	390	500	.30	.65
CM-25-431	430	500	.30	.65
CM-25-471	470	500	.30	.70
CM-25-501	500	500	.30	.70
CM-25-511	510	500	.30	.70
CM-25-561	560	500	.35	.75
CM-25-621	620	500	.35	.80
CM-25-681	680	500	.35	.85
CM-25-751	750	500	.35	.90
CM-25-821	820	500	.40	.95
CM-25-911	910	500	.45	1.00
CM-25-102	1000	500	.45	1.10
CM-25-112†	1100	500	.50	1.20
CM-25-122†	1200	500	.50	1.30
CM-25-132†	1300	500	.50	1.40
CM-25-152†	1500	500	.60	1.50
CM-25-162†	1600	500	.60	1.60
CM-25-182†	1800	500	.70	1.70
CM-25-202†	2000	500	.75	1.80

STANDARD TOLERANCES:

Regular mica ±20% (A and B Characteristics)
For ±10% tolerance add 10% to list price.
For ±5% tolerance add 25% to list price.
Silvered Mica ±5% (C, D and E Characteristics)
For ±2% tolerance add 15% to list price.
For ±1% tolerance add 25% to list price.

NOTE:

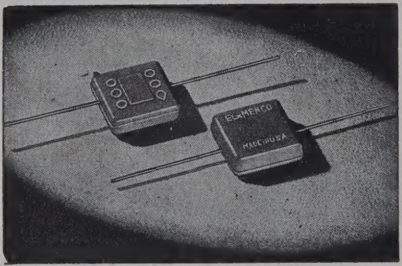
CM19 capacitors available only up to 1000 mmf.

CM20 and CM25 available to 2000 mmf.

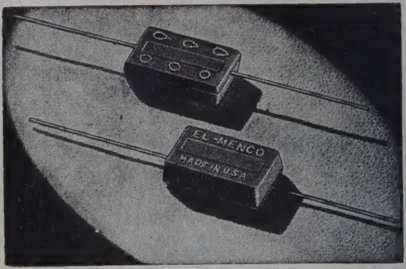
ARCO ELECTRONICS, INC.

EL-MENCO CAPACITORS

MICA CAPACITORS



CM-30—13/16" x 13/16" x 9/32"
CM-35—13/16" x 13/16" x 11/32"



CM-40—1" x 5/8" x 11/32"

CM-30

TYPE DESIGNATION	CAP. MMF.	DC WKG. VOLTAGE	LIST PRICE REGULAR MICA	LIST PRICE SILVERED MICA
CM-30-511	510	500	$0.30	$0.70
CM-30-561	560	500	.30	.75
CM-30-621	620	500	.30	.80
CM-30-681	680	500	.30	.85
CM-30-751	750	500	.30	.90
CM-30-821	820	500	.30	.95
CM-30-911	910	500	.30	1.00
CM-30-102	1000	500	.35	1.10
CM-30-112	1100	500	.35	1.10
CM-30-122	1200	500	.35	1.25
CM-30-132	1300	500	.35	1.25
CM-30-152	1500	500	.40	1.35
CM-30-162	1600	500	.40	1.35
CM-30-182	1800	500	.45	1.35
CM-30-202	2000	500	.45	1.50
CM-30-222	2200	500	.45	1.50
CM-30-242	2400	500	.50	1.80
CM-30-252	2500	500	.50	1.80
CM-30-272	2700	500	.50	1.90
CM-30-302	3000	500	.60	2.05
CM-30-332	3300	500	.60	2.05
CM-30-362	3600	500	.60	2.10
CM-30-392	3900	500	.65	2.15
CM-30-432	4300	500	.65	2.15
CM-30-472	4700	500	.65	2.15
CM-30-502	5000	500	.70	2.25
CM-30-512	5100	500	.70	2.25
CM-30-562	5600	500	.70	2.50
CM-30-622	6200	500	.90	2.90

CM-35

TYPE DESIGNATION	CAP. MMF.	DC WKG. VOLTAGE	LIST PRICE REGULAR MICA	LIST PRICE SILVERED MICA
CM-35-682	6800	300	$0.95	$3.00
CM-35-752	7500	300	1.00	3.25
CM-35-822	8200	300	1.15	3.50
CM-35-912	9100	300	1.15	4.00
CM-35-103	10000	300	1.40	4.00
CM-35-123	12000	300	1.60	4.50
CM-35-153	15000	300	2.00	5.25
CM-35-682	6800	500	1.05	3.30
CM-35-752	7500	500	1.15	3.65
CM-35-822	8200	500	1.30	3.85
CM-35-912	9100	500	1.30	4.40
CM-35-103	10000	500	1.55	4.40

CM-40

TYPE DESIGNATION	CAP. MMF.	DC WKG. VOLTAGE	LIST PRICE REGULAR MICA	LIST PRICE SILVERED MICA
CM-40-272	2700	500	.55	1.90
CM-40-302	3000	500	.60	2.05
CM-40-332	3300	500	.60	2.05
CM-40-362	3600	500	.65	2.10
CM-40-392	3900	500	.70	2.15
CM-40-432	4300	500	.70	2.15
CM-40-472	4700	500	.70	2.15
CM-40-502	5000	500	.75	2.25
CM-40-512	5100	500	.75	2.25
CM-40-562	5600	500	.75	2.50
CM-40-622	6200	500	1.05	2.90
CM-40-682	6800	500	1.15	3.30
CM-40-752	7500	500	1.40	3.65
CM-40-822	8200	500	1.40	3.85
CM-40-912	9100	500	1.40	4.40
CM-40-103	10000	500	1.70	4.40
CM-40-912	9100	300	1.30	4.00
CM-40-103	10000	300	1.50	4.00
CM-40-123	12000	300	1.80	4.50
CM-40-153	15000	300	2.20	5.25

STANDARD TOLERANCES

Regular mica ±20% (A and B Characteristics)
For ±10% tolerance add 10% to list price.
For ±5% tolerance add 25% to list price.

Silvered mica ±5% (C, D and E Characteristics)
For ±2% tolerance add 15% to list price.
For ±1% tolerance add 25% to list price.

ARCO ELECTRONICS, INC.

EL-MENCO CAPACITORS

TELEVISION • TRANSMITTING • INDUSTRIAL
HIGH VOLTAGE MICA CAPACITORS

DC WORKING VOLTAGES: FROM 1000 TO 3000 VOLTS

Molded in CM-20 and CM-35 Cases

Demand for smaller units in higher voltages designed to meet the requirements for TELEVISION, POWER AMPLIFIERS, LOW POWER TRANSMITTERS, and various INDUSTRIAL USES has increased. EL-MENCO designed and produced units listed below are especially adaptable to compact circuits where space is an important factor. Their acceptance has been overwhelming by the various manufacturers of TELEVISION RECEIVERS.

In many cases, these units will do the work of capacitors molded in CM-45, CM-50, and CM-55 cases without breaking down. NO SPECIAL MOUNTINGS ARE NECESSARY; just wire right into the circuit.

The capacitors are molded in low-loss bakelite and tested at double the branded voltage. They are tested for dielectric strength, insulation resistance, temperature coefficient, capacitance drift, susceptibility to humidity, and length of life, according to RCM Standards. All units are wax-dipped for protection against salt water immersion.

VCM-20

TYPE DESIGNATION	CAP. MMF.	5000 VDC TEST 2500 VDC WKG. LIST PRICE	4000 VDC TEST 2000 VDC WKG. LIST PRICE	3000 VDC TEST 1500 VDC WKG. LIST PRICE	2000 VDC TEST 1000 VDC WKG. LIST PRICE
VCM-20-B-050	5	$0.35	$0.35	$0.35	$0.30
VCM-20-B-100	10	.35	.35	.35	.30
VCM-20-B-120	12	.35	.35	.35	.30
VCM-20-B-150	15	.35	.35	.35	.30
VCM-20-B-180	18	.35	.35	.35	.30
VCM-20-B-200	20	.35	.35	.35	.30
VCM-20-B-220	22	.35	.35	.35	.30
VCM-20-B-240	24	.35	.35	.35	.30
VCM-20-B-270	27	.35	.35	.35	.30
VCM-20-B-300	30	.40	.35	.35	.30
VCM-20-B-330	33	.40	.35	.35	.30
VCM-20-B-360	36	.40	.35	.35	.30
VCM-20-B-390	39	.40	.35	.35	.30
VCM-20-B-430	43	.40	.35	.35	.30
VCM-20-B-470	47	.40	.35	.35	.30
VCM-20-B-500	50	.40	.40	.35	.30
VCM-20-B-510	51	.40	.40	.35	.30
VCM-20-B-560	56	.40	.40	.35	.30
VCM-20-B-620	62	.40	.40	.35	.30
VCM-20-B-680	68	.45	.40	.35	.30
VCM-20-B-750	75	.50	.40	.35	.30
VCM-20-B-820	82	.50	.40	.35	.30
VCM-20-B-910	91	.50	.40	.40	.35
VCM-20-B-101	100	.55	.40	.40	.35
VCM-20-B-111	110	.60	.45	.40	.35
VCM-20-B-121	120	.60	.45	.40	.35
VCM-20-B-131	130	.60	.45	.40	.35
VCM-20-B-151	150	.65	.45	.40	.35
VCM-20-B-161	160	.70	.50	.40	.35
VCM-20-B-181	180	.70	.50	.40	.35
VCM-20-B-201	200	.80	.60	.45	.40
VCM-20-B-221	220	.85	.60	.45	.40
VCM-20-B-241	240	.85	.65	.45	.40
VCM-20-B-251	250		.65	.55	.40
VCM-20-B-271	270		.65	.55	.40
VCM-20-B-301	300		.70	.60	.45
VCM-20-B-331	330		.80	.60	.45
VCM-20-B-361	360		.80	.60	.45
VCM-20-B-391	390		.85	.65	.45
VCM-20-B-431	430			.65	.50
VCM-20-B-471	470			.70	.50
VCM-20-B-501	500			.70	.50
VCM-20-B-511	510			.70	.50
VCM-20-B-561	560			.80	.55
VCM-20-B-621	620			.85	.55
VCM-20-B-681	680				.60
VCM-20-B-751	750				.60
VCM-20-B-821	820				.65
VCM-20-B-911	910				.70
VCM-20-B-102	1000				.75

VCM-35

TYPE DESIGNATION	CAP. MMF.	6000 VDC TEST *3000 VDC WKG. LIST PRICE	5000 VDC TEST 2500 VDC WKG. LIST PRICE	4000 VDC TEST 2000 VDC WKG. LIST PRICE	3000 VDC TEST 1500 VDC WKG. LIST PRICE	2000 VDC TEST 1000 VDC WKG. LIST PRICE
VCM-35-B-121	120	$0.55				
VCM-35-B-151	150	.60				
VCM-35-B-161	160	.65				
VCM-35-B-181	180	.65				
VCM-35-B-221	220	.75				
VCM-35-B-241	240	.80	$0.60			
VCM-35-B-251	250	.80	.60			
VCM-35-B-271	270	.80	.60			
VCM-35-B-301	300	.85	.65			
VCM-35-B-331	330	.90	.65			
VCM-35-B-361	360	.95	.75			
VCM-35-B-391	390	1.05	.80			
VCM-35-B-431	430	1.15	.80	$0.65		
VCM-35-B-471	470	1.20	.80	.75		
VCM-35-B-501	500	1.30	.85	.75		
VCM-35-B-511	510	1.30	.85	.75		
VCM-35-B-561	560	1.40	.90	.75		
VCM-35-B-621	620	1.45	.95	.80		
VCM-35-B-681	680	1.60	1.05	.80	$0.75	
VCM-35-B-821	820	1.80	1.15	.90	.85	
VCM-35-B-911	910		1.35	.95	.90	
VCM-35-B-102	1000		1.40	1.10	.90	
VCM-35-B-112	1100		1.40	1.15	.95	$0.60
VCM-35-B-122	1200		1.50	1.20	1.10	.65
VCM-35-B-132	1300		1.65	1.30	1.15	.65
VCM-35-B-152	1500		1.85	1.45	1.30	.75
VCM-35-B-162	1600		2.00	1.50	1.30	.80
VCM-35-B-182	1800			1.70	1.45	.80
VCM-35-B-202	2000			1.80	1.60	.85
VCM-35-B-222	2200				1.70	.95
VCM-35-B-242	2400				1.80	1.05
VCM-35-B-272	2700					1.05
VCM-35-B-302	3000					1.15
VCM-35-B-332	3300					1.20
VCM-35-B-362	3600					1.35
VCM-35-B-392	3900					1.40
VCM-35-B-432	4300					1.50
VCM-35-B-472	4700					1.65
VCM-35-B-502	5000					1.70
VCM-35-B-512	5100					1.70

All units supplied in "A" or "B" Characteristic at list price.
Case Size Dimensions (See preceeding pages for illustrations):

VCM-20—$\frac{25}{32}$" x $\frac{7}{16}$" x $\frac{7}{32}$"   VCM-35—$\frac{13}{16}$" x $\frac{13}{16}$" x $\frac{11}{32}$"

Standard Tolerance: ±20%.
Prices will be quoted for closer tolerances in "Silvered" mica upon request.

ARCO ELECTRONICS, INC.

EL-MENCO CAPACITORS

EL-MENCO
CP-6
EL-MENCO
CP-5
EL-MENCO
CP-4
EL-MENCO
CP-3
EL-MENCO
CP-2
EL-MENCO
CP-1

MINERAL OIL IMPREGNATION
NON-INDUCTIVE WINDING
SYNTHETIC RESIN END SEALS
STEATITE CASE

PAPER TUBULAR CAPACITORS CP TYPE

EL-MENCO CP type paper tubular capacitors are sealed into STEATITE TUBES which serve to insulate the capacitor electrically as well as against moisture and heat. The capacitor insert is impregnated with MINERAL OIL, thereby assuring long life at 85° C operating conditions. This feature insures successful operation at the high ambient temperatures existing in small, compact enclosures.

The NON-INDUCTIVELY wound paper and foil units are sealed in the CERAMIC TUBES by means of baked SYNTHETIC RESIN END FILLS which cannot melt at any conceivable operating temperature. The end fills will not dissolve in wax, permitting the capacitors to be potted without damage to in the insert. Leads are of tinned copper 2¼" long.

Many of the large TELEVISION, TRANSMITTER and HIGH VOLTAGE AMPLIFIER manufacturers have found these capacitors to be of highest quality. Breakdown tests have exceeded the required standards.

DIMENSIONS FOR CP TYPE CAPACITORS

	DIAMETER	LENGTH
CP-1	3/8"	1 1/8"
CP-2	3/8"	1 3/8"
CP-3	7/16"	1 3/8"
CP-5	9/16"	1 5/8"
CP-5	3/4"	2 1/8"
CP-6	13/16"	2 1/8"

STANDARD TOLERANCE ON ABOVE UNITS IS ± 20%.

CAPACITY MFD.	1000 WVDC		600 WVDC		400 WVDC		200 WVDC	
	PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE	PART NUMBER	LIST PRICE
.001	CP-2-102	$0.40	CP-1-102	$0.25				
.0015	CP-2-152	.40	CP-1-152	.25				
.002	CP-2-202	.40	CP-1-202	.25				
.0022	CP-2-222	.40	CP-1-222	.25				
.0025	CP-2-252	.40	CP-1-252	.25				
.003	CP-3-302	.40	CP-1-302	.25				
.0033	CP-3-332	.40	CP-1-332	.25				
.004	CP-3-402	.40	CP-1-402	.25				
.0047	CP-3-472	.45	CP-1-472	.25				
.005	CP 3-502	.45	CP-1-502	.25				
.006	CP-3-602	.45	CP-2-602	.25				
.0068	CP-3-682	.45	CP-2-682	.25				
.0075	CP-3-752	.45	CP-2-752	.30				
.01	CP-3-103	.50	CP-2-103	.30				
.015	CP-4-153	.50	CP-2-153	.30				
.02	CP-5-203	.50	CP-3-203	.30	CP-2-203	$0.25		
.022	CP-5-223	.50	CP-3-223	.30	CP-3-223	.30		
.025	CP-5-253	.50	CP-4-253	.35	CP-3-253	.30		
.03	CP-5-303	.50	CP-4-303	.35	CP-3-303	.30		
.033	CP-5-333	.60	CP-4-333	.35	CP-3-333	.30		
.04	CP-6-403	.60	CP-4-403	.35	CP-3-403	.30		
.047	CP-6-473	.60	CP-4-473	.35	CP-4-473	.30		
.05	CP-6-503	.60	CP-4-503	.40	CP-4-503	.30		
.056	CP-6-563	.65	CP-5-563	.40	CP-4-563	.30		
.068			CP-6-683	.40	CP-4-683	.35		
.075			CP-6-753	.45	CP-5-753	.35		
.1			CP-6-104	.45	CP-5-104	.35	CP-4-104	$0.35
.15					CP-6-154	.45	CP-4-154	.40
.22					CP-6-224	.55	CP-5-224	.45
.25					CP-6-254	.55	CP-5-254	.45
.33							CP-6-334	.55
.47							CP-6-474	.70
.5							CP-6-504	.70

ARCO ELECTRONICS, INC.

EL-MENCO CAPACITORS

Single and Dual
PADDERS

El-Menco Padding Condensers have been acclaimed by engineers as the finest development in adjustable mica condensers.

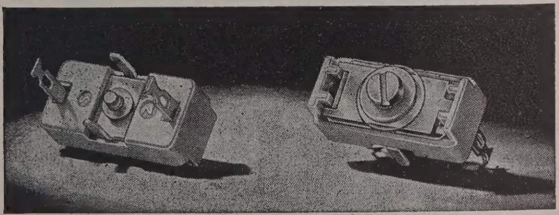
The construction is such as to completely enclose and protect the delicate edges of the mica films, made of the finest quality clear India ruby mica.

The phosphor bronze adjusting plates assure permanent resilience and freedom from mechanical fatigue. All parts are heavily plated to resist corrosion.

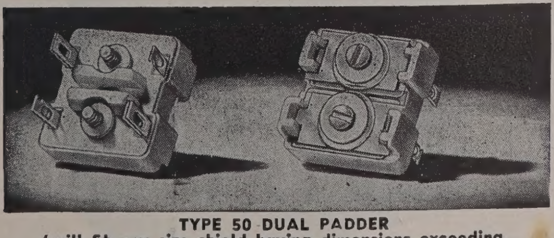
TYPE 30
350 Volts DC Flash-Test — 175 WVDC

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE At $1\frac{1}{2}$ Inch Pounds Cap. Will Be More Than MMF.	GUARANTEED RANGE At $2\frac{1}{2}$ Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
302	2 Pl.	130	15	$0.60
303	3 Pl.	340	65	.65
304	4 Pl.	550	100	.75
305	5 Pl.	760	190	.85
306	6 Pl.	970	275	.90
307	7 Pl.	1180	350	1.00
308	8 Pl.	1390	450	1.05
309	9 Pl.	1600	550	1.15
310	10 Pl.	1890	650	1.25
311	11 Pl.	2110	780	1.35
312	12 Pl.	2330	880	1.40
313	13 Pl.	2605	1150	1.50
314	14 Pl.	2830	1300	1.60
315	15 Pl.	3055	1400	1.65

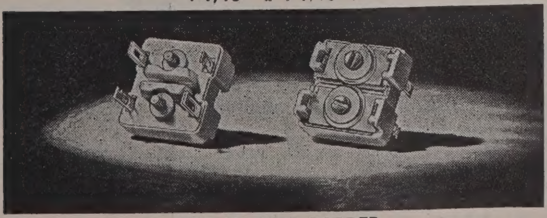
Screw is insulated from top plate my mica washer. Above maximum capacity values are based on using 1½ to 1¾ Mil Mica films.



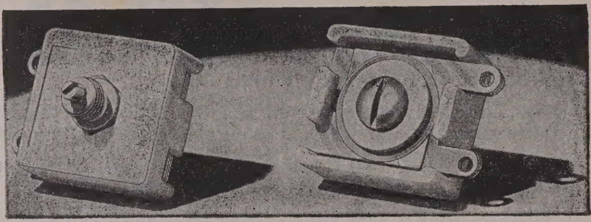
TYPE 58 PADDER 1.000" x .468"



TYPE 50 DUAL PADDER
(will fit any size shield having dimensions exceeding 1-1/16" x 1-1/16")



TYPE 60 DUAL PADDER
(will fit any size shield having dimensions exceeding 3/4" x 3/4")



TYPE 30 AND TYPE 30-M PADDER 7/8" x 15/16"

TYPE 30-M
1000 Volts DC Flash-Test — 500 Working Volts DC

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE At $1\frac{1}{2}$ Inch Pounds Cap. Will Be More Than MMF.	GUARANTEED RANGE At $2\frac{1}{2}$ Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
302-M	2 Pl.	120	15	$0.60
303-M	3 Pl.	320	65	.65
304-M	4 Pl.	500	100	.80
305-M	5 Pl.	690	180	.85
306-M	6 Pl.	880	265	.90
307-M	7 Pl.	1070	340	1.05
308-M	8 Pl.	1260	425	1.10
309-M	9 Pl.	1415	525	1.15
310-M	10 Pl.	1600	615	1.25
311-M	11 Pl.	1785	730	1.35
312-M	12 Pl.	1970	800	1.45
313-M	13 Pl.	2155	1000	1.50
314-M	14 Pl.	2340	1100	1.60
315-M	15 Pl.	2525	1200	1.70

Screw is insulated from top plate by mica washer. Above maximum capacity values are based on using 2 to 2¼ Mil Mica.

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE At Tight Cap. Will Be More Than MMF.	GUARANTEED RANGE At 2 Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
582	2 Pl.	80	7.5	$0.40
583	3 Pl.	160	19	.45
584	4 Pl.	240	50	.50

◄**TYPE 58** Padder is a single variable trimmer section provided with a two-pronged staple mounting for attachment to bracket or chassis. Base is made of lowest loss steatite and the mica is India Ruby.

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE At Tight Cap. Will Be More Than MMF.	GUARANTEED RANGE At 2 Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
502	2 Pl.	80	7.5	$0.60
503	3 Pl.	160	19	.70
504	4 Pl.	240	50	.80

◄**TYPE 50** Dual Padders provide two variable trimmers mounted on a single base. This unit is designed as a tuning component for I.F. transformers; and as such, may be snap-in mounted along with the transformer coil in any size shield having dimensions exceeding $1\frac{1}{16}$" x $1\frac{1}{16}$".

PART NUMBER	NUMBER OF PLATES	GUARANTEED RANGE At Tight Cap. Will Be More Than MMF.	GUARANTEED RANGE At 2 Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
602	2 Pl.	55	7	$0.50
603	3 Pl.	100	15	.60
604	4 Pl.	160	35	.70

▲**TYPE 60** Dual Padders provide two variable trimmers mounted on a single base. This unit is designed as a tuning component for I.F. transformers; and as such, may be snap-in mounted along with the transformer coil in any size shield having dimensions exceeding ¾" x ¾".

See page 7 for Mica Trimmer Capacitors

ARCO ELECTRONICS, INC.

EL-MENCO CAPACITORS

TYPE 46 TRIMMER

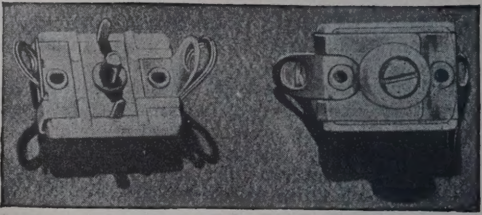
The base is made of the lowest dielectric loss ceramic material available and the mica is clear India Ruby.

The soldering lugs may be bent in any position without affecting capacity setting due to the rigid construction of adjusting plates.

El-Menco Trimming Condensers are treated for resistance to humidity and for permanence of capacity setting.

Trimmers shown here are standard sizes and capacities.

TYPE 46W		GUARANTEED RANGE		
NUMBER PART	PLATES NUMBER OF	At Tight Cap. Will Be More Than MMF.	At 2½ Turns Open Cap. Will Be Less Than MMF.	LIST PRICE
460	1¼ Pl.	15	1.5	$0.35
461	1¾ Pl.	30	2.7	.35
462	2 Pl.	80	5	.40
463	3 Pl.	180	9	.45
464	4 Pl.	280	25	.50
465	5 Pl.	380	50	.55
466	6 Pl.	480	80	.60
467	7 Pl.	580	110	.70
468	8 Pl.	680	140	.75
469	9 Pl.	780	170	.80



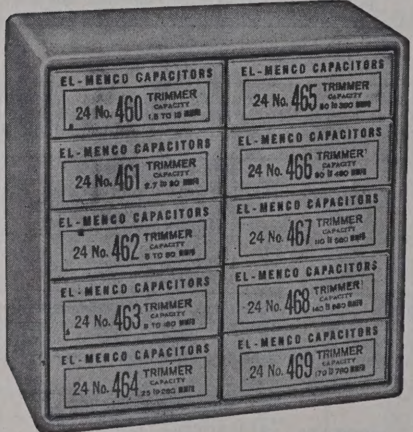
TYPE 46 TRIMMER ¾'' x ⅝''

Metal Mounting Brackets for these trimmers can be supplied from stock

	LIST PRICE
Bracket for mounting 2 Trimmers	$0.10
Bracket for mounting 3 Trimmers	.12
Bracket for mounting 4 Trimmers	.14
Bracket for mounting 5 Trimmers	.16
Bracket for mounting 6 Trimmers	.18

Type 46 Trimmer and Type 30 Padder Kits

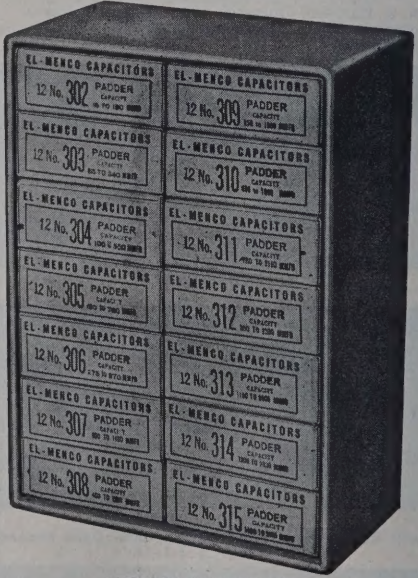
A complete stock of trimmers and padders is provided in these compact, easily handled, and readily accessible kits. Always have a full line of El-Menco trimmers and padders available for immediate use.


EL-MENCO CAPACITORS 24 No. 460 TRIMMER
EL-MENCO CAPACITORS 24 No. 461 TRIMMER
EL-MENCO CAPACITORS 24 No. 462 TRIMMER
EL-MENCO CAPACITORS 24 No. 463 TRIMMER
EL-MENCO CAPACITORS 24 No. 464 TRIMMER
EL-MENCO CAPACITORS 24 No. 465 TRIMMER
EL-MENCO CAPACITORS 24 No. 466 TRIMMER
EL-MENCO CAPACITORS 24 No. 467 TRIMMER
EL-MENCO CAPACITORS 24 No. 468 TRIMMER
EL-MENCO CAPACITORS 24 No. 469 TRIMMER

TYPE 46 TRIMMER KIT

Provides a capacity range from 1½ to 780 mmfd.
Twenty-four units of each size available in type 46 trimmers (see page 7).
The total list price for all units included in the kit is $115.20.
Yet you may have this complete kit for only

List Price Only $90.00*


EL-MENCO CAPACITORS 12 No. 302 PADDER
EL-MENCO CAPACITORS 12 No. 303 PADDER
EL-MENCO CAPACITORS 12 No. 304 PADDER
EL-MENCO CAPACITORS 12 No. 305 PADDER
EL-MENCO CAPACITORS 12 No. 306 PADDER
EL-MENCO CAPACITORS 12 No. 307 PADDER
EL-MENCO CAPACITORS 12 No. 308 PADDER
EL-MENCO CAPACITORS 12 No. 309 PADDER
EL-MENCO CAPACITORS 12 No. 310 PADDER
EL-MENCO CAPACITORS 12 No. 311 PADDER
EL-MENCO CAPACITORS 12 No. 312 PADDER
EL-MENCO CAPACITORS 12 No. 313 PADDER
EL-MENCO CAPACITORS 12 No. 314 PADDER
EL-MENCO CAPACITORS 12 No. 315 PADDER

TYPE 30 PADDER KIT

Provides a capacity range from 15 to 3055 mmfd.
(30M:15 to 2525 mmfd.)
Twelve units of each size available in type 30 or type 30M (see page 6).
The total list price for all units included in the kit is $163.20.
Yet you may have this complete kit for only

List Price Only $125.00*

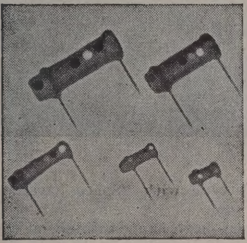
ARCO ELECTRONICS, INC.

EL-MENCO CAPACITORS

CERAMIC CAPACITORS

Use primarily for coupling and by-pass in RF and higher frequency circuits, ELMENCO ceramic capacitors are wax impregnated with low-loss phenolic coating. Insulation resistance far exceeds the 10,000 megohm minimum requirements. Voltage rating is 1500VDCT, 500VDCW. 90% relative humidity test for 100 hours. Radial leads are 1¼″ minimum No. 22 tinned copper wire.

SILVER HIGH "K" TUBULAR

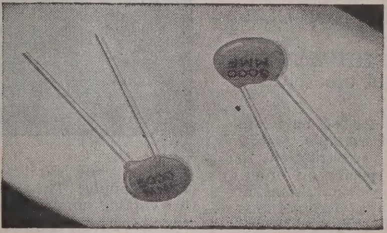


For general and higher frequency applications RMA Color Code. Tolerance ±20%.

See Note below for Lower Capacities.

TYPE DESIGNATION	CAP. MMF.	SIZE		LIST PRICE
		LENGTH	DIAM.	
CC-1-301	300	9/16″	.250″	$0.25
CC-1-401	400	9/16″	.250″	.25
CC-1-501	500	9/16″	.250″	.25
CC-2-751	750	3/4″	.250″	.25
CC-2-102	1000	3/4″	.250″	.25
CC-2-122	1200	3/4″	.250″	.25
CC-2-152	1500	3/4″	.250″	.25
CC-2-202	2000	3/4″	.250″	.25
CC-3-252	2500	11/16″	.350″	.30
CC-3-302	3000	11/16″	.350″	.30
CC-3-402	4000	11/16″	.350″	.35
CC-4-502	5000	1″	.350″	.40
CC-4-682	6800	1″	.350″	.40
CC-5-752	7500	1.20″	.350″	.45
CC-5-103	10000	1.20″	.350″	.50
CC-6-123	12000	1.325″	.350″	.50

SILVER HIGH "K" DISC



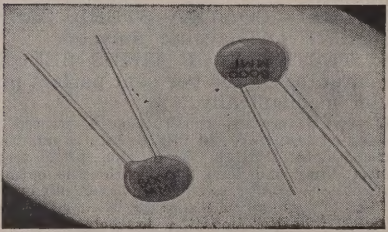
Reduced self-inductance due to flat design makes these units particularly adaptable to VHF applications.

Capacity and tolerance stamped on capacitor.

Maximum dimensions:
.575″ diameter
.150″ thickness

TYPE DESIGNATION	CAP. MMF.	LIST PRICE (MIN. GUAR. CAP.)	LIST PRICE (±20% TOL.)
CCD-102	1000	$0.25	$0.30
CCD-152	1500	.25	.30
CCD-202	2000	.25	.30
CCD-272	2700	.25	.35
CCD-332	3300	.25	.35
CCD-392	3900	.25	.35
CCD-472	4700	.25	.35
CCD-502	5000	.25	.40
CCD-682	6800	.25	.45
CCD-822	8200	.30	.50
CCD-103	10000	.30	.50
CCD-123	12000	.40	
CCD-153	15000	.40	
CCD-203	20000	.40	

N-750 DISC



Negative temperature coefficient ceramics for compensation and reduction of temperature drift.

Capacity and tolerance stamped on capacitor.

Maximum dimensions:
.575″ diameter
.150″ thickness

TYPE DESIGNATION	CAP. MMF.	LIST PRICE (±20% TOL.)	LIST PRICE (±10% TOL.)
CCDN-470	47	$0.40	$0.50
CCDN-560	56	.40	.50
CCDN-620	62	.40	.50
CCDN-680	68	.40	.50
CCDN-750	75	.40	.50
CCDN-820	82	.40	.50
CCDN-101	100	.40	.50
CCDN-121	120	.40	.50
CCDN-151	150	.40	.50

FOR USE AS SUBSTITUTES FOR LOW CAPACITY GENERAL PURPOSE CERAMICS:

Our type CM15 miniature silvered mica capacitors are now available ±20% tolerance. These units are comparable in size to ceramics and have the highly stable characteristics of silvered mica capacitors. SEE PAGE 2 FOR PHYSICAL AND ELECTRICAL SPECIFICATIONS.

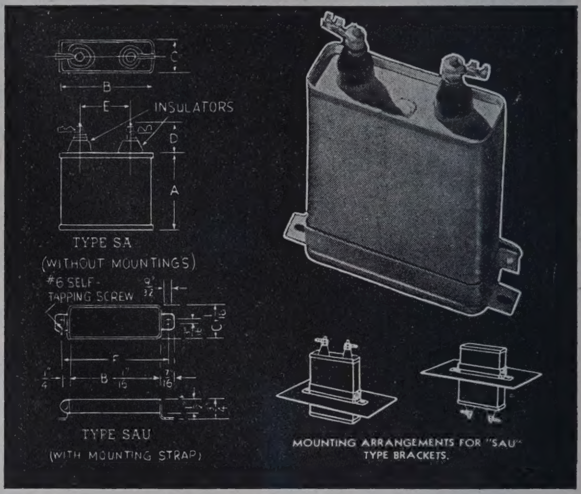
PRICES:

All JAN capacity values from 10 to 180 mmf (±20% tolerance)	$0.25 list
All JAN capacity values from 200 to 250 mmf (±20% tolerance)	0.30 list

INDUSTRIAL CONDENSER

INDUSTRIAL CONDENSER CORPORATION

TYPE "SA" OIL FILLED



1. INCCO OIL "A" IMPREGNATED AND FILLED—permitting efficient operation over widest range of temperatures.
2. HERMETICALLY SEALED CASE—is unaffected by time, humidity, or operating temperatures.
3. Use of HIGHEST GRADE CONDENSER TISSUES insures a long uninterrupted life.
4. HIGH-GLAZE PORCELAIN INSULATORS—insure low moisture absorption and high terminal to case flash over.
5. CONSERVATIVELY RATED—SAFE FOR CONTINUOUS OPERATION AT 10 PER CENT OVERLOAD.
6. Use of "SPACE SAVER" UNIVERSAL MOUNTING BRACKET provides adjustable capacitor heights.
7. LEAD COATED STEEL CASE—IS NON-CORROSIVE and lacquer finished.
8. TESTED FOUR TIMES BEFORE SHIPMENT—guarantees a 100 per cent perfect product electrically and mechanically.

If riveted terminal construction is wanted in place of porcelain stand-off insulators add "R" to catalog number. For example, 6SA50 changes to 6SAR50. Submersion proof terminal construction to meet Army and Navy Specifications is optional; specify on order. Standard capacity tolerance plus or minus 10 per cent. Mounting brackets supplied in accordance with following catalog designations: **TYPE SA**—No mounting brackets. **TYPE SAU**—"Space Saver" universal bracket. **TYPE SAJ**—Soldered vertical mounting bracket. **Type SAL**—Reversible mounting foot bracket. **TYPE SAH**—Reversible spade bolt bracket.

For example: The 8mfd. 600V. type with "Space Saver" bracket has catalog number 6SAU800.

NOTE: To facilitate delivery we have standardized on container heights. In many cases units can be supplied in shorter containers if required.

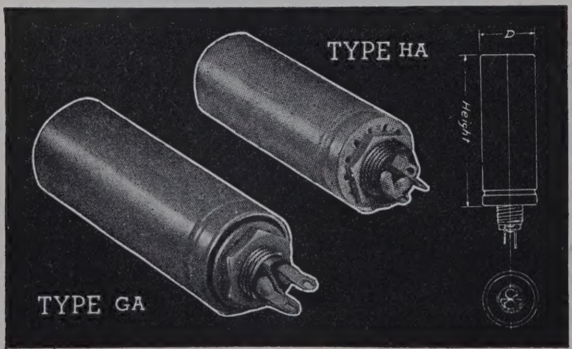
Cat. No.	Cap. Mfd.	A	B	C	D	E	F	H	List Price
600 V.D.C. WORKING									
6SA50	.5	2⅞	1 13/16	1 1/16	⅞	¾	2¼	2¼	$4.55
6SA100	1.0	2⅞	1 13/16	1 1/16	⅞	¾	2¼	2¼	5.85
6SA200	2.0	2⅞	1 13/16	1 1/16	⅞	¾	2¼	2¼	7.10
6SA400	4.0	4⅛	2½	1 3/16	⅞	1⅛	3	3	9.20
6SA600	6.0	4¾	2½	1 3/16	⅞	1⅛	3	3	11.30
6SA800	8.0	4	3¾	1¼	⅞	2	4⅜	4⅜	13.35
6SA1000	10.0	4¾	3¾	1¼	⅞	2	4⅜	4⅜	15.00
1000 V.D.C. WORKING									
10SA10	.1	2⅞	1 13/16	1 1/16	⅞	¾	2¼	2¼	4.20
10SA25	.25	2⅞	1 13/16	1 1/16	⅞	¾	2¼	2¼	4.55
10SA50	.5	2⅞	1 13/16	1 1/16	⅞	¾	2¼	2¼	5.00
10SA100	1.0	2⅞	1 13/16	1 1/16	⅞	¾	2¼	2¼	6.25
10SA200	2.0	4	1 13/16	1 1/16	⅞	¾	2¼	2¼	8.35
10SA400	4.0	4¾	2½	1 3/16	⅞	1⅛	3	3	10.45
10SA600	6.0	4¾	3¾	1¼	⅞	2	4⅜	4⅜	14.05
10SA800	8.0	4¾	3¾	1¼	⅞	2	4⅜	4⅜	15.00
10SA1000	10.0	4¾	3¾	1¾	⅞	2	4⅜	4⅜	16.70
1500 V.D.C. WORKING									
15SA50	.5	2⅞	1 13/16	1 1/16	⅞	¾	2¼	2¼	6.25
15SA100	1.0	4	1 13/16	1 1/16	⅞	¾	2¼	2¼	7.55
15SA200	2.0	4⅛	2½	1 3/16	⅞	1⅛	3	3	10.45
15SA400	4.0	4¾	3¾	1¼	⅞	2	4⅜	4⅜	13.90
15SA600	6.0	4¾	3¾	1¾	⅞	2	4⅜	4⅜	17.05
2000 V.D.C. WORKING									
20SA10	.1	2⅞	1 13/16	1 1/16	⅞	¾	2¼	2¼	6.65
20SA25	.25	2⅞	1 13/16	1 1/16	⅞	¾	2¼	2¼	7.10

Cat. No.	Cap. Mfd.	A	B	C	D	E	F	*G	H	List Price
2000 V.D.C. WORKING										
20SA50	.5	2⅞	1 13/16	1 1/16	⅞	1⅛	3		3	$7.55
20SA100	1.0	4⅛	2½	1 3/16	⅞	2	4⅜		4⅜	9.20
20SA200	2.0	4	3¾	1¼	⅞	2	4⅜		4⅜	10.85
20SA400	4.0	4¼	3¾	2¼	⅞	2	4⅜	2	4⅜	15.00
20SA600	6.0	4¾	3¾	3 3/16	⅞	¾	2¼		2¼	19.65
2500 V.D.C. WORKING										
25SA50	.5	4	3¾	1¼	1¼	2	4⅜		4⅜	11.70
25SA100	1.0	3¼	3¾	1¾	1¼	2	4⅜		4⅜	13.35
25SA200	2.0	4¾	3¾	1¾	1¼	2	4⅜		4⅜	21.55
25SA400	4.0	4¼	3¾	4 9/16	1¼	2	4⅜	3⅜	4	29.90
3000 V.D.C. WORKING										
30SA10	.1	2⅝	2½	1 3/16	1¼	1⅛	3		3	13.90
30SA25	.25	3⅜	2½	1 3/16	1¼	1⅛	3		3	15.00
30SA50	.5	4⅛	2½	1 3/16	1¼	1⅛	3		3	16.70
30SA100	1.0	4¼	3¾	2¼	1¼	2	4⅜		4⅜	20.10
30SA200	2.0	4¾	3¾	3 3/16	1¼	2	4⅜	2	4⅜	25.10
4000 V.D.C. WORKING										
40SA10	.1	2¾	3¾	2¼	1¼	2	4⅜		4⅜	25.10
40SA25	.25	2¾	3¾	2¼	1¼	2	4⅜		4⅜	26.45
40SA50	.5	4¼	3¾	2¼	1¼	2	4⅜		4⅜	29.90
40SA100	1.0	5	3¾	2¼	1¼	2	4⅜		4⅜	36.75
5000 V.D.C. WORKING										
50SA50	.5	4¼	3¾	2¼	1¼	2	4⅜		4⅜	33.45
50SA100	1.0	4¼	3¾	4 9/16	1¼	2	4⅜	3⅜	4⅜	41.80
6000 V.D.C. WORKING										
60SA50	.5	7	3¾	3 3/16	2 5/16	1⅞	4⅜	2	4⅜	51.64
60SA100	1.0	6½	3¾	4 9/16	2 5/16	2	4⅜	3⅜	4⅜	83.55

* Where G dimension is given, two spade lugs or mountings holes are supplied on each bracket.

TYPES "GA" and "HA" OIL FILLED

These inverted mounting capacitors fill a definite need where chassis space is the prime factor.



Types "GA" and "HA" are INCCO Oil "A" impregnated and filled. The case is a one-piece metal extrusion with a "locked-in" molded neck. This construction meets and surpasses the Army and Navy requirements for a submersion-proof capacitor.

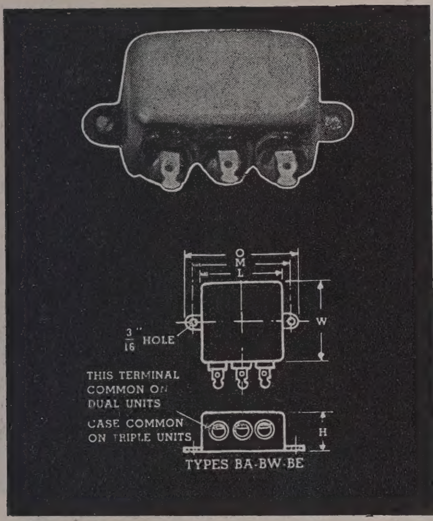
Type "GA" is available in the twelve standard ratings listed below, but can also be supplied in other capacities and/or voltages to manufacturers' specifications.

In the standard "GA" and "HA" types the container is insulated. A grounding lug can be supplied for connecting one terminal to the case. Fiber washer for insulating container from chassis, when case is grounded, and insulating cover for insulating the container from adjacent equipment, can also be supplied on special order.

Catalog Number	Cap. Mfd.	Working V.D.C.	Case Size Dia.	Case Size Height	Size of Mounting Neck	List Price
6GA200	2	600	1½	2⅞	¾" x 16 thread	$4.55
6GA300	3	600	1½	3¾	¾" x 16 thread	5.45
6GA400	4	600	1½	4½	¾" x 16 thread	6.25
6GA800	8	600	2	4¾	1" x 14 thread	9.60
6GA2X400	4-4	600	2	4¾	1" x 14 thread	10.10
10GA100	1	1000	1½	2⅞	¾" x 16 thread	..4.20
10GA200	2	1000	1½	4½	¾" x 16 therad	5.45
10GA400	4	1000	2	4½	1" x 14 thread	8.00
10GA2X200	2-2	1000	2	4½	1" x 14 thread	8.60
15GA50	0.5	1500	1½	2⅞	¾" x 16 thread	5.00
15GA100	1	1500	1½	4½	¾" x 16 thread	5.45
15GA200	2	1500	2	4½	1" x 14 thread	7.75

INDUSTRIAL CONDENSER CORPORATION

CONDENSER


O
M
L
W
3/16" HOLE
THIS TERMINAL COMMON ON DUAL UNITS
CASE COMMON ON TRIPLE UNITS
H
TYPES BA-BW-BE

DRY ELECTROLYTICS

Type "B" electrolytic capacitor is the first commercially available unit of this type with the reliability of the total submersion type, oil filled capacitors.

Wound with the highest purity aluminum foil and cellulose separators available; impregnated in electrolyte having excellent temperature characteristics, these units will outlive their associated equipment.

Cat. No.	Cap. in Mfds.	Volts	Dimen. in Inches L	W	H	M	List Price
52BE10	10	25	1 13/16	1	13/16	2⅛	$2.70
52BE25	25	25	1 13/16	1	13/16	2⅛	2.70
52BE50	50	25	1 13/16	1	13/16	2⅛	2.80
05BE10	10	50	1 13/16	1	13/16	2⅛	2.75
05BE25	25	50	1 13/16	1	13/16	2⅛	2.75
05BE50	50	50	1 13/16	1	13/16	2⅛	3.00

Built to U. S. Signal Corps and Navy Specifications

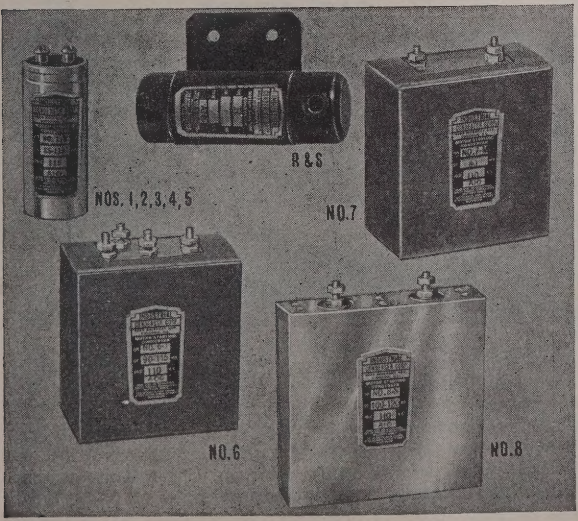
TYPE "BA" OIL FILLED

1. INCCO OIL "A" permits efficient operation of these compact units over the widest range of temperature.
2. The use of the HIGHEST GRADE CONDENSER TISSUE insures greater safety factor and longer life.
3. Specially PROCESSED RIVETED TERMINALS are designed to withstand total submersion in salt water and changes in temperature from 50° below zero Centigrade to 90° above zero Centigrade without loosening or losing their integrity.
4. CONDENSER MOUNTINGS form an integral part of these drawn shell containers insuring permanent and rigid fastenings.
5. All units are NON-INDUCTIVELY WOUND providing efficient operation over the widest range of frequencies.
6. HERMETICALLY SEALED, they are unaffected by time, temperature or humidity.
7. CONSERVATIVELY RATED for safe and continuous uninterrupted operation at 10% above rated voltage for the lifetime of associated equipment.
8. Tested at twice the rated voltage between terminals and twice the rated voltage plus 1000 from each terminal to case.

Cat. No.	Cap. in MFDS.	Dimensions in Inches L	W	H	M	O	List Price
		600 V. D. C. WORKING					
6BA05	.05	1 13/16	1	13/16	2⅛	2½	$2.85
6BA10	.1	1 13/16	1	13/16	2⅛	2½	2.90
6BA25	.25	1 13/16	1	13/16	2⅛	2½	3.10
6BA50	.5	1 13/16	1	⅞	2⅛	2½	3.30
6BA100	1.0	2	1¾	⅞	2⅜	2¾	3.75
6BA0505	.05-.05	1 13/16	1	13/16	2⅛	2½	3.65
6BA11	.1-.1	1 13/16	1	13/16	2⅛	2½	3.70
6BA22	.25-.25	2	1¾	⅞	2⅜	2¾	3.75
6BA55	.5-.5	2	1¾	⅞	2⅜	2¾	4.30
6BA111	.1-.1-.1	1 13/16	1	13/16	2⅛	2½	4.20
6BA200	2	2	2	1⅛	2⅜	2 13/16	5.00
		1000 V. D. C. WORKING					
10BA05	.05	1 13/16	1	13/16	2⅛	2½	3.05
10BA10	.1	1 13/16	1	13/16	2⅛	2½	3.15
10BA25	.25	1 13/16	1	13/16	2⅛	2½	3.25
10BA50	.5	2	1¾	⅞	2⅜	2¾	3.50
10BA100	1.0	2	2	1⅛	2⅜	2 13/16	4.40
10BA0505	.05-.05	1 13/16	1	13/16	2⅛	2½	3.85
10BA11	.1-.1	1 13/16	1	13/16	2⅛	2½	3.95
10BA22	.25-.25	2	1¾	⅞	2⅜	2¾	4.20

Above units also available in 200 V. D. C., 400 V. D. C. and 1500 V. D. C. on request.

NOTICE—Most units are available with TERMINALS ON TOP, BOTTOM, OR ENDS. When ordering, add "T" for top terminals, "B" for terminals on bottom, or "E" for end terminals, i.e., 6BAT100 for terminals on top. Type "B" also available in WAX FILLED. When ordering, change catalog number A to W, i.e., 6BW100. If terminal position is not designated, side terminals are furnished. STANDARD CAPACITY tolerance of plus 20 per cent minus 10 per cent furnished on oil filled and wax filled units unless otherwise specified when ordering. Can be furnished in plus or minus 1 per cent capacity tolerance on special request.



MOTOR STARTING CONDENSERS

These motor starting condensers are all heavy duty three second start. Built of the finest materials obtainable, these capacitors are engineered to the Nth degree of perfection. They are used by all the leading manufacturers of high quality motors.

The listings shown will take care of 90% of all your replacement requirements.

Number	Size. Inches	Capacity	List Price
MS145	1⅜ Dia. x 3¼	45 - 70	$2.10
MS170	1⅜ Dia. x 3¼	70 - 85	2.30
MS185	1⅜ Dia. x 3¼	85 - 115	2.60
MS1108	1⅜ Dia. x 3¼	108 - 120	2.85
MS1120	1⅜ Dia. x 3¼	120 - 150	2.95
MS1145	1⅜ Dia. x 3¼	145 - 162	3.20
MS1161	1⅜ Dia. x 3¾	161 - 190	3.25
MS1191	1⅜ Dia. x 3¾	191 - 240	3.90
MS285	1½ Dia. x 3¾	85 - 115	2.75
MS2120	1½ Dia. x 3¾	120 - 150	3.00
MS3161	2 Dia. x 4⅛	161 - 190	3.50
MS3191	2 Dia. x 4⅛	191 - 240	3.85
MS3218	2 Dia. x 4⅛	218 - 262	4.05
MS3234	2 Dia. x 4⅛	234 - 286	4.50
MS3245	2 Dia. x 4⅛	245 - 300	4.70
MS3324	2 Dia. x 4⅛	324 - 389	5.40
MS690	3½ x 4 x 2	90 - 115	3.35
MS6124	3½ x 4 x 2	124 - 138	3.80
MS6145	3½ x 4 x 2	145 - 162	4.50
R	Mounting Bracket for 1⅜ x 3¼		.95
S	Mounting Bracket for 2 x 4⅛		1.15

SEND FOR BULLETIN No. 1075 WHICH LISTS OUR OIL FILLED MOTOR RUNNING CAPACITORS

INDUSTRIAL CONDENSER

INDUSTRIAL CONDENSER CORPORATION

CAPACITORS TO 250,000 V.D.C.W.

INCCO OIL "A" IMPREGNATED AND FILLED assures smaller size, low power factor, and widest range of operating temperatures.

ELECTRIC ARC WELDED HEAVY GAUGE HOT TINNED STEEL CASES are non-corrosive—finished in durable lacquer.

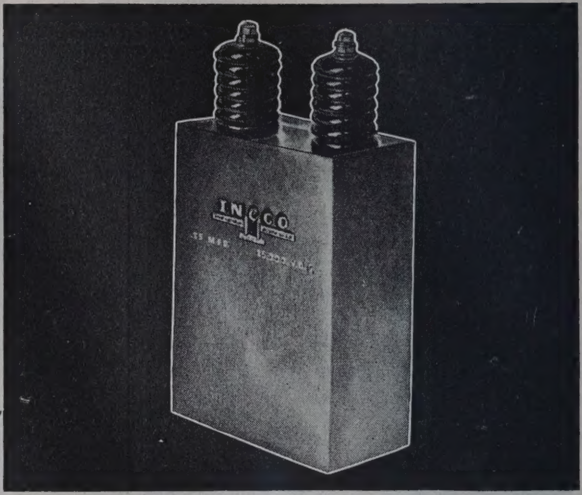
GLAZED WET-PROCESS PORCELAIN INSULATORS—low moisture absorption and high terminal to case flash over.

WOUND WITH HIGHEST GRADE CONDENSER TISSUES—insures a long, uninterrupted life.

CONSERVATIVELY RATED—Safe for continuous operation at 10 per cent overload.

HERMETICALLY SEALED STEEL CASE — unaffected by time, humidity or operating temperatures.

AVAILABLE TO MEET U. S. SIGNAL CORPS AND NAVY SALT WATER SUBMERSION REQUIREMENTS.



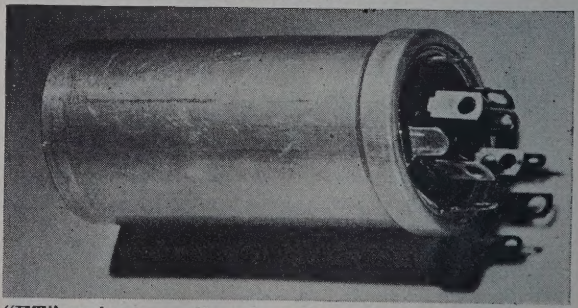
TYPE "WA" — HIGH VOLTAGE OIL FILLED CAPACITORS

Cat. No.	Cap. Mfd.	Case Dimensions in Inches Width	Length	Height	List Price
6,000 V. D. C. WORKING					
60WA200	2.	4	8	11	$140.00
60WA400	4.	4	12	11	172.00
60WA500	5.	4	12	11	195.00
60WA600	6.	4	12	13	218.00
60WA1000	10.	6	12	13	273.00
7,500 V. D. C. WORKING					
75WA50	.5	4	8	11	78.00
75WA100	1.	4	8	11	101.00
75WA200	2.	4	8	11	156.00
75WA400	4.	4	12	13	234.00
75WA600	6.	6	12	13	281.00
10,000 V. D. C. WORKING					
100WA100	1.	4	8	11	203.00
100WA200	2.	4	8	13	257.00
100WA400	4.	6	12	13	312.00
100WA500	5.	6	12	13	343.00
12,500 W. D. C. WORKING					
125WA50	.5	4	8	11	172.00
125WA100	1.	4	12	11	218.00
125WA200	2.	6	12	13	273.00
125WA500	5.	9½	12	15	515.00
15,000 V. D. C. WORKING					
150WA25	.25	4	8	11	$164.00
150WA50	.5	4	12	11	195.00
150WA100	1.	4	12	13	273.00
150WA200	2.	9½	12	15	359.00
150WA300	3.	9½	12	15	491.00
20,000 V. D. C. WORKING					
200WA25	.25	4	8	11	195.00
200WA50	.5	4	12	11	250.00
200WA100	1.	6	12	13	335.00
200WA150	1.5	9½	12	15	452.00
200WA200	2.0	9½	12	15	538.00
25,000 V. D. C. WORKING					
250WA20	.2	4	12	11	203.00
250WA25	.25	4	12	11	273.00
250WA50	.5	6	12	13	296.00
250WA100	1.	9½	12	15	445.00
50,000 V. D. C. WORKING					
500WA25	.25	6	13½	16¾	*
500WA50	.5	7¼	18	20	*
80,000 V. D. C. WORKING					
800WA25	.25	7¼	18	20	*
100,000 V. D. C. WORKING					
1000WA20	.2	7¼	18	20	*

* Prices on application.

ET SERIES ELECTROLYTIC CAPACITORS

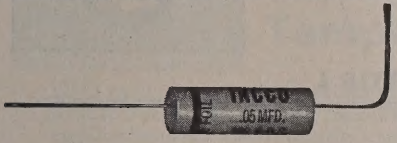
Catalog Number	Cap. Mfd.	D.C. Voltage Working	D.C. Voltage Surge	Dim. in Ins. Diam.	Dim. in Ins. Lg.	List Price
52ET100	100	25	35	1	2	$1.60
15ET30	30	150	225	1	2	1.55
15ET50	50	150	225	1	2	1.65
45ET10	10	450	550	1	2	1.55
45ET15	15	450	550	1	2	1.70
45ET20	20	450	550	1	2½	1.80
45ET30	30	450	550	1	3	1.95
15ET2x20	20-20	150	225	1	2	1.70
15ET2x30	30-30	150	225	1	2	1.85
15ET2x50	50-50	150	225	1	3	2.15
30ET2x15	15-15	300	400	1	2	1.90
35ET3020	30-20	350	450	1	3	2.60
45ET2x10	10-10	450	550	1	2½	1.90
45ET2x20	20-20	450	550	1⅜	2½	2.55
ET100	30-20/20	150/25	225/35	1	2	2.25
ET101	40-30/20	150/25	225/35	1	2½	2.35
15ET3x20	20-20-20	150	225	1	2	2.30
ET102	40-20-20	150	225	1	2½	2.40
15ET3x40	40-40-40	150	225	1	3	2.60
ET103	10-10/25	450/25	550/35	1	3	2.40
45ET3x10	10-10-10	450	550	1	3	2.60



"ET" series capacitors have been designed for ease in installation and reliability. They are constructed to withstand the most severe operating conditions encountered in industrial and electronic equipment. Especially controlled manufacturing processes insure that the equipment in which these capacitors are used will function without interruption. Capacitors can be supplied for operation at temperatures ranging from minus 40 to plus 85 degrees Centigrade. Mounting is effected by inserting the capacitor through the slots in either the chassis or mounting plate, and twisting the mounting prongs 90 degrees.

INDUSTRIAL — INDUSTRIAL CONDENSER CORPORATION — CONDENSER

TUBULAR PAPER CONDENSERS



TYPE PT

INDUSTRIAL By-Pass Capacitors are non-inductively wound and designed for maximum efficiency up to the highest frequencies. The units themselves are completely impregnated and sealed with a special non-hygroscopic sealing compound, thus preventing moisture penetration under the most humid conditions.

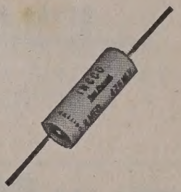
Catalog Number	Capacity Mfd.	Working Volts D.C.	List Price
PT100	.0001	1000	$0.45
PT101	.00025	1000	.45
PT102	.0005	1000	.45
PT103	.001	1000	.45
PT104	.002	1000	.45
PT105	.005	1000	.45
PT106	.006	1000	.45
PT107	.01	1000	.45
PT131	.001	600	.23
PT132	.002	600	.23
PT133	.005	600	.23
PT134	.006	600	.23
PT135	.01	600	.27
PT136	.02	600	.27
PT137	.03	600	.32
PT130	.04	600	.32
PT138	.05	600	.36
PT139	.1	600	.41
PT140	.25	600	.50
PT141	.5	600	.72
PT142	1.0	600	1.13
PT170	.01	400	.23
PT171	.02	400	.23
PT172	.05	400	.27
PT173	.1	400	.32
PT174	.25	400	.41
PT175	.5	400	.54
PT176	1.0	400	1.00
PT200	.02	200	.30
PT201	.05	200	.30
PT202	.1	200	.35
PT203	.25	200	.40
PT204	.5	200	.60
PT205	1.0	200	.90
PT260*	.005	2000	.65
PT261*	.0075	2000	.75
PT262*	.01	2000	.75
PT263*	.02	2000	.85
PT264	.015-.015	1600	.80

*Vibrator Capacitor

MIGHTY MIDGET METAL TUBULAR TYPE "MM"

Catalog Number	Cap. Mfd.	W.V.	Peak Volts	Dimen. Dia. L.	List Price
MM406	100	10	15	11/16 x 1 11/16	$1.20
MM407	250	10	15	13/16 x 2 3/16	1.45
MM408	500	10	15	1 1/16 x 2 3/16	2.30
MM409	750	10	15	1 1/16 x 2 11/16	3.00
MM400	5	25	35	11/16 x 1 11/16	1.00
MM401	10	25	35	11/16 x 1 11/16	1.00
MM402	25	25	35	11/16 x 1 11/16	1.00
MT403*†	10-10	25	35	11/16 x 2 ⅜	1.40
MM410	250	25	35	15/16 x 2 3/16	1.70
MM411	500	25	35	1 1/16 x 2 11/16	2.30
MM404	10	50	75	11/16 x 1 11/16	1.00
MM405	25	50	75	11/16 x 1 11/16	1.05
MM412	100	50	75	13/16 x 2 3/16	1.40
MM413	200	50	75	1 1/16 x 2 3/16	2.00
MM414	300	50	75	1 1/16 x 2 11/16	2.75
MM360	8	150	225	11/16 x 1 11/16	1.05
MM368	12	150	225	11/16 x 1 11/16	1.10
MM361	16	150	225	11/16 x 1 11/16	1.15
MM362	20	150	225	11/16 x 2 3/16	1.20
MM369	30	150	225	13/16 x 2 3/16	1.30
MM363	40	150	225	13/16 x 2 3/16	1.35
MM373	60	150	225	1 1/16 x 2 3/16	1.50
MM374	80	150	225	1 1/16 x 2 3/16	1.60
MM370†	20-20	150	225	15/16 x 2 3/16	1.65
MM375†	30-30	150	225	1 1/16 x 2 3/16	1.80
MM376†	40-40	150	225	1 1/16 x 2 3/16	1.85
MM364	4	475	600	11/16 x 1 11/16	1.15
MM365	8	475	600	13/16 x 2 3/16	1.25
MM371	12	475	600	15/16 x 2 5/16	1.35
MM366	16	475	600	15/16 x 2 3/16	1.40
MM372	20	475	600	1 1/16 x 2 3/16	1.60
MM367†	8-8	475	600	1 1/16 x 2 3/16	1.70

*In cardboard tube with wax filled ends.
†3 leads.



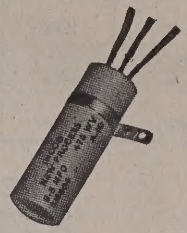
Type MM

An extremely popular type of condenser due to its exceptional high quality and midget size. Hermetically sealed in a small metal case and scientifically vented, to protect against adverse operating conditions of voltage, temperature and humidity. Container is insulated by a high grade tube which is spun over the ends of the can to eliminate shorts when wires are bent close to container. Easily mounted by their rigid wire leads.

"SM" TYPE

Catalog Number	Cap. Mfd.	W.V.	Peak Volts	Dimen. Dia. L.	List Price
SM605*	20-20	150	225	15/16 x 2½	$1.40
SM606†	20-20	150	225	1 x 2½	2.15
SM601*	30-30	150	225	15/16 x 3	1.55
SM608*	40-40	150	225	1 x 3	1.75
SM607*	50-30	150	225	1 x 3	1.75
SM609†	30-20-20	150	225	1 x 3	2.05
SM604*	8-8	475	600	1 x 3	2.00
SM610*	40-20	150	225	15/16 x 3	1.55

*SM605, SM601, SM608, SM607, SM610: 3 leads.
†SM606, SM609: 4 leads.



Type SM

Type "SM" units are embedded in a high temperature wax and then sealed in a thoroughly impregnated cardboard tube, affording complete immunity to moisture penetration. New high voltage formation gives complete protection against surges and high peak voltages. The addition of the strap mounting bracket has proved favorable in its use due to its wide application in AC-DC and portable sets in the replacement field. The strap can be moved to the best mounting position and then bolted or soldered. Supplied with color-coded, Underwriters' Approved, rubber covered leads.

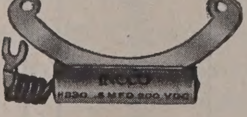
RADIO INTERFERENCE ELIMINATORS

INDUSTRIAL CONDENSER CORP. has made a special study of the suppression of noises caused by fluorescent lighting. No. 7249 capacitor is designed with three leads, two leads to be connected across the 110 volt line and the single lead to be grounded. No. 4219 is housed in a metal container and is self grounding. It is supplied with strap mounting for easy installation. No. 4252 is a flat type unit designed to mount on the ballast support of circline ballasts. The convenient mounting flap grounds the unit when the stem of the lamp is placed through the mounting hole.

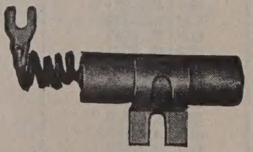
Catalog Number	Dimensions in Inches	List Price
7249	21/32 x 1⅜	$1.30
4219	¾ x 2	1.75
4252	2⅛ x ⅝ x 11/32	1.95

AUTO GENERATOR CONDENSER

ALSO AVAILABLE IN HERMETICALLY SEALED SUBMERSION-PROOF CONSTRUCTION



TYPE F



TYPE G

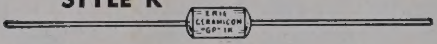
Completely enclosed in a metal container to overcome severe operating conditions of temperature and humidity. Sturdily built to withstand constant vibration.

Cat. No.	Cap. Mfd.	List Price	Cat. No.	Cap. Mfd.	List Price
G325	.25	$0.77	G328	1.0	$1.15
G326	.5	.85	F330	.5	1.06

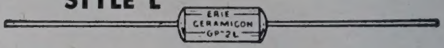
ERIE RESISTOR CORPORATION—ERIE, PA.

ERIE CERAMICONS®

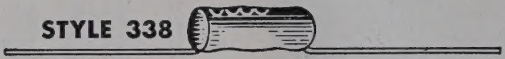
STYLE K



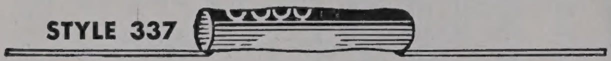
STYLE L



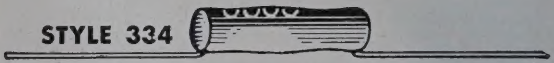
STYLE 338



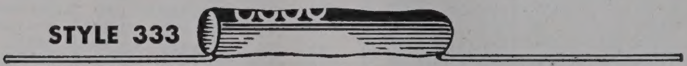
STYLE 337



STYLE 334



STYLE 333



DIMENSION SPECIFICATION CHART

Style	Length	Diameter	Leads	Insulation
K	.562″	.250″	Axial 1¼″ Min.	Molded
L	.812″	.250″	Axial 1¼″ Min.	Molded
338	.550″	.312″	Radial 1¼″ Min.	Dipped

Style	Length	Diameter	Leads	Insulation
337	.937″	.312″	Radial 1¼″ Min.	Dipped
334	1.213″	.415″	Radial 1¼″ Min.	Dipped
333	1.250″	.315″	Radial 1¼″ Min.	Dipped

ERIE CERAMICONS* are small fixed capacitors consisting essentially of a ceramic dielectric with silver electrodes which are fired on at a very high temperature. Erie Ceramicons are outstanding because of their excellent high frequency characteristics, small size, rugged construction and availability in a wide range of capacity values.

"GP" GENERAL PURPOSE CERAMICONS are ideally suited for such applications as coupling and by-passing, in circuits where temperature coefficient is not important—in other words for all receiver applications *except* in frequency determining circuits. Working voltage—500 volts D. C. Use Erie "GP" Ceramicons as replacements for molded mica and paper tubular capacitors.

ORDER BY PART NUMBER FROM TABLE BELOW

Part No.	Capacity (MMF)	List
GP1K-050	5	.25
GP1K-100	10	.25
GP1K-120	12	.25
GP1K-150	15	.25
GP1K-180	18	.25
GP1K-200	20	.25
GP1K-220	22	.25
GP1K-240	24	.25
GP1K-250	25	.25
GP1K-270	27	.25
GP1K-300	30	.25
GP1K-330	33	.25
GP1K-390	39	.25
GP1K-470	47	.25
GP1K-500	50	.25
GP1K-510	51	.25
GP1K-560	56	.25
GP1K-680	68	.25
GP1K-750	75	.25
GP1K-820	82	.25
GP1K-101	100	.25
GP2K-121	120	.25
GP2K-151	150	.25
GP2K-181	180	.25
GP2K-201	200	.25
GP2K-221	220	.25
GP2K-241	240	.25
GP2K-251	250	.25
GP2K-271	270	.25

Part No.	Capacity (MMF)	List
GP2K-301	300	.25
GP2K-331	330	.25
GP2K-361	360	.25
GP2K-391	390	.25
GP2K-471	470	.25
GP2K-501	500	.25
GP2K-511	510	.25
GP2K-561	560	.25
GP2K-681	680	.25
GP2L-751	750	.25
GP2L-102	1,000	.25
GP2L-122	1,200	.25
GP2L-152	1,500	.25
GP2-333-182	1,800	.25
GP2-333-202	2,000	.25
GP2-333-222	2,200	.25
GP2-333-252	2,500	.25
GP2-333-272	2,700	.25
GP2-333-302	3,000	.25
GP2-333-332	3,300	.25
GP2-333-402	4,000	.25
GP2-333-472	4,700	.25
GP2-333-502	5,000	.25
GP2-333-562	5,600	.25
GP2-333-602	6,000	.25
GP2-333-682	6,800	.25
GP2-333-752	7,500	.25
GP2-333-103	10,000	.25

Note: All GP values supplied in standard ± 20% tolerance.

ERIE RESISTOR CORPORATION—ERIE, PA.

NPO Zero Temperature Coefficient CERAMICONS®

NPO zero temperature coefficient Ceramicons are highly recommended for frequency determining applications where no capacity change with change in temperature is desired. "Q" for NPO Ceramicons above 30 mmf is 1000 or higher. Below 30 mmf "Q" decreases slightly as capacity decreases. Working voltage—500 volts D.C. Can be used as replacements for silver mica condensers.

ORDER BY PART NUMBER FROM TABLE BELOW

Part No.	Capacity (MMF)	List
NPOK-1R5	1.5	.50
NPOK-2R2	2.2	.50
NPOK-030	3	.50
NPOK-3R3	3.3	.50
NPOK-4R7	4.7	.50
NPOK-050	5	.50
NPOK-6R8	6.8	.50
NPOK-8R2	8.2	.50
NPOK-100	10	.50

Part No.	Capacity (MMF)	List
NPOK-200	20	.50
NPOL-250	25	.50
NPOL-330	33	.50
NPO-333-500	50	.55
NPO-333-750	75	.55
NPO-333-101	100	.55
NPO-334-151	150	.60
NPO-334-1750	175	.60

Note: Standard tolerance supplied is ± 10%

Negative Temperature Coefficient CERAMICONS

N080 and N750 units provide temperature compensation to eliminate drift. Positive and Negative Temperature Coefficient Ceramicons P100 through N1400 are available on special order through your distributor.

ORDER BY PART NUMBER FROM TABLE BELOW

ERIE TUBULAR TYPE N750 CERAMICONS

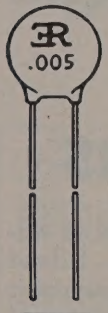
Part No.	Capacity (MMF)	List
N750K-050	5	.50
N750K-100	10	.50
N750K-470	47	.50
N750L-750	75	.50
N750L-101	100	.50

ERIE TUBULAR TYPE N080 CERAMICONS

Part No.	Capacity (MMF)	List
N080-331-100	10	.60
N080-331-220	22	.60
N080-338-330	33	.60
N080-338-470	47	.60
N080-338-620	62	.60

Note: Standard tolerance supplied is ± 10%

ERIE DISC and PLATE CERAMICONS

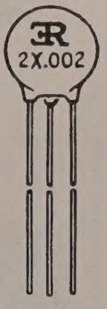


STYLE 811

Erie Disc and Plate Ceramicons consist of a flat Hi-K* ceramic dielectric with silver fired onto the dielectric. Lead wires are firmly soldered to the silver electrodes, and the unit is given a protective coating of phenolic. Very efficient at high frequencies.

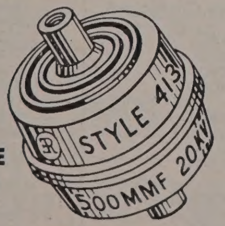
ORDER BY PART NUMBER FROM TABLE BELOW

Part No.	Size	Value (MFD)	List
801-.001	3/8" Max. Dia.	.001 (Min.)	.25
801-.0015	3/8" " "	.0015 "	.25
801-.002	3/8" " "	.002 "	.25
811-.005	19/32" " "	.005 "	.25
811-.01	19/32" " "	.01 "	.25
821-.01	3/4" " "	.01 "	.30
812-.001	19/32" " "	.001 " Dual	.40
812-.0015	19/32" " "	.0015 " Dual	.40
812-.002	19/32" " "	.002 " Dual	.40
822-.003	3/4" " "	.003 " Dual	.45
822-.004	3/4" " "	.004 " Dual	.45



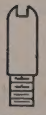
STYLE 812

ERIE UNIVERSAL 20 KV CERAMICONS

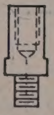


STYLE 413

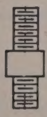
A highly universal 20 KV television power supply filter Ceramicon. Five types of terminals are available. By selecting the correct combinations of these, the correct replacement is provided for practically any existing receiver. Approved by leading TV manufacturers for replacement units.



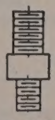
413-203



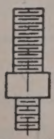
413-204



413-205



413-206-1



413-206-2

ORDER BY PART NUMBER FROM TABLE BELOW

Part No.	Capacity (MMF)	List
413-501	500	2.25

Note: Standard tolerance supplied is ± 20%

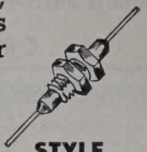
ERIE FEED-THRU CERAMICONS®

These very practical feed-thru capacitors are highly recommended for by-passing R. F. to ground in feed-thru applications. Wire terminals of Style 362 and hook type terminals of Style 327 are sufficiently rugged to serve as tie points for several connections, for supporting other circuit elements, and long enough for point to point wiring. Style 327 is hermetically sealed and ruggedized, and is primarily for military and similar commercial usage.

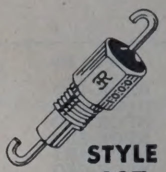
ORDER BY PART NUMBER FROM TABLE BELOW

Part No.	Capacity (MMF)	List
362-152	1,500	1.00
327-102	1,000	1.25

Note: Standard tolerance supplied is ± 20%



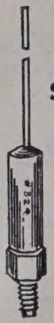
STYLE 362



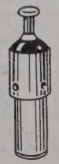
STYLE 327

ERIE STAND-OFF CERAMICONS

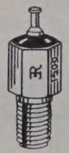
Stand-off Ceramicons, an original Erie development, are now widely used for the dual purposes of by-passing R.F. current to ground, and of mechanically supporting other circuit elements. They are especially suited for V.H.F. and U.H.F. applications, due to their low-inductance electrical paths and resultant high resonant frequency.



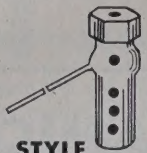
STYLE 324



STYLE 325



STYLE 326

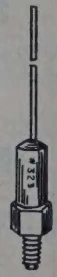


STYLE 2336

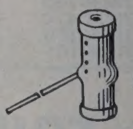
ORDER BY PART NUMBER FROM TABLE BELOW

Part No.	Capacity (MMF)	List
323-500	50	.60
323-101	100	.60
323-501	500	.60
324-102	1,000	.60
324-152	1,500	.60
325-102	1,000	.70
325-152	1,500	.70
326-102	1,000	1.10
326-152	1,500	1.10
2322-252	2,500	1.25
2336-252	2,500	1.15
2336-502	5,000	1.15

Note: Standard tolerance supplied is ± 20%

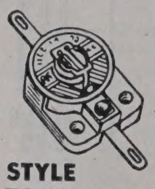


STYLE 323

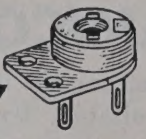


STYLE 2322

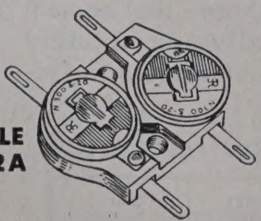
ERIE CERAMICON TRIMMERS



STYLE TS2A



STYLE 557



STYLE TD2A

Erie Ceramicon trimmers give maximum stability and ease of adjustment. Capacity change is constant per degree of rotation. Silver electrodes are fired onto ceramic rotor and base. 360 degree rotor completely covers entire track on stator thus preventing dust and other foreign matter from affecting characteristics of the unit.

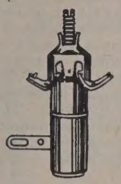
ORDER BY PART NUMBER FROM TABLE BELOW

Part No.	Capacity Range (MMF)	Temperature Coefficient	List
TS2A-1.5	1.5-7	NPO	1.50
TS2A-3	3-12	NPO	1.50
TS2A-4	4-30	N500	1.50
TS2A-7	7-45	N500	1.50
TD2A-1.5	1.5-7	NPO	2.50
TD2A-3	3-12	NPO	2.50
TD2A-4	4-30	N500	2.50
TD2A-7	7-45	N500	2.50
557-3	3-12	NPO	1.25
557-5	5-25	NPO	1.25
557-8	8-50	N750	1.25

"Hi-K", "Ceramicon" and "GP" are registered trade names and refer to ceramic dielectric condensers manufactured by Erie Resistor Corp.

ERIE RESISTOR CORPORATION—ERIE, PA.

ERIE TUBULAR TRIMMERS



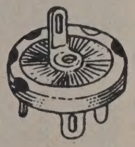
STYLE 532

Here is a compact, economical tubular trimmer that is ideal for applications calling for a low minimum capacity and a high ratio of maximum to minimum capacity. Has molded plastic dielectric. Can be mounted on panels having a thickness of .040″ to .065″

ORDER BY PART NUMBER FROM TABLE BELOW

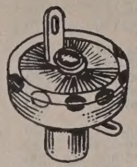
Part No.	Capacity Range (MMF)	List
532-08-0R5	0.5-5	.55
532-10	1-8	.55

ERIE BUTTON® SILVER MICA CAPACITORS



STYLE CB

These are midget silver-mica capacitors, for use where compact size, minimum series inductance, and high leakage resistance are essential. Erie button silver-mica capacitors are unmatched for V.H.F. and U.H.F. work. "Q" at 1 MC is not less than 1000 above 100 mmf; not less than 700 between 50 and 100 mmf; not less than 500 below 50 mmf. Type 370-CB has ring type metal shell with three soldering ears. High potential terminal at either end for feed-thru connection. Type 370-FA is fastened to chassis with 3-48 screw.



STYLE FA

ORDER BY PART NUMBER FROM TABLE BELOW

Part No. FA Styles	Part No. CB Styles	Cap. (MMF)	Tol.	List
370-FA-150M	370-CB-150M	15	20%	1.55
370-FA-150K	370-CB-150K	15	10%	1.55
370-FA-150J	370-CB-150J	15	5%	1.95
370-FA-250M	370-CB-250M	25	20%	1.55
370-FA-250K	370-CB-250K	25	10%	1.55
370-FA-250J	370-CB-250J	25	5%	1.95
370-FA-500M	370-CB-500M	50	20%	1.55
370-FA-500K	370-CB-500K	50	10%	1.55
370-FA-500J	370-CB-500J	50	5%	1.95
370-FA-101M	370-CB-101M	100	20%	1.55
370-FA-101K	370-CB-101K	100	10%	1.55
370-FA-101J	370-CB-101J	100	5%	1.95
370-FA-151M	370-CB-151M	150	20%	1.55
370-FA-151K	370-CB-151K	150	10%	1.55
370-FA-151J	370-CB-151J	150	5%	1.95
370-FA-201M	370-CB-201M	200	20%	1.55
370-FA-201K	370-CB-201K	200	10%	1.55
370-FA-201J	370-CB-201J	200	5%	1.95

Part No. FA Styles	Part No. CB Styles	Cap. (MMF)	Tol.	List
370-FA-251M	370-CB-251M	250	20%	1.55
370-FA-251K	370-CB-251K	250	10%	1.55
370-FA-251J	370-CB-251J	250	5%	1.95
370-FA-301M	370-CB-301M	300	20%	1.65
370-FA-301K	370-CB-301K	300	10%	1.65
370-FA-301J	370-CB-301J	300	5%	2.00
370-FA-401M	370-CB-401M	400	20%	1.70
370-FA-401K	370-CB-401K	400	10%	1.70
370-FA-401J	370-CB-401J	400	5%	2.15
370-FA-501M	370-CB-501M	500	20%	1.80
370-FA-501K	370-CB-501K	500	10%	1.80
370-FA-501J	370-CB-501J	500	5%	2.30
370-FA-751M	370-CB-751M	750	20%	2.60
370-FA-751K	370-CB-751K	750	10%	2.60
370-FA-751J	370-CB-751J	750	5%	3.35
370-FA-102M	370-CB-102M	1000	20%	3.15
370-FA-102K	370-CB-102K	1000	10%	3.15
370-FA-102J	370-CB-102J	1000	5%	3.75

"Button" is a registered trade name of Erie Resistor Corp.

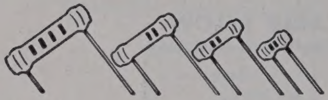
Centralab **CRL** **Centralab**

FIRST IN COMPONENTS RESEARCH **SAFEST FOR SERVICING**

CERAMIC CAPACITORS

More and more modern circuits specify "permanent" ceramic capacitors . . . designed and produced under Centralab's exclusive methods . . . making them "safest for servicing" for most electronic applications. Reliable performance, proved where older capacitor types do not last. Install them throughout radio or TV receiver circuits and your "call backs" or repeat calls for capacitor failure on the same jobs will decrease. Centralab ceramic capacitors mean more satisfied customers for you and more profits from your service calls.

BC HI-KAP TUBULARS



For bypass, coupling and general use in AM, FM, TV, Audio or other r. f. circuits. Tolerance ±20% through 2200 mmf.; higher cap. guaranteed minimum values (GMV). 85° C. plus operation. Tropicalized. 1000 volts D.C. test; 600 volts D.C. working. Packaged 5 per envelope.

Cat. No.	Cap. Mmf.	Size	List Price
D6-050	5	A	$0.25
D6-100	10	A	.25
D6-120	12	A	.25
D6-150	15	A	.25
D6-180	18	A	.25
D6-220	22	A	.25
D6-250	25	A	.25
D6-270	27	A	.25
D6-330	33	A	.25
D6-390	39	A	.25
D6-470	47	A	.25
D6-500	50	A	.25
D6-560	56	A	.25
D6-680	68	A	.25
D6-750	75	A	.25
D6-101	100	A	.25
D6-121	120	A	.25
D6-151	150	A	.25
D6-181	180	A	.25
D6-201	200	A	.25
D6-221	220	A	.25
D6-251	250	A	.25
D6-301	300	A	.25
D6-331	330	A	.25
D6-391	390	A	.25
D6-401	400	A	.25
D6-471	470	A	.25
D6-501	500	A	.25
D6-561	560	A	.25
D6-601	600	A	$0.25
D6-681	680	A	.25
D6-751	750	A	.25
D6-102	1,000	A	.25
D6-122	1,200	B	.25
D6-152	1,500	B	.25
D6-182	1,800	B	.25
D6-202	2,000	B	.25
D6-222	2,200	B	.25
D6-252	2,500	B	.25
D6-272	2,700	B	.25
D6-302	3,000	B	.25
D6-332	3,300	C	.25
D6-402	4,000	C	.25
D6-472	4,700	C	.25
D6-502	5,000	C	.25
D6-562	5,600	D	.25
D6-682	6,800	D	.25
D6-103	10,000	D	.25

BODY DIMENSIONS

Size	Diam.	Length
A	.230″	.475″
B	.230″	.750″
C	.255″	.885″
D	.310″	1.180″

DK-200 CAPACITOR KIT:

200 assorted tubulars in most commonly used values. (600 volt rating)................ **$50.00**

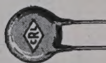
DK-40 PLASTI-PAK:

40 tubulars of popular values. (600 volt rating)............ **$11.00**

DK-25 PLASTI-PAK:

25 tubulars of popular values. (600 volt rating)........ **$6.75**

DISK HI-KAPS



Fit narrow spaces. Tolerances GMV except Cat. No. DD-2-502 is −20% +80%. 1000 volts D.C. test; 600 volts D.C. working. Packaged 5 per envelope.

TYPE DD—SINGLE DISCS

Cat. No.	Cap. Mfd.	Diam. Ins.	Thick. Ins.	List Price
DD-471	.00047	¼	.156	$0.25
DD-801	.0008	¼	.156	.25
DD-102	.001	⅜	.156	.25
DD-152	.0015	⅜	.156	.25
DD-202	.002	9/16	.156	.25
DD-502	.005	9/16	.156	.25
DD-103	.01	⅝	.156	.25
DD-203	.02	9/16	.156	.45

TYPE DD-2—DUAL DISCS

DD-2-102	2x.001	⅜	.156	$0.40
DD-2-152	2x.0015	9/16	.156	.40
DD-2-502	2x.005	⅝	.156	.45

TYPE DD-3*—SHIELDED DUAL DISCS

Cat. No.	Cap. Mfd.	Diam. Ins.	Thick. Ins.	List Price
DD-3-102	2x.001	⅜	.225	$0.45
DD-3-152	2x.0015	⅜	.225	.45
DD-3-202	2x.002	9/16	.225	.45
DD-3-502	2x.005	9/16	.225	.50
DD-3-103	2x.01	⅝	.225	.50

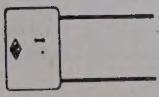
DDK-25 PLASTI-PAK

25 Cat. No. DD-502 Discs (600 volts rating). List......... **$6.25**

DK-100 PLASTI-PAK:

100 popular tubular and disc values. (600 volt rating). List.... **$25.00**

TYPE DF FLAT-PLATE HI-KAPS*

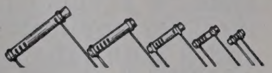


A dependable 600 volt ceramic capacitor recommended for general replacement application.

Cat. No.	Cap. Mfd.	Length Inches.	Height Inches	Thick. Inches	List Price
DF-203	.02	1-9/32″	27/32″	5/64″	$0.60
DF-503	.05	1-9/32″	27/32″	3/32″	.70
DF-104	.1	1-9/32″	27/32″	⅛″	.80

* Packaged singly.

TC TEMPERATURE COMPENSATING TUBULARS



Designed especially to limit frequency drift in r. f. circuits where temperature variations are prevalent. These capacitors are constructed with a ceramic body which changes capacitance as the temperature varies. Use Centralab T.C. Hi-Kaps when servicing superhet receivers—replace older types in oscillator and detector circuits in TV, AM and FM receivers. TCZ units are negative-positive-zero (NPO) type. TCN units are temperature compensating, N750 type, giving a negative change of 750 parts per million per degree C. Packaged singly, including instructions. 1,200 volts D.C. test; 600 volts D.C. working.

TCZ NEGATIVE POSITIVE ZERO (NPO)

Cat. No.	Cap. Mmf.	Tol. Mmf.	Size	List Price
TCZ-.5	.5	± .25	A	$0.75
TCZ-.68	.68	± .25	A	.75
TCZ-1	1.	± .25	A	.75
TCZ-1.5	1.5	± .25	A	.75
TCZ-2.2	2.2	± .25	A	.75
TCZ-3.3	3.3	± .25	A	.75
TCZ-4.7	4.7	± .5	A	.60
TCZ-6.8	6.8	± .5	A	.60
TCZ-10	10.	± .5	A	.60
TCZ-12	12.	± .5	A	.60
TCZ-15	15.	± .5	A	.60
TCZ-18	18.	± .5	A	.60
TCZ-20	20.	± .5	A	.60
		Tol. %		
TCZ-22	22.	±2½	A	.50
TCZ-24	24.	±2½	A	.50
TCZ-27	27.	±2½	B	.50
TCZ-30	30.	±2½	B	.50
TCZ-33	33.	±2½	B	.50
TCZ-36	36.	±2½	B	.50
TCZ-39	39.	±2½	B	.50
TCZ-43	43.	±2½	B	.50
TCZ-47	47.	±2½	B	.50
TCZ-51	51.	±2½	B	.50
TCZ-56	56.	±2½	B	.50
TCZ-62	62.	±2½	C	.50
TCZ-68	68.	±2½	C	.50
TCZ-75	75.	±2½	C	.50
TCZ-82	82.	±2½	C	.50
TCZ-91	91.	±2½	C	.50
TCZ-100	100.	±2½	C	.50
TCZ-110	110.	±5	C	.50
TCZ-120	120.	±5	C	.50
TCZ-130	130.	±5	D	.50
TCZ-150	150.	±5	D	.50
TCZ-160	160.	±5	D	.50
TCZ-180	180.	±5	D	.50
TCZ-200	200.	±5	E	.50
TCZ-220	220.	±5	E	.50
TCZ-240	240.	±5	E	.50
TCZ-270	270.	±5	E	.50
TCZ-300	300.	±5	E	.50

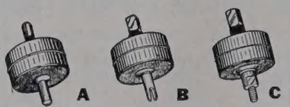
TCN NEG. TEMP. UNITS (N750)

Cat. No.	Cap. Mmf.	Tol. Mmf.	Size	List Price
TCN-5	5.	± .5	A	$0.60
TCN-10	10.	± .5	A	.60
TCN-12	12.	± .5	A	.60
TCN-15	15.	± .5	A	.60
TCN-18	18.	± .5	A	.60
TCN-20	20.	± .5	A	.60
		Tol. %		
TCN-22	22.	±2½	A	.50
TCN-24	24.	±2½	A	.50
TCN-27	27.	±2½	A	.50
TCN-30	30.	±2½	A	.50
TCN-33	33.	±2½	A	.50
TCN-36	36.	±2½	A	.50
TCN-39	39.	±2½	A	.50
TCN-43	43.	±2½	A	.50
TCN-47	47.	±2½	A	.50
TCN-51	51.	±2½	A	.50
TCN-56	56.	±2½	A	.50
TCN-62	62.	±2½	A	.50
TCN-68	68.	±2½	B	.50
TCN-75	75.	±2½	B	.50
TCN-82	82.	±2½	B	.50
TCN-91	91.	±2½	B	.50
TCN-100	100.	±2½	B	.50
TCN-110	110.	±5	B	.50
TCN-120	120.	±5	B	.50
TCN-130	130.	±5	B	.50
TCN-150	150.	±5	B	.50
TCN-160	160.	±5	B	.50
TCN-180	180.	±5	C	.50
TCN-200	200.	±5	C	.50
TCN-220	220.	±5	C	.50
TCN-220	220.	±5	C	.50
TCN-240	240.	±5	C	.50
TCN-270	270.	±5	C	.50
TCN-300	300.	±5	C	.50
TCN-330	330.	±5	C	.50
TCN-360	360.	±5	D	.50
TCN-390	390.	±5	D	.50
TCN-430	430.	±5	D	.50
TCN-470	470.	±5	D	.50
TCN-510	510.	±5	D	.50
TCN-560	560.	±5	E	.50
TCN-620	620.	±5	E	.50
TCN-680	680.	±5	E	.50
TCN-750	750.	±5	E	.50

BODY DIMENSIONS

Size	Diam.	Length
A	.200″	.400″
B	.200″	.690″
C	.225″	.860″
D	.285″	1.165″
E	.286″	1.625″

TV HI-VO KAPS



Centralab TV Hi-Vo-Kaps have proved their dependability. Years of research and know-how in ceramic manufacture have gone into the development of these husky capacitors. That is why they have become the accepted standard for filter and bypass applications in television high voltage power supplies. Body sizes—501, 1″ diam. x .510″. 502, 1″ diam. x 1.050″. 503, 1.4″ diam. x 1.250″. Terminals: A—plain studs. B—One slotted 1/16″ wide x 1/16″ deep, other tapped 6-32, ¼″ deep. C—Screw terminals, male 6-32 x ¼″, female 6-32 x ¼″. Capacity tolerance −20% +50%.

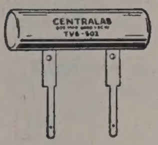
Cat. No.	Cap. Mmf.	V.D.C. Working	Term.	List Price
TV1-501	500	10,000	A	$1.75
TV2-501	500	10,000	B	1.75
TV3-501	500	10,000	C	1.75
TV1-502	500	20,000	A	2.25
TV2-502	500	20,000	B	$2.25
TV3-502	500	20,000	C	2.25
TV1-503	500	30,000	A	4.50

Centralab CRL Centralab

FIRST IN COMPONENTS RESEARCH — SAFEST FOR SERVICING

CERAMIC CAPACITORS

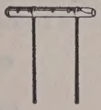
TV6 MOLDED 6000 VOLT REPLACEMENT TUBULARS



Used in capacity deflection circuits in electrostatic TV sets, also in voltage divider circuits in electro dynamic TV sets. Molded casing assures adequate external insulation. Tolerance GMV. Body size $\frac{3}{4}$" diam. x $2\frac{3}{4}$".

Cat. No.	Cap. Mfd.	V.D.C. Working	List Price
TV6-502	.005	6000	**$1.10**

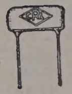
TV6-200 TO TV6-600 SERIES



A smaller, tubular type high voltage capacitor, especially suited for conversion of TV sets for larger size picture tubes. Reliable, lasting performance. All units rated with ±20% tolerance.

Cat. No.	Cap. Mmf.	V.D.C. Working	BODY SIZE Diam.	BODY SIZE Length	List Price
TV6-200	20	6000	.255"	.885"	**$ .50**
TV6-300	30	6000	.310"	1.640"	**.50**
TV6-400	40	6000	.310"	1.180"	**.50**
TV6-500	50	6000	.310"	1.180"	**.50**
TV6-600	60	6000	.310"	1.180"	**.50**

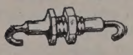
CERAMIC MIN-KAPS



Tiny flat-plate capacitors, size $\frac{17}{32}$" x $\frac{7}{32}$" x $\frac{7}{64}$". Tolerance −20% +80%. Space savers for low voltage applications. 5 per package.

Cat. No.	Cap. Mfd.	V.D.C. Working	List Price	Cat. No.	Cap. Mfd.	V.D.C. Working	List Price
DM-201	.0002	150	**$0.35**	DM-202	.002	150	**$0.45**
DM-501	.0005	150	**.35**	DM-502	.005	150	**.45**
DM-102	.001	150	**.35**	DM-103	.01	150	**.65**

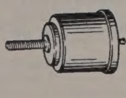
FT FEED THROUGH HI-KAPS



For single hole mounting where capacity ground to chassis or shield is desired. 1000 volts D.C. test, 600 volts D.C. working. Packaged singly.

Cat. No.	Cap. Mmf.	Tol.	List Price
FT-500	500	±20%	**$1.00**
FT-1000	1000	±20%	**1.00**
FT-1500	1500	−20% +50%	**1.00**

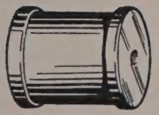
HIGH ACCURACY CAPACITORS



Precision ceramic capacitors for applications involving rigid frequency control. Excellent as prime or secondary standards. $\frac{13}{16}$" diameter. Metal case grounded with mounting stud $\frac{11}{32}$" long $\frac{6}{32}$" thread. Other terminal opposite end, plain stud $\frac{1}{4}$" long. Tolerance ±1%.

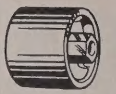
Cat. No.	Cap. Mmf.	V.D.C. Working	Length	List Price
950-501	500	500	9/16"	**$40.00**
950-102	1000	500	11/16"	**40.00**
950-202	2000	500	15/16	**40.00**

TRANSMITTING CAPACITORS



Type 851 ceramic capacitors are high voltage units, held to ±10% tolerance. Size $1\frac{9}{32}$" diam. x $1\frac{15}{32}$". End terminal plates are center tapped 10-32.

Cat. No.	Cap. Mmf.	V.D.C. Working	Temp. Coef.	List Price
851-25Z	25	15,000	NPO	**$10.00**
851-50Z	50	15,000	NPO	**10.00**
851-100N	100	15,000	N750	**10.00**
851-200N	200	7,500	N750	**10.00**



Type 850S high voltage ceramic capacitors are ±10% tolerance, Type "S" with centered hex studs, one each end, projecting $\frac{1}{8}$", tapped 6-32, $\frac{1}{4}$" deep. Type SL have off center solder lugs $\frac{17}{32}$" long with 6-32 tapped hole.

Cat. No.	Cat. No.	Cap. Mmf.	V.D.C. Working	Temp. Coef.	List Price
850S-25Z	850SL-25Z	25	7500	NPO	**$3.00**
850S-50Z	850SL-50Z	50	7500	NPO	**3.00**
850S-50N	850SL-50N	50	7500	N750	**3.00**
850S-75N	850SL-75N	75	7500	N750	**3.00**
850S-100N	850SL-100N	100	5000	N750	**3.00**

SMALL HIGH VOLTAGE UNITS

TYPES 853-853A, 854-854A, 855-855A

The three series which follow are exceedingly compact ceramic capacitors, similar in appearance to type 850S above. Mounting is with axial screw type terminals tapped 2-56. Tolerance ±10%. Sizes: 853, $\frac{9}{16}$" diam. x $\frac{1}{2}$". 854, $\frac{7}{16}$" diam. x $\frac{7}{16}$ 855, $\frac{5}{16}$" diam. x $\frac{3}{8}$".

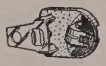
Types 853, 854 and 855 also available with axial leads, $1\frac{1}{2}$" long, in place of screw terminals. For lead types, use same Cat. Nos., omitting "A". Same list prices.

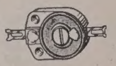
Cat. No.	Cap. Mmf.	V.D.C. Wkg.	Temp. Coef.	List Price
853A-10Z	10	5000	NPO	**$3.00**
853A-20Z	20	5000	NPO	**3.00**
853A-40N	40	5000	N750	**3.00**
854A-5Z	5	5000	NPO	**3.00**
854A-10Z	10	5000	NPO	**3.00**
854A-20N	20	5000	N750	**3.00**
855A-3Z	3	5000	NPO	**3.00**
855A-5Z	5	5000	NPO	**3.00**
855A-10N	10	5000	N750	**3.00**

CERAMIC TRIMMERS

Type 820, at left; $\frac{27}{32}$" x $\frac{5}{8}$".

Cat. No.	Cap. Range Mmf.	List Price
840-A	2.6– 6.	**$0.75**
820-B	6. –20.	**.75**
820-C	7. –35.	**.75**

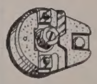




Type 822, at left, $\frac{27}{32}$" x $\frac{21}{32}$". Nos. ending in Z, zero temp. coef. (NPO) ending in N, neg. temp. coef. (N650).

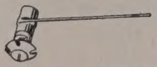
Cat. No.	Range Mmf.	List Price
822-EZ	1.5– 7.0	**$1.50**
822-CZ	2. – 7.5	**1.50**
822-BZ	2.5– 13.	**1.50**
822-AZ	4.5– 25.	**1.50**
822-DN	2.0– 6.0	**1.50**
822-CN	4.5– 25.	**1.50**
822-BN	7. – 45.	**1.50**
822-AN	5. – 50.	**1.50**

Type 823, at left, $1\frac{1}{4}$" x $\frac{15}{16}$"W. Neg. temp. coef.



Cat. No.	Range Mmf.	List Price
823-EZ	5.– 12.	**$2.50**
823-DZ	6.– 25.	**2.50**
823-BZ	10.– 50.	**2.50**
823-AZ	12.– 60.	**2.50**
823-EN	8.– 25.	**2.50**
823-DN	8.– 50.	**2.50**
823-BN	10.–100.	**2.50**
823-AN	20.–125.	**2.50**

TYPE 829 TUBULAR TRIMMERS



Tiny, tubular trimmer, used widely in TV and FM circuits.

Cat. No.	Range Mmf.	List Price
829-3	.5 –3.	**$0.50**
829-4	1. – 4.	**.50**
829-6	1. – 6.	**.50**
829-7	1. – 7.5	**.60**
829-10	1.5–10.	**.60**

PRINTED ELECTRONIC CIRCUITS (P. E. C.)

Since their introduction a few short years ago, Centralab printed electronic circuits have skyrocketed in popularity. First developed for the manufacturing trade, increasing demand from the industry at large brought about a line of stock P. E. C. items for servicemen, hams and laboratory experimenters. Printed electronic circuits consist of capacitors and resistors, including the use of pure metallic silver fired to Ceramic-X plates . . . with integral "printed" circuit connections, brought out to convenient external leads which are anchored mechanically. The complete unit is protected with a moisture-proof phenolic coating. The result is a unit group of components of ultra compactness and permanence. No other modern development in electronic circuitry offers so many advantages in low powered applications as regards small size, low cost assembly and utmost reliability. A complete P. E. C. replacement guide is available FREE at any Centralab Distributor.

RESISTOR AND RESIS.-CAP. UNITS

Plate size, 17/32" x 7/32" x 7/64" thick max. Capacitors 150 V.D.C.W. Resistors, 1/5 watt.

Cat. No.	Dwg.	Consists of	List Price
PC-2	A	2 meg. Resis.	$0.35
PC-21	B	½ meg.; 110,000 ohms	.50
PC-30	C	R=240,000 ohms. C=1000 mmf.	.50
PC-33	D	R= meg. C=1000 mmf.	.50
PC-36	E	R=100,000 ohms. C=100 mmf.	.50

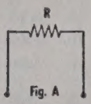


Fig. A

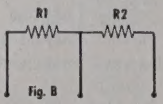


Fig. B

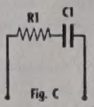


Fig. C

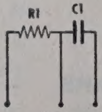


Fig. D

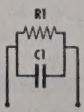


Fig. E

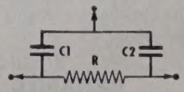


Fig. F

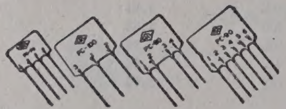
21

FILPEC BALANCED DIODE LOAD FILTER

Plate size, 17/32" x 9/32" x 7/64" thick max. Capacitors, 100 V.D.C.W. Resistors, 1/5 watt.

Cat. No.	Dwg.	Consists of	List Price
PC-50	F	C1=100 mmf. C2=100 mmf. R=47,000 ohms.	$0.60
PC-51	F	C1=150 mmf. C2=150 mmf. R=47,000 ohms.	.60
PC-52	F	C1=50 mmf. C2=50 mmf. R=47,000 ohms.	.60

P. E. C. INTERSTAGE COUPLING PLATES AND VERTICAL INTEGRATORS



The couplate combines three capacitors and two resistors and is designed to replace the normal components of the audio circuit.

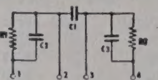


Fig. A

MIDGET NO. 2 TRIODE COUPLATES

Plate size, 13/16" x 9/16" x 5/32" thick—Capacitors rated at 450 W.V.D.C. Resistors 1/5 watt.

CAT. NO. PC-70 MIDGET NO. 2 COUPLATE

Consisting of — List Price
C1=.005 mfd. C2 and C3=250 mmf. R1=500,000 ohms. R2=500,000 ohms. — $0.70

CAT. NO. PC-71 MIDGET NO. 2 COUPLATE

Consisting of — List Price
C1=.005 mfd. C2 and C3=250 mmf. R1=250,000 ohms. R2=500,000 ohms. — $0.70

STANDARD TRIODE COUPLATES

Plate size, 13/32" x 13/16" x 11/64" thick, max. Capacitors, 450 V.D.C.W. Resistors, 1/5 watt.

CAT. NO. PC-80 STANDARD COUPLATE

Consisting of — List Price
C1=.01 mfd. C2 and C3=250 mmf. R1=500,000 ohms. R2=500,000 ohms. — $0.75

CAT. NO. PC-81 STANDARD COUPLATE

Consisting of — List Price
C1=.01 mfd. C2 and C3=250 mmf. R1=250,000 ohms. R2=500,000 ohms. — $0.75

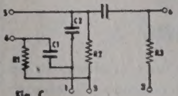


Fig. C

PENTODE COUPLATES

Plate size, 117/64" x 7/8" x 11/64" thick max. Capacitors, 450 V.D.C.W. Resistors, 1/5 watt.

CAT. NO. PC-90 PENTODE COUPLATE

Consisting of — List Price
C1=.005 mfd. C2=50 mmf. C3=2000 mmf. R1=4.7 megohms. R2=1 megohm. R3=2.2 megohms. — $0.90

CAT. NO. PC-91 PENTODE COUPLATE

Consisting of — List Price
C1=.005 mfd. C2=100 mmf. C3=.005 mfd. R1=4.7 megohms. R2=1 megohm. R3=2.2 megohms. — $0.90

CAT. NO. PC-92 PENTODE COUPLATE

Consisting of — List Price
C1=.005 mfd. C2=100 mmf. C3=2000 mmf. R1=4.7 megohms. R2=1 megohm R3=2.2 megohms. — $1.00

TV VERTICAL INTEGRATOR PLATES

Due to great saving in assembly costs, this Centralab printed circuit is being used widely in television vertical integrator networks. Two forms are available. Either one has only three external leads. Size, PC-100 13/32" x 13/16" x 11/64" thick, max. PC-101, 19/16" x 11/16" x 3/16" thick, max. Capacitors, 450 V.D.C.W. Resistor, 1/5 watt.

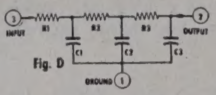


Fig. D

CAT. NO. PC-100 VERTICAL INTEGRATOR PLATES

Consisting of — List Price
C1=.002 mfd. C2=.005 mfd. C3=.005 mfd. R1=2200 ohms. R2=8200 ohms. R3=8200 ohms. — $1.10

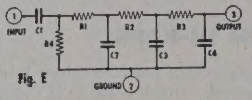
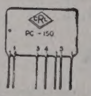


Fig. E

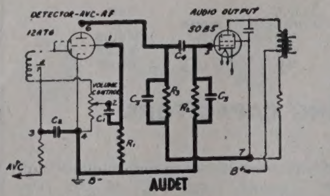
CAT. NO. PC-101 VERTICAL INTEGRATOR PLATES

Consisting of — List Price
C1=.01 mfd. C2=.002 mfd. C3=.005 mfd. C4=.005 mfd. R1=22000 ohms. R2=8200 ohms. R3=8200 ohms. R4=22000 ohms. — $1.25

AUDET—P. E. C. OUTPUT STAGE FOR A.C.-D.C. RECEIVERS



AUDET is a compact (15/8" x 7/8" x 11/64"), highly efficient and dependable audio-detector plate with 7 leads, furnishing the values of all components generally found in the output stage of 5 tube A.C.-D.C. radio receivers. Where trouble develops in this part of a set, it is simple and economical to replace the entire stage with AUDET. The values of the components may differ slightly from the original circuit, but the slight difference may be overlooked as no noticeable change in performance will be noted.
With only 7 leads, you have installed 8 modern components—3 resistors and 5 capacitors—an economical repair.



AUDET

Audet P. E. C. also will find application in other types of miniature or portable equipment where size and weight are prime factors. Capacitors, 450 V.D.C.W. Resistors, 1/5 watt.

CAT. NO. PC-150 AUDET

Consisting of — List Price
C1=.002 mfd. C2=220 mmf. C3 and C5=250 mmf. C4=.005 mfd. R1=6.8 megohms. R2=470,000 ohms. R3=470,000 ohms. — $1.00

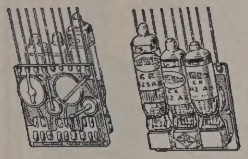
CAT. NO. PC-151 AUDET

(For use where greater low frequency response is required)

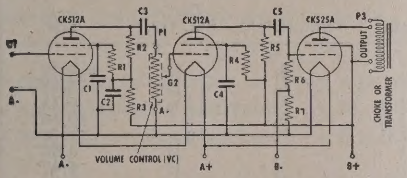
Consisting of — List Price
C1=.005 mfd. C2=220 mmf. C3 and C5=250 mmf. C4=.005 mfd. R1=6.8 megohms. R2=470,000 ohms. R3=470,000 ohms. — $1.15

PRINTED CIRCUITS P. E. C.

AMPEC—COMPLETE THREE STAGE AMPLIFIER



There's never been an electronic device like Centralab's Ampec. In this compact unit—permanently bonded to a master plate—are all the components of an audio amplifier—tube socket, capacitators, resistors, wiring—a three tube, three stage speech amplifier. Similar Centralab units are used widely in hearing aids, for the most trouble-free performance ever attained. Ampec has other interesting applications such as mike preamplifier, miniature or portable radio receiver (pocket type), amplification for walkie-talkie or portable amateur field equipment. Each unit packaged in a hinged cover plastic box, with complete instructions for use.



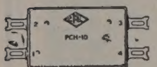
Size, 1¼″ x 1⅛″ x .340″ over tube sockets. Capacitors, 100 V.D.C.W. Resistors, 1/5 watt. Recommended tube complement, T-1 and T-2 (see dwg.) Raytheon type CK512AX; T-3 Raytheon type CK525AX. Gain frequency performance—A voltage 1.2; input voltage, 1 millivolt; B voltage 22. 50,000 ohm plate output load. At 1000 cycles per second the amplification factor is 4000. Volume control (VC in dwg.) not furnished. The ideal control is Centralab Cat. No. B16-128 or switch type Cat. No. B16-228.

Cat. No.	Type	Consisting of	List Price
PC-200	AMPEC	Complete Three Stage Speech Amplifier, including three built-in sockets, less tubes.	**$15.00**
PC-201	AMPEC	Same as PC-200, but furnished complete with tubes, two CK512AX and one CK525AX.	**26.00**

Tubes—Listed separately as a matter of convenience.

Cat. No.	Consisting of	List Price
CK512AX	Raytheon Subminiature Voltage Amplifier Pentode Tube	**$3.40**
CK525AX	Raytheon Subminiature Output Pentode Tube	**4.25**

TELEVISION H-PADS
FOR ATTENUATION OF SIGNAL STRENGTH



These handy Centralab P. E. C. units are specially designed for use in television antenna installations where signal strength needs attenuation to secure optimum performance. The proper H-Pad, in many instances will match the signal strength to the requirements of the receiver. This can prevent overloading, can eliminate tearing of the image, and improve both audio and video results. They are especially valuable where the television set is located too close to the broadcast station. In connection with a switching arrangement, they are helpful in balancing signals from stations which, because of high power or location, are too strong in relation to other stations. H-pads also are useful in matching impedance between the antenna and the receiver.

The H-Pad has four terminals, and is for installation in series with the standard 300 ohm antenna. Full directions are included.

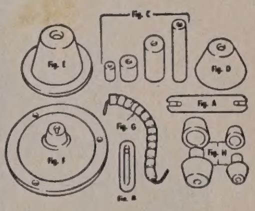
Size—1¼″ x 13/16″ x 3/16″ thick.

Terminals—Solder terminals, 9/32″ long.

Packaged—Singly in envelopes. In sets of four (PCH-100) in a plastic box.

Cat. No.	Type	Attenuation Rating	List Price
PCH-10	H-Pad	10 db	**$0.80**
PCH-20	H-Pad	20 db	**.80**
PCH-30	H-Pad	30 db	**.80**
PCH-40	H-Pad	40 db	**.80**
PCH-100 SET OF FOUR H-PADS. One each of the above, in plastic box			**3.00**

STEATITE



Centralab has been producing fine ceramics since 1928 . . . primarily for its own use in fixed resistors, ceramic capacitors, switches—and more recently, printed electronic circuits. Often called upon by other manufacturers to produce many "standard" and custom designs, some very intricate, Centralab is the only ceramic manufacturer capable of producing many of these in quantity. All items listed are Grade L-5 Steatite, approved without limitation for Army and Navy use.

Characteristics: Uniform, white appearance, high dielectric strength, exceedingly low loss at high frequencies, and strong mechanically. Impervious to moisture and common acids, will not warp, withstands high temperatures; harder than hardest quartz.

SPREADERS—STRAIN INSULATORS

Deluxe Grade—Fig. "A". Rounded and grooved. Packaged singly.

Cat. No.	O.A. Length	Diam.	Line Spacing	List Price
X-1	2¾″	½″	2″	**$0.70**
X-2	4″	¾″	3″	**1.00**
X-3	6″	¾″	5″	**1.25**

Standard Grade—Not illustrated. Square and rectangular bars. Packaged singly.

Cat. No.	O.A. Length	Size	Line Spacing	List Price
X-4	3″	½″ x ⅜″	2″	**$0.15**
X-5	5″	½″ x ½″	4″	**.25**
X-6	7″	½″ x ½″	6″	**.45**

Deluxe Aircraft Type Insulator—Fig. B. Fully glazed. Packaged singly.

Cat. No.	O.A. Length	Diam.	Line Spacing	List Price
X-7	1½″	17/32″	¾″	**$0.65**

STANDOFF OR PILLAR INSULATORS

See Figure "C". Circumference glazed, tapped for screw sizes shown. "X" numbers below are catalog numbers.

Length	¼″ Diam.* #6-32 Thd.	List Price	½″ Diam.** #6-32 Thd.	List Price
½″	X-8	**$0.55**	X-12	**$0.12**
¾″	X-9	**.55**	X-13	**.15**
1″	X-10	**.60**	X-14	**.16**
1¼″	X-11	**.70**	X-15	**.17**
1½″			X-16	**.17**
2″			X-17	**.18**
2½″			X-18	**.19**
3″			X-19	**.20**

* Packaged 5 per carton.

Length	¾″ Diam.** #10-32 Thd.	List Price	1″ Diam.** ¼″-20 Thd.	List Price
¾″	X-20	**$0.16**		
1″	X-21	**.17**	X-28	**$0.18**
1¼″	X-22	**.18**	X-29	**.19**
1½″	X-23	**.18**	X-30	**.20**
2″	X-24	**.19**	X-31	**.21**
2½″	X-25	**.20**	X-32	**.23**
3″	X-26	**.22**	X-33	**.28**
4″	X-27	**.25**	X-34	**.33**
5″			X-35	**.37**

** Packaged singly.

FEED-THROUGH INSULATORS

Glazed Surface—No hardware included. Packaged singly.

Cat. No.	Fig.	Height	Base Diam.	Max.-Screw Size	List Price
X-36	D	⅞″	1¼″	10-32	**$0.25**
X-37	D	1⅛″	1¾″	¼″-20	**.30**
X-38	E	1⅝″	2½″	⅜″-16	**1.50**
X-39	F	1″	3⅛″	8-32	**1.50**

FISH SPINE BEADS

See Fig. G. Four beads will cover 1″, or package of 100 covers 25″ of buss wire. 5/16″ O.D., ⅛″ I.D. Packaged 100 per envelope.
CAT. NO. X-40. Carton of 100 Beads. List Price............ **$1.25**

THROUGH PANEL BUSHINGS

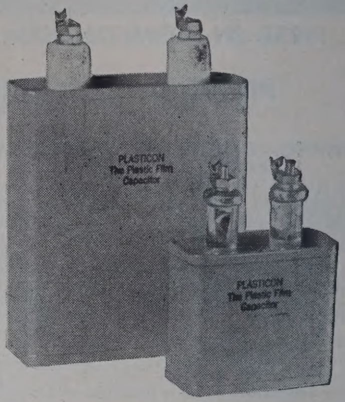
See Fig. "H". Matched pairs of male and female bushings for feeding through chassis, panels, shields, racks or cases. No hardware included. Packaged—One matched pair per carton.

Cat. No. Pair	Top Height	Max. Diam.	Panel Hole	Panel Thickness	Max. Screw Size	List Price
X-41	⅛″	½″	5/16″	to ⅛″	6-32	**$0.30**
X-42	7/32″	⅝″	7/16″	to ⅛″	8-32	**.40**
X-43	⅜″	½″	¼″	to 3/16″	6-32	**.35**
X-44	⅜″	⅝″	⅜″	to ⅜″	8-32	**.40**
X-45	¾″	1⅛″	¾″	to ⅜″	10-32	**1.00**
X-46	1⅝″	1¼″	½″	to 2″	10-32	**1.70**

FOR MORE COMPLETE INFORMATION ON CRL COMPONENTS SEE YOUR DISTRIBUTOR.

PLASTICON DC RECTANGULARS

Mineral oil impregnated and filled. Hermetically sealed. Can be operated in any position, continuously at 10% over rated voltage. Tolerance 10%. Ambient temperature range -40° C. to +85° C. Insulators: Two ceramic type bushings for standard temperature range. Two soldered-in metallized glass insulators for extended temperature range. All DC rectangulars have 8-32 screw and hex nut terminals with removable hot-tinned solder lugs. Case: Rectangular base, lead coated steel with heavy finish of grey organic lacquer.

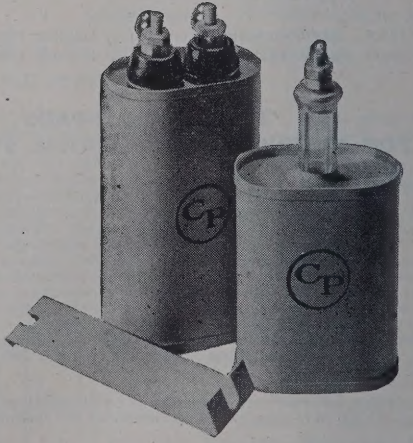


Mfr's. No.	Cap. Mfd.	Volts DC	Dimensions - Inches Height	Width	Depth	Term. Height	Dist. Bet. Ter.	List
AOC6C1	1.0	600	2⅛	1¾	1	¾	13/16	$ 4.49
AOC6C2	2.0	600	2¾	1¾	1	¾	13/16	5.41
AOC6C4	4.0	600	3½	2½	1 3/16	¾	1⅛	6.73
AOC6C8	8.0	600	4	3¾	1¼	¾	2	10.16
AOC6C10	10.0	600	4	3¾	1¾	¾	2	11.42
AOC1M1	1.0	1000	2⅜	1¾	1	¾	13/16	4.82
AOC1M2	2.0	1000	4	1¾	1	¾	13/16	6.47
AOC1M4	4.0	1000	4	2½	1 3/16	¾	1⅛	7.85
AOC1M8	8.0	1000	4⅝	3¾	1¾	¾	2	11.09
AOC1M10	10.0	1000	4⅝	3¾	2¼	¾	2	12.80
AOC2M05	0.5	2000	2⅜	1¾	1	¾	13/16	5.81
AOC2M1	1.0	2000	3½	1¾	1	¾	13/16	7.06
AOC2M2	2.0	2000	3½	2½	1 3/16	¾	1⅛	8.18
AOC2M4	4.0	2000	3½	3¾	1¾	¾	2	11.09
AOC3M1	1.0	3000	4	2½	1 3/16	1 1/16	1⅛	14.52
AOC3M2	2.0	3000	4	3¾	1¼	1 1/16	2	18.48
AOC3M4	4.0	3000	4⅝	3¾	2¼	1 1/16	2	25.54
AOC4M1	1.0	4000	4	3¾	1¼	1 1/16	2	33.00
AOC4M2	2.0	4000	4	3¾	1¾	1 1/16	2	39.60
AOC4M4	4.0	4000	4	3¾	4 9/16	1 1/16	2	60.53
AOC5M1	1.0	5000	4	3¾	1¾	2	2	49.60
AOC5M2	2.0	5000	3½	3¾	4 9/16	2	2	49.50
AOC75C1	1.0	7500	3½	3¾	4 9/16	2	2	59.40
AOC10M1	1.0	10000	4⅝	3¾	4 9/16	2	2	105.60

PLASTICON DC OVALS

Mfr's. No.	Cap. Mfd.	Volts DC	Dimensions - Inches Height	Width	Depth	Term. Height	Dist. Bet. Ter.	List Price
AOCO6C2	2.0	600	2⅜	2	1¼	¾	13/16	$5.28
AOCO6C4	4.0	600	4	2	1¼	¾	13/16	6.34
AOCO1M1	1.0	1000	2⅜	2	1¼	¾	13/16	4.62
AOCO1M2	2.0	1000	3½	2	1¼	¾	13/16	6.20
AOCO3M01	0.1	3000	2⅜	2	1¼	1 1/16	—	9.11
AOCO5M01	0.1	5000	2¾	2	1¼	2	—	16.90
AOCO5M025	0.25	5000	3½	2	1¼	2	—	18.48
AOCO5M05	0.5	5000	4⅝	2	1¼	2	—	21.78
AOCO8M005	0.05	8000	2¾	2	1¼	2	—	18.22
AOCO8M01	0.1	8000	3½	2	1¼	2	—	20.06
AOCO10M005	0.05	10000	3½	2	1¼	2	—	23.10

Same specifications as DC Rectangulars. Insulators: Two wet-process porcelain bushings on Types AOCO6C, AOCO1M & AOCO2M. One ceramic bushing can grounded on Types AOCO3M, AOCO5M, AOCO8M and AOCO10M. Case: Obround (flattened oval) cross section. Drawn or lock-seam lead coated steel with heavy finish of gray organic lacquer. Two right angle mounting foot brackets are provided as standard on all AOCO capacitors. Add ½″ to depth to get mounting centers.

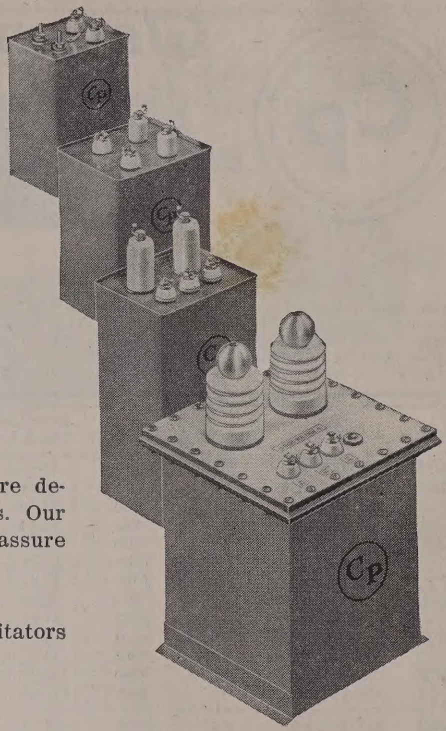


Condenser Products Company

7517 North Clark Street • Chicago 26, Illinois

MANUFACTURERS: Glassmikes • Plasticon Capacitors • HiVolt Power Supplies • Pulse Forming Networks

HiVolt POWER SUPPLIES



Where size and weight must be kept to a minimum —

These hermetically-sealed, self-contained power supplies are designed for Hi Voltage low current DC for many applications. Our exclusive engineering techniques and oil-filled construction assure smaller, lighter, more flexible units.

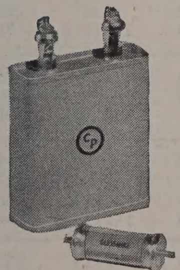
APPLICATIONS:

- radiation counters
- spectrographic analyzers
- projection television sets
- dust and electrostatic precipitators
- oscilloscopes
- display tubes, etc.

Model No.	Output Voltage	Rated Output Current	Max. Output Current	% Ripple at Rated Current	Case Size	Circuit	List Price
PS 2	2 KV DC	2.0 ma	5.0 ma	1.0	3¾ x 3 3/16 x 5½	Half Wave	$ 31.00
PS 5	5 KV DC	3.0 ma	5.0 ma	2.0	3¾ x 4 9/16 x 6	Half Wave	85.00
PS10	0-12 KV DC	1.5 ma	1.75 ma	2.0	3¾ x 4 9/16 x 8	Full Wave Doubler	115.00
PS15	0-15 KV DC	1.0 ma	1.75 ma	3.0	3¾ x 4 9/16 x 9	Full Wave Doubler	200.00
PS30	0-30 KV DC	1.0 ma	1.75 ma	3.0	7 x 7 x 8¼	Full Wave Doubler	285.00
*PS50	0-50 KV DC	2.0 ma	4.0 ma	3.0	12½ x 12½ x 12½	Full Wave Tripler	850.00
		Others by Quotation					

NOTES: *The PS 50 supply has a separate accessible compartment for the rectifier tubes.

1. Hivolt Supplies are rated at 118 V AC input, 60 cycles.
2. Hivolt Supplies for 400 cycle operation are also available for aircraft use, built to military specifications.
3. Hivolt Supplies are engineered for various applications. Send us your requirements.



LABORATORY GRADE PLASTICON CAPACITORS

Low dielectric absorption, .01-.02% residual. Low dissipation factor, .0002-.0003 at 1 MC. Constant Q and capacitance, from DC to 100 KC. High insulation resistance, 10^{12} ohms/mfd. average. Negative temp. coefficient, minus 400-500 ppm/°C. Rated voltage 500 V DC. Resistance and absorption readings taken at 200 V DC. 2% and 5% standard tolerances, 1% to order. Type LAG Glassmike style. Type LAC rectangular metal can.

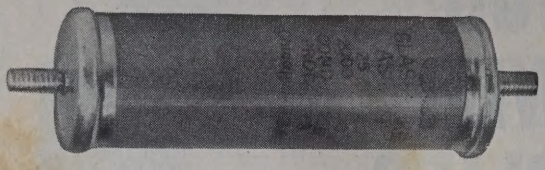
No.	Mfd.	Dimensions	List Price 5% Tolerance
LAG101	.0001	19/32 x 1″	$ 6.25
LAG201	.0002	19/32 x 1″	6.33
LAG501	.0005	19/32 x 1″	6.50
LAG102	.001	¾ x 1″	6.67
LAG202	.002	¾ x 1″	6.83
LAG502	.005	¾ x 1″	7.25
LAG103	.01	29/32 x 1″	7.75
LAG203	.02	29/32 x 1″	8.50
LAG503	.05	1⅜ x 1″	9.33
LAC104	.1	2¼ x 1¾ x 1″	12.83
LAC204	.2	2¼ x 2½ x 1 3/16″	13.83
LAC504	.5	4 x 2½ x 1 3/16″	15.83
LAC105	1.	4⅝ x 3¾ x 1¼″	27.50
LAC205	2.	4⅝ x 3¾ x 2¼″	40.83
LAC505	5.	6 x 3¾ x 4 9/16″	88.33

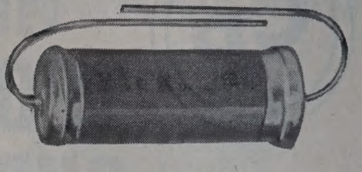
Condenser Products Company

7517 North Clark Street • Chicago 26, Illinois

MANUFACTURERS: Glassmikes • Plasticon Capacitors • HiVolt Power Supplies • Pulse Forming Networks

"*Glassmike*" PLASTICON CAPACITORS





Type ASG

Type ASG are Plasticon A dielectric-silicone fluid impregnated capacitor elements in hermetically sealed glass tubes. Standard range —60°C to +85°C, extended range —60°C to +125°C with proper derating. The smallest and lightest high voltage capacitors made. Type ASG are ideal for DC and low frequency AC applications.

Plasticon dielectric is superior to the finest linen or kraft condenser paper hitherto used. Plasticon is a thin plastic film, free from metallic particles or other foreign matter. Much higher tensile strength than paper and does not become brittle with age and heat. Not porous as paper and has higher breakdown voltage.

Cat. No.	New Cat. No.	Cap. Mfd.	Volts D.C.	Dimensions Dia. & Length	List Price
ASG1	ASG103-6C*	.01	600	19/32 x1 3/16	$1.50
ASG2	ASG203-6C*	.02	600	19/32 x1 3/16	1.60
	ASG303-6C	.03	600	19/32 x1 3/16	1.60
	ASG403-6C	.04	600	19/32 x1 3/16	1.60
ASG3	ASG503-6C*	.05	600	19/32 x1 9/16	1.75
	ASG603-6C	.06	600	19/32 x1 9/16	1.75
	ASG753-6C	.075	600	19/32 x1 9/16	1.75
ASG4	ASG104-6C*	.1	600	¾ x1 ¾	1.95
	ASG204-6C	.2	600	13/16 x1 ¾	2.15
ASG5	ASG254-6C*	.25	600	29/32 x2 ¼	2.25
	ASG304-6C	.3	600	29/32 x1 ¾	2.35
ASG6	ASG504-6C*	.5	600	29/32 x2 ¾	2.60
	ASG105-6C	1.0	600	1 ⅜ x2	3.90
ASG7	ASG502-1M	.005	1000	19/32 x1 3/16	1.50
ASG8	ASG108-1M*	.01	1000	19/32 x1 3/16	1.60
ASG9	ASG203-1M*	.02	1000	19/32 x1 3/16	1.70
ASG10	ASG503-1M*	.05	1000	¾ x1 ¾	1.85
ASG11	ASG104-1M*	.1	1000	¾ x2 ¼	2.15
ASG12	ASG254-1M*	.25	1000	29/32 x2 ¾	2.50
	ASG504-1M	.5	1000	1 ⅛ x2 ¼	2.90
ASG13	ASG202-2M*	.002	2000	19/32 x1 3/16	1.90
ASG14	ASG502-2M*	.005	2000	19/32 x1 3/16	2.05
ASG15	ASG103-2M*	.01	2000	19/32 x1 3/16	2.25
ASG16	ASG203-2M*	.02	2000	19/32 x1 9/16	2.50
ASG17	ASG503-2M*	.05	2000	¾ x1 ¾	2.80
ASG18	ASG104-2M*	.1	2000	¾ x2 ¼	3.20
ASG19	ASG254-2M*	.25	2000	29/32 x2 ¾	3.70
	ASG504-2M	.5	2000	1 ⅜ x2	4.40
ASG20	ASG102-3M*	.001	3000	19/32 x1 3/16	5.15
ASG21	ASG202-3M*	.002	3000	19/32 x1 3/16	5.25
ASG22	ASG502-3M*	.005	3000	19/32 x1 3/16	5.40
ASG23	ASG103-3M*	.01	3000	19/32 x1 9/16	5.60
ASG24	ASG203-3M*	.02	3000	¾ x1 ¾	5.85
ASG25	ASG503-3M*	.05	3000	29/32 x2 ¼	6.15
ASG26	ASG104-3M*	.1	3000	1 ⅛ x2 ¼	6.50
	ASG254-3M	.25	3000	1 ⅜ x2	7.20
	ASG102-4M	.001	4000	19/32 x1 3/16	5.95
	ASG202-4M	.002	4000	19/32 x1 3/16	6.05
	ASG502-4M	.005	4000	19/32 x1 ⅝	6.20
	ASG103-4M	.01	4000	¾ x1 3/16	6.40
	ASG203-4M	.02	4000	¾ x1 ¾	6.75
	ASG503-4M	.05	4000	13/16 x2	7.00
	ASG104-4M	.1	4000	1 ⅛ x2	7.80
ASG27	ASG102-5M*	.001	5000	19/32 x1 3/16	6.50
ASG28	ASG202-5M*	.002	5000	19/32 x1 3/16	6.70
ASG29	ASG502-5M*	.005	5000	19/32 x1 ⅝	6.95
ASG30	ASG103-5M*	.01	5000	¾ x1 ¾	7.25
ASG31	ASG203-5M*	.02	5000	¾ x2 ¼	7.65
ASG32	ASG503-5M*	.05	5000	29/32 x2 ¼	8.15
ASG33	ASG104-5M*	.1	5000	1 ⅜ x3 ½	9.10

Cat. No.	New Cat. No.	Cap. Mfd.	Volts D.C.	Dimensions Dia. & Length	List Price
	ASG501-75C	.0005	7500	19/32 x1 9/16	$7.00
ASG34	ASG102-75C*	.001	7500	19/32 x1 9/16	7.00
ASG35	ASG202-75C*	.002	7500	19/32 x1 ¾	7.25
ASG36	ASG502-75C*	.005	7500	¾ x1 ¾	7.55
ASG37	ASG103-75C*	.01	7500	¾ x2 ¼	8.15
ASG38	ASG203-75C*	.02	7500	29/32 x2 ¾	9.25
ASG39	ASG503-75C*	.05	7500	1 ⅜ x4 ¼	11.50
ASG40	ASG501-10M*	.0005	10,000	19/32 x1 ⅝	7.30
ASG41	ASG102-10M*	.001	10,000	19/32 x1 ⅝	7.50
ASG42	ASG202-10M*	.002	10,000	19/32 x1 ⅝	7.80
ASG43	ASG502-10M*	.005	10,000	13/16 x1 ¾	9.00
ASG44	ASG103-10M*	.01	10,000	29/32 x2 ¼	10.50
ASG45	ASG203-10M*	.02	10,000	1 ⅛ x2 ¾	12.50
ASG46	ASG303-10M	.03	10,000	1 ⅜ x2 ¾	15.00
ASG60	ASG603-10M*	.06	10,000	1 ⅜ x4 ¼	17.50
ASG47	ASG501-15M*	.0005	15,000	19/32 x2 ¼	14.50
ASG48	ASG102-15M*	.001	15,000	¾ x2 ¼	14.80
ASG49	ASG202-15M*	.002	15,000	¾ x2 ¼	15.50
	ASG502-15M	.005	15,000	1 ⅛ x2 ¾	18.00
	ASG103-15M	.01	15,000	1 ⅛ x3 ¾	21.00
	ASG203-15M	.02	15,000	1 ⅜ x4 ½	25.00
ASG50	ASG501-20M*	.0005	20,000	19/32 x3 ½	19.50
ASG51	ASG102-20M*	.001	20,000	¾ x3 ½	20.50
	ASG202-20M	.002	20,000	13/16 x3 ½	22.00
	ASG502-20M	.005	20,000	1 ⅛ x3 ½	24.00
	ASG103-20M	.01	20,000	1 ⅜ x4 ½	26.00
ASG52	ASG501-30M*	.0005	30,000	19/32 x4 9/16	22.50
	ASG102-30M	.001	30,000	¾ x5	25.00
	ASG202-30M	.002	30,000	29/32 x5	28.00
	ASG502-30M	.005	30,000	1 ⅜ x5	30.00
	ASG501-40M	.0005	40,000	19/32 x5 ¾	25.00
	ASG102-40M	.001	40,000	13/16 x6 ½	29.00
	ASG202-40M	.002	40,000	1 ⅛ x6 ½	30.00
	ASG501-50M	.0005	50,000	¾ x8 ¼	28.00
	ASG102-50M	.001	50,000	13/16 x8 ¼	34.00
	ASG202-50M	.002	50,000	1 ⅛ x8 ¼	36.00
	ASG502-50M	.005	50,000	1 ⅜ x10 ¾	44.00
	ASG501-60M	.0005	60,000	¾ x11	32.00
	ASG102-60M	.001	60,000	29/32 x11	39.00

Other prices and values by quotation.

*These units are duplicated in the ASG line now in use, i.e. ASG1 thru 52.

Condenser Products Company

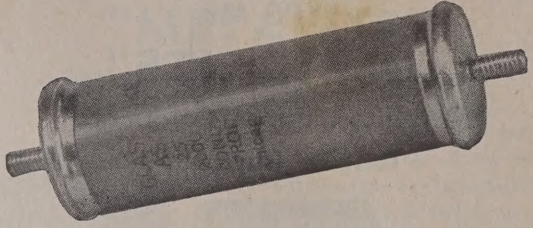
7517 North Clark Street • Chicago 26, Illinois

MANUFACTURERS: Glassmikes • Plasticon Capacitors • HiVolt Power Supplies • Pulse Forming Networks

"*Glassmike*" PLASTICON CAPACITORS

Type LSG

LSG type capacitors have Plasticon L film-silicone fluid impregnant in Glassmike style case. Designed to compete with mica capacitors, the LSG capacitors are more applicable for Radio Frequency. Special beneficial features include greater safety factor, lower RF losses, more conveniently mounted, utilize less chassis space, impervious to moisture and smaller in overall volume.



Part #	Size	Cap	Volts D.C.	List Price
752-6C	19/32 x1	.0075	600	$4.17
103-6C	¾ x1	.01	600	4.50
203-6C	29/32 x1	.02	600	5.50
253-6C	29/32 x1½	.025	600	5.50
303-6C	29/32 x1½	.03	600	5.50
403-6C	29/32 x1½	.04	600	5.50
503-6C	29/32 x1½	.05	600	5.50
603-6C	29/32 x1½	.06	600	5.50
753-6C	1⅛ x1½	.075	600	6.17
104-6C	1⅛ x1½	0.1	600	6.17
154-6C	1⅜ x1½	0.15	600	7.00
204-6C	1⅜ x2	0.2	600	7.00
254-6C	1⅜ x2½	0.25	600	7.33
304-6C	1⅝ x2½	0.3	600	8.86
404-6C	1⅝ x2½	0.4	600	8.86
504-6C	1⅝ x3	0.5	600	10.80
502-1M	19/32 x1	.005	1000	5.00
602-1M	¾ x1	.006	1000	5.50
752-1M	¾ x1	.0075	1000	5.50
103-1M	¾ x1	.01	1000	5.50
203-1M	¾ x1½	.02	1000	5.85
253-1M	¾ x1½	.025	1000	5.85
303-1M	13/16 x1½	.03	1000	6.17
403-1M	29/32 x1½	.04	1000	6.85
503-1M	1⅛ x1½	.05	1000	7.33
603-1M	1⅛ x1½	.06	1000	7.33
753-1M	1⅛ x1½	.075	1000	7.33
104-1M	1⅛ x2	0.1	1000	8.00
154-1M	1⅜ x2	0.15	1000	9.50
204-1M	1⅜ x2½	0.2	1000	10.80
254-1M	1⅝ x2½	0.25	1000	11.00
304-1M	1⅝ x3	0.3	1000	11.70
404-1M	1⅝ x3½	0.4	1000	12.70
202-25C	19/32 x1	.002	2500	5.15
252-25C	¾ x1	.0025	2500	5.50
302-25C	¾ x1	.003	2500	5.50
402-25C	¾ x1	.004	2500	5.50
502-25C	13/16 x1	.005	2500	5.85
602-25C	13/16 x1	.006	2500	5.85
752-25C	29/32 x1	.0075	2500	6.17
103-25C	1⅛ x1	.01	2500	6.50
203-25C	1⅛ x1½	.02	2500	7.18
253-25C	1⅛ x1½	.025	2500	7.18
303-25C	1⅛ x1½	.03	2500	7.18
403-25C	1⅛ x2	.04	2500	8.00
503-25C	1⅜ x2	.05	2500	8.68
603-25C	1⅜ x2	.06	2500	8.68
753-25C	1⅝ x2	.075	2500	10.40
104-25C	1⅝ x2½	0.1	2500	11.70
154-25C	1⅝ x3½	0.15	2500	12.70
601-35C	19/32 x1	.0006	3500	5.50
751-35C	¾ x1	.00075	3500	5.85
102-35C	¾ x1	.001	3500	5.85
202-35C	¾ x1	.002	3500	5.85
252-35C	13/16 x1	.0025	3500	6.20
302-35C	29/32 x1	.003	3500	7.00
402-35C	29/32 x1	.004	3500	7.00
502-35C	1⅛ x1	.005	3500	7.50
602-35C	1⅛ x1	.006	3500	7.50
752-35C	1⅜ x1	.0075	3500	7.85
103-35C	1⅝ x1	.01	3500	8.18
203-35C	1⅝ x1½	.02	3500	8.50
253-35C	1⅝ x1½	.025	3500	8.67
303-35C	1⅝ x2	.03	3500	10.80
403-35C	1⅝ x2	.04	3500	10.80
503-35C	1⅝ x2½	.05	3500	11.65
603-35C	1⅝ x3	.06	3500	12.35

Part #	Size	Cap	Volts D.C.	List Price
753-35C	1⅝ x3	.075	3500	$12.35
104-35C	1⅝ x4	0.1	3500	13.65
401-5M	19/32 x2	.0004	5000	8.00
501-5M	19/32 x2	.0005	5000	8.00
601-5M	¾ x2	.0006	5000	8.85
751-5M	¾ x2	.00075	5000	8.85
102-5M	¾ x2	.001	5000	8.85
202-5M	13/16 x2	.002	5000	9.65
252-5M	13/16 x2	.0025	5000	9.65
302-5M	13/16 x2	.003	5000	9.65
402-5M	1⅛ x2	.004	5000	10.50
502-5M	1⅛ x2	.005	5000	10.50
602-5M	1⅛ x2	.006	5000	10.50
752-5M	1⅜ x2	.0075	5000	11.50
103-5M	1⅜ x2	.01	5000	11.50
203-5M	1⅜ x3	.02	5000	12.50
253-5M	1⅜ x3	.025	5000	12.50
303-5M	1⅜ x4	.03	5000	15.00
403-5M	1⅝ x4	.04	5000	16.70
503-5M	1⅜ x6	.05	5000	18.70
603-5M	1⅝ x6	.06	5000	20.70
753-5M	1⅜ x8	.075	5000	22.70
104-5M	1⅝ x8	0.1	5000	24.70
301-7M	19/32 x2	.0003	7000	8.15
401-7M	¾ x2	.0004	7000	9.00
501-7M	¾ x2	.0005	7000	9.00
601-7M	¾ x2	.0006	7000	9.00
751-7M	¾ x2	.00075	7000	9.00
102-7M	¾ x2	.001	7000	9.00
202-7M	29/32 x2	.002	7000	11.00
252-7M	1⅛ x2	.0025	7000	11.85
302-7M	1⅛ x2	.003	7000	11.85
402-7M	1⅜ x2	.004	7000	12.35
502-7M	1⅝ x2	.005	7000	14.35
602-7M	1⅝ x2	.006	7000	14.35
752-7M	1⅛ x4	.0075	7000	17.00
103-7M	1⅛ x4	.01	7000	17.00
203-7M	1⅝ x4	.02	7000	18.65
253-7M	1⅜ x6	.025	7000	21.30
303-7M	1⅝ x6	.03	7000	21.30
403-7M	1⅜ x8	.04	7000	23.00
503-7M	1⅝ x8	.05	7000	23.00

Part #	Size	Cap	Kilovolts D.C.	List Price
201-10M	19/32 x3	.0002	10	$10.80
301-10M	¾ x3	.0003	10	11.00
401-10M	¾ x3	.0004	10	11.00
501-10M	¾ x3	.0005	10	11.00
601-10M	13/16 x3	.0006	10	11.65
751-10M	29/32 x3	.00075	10	12.35
102-10M	29/32 x3	.001	10	12.35
202-10M	1⅛ x3	.002	10	13.65
252-10M	1⅜ x3	.0025	10	15.35
302-10M	1⅜ x3	.003	10	15.35
402-10M	1⅝ x3	.004	10	17.65
502-10M	1⅛ x6	.005	10	21.30
602-10M	1⅛ x6	.006	10	21.30
752-10M	1⅜ x6	.0075	10	24.00
103-10M	1⅜ x6	.01	10	24.00
203-10M	1⅝ x9	.02	10	27.70
253-10M	1⅝ x9	.025	10	27.70
101-14M	19/32 x4	.0001	14	12.00
201-14M	¾ x4	.0002	14	12.85
251-14M	¾ x4	.00025	14	12.85

Part #	Size	Cap	Kilovolts D.C.	List Price
301-14M	¾ x4	.0003	14	$12.85
401-14M	¾ x4	.0004	14	12.85
501-14M	¾ x4	.0005	14	12.85
601-14M	13/16 x4	.0006	14	13.65
751-14M	29/32 x4	.00075	14	15.35
102-14M	29/32 x4	.001	14	15.35
202-14M	1⅜ x4	.002	14	20.00
252-14M	1⅝ x4	.0025	14	22.70
302-14M	1⅝ x4	.003	14	22.70
402-14M	1⅛ x8	.004	14	24.00
502-14M	1⅛ x8	.005	14	24.00
602-14M	1⅜ x8	.006	14	25.40
752-14M	1⅝ x8	.0075	14	27.50
103-14M	1⅝ x8	.01	14	27.70
101-17M	19/32 x4¾	.0001	17	14.00
201-17M	¾ x4¾	.0002	17	14.70
251-17M	¾ x4¾	.00025	17	14.70
301-17M	¾ x4¾	.0003	17	14.70
401-17M	¾ x4¾	.0004	17	14.70
501-17M	13/16 x4¾	.0005	17	16.00
601-17M	29/32 x4¾	.0006	17	17.35
751-17M	1⅛ x4¾	.00075	17	19.00
102-17M	1⅛ x4¾	.001	17	19.00
202-17M	1⅝ x4¾	.002	17	21.85
252-17M	1⅝ x4¾	.0025	17	21.85
302-17M	1⅜ x5¾	.0030	17	23.00
402-17M	1⅝ x5¾	.004	17	25.90
502-17M	1⅝ x6¾	.005	17	29.00
101-20M	19/32 x5¾	.0001	20	16.00
201-20M	¾ x5¾	.0002	20	17.00
251-20M	¾ x5¾	.00025	20	17.00
301-20M	¾ x5¾	.0003	20	17.00
401-20M	13/16 x5¾	.0004	20	18.35
501-20M	29/32 x5¾	.0005	20	20.15
601-20M	29/32 x5¾	.0006	20	20.15
751-20M	1⅛ x5¾	.00075	20	22.65
102-20M	1⅛ x5¾	.001	20	22.65
202-20M	1⅝ x5¾	.002	20	24.50
252-20M	1⅜ x7	.0025	20	26.70
302-20M	1⅝ x7	.003	20	28.70
402-20M	1⅝ x8½	.004	20	30.20
750-25M	19/32 x7¼	.000075	25	20.15
101-25M	¾ x7¼	.0001	25	21.70
201-25M	¾ x7¼	.0002	25	21.70
251-25M	¾ x7¼	.00025	25	21.70
301-25M	13/16 x7¼	.0003	25	22.20
401-25M	29/32 x7¼	.0004	25	25.00
501-25M	29/32 x7¼	.0005	25	25.00
601-25M	1⅛ x7¼	.0006	25	27.50
751-25M	1⅜ x7¼	.00075	25	31.20
102-25M	1⅜ x7¼	.001	25	31.20
202-25M	1⅝ x7¼	.002	25	35.40
252-25M	1⅝ x9½	.0025	25	45.00
302-25M	1⅝ x9½	.003	25	45.00
500-30M	19/32 x9	.00005	30	23.70
600-30M	¾ x9	.00006	30	25.00
750-30M	¾ x9	.000075	30	25.00
101-30M	¾ x9	.0001	30	25.00
201-30M	¾ x9	.0002	30	25.00
251-30M	13/16 x9	.00025	30	30.70
301-30M	29/32 x9	.0003	30	37.00
401-30M	29/32 x9	.0004	30	37.00
501-30M	1⅛ x9	.0005	30	44.00
601-30M	1⅛ x9	.0006	30	44.00
751-30M	1⅜ x9	.00075	30	46.00
102-30M	1⅝ x9	.001	30	50.00

Condenser Products Company

7517 North Clark Street • Chicago 26, Illinois

MANUFACTURERS: Glassmikes • Plasticon Capacitors • HiVolt Power Supplies • Pulse Forming Networks

ASTRON QUALITY CAPACITORS

ASTRON CORPORATION *255 Grant Ave., E. Newark, N. J.*

TYPE ML

"METALITE"

Metallized Paper Cardboard Tubular Capacitors

These METALITE capacitors are vacuum impregnated in a microcrystalline hydrocarbon wax which makes them suitable for service at temperatures up to 65°C. The double over all mineral wax coating has far superior moisture-resistant properties than the waxes employed in conventional tubulars. Furnished in kraft paper tubes with a unique terminal construction. The soldered metal end-caps achieve much greater mechanical strength than conventional paper tubulars. Lead length—1½" minimum. STANDARD TOLERANCE: —20 +30 percent.

CATALOG NUMBER	CAP. MF.	SIZE DIAM.		SIZE LENGTH	LIST PRICE
		200 Volts DC Working			
ML-2-01	.01	3/8	x	5/8	$ .65
ML-2-02	.02	3/8	x	5/8	.65
ML-2-05	.05	3/8	x	5/8	.65
ML-2-1	.1	3/8	x	5/8	.70
ML-2-25	.25	15/32	x	5/8	.90
ML-2-5	.5	15/32	x	1 1/8	1.05
ML-2-1M	1.0	9/16	x	1 1/8	1.30
ML-2-2M	2.0	5/8	x	1 5/8	1.80
		400 Volts DC Working			
ML-4-01	.01	3/8	x	5/8	.70
ML-4-02	.02	3/8	x	5/8	.70
ML-4-03	.03	3/8	x	5/8	.70
ML-4-05	.05	15/32	x	5/8	.70
ML-4-1	.1	15/32	x	1 1/8	.80
ML-4-25	.25	9/16	x	1 1/8	1.00
ML-4-5	.5	5/8	x	1 5/8	1.15
ML-4-1M	1.0	23/32	x	2 1/8	1.60
		600 Volts DC Working			
ML-6-01	.01	3/8	x	5/8	.70
ML-6-02	.02	3/8	x	5/8	.70
ML-6-03	.03	15/32	x	5/8	.80
ML-6-05	.05	15/32	x	5/8	.80
ML-6-1	.1	15/32	x	1 1/8	.90
ML-6-25	.25	5/8	x	1 1/8	1.10
ML-6-5	.5	23/32	x	1 5/8	1.45
ML-6-1M	1.0	23/32	x	2 1/8	1.80

TYPE MRF

"METALITE"

Metallized Paper Metal Encased Tubulars

Hermetically sealed in metal containers, mineral wax filled and impregnated, they are designed for operation up to 85°C. They can be furnished with plastic sleeve and/or mounting bracket.

TYPE MRF complies with JAN immersion and vibration test requirements, and offer size reductions up to 83% over equivalent paper foil units. STANDARD TOLERANCE: —20 +30 percent. Lead length—1¾" minimum. Lead wire sizes are as follows:

CASE DIA.	AWG SIZE
3/8	#20
7/16 to .670	#20
3/4 and up	#18

If plastic outer sleeving is required add "P" to type, i.e. MRFP-6-25, and add 15c to list price. For mounting bracket, add "Y" to type designation, i.e. MRFY-2-1, and add 20c to list price.

METALITE types are:

MRF—insulated from outer case.
MRG—grounded to outer case (deduct 3/32" from length)

CATALOG NUMBER	CAP. MF.	SIZE DIAM.		SIZE LENGTH	LIST PRICE
		200 Volts DC Working			
MRF-2-05	.05	3/8	x	7/8	$1.40
MRF-2-1	.1	7/16	x	7/8	1.45
MRF-2-25	.25	1/2	x	7/8	1.60
MRF-2-5	.5	1/2	x	1 3/8	1.70
MRF-2-1M	1.0	.670	x	1 3/8	2.10
MRF-2-2M	2.0	.670	x	1 7/8	2.60
		150 Volts DC Working			
MRF-1.5-4M	4.0	1	x	1 15/16	4.35
MRF-1.5-6M	6.0	1	x	1 15/16	5.30
MRF-1.5-8M	8.0	1 1/8	x	1 15/16	6.10
MRF-1.5-10M	10.0	1 1/4	x	1 15/16	7.20
		400 Volts DC Working			
MRF-4-05	.05	1/2	x	7/8	1.45
MRF-4-1	.1	1/2	x	1 3/8	1.60
MRF-4-25	.25	.670	x	1 3/8	1.80
MRF-4-5	.5	.670	x	1 7/8	2.00
MRF-4-1M	1.0	3/4	x	2 3/8	2.50
MRF-4-2M	2.0	1	x	2 7/16	3.60
MRF-4-3M	3.0	1 1/8	x	2 7/16	4.80
MRF-4-4M	4.0	1 1/4	x	2 7/16	5.90
		600 Volts DC Working			
MRF-6-02	.02	7/16	x	7/8	1.45
MRF-6-03	.03	7/16	x	7/8	1.50
MRF-6-05	.05	1/2	x	7/8	1.55
MRF-6-1	.1	1/2	x	1 3/8	1.70
MRF-6-2	.2	.670	x	1 3/8	1.90
MRF-6-25	.25	.670	x	1 3/8	2.00
MRF-6-5	.5	.670	x	1 7/8	2.40
MRF-6-1M	1.0	3/4	x	2 3/8	3.00
MRF-6-2M	2.0	1 1/8	x	2 7/16	4.00
MRF-6-3M	3.0	1 1/4	x	2 7/16	5.30

ASTRON QUALITY CAPACITORS

ASTRON CORPORATION 255 Grant Ave., E. Newark, N. J.

TYPE MQC

Glass Terminal Hermetically Sealed Tubular "METALITE" Metallized Paper Capacitors

ASTRON
METALITE
MQC-2-2M

Astron Type MQC METALITE capacitors are encased in tinned, non-ferrous cases with glass-to-metal hermetic terminal seals. Ideally suited for military and aircraft applications, they will meet high exacting requirements for rigorous service. Mineral wax impregnated and filled, Type MQC is available in ratings up to 600 WVDC.

Smallest type available, they are non-inductively wound, with one foil grounded to the outer case.

Positively sealed against moisture, Type MQC is furnished with glass-to-metal terminal at one end, or at each end, in accordance with circuit requirements. When terminals are furnished at each end, the capacitor section is completely insulated from case. Can be furnished with plastic insulating sleeve when required.

Where circuit requirements make it necessary to have a minimum of capacitance variation with temperature changes, Type MQM, mineral oil impregnated and filled, can be furnished without increase in size. STANDARD TOLERANCE: —15 +25 percent.

For glass terminals at each end (internally insulated construction), specify Type MQCF and add 1/16" to length. For MQCF add 50c to list price. For plastic outer sleeve specify Type MQCP and add 15c to list price.

CATALOG NUMBER	CAP. MF.	SIZE DIAM.		SIZE LENGTH	LIST PRICE
		200 Volts DC Working			
MQC-2-01	.01	.235	x	¾	$2.05
MQC-2-02	.02	.235	x	¾	2.10
MQC-2-05	.05	.235	x	¾	2.10
MQC-2-1	.1	.312	x	¾	2.15
MQC-2-25	.25	.400	x	¾	2.35
MQC-2-5	.5	.400	x	1 1/16	2.40
MQC-2-1M	1.0	.562	x	1¼	2.65
MQC-2-1.5M	1.5	.562	x	1¾	2.85
MQC-2-2M	2.0	.670	x	1¾	3.95
		150 Volts DC Working			
MQC-1.5-4M	4.0	1	x	1¾	5.00
MQC-1.5-6M	6.0	1	x	1¾	5.85
MQC-1.5-8M	8.0	1	x	2¼	6.65
		400 Volts DC Working			
MQC-4-01	.01	.235	x	¾	2.10
MQC-4-02	.02	.235	x	¾	2.15
MQC-4-03	.03	.312	x	¾	2.15
MQC-4-05	.05	.312	x	1 1/16	2.20
MQC-4-1	.1	.400	x	1 1/16	2.25
MQC-4-25	.25	.562	x	1 1/16	2.45
MQC-4-5	.5	.562	x	1¾	2.75
MQC-4-1M	1.0	.670	x	2¼	3.05
MQC-4-1.5M	1.5	1	x	2¼	4.10
MQC-4-2M	2.0	1	x	2¼	4.65
MQC-4-4M	4.0	1⅛	x	2¼	6.85
		600 Volts DC Working			
MQC-6-01	.01	.235	x	¾	2.15
MQC-6-03	.03	.312	x	¾	2.20
MQC-6-05	.05	.312	x	1 1/16	2.25
MQC-6-1	.1	.400	x	1 1/16	2.30
MQC-6-25	.25	.562	x	1¼	2.70
MQC-6-5	.5	.670	x	1¾	3.00
MQC-6-1M	1.0	.750	x	2¼	3.65
MQC-6-2M	2.0	1	x	2¼	5.15

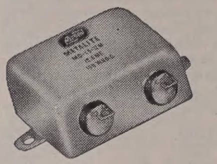
Lead length—1¾" minimum

Lead wire sizes are as follows:

CASE DIA.	AWG SIZE
.235	#24
.312	#22
.400 and up	#20

TYPE MD

"METALITE" Metallized Paper Capacitors



Type MD METALITE metallized paper capacitors allow the use of the convenient bathtub type can in capacities much higher than ever before available in this case style. Multiple section construction of metallized paper is made possible in this type with terminals positioned in accordance with your specific requirements.

Standard types are supplied with side terminals. For other terminal positions: specify type MDT for top terminals, MDB for bottom terminals, and MDE for terminals at ends. If required for special applications, stud and nut terminals can be furnished, as well as glass-to-metal hermetic seal terminals.

CATALOG NUMBER	CAP. MF.	WVDC	SIZE L.		SIZE W.		SIZE H.	LIST PRICE
MD-2-5	.5	200	1¾	x	1	x	¾	$3.30
MD-2-1M	1.0	200	1¾	x	1	x	¾	3.55
MD-2-2M	2.0	200	1¾	x	1	x	¾	4.45
MD-1.5-4M	4.0	150	1¾	x	1	x	⅞	5.75
MD-1.5-6M	6.0	150	2	x	1¾	x	⅞	6.10
MD-1.5-8M	8.0	150	2	x	2	x	⅞	8.40
MD-1.5-10M	10.0	150	2	x	2	x	⅞	9.70
MD-1.5-12M	12.0	150	2	x	2	x	1	11.00
MD-1.5-16M	16.0	150	2	x	2	x	1⅜	13.50
MD-1.5-18M	18.0	150	2	x	2	x	1½	15.00
MD-4-25	.25	400	1¾	x	1	x	¾	3.35
MD-4-5	.5	400	1¾	x	1	x	¾	3.55
MD-4-1M	1.0	400	1¾	x	1	x	⅞	3.95
MD-4-2M	2.0	400	2	x	1¾	x	⅞	4.90
MD-4-4M	4.0	400	2	x	2	x	1⅛	7.85
MD-6-1	.1	600	1¾	x	1	x	¾	3.50
MD-6-25	.25	600	1¾	x	1	x	¾	3.55
MD-6-5	.5	600	1¾	x	1	x	¾	4.25
MD-6-1M	1.0	600	1¾	x	1¼	x	⅞	4.90
MD-6-2M	2.0	600	2	x	2	x	1	6.25
MD-6-3M	3.0	600	2	x	2	x	1⅜	7.75
MD-6-4M	4.0	600	2	x	2	x	1½	9.75
			Dual Units					
MD-2-2x1M	1.0—1.0	200	1¾	x	1	x	¾	$5.00
MD-2-2x2M	2.0—2.0	200	1¾	x	1	x	⅞	6.30
MD-1.5-2x4M	4.0—4.0	150	2	x	2	x	⅞	9.00
MD-1.5-2x6M	6.0—6.0	150	2	x	2	x	1	11.50
MD-4-2x5	.5—.5	400	1¾	x	1	x	⅞	4.35
MD-4-2x1M	1.0—1.0	400	2	x	1¾	x	⅞	5.50
MD-4-2x2M	2.0—2.0	400	2	x	2	x	1⅛	8.10
MD-6-2x25	.25—.25	600	1¾	x	1	x	¾	4.95
MD-6-2x5	.5—.5	600	1¾	x	1	x	⅞	5.70
MD-6-2x1M	1.0—1.0	600	2	x	2	x	1	6.60

Standard Tolerance ±20%

Mounting Centers

For Can size 1¾" x 1" is 2⅛"
For Can size 2" x 1¾" is 2⅜"
For Can size 2" x 2" is 2⅜"

ASTRON QUALITY CAPACITORS

ASTRON CORPORATION *255 Grant Ave., E. Newark, N. J.*

"MINIMITE" TYPE MM METAL TUBULAR DRY ELECTROLYTICS

Astron MINIMITE Type MM high quality compact electrolytic capacitors are ideally suited for under chassis mounting in filter and audio by-pass circuits, where long life and limited space are essential factors. Hermetically sealed in seamless extruded aluminum shells and covered with kraft tube insulating sleeves. They have bare tinned 20 ga. wire leads, a minimum of 3 inches in length. Exceptionally low leakage. Withstand high surge voltage. Adequate voltage breakdown characteristics. Permanent low resistance contact. Dual units are negative common with 3 bare wire leads and neutral strap.

CATALOG NUMBER	CAP. MF.	WVDC	SIZE† DIAM.		LENGTH	LIST PRICE
MM-500-15	500	15	7/8	x	2 1/16	$1.75
MM-1000-15	1000	15	1	x	2 11/16	2.30
MM-10-25	10	25	1/2	x	1 1/16	.75
MM-25-25	25	25	1/2	x	1 1/16	.85
MM-50-25	50	25	5/8	x	1 1/16	1.00
MM-100-25	100	25	5/8	x	1 5/8	1.20
MM-10-50	10	50	1/2	x	1 1/16	.80
MM-25-50	25	50	5/8	x	1 1/16	.90
MM-50-50	50	50	5/8	x	1 5/8	1.05
MM-8-150	8	150	1/2	x	1 5/8	.80
MM-16-150	16	150	5/8	x	1 5/8	.90
MM-20-150	20	150	5/8	x	1 5/8	.95
MM-30-150	30	150	3/4	x	1 5/8	1.00
MM-40-150	40	150	3/4	x	1 5/8	1.10
MM-50-150	50	150	7/8	x	1 5/8	1.20
MM-80-150	80	150	7/8	x	2 1/16	1.60
MM-150-150	150	150	1	x	2 3/8	1.90
MM-8-250	8	250	5/8	x	1 5/8	.80
MM-16-250	16	250	3/4	x	1 5/8	1.10
MM-20-250	20	250	3/4	x	1 5/8	1.35
MM-40-250	40	250	7/8	x	1 3/4	1.55
MM-10-350	10	350	3/4	x	1 5/8	1.00
MM-20-350	20	350	7/8	x	1 5/8	1.30
MM-4-450	4	450	5/8	x	1 3/8	.90
MM-8-450	8	450	3/4	x	1 3/8	.95
MM-10-450	10	450	3/4	x	1 5/8	1.05
MM-16-450	16	450	7/8	x	1 3/4	1.35
MM-20-450	20	450	7/8	x	2 1/16	1.50
MM-30-450	30	450	1	x	2 3/8	1.65
MM-40-450	40	450	1	x	2 11/16	1.80
MM-8-500	8	500	7/8	x	2 1/16	1.30
MM-16-500	16	500	1	x	2 3/8	1.50
Dual Capacitance Units						
MM-2x20-150	20+20	150	3/4	x	1 5/8*	1.30
MM-2x30-150	30+30	150	7/8	x	1 5/8*	1.50
MM-2x40-150	40+40	150	7/8	x	2 1/16*	1.70
MM-5030-150	50+30	150	7/8	x	2 1/16*	1.95
MM-2x50-150	50+50	150	7/8	x	2 3/8*	2.10
MM-2x8-450	8+8	450	7/8	x	2 1/16*	1.70
MM-2x10-450	10+10	450	7/8	x	2 1/16*	1.85
MM-2x16-450	16+16	450	1	x	2 11/16*	2.25
MM-2x20-450	20+20	450	1	x	2 11/16*	2.50

*Furnished with radial mounting strap.

†Dimensions are for metal tubes. Add 1/16" to diameter and 1/8" to length for over-all dimensions for cardboard insulating sleeve.

TYPE ES CARDBOARD TUBE DRY ELECTROLYTICS

ASTRON
ES-311

Sturdily constructed, Astron Type ES capacitors are ideal for use in television and other electronic filter and audio by-pass circuits. They are internally wrapped in plastic film for protection in humid operating conditions and contained in a strong wax impregnated kraft tube. Filled with high melting point wax. Capacity, voltage and polarity clearly identified on the container. Insulated lead wires approximately 6 inches long. Supplied with centrally located mounting strap.

CATALOG NUMBER	CAP. MF.	WVDC	SIZE DIAM.		LENGTH	LIST PRICE
Dual Units—Common Negative						
ES-2x20-150	20+20	150	3/4	x	2 1/2	$1.30
ES-2x30-150	30+30	150	7/8	x	2 1/2	1.50
ES-2x40-150	40+40	150	1	x	2 1/2	1.70
ES-5030-150	50+30	150	1	x	2 1/2	1.70
ES-2x50-150	50+50	150	1	x	3	1.85
ES-8040-150	80+40	150	1 1/8	x	3	2.00
ES-2x20-250	20+20	250	7/8	x	2 1/2	1.85
ES-2x20-450	20+20	450	1 1/8	x	3 1/4	2.50
Triple Units—Common Negative						
ES-3x20-150	20+20+20	150	1	x	2 1/2	$2.00
ES-310	40+30+20	150	1	x	3	2.15
ES-311	80+40+20	150	1 1/8	x	3 1/4	2.50
ES-312	40+10/20	150/25	1	x	2 1/2	1.95
ES-313	40+30/20	150/25	1	x	3	2.05
ES-314	40+40/40	150/25	1	x	3 1/4	2.20
ES-315	50+30/100	150/25	1	x	3 1/4	2.55

TYPE EY TWIST PRONG DRY ELECTROLYTICS

Simple to mount by means of twist prong tabs on a mounting plate, or directly on the chassis, in filter and by-pass circuits. The mounting tab ring is electrically welded to the cathode of the capacitor, and serves as the negative terminal. Multiple section units are concentrically wound and have common cathode. Terminal tabs are securely fastened to the terminal lugs, insuring permanent low resistance connections. Compact and hermetically sealed in a seamless aluminum drawn can. Operates at ambient temperatures up to 85°C. Smallest practical sizes. Coding clearly etched on container.

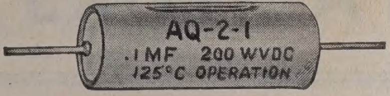
CATALOG NUMBER	CAP. MF.	WVDC	SIZE DIAM.		LENGTH	LIST PRICE
Single Section						
EY-1000-15	1000	15	1	x	3	$2.55
EY-2000-15	2000	15	1 3/8	x	3	3.45
EY-100-25	100	25	1	x	2	1.45
EY-500-25	500	25	1	x	3	2.45
EY-1000-25	1000	25	1 3/8	x	3	3.55
EY-500-50	500	50	1 3/8	x	3	2.65
EY-50-150	50	150	1	x	2	1.45
EY-100-150	100	150	1	x	2	2.00
EY-30-350	30	350	1	x	2	1.70
EY-50-350	50	350	1	x	3	2.05
EY-125-350	125	350	1 3/8	x	3	3.55
EY-10-450	10	450	1	x	2	1.30
EY-20-450	20	450	1	x	2	1.75
EY-30-450	30	450	1	x	2 1/2	1.90
EY-40-450	40	450	1	x	3	2.0
EY-80-450	80	450	1 3/8	x	3	3.
Dual Sections						
EY-2x30-150	30+30	150	1	x	2	1.75
EY-5030-150	50+30	150	1	x	2 1/2	1.95
EY-2x50-150	50+50	150	1	x	2 1/2	2.10
EY-2x20-250	20+20	250	1	x	2	1.90
EY-2x40-250	40+40	250	1	x	2 1/2	2.55
EY-2x15-350	15+15	350	1	x	2	2.10
EY-2x20-350	20+20	350	1	x	2 1/2	2.35
EY-2x10-450	10+10	450	1	x	2	1.90
EY-2x20-450	20+20	450	1	x	3	2.55
EY-2x40-450	40+40	450	1 3/8	x	3	3.45
EY-8010-450	80+10	450	1 3/8	x	3	4.25
EY-2x40-500	40+40	500	1 3/8	x	4	4.30
EY-2x1000-15	1000+1000	15	1 3/8	x	3	4.95
EY-200	250/1000	10/6	1 3/8	x	2	2.85
EY-201	80/50	450/50	1 3/8	x	3	3.50
EY-202	20/80	450/350	1 3/8	x	3	3.65
EY-203	40/10	450/350	1 3/8	x	2 1/2	2.60
Triple Sections						
EY-310	40+40+40	25	1	x	2	2.15
EY-312	40+20/100	150/25	1	x	2 1/2	2.50
EY-313	40+20/20	150/25	1	x	2	2.35
EY-314	50+30/30	150/25	1	x	2	2.45
EY-315	20+20+20	150	1	x	2	2.30
EY-316	40+40+40	150	1	x	2 1/2	2.60
EY-317	15+15/20	350/25	1	x	2 1/2	2.55
EY-318	30+30/50	350/50	1 3/8	x	2 1/2	3.05
EY-319	15+10/20	350/25	1	x	2	2.40
EY-320	10+10+10	450	1	x	3	2.50
EY-321	20+20+20	450	1 3/8	x	3	3.45
EY-322	20+20/20	450/25	1	x	3 1/2	2.95
EY-323	40+20/25	450/50	1 3/8	x	3	3.40
EY-324	60+30+10	450	1 3/8	x	3 1/2	4.25
EY-325	40+10/80	450/150	1 3/8	x	3	3.90
EY-326	40+40+10	450	1 3/8	x	3 1/2	4.15
EY-327	10/30/30	450/400/300	1 3/8	x	2 1/2	3.35
EY-328	40+10+10	450	1 3/8	x	2 1/2	3.35
EY-329	40+40+40	450	1 3/8	x	4	4.90
EY-330	40+10/80	450/200	1 3/8	x	3	3.90
Quadruple Sections						
EY-410	40+40+40/20	150/25	1 3/8	x	2	3.15
EY-411	10+10+10+10	450	1 3/8	x	2	3.25
EY-412	20+20+20+20	450	1 3/8	x	3	4.50
EY-413	20/20/20/20	{450/400 350/25}	1 3/8	x	3	3.80
EY-414	40+30+20/20	450/25	1 3/8	x	3 1/2	4.45
EY-415	40+10+10/10	450/350	1 3/8	x	3	3.35

QUALITY CAPACITORS

ASTRON CORPORATION 255 Grant Ave., E. Newark, N. J.

TYPE AQ

Subminiature Paper Capacitors
For Operation at 125°C *Without Derating*



Designed specifically for operation at temperatures up to and including 125°C, without derating, Type AQ offers exceptional capacitance stability over a wide temperature range, high insulation resistance, low power factor, high test voltage in addition to its subminiature size. Type AQ are unusually compact.

To insure unqualified performance for low voltage, as well as high voltage applications, and to offer units with lowest possible resonance losses, Type AQ is supplied only in the extended foil, non-inductive type construction. It has excellent operating characteristics on both AC and DC voltages.

Through the use of Astron's newly developed high temperature impregnant, X-250, Type AQ can be used in operating temperatures from —65°C to +125°C without derating. They are capable of meeting all the stringent and exacting Armed Forces requirements.

Positive assurance of hermetic sealing is provided by the use of glass-to-metal seal terminals. These capacitors may be obtained with either one lead grounded to case or insulated section construction (Type AQF). Supplied in a variety of hermetically sealed metal tubular cases and construction styles.

For glass terminal at each end (internally insulated construction), specify Type AQF and add 1/16" to length. For Type AQF add 50c to list price. For plastic outer sleeve, specify Type AQP, and add 15c to list price.

STANDARD TOLERANCE: —15 +25 percent
Lead Length: 1¾" Minimum
Lead Wire Sizes Are as Follows:

CASE DIA.	AWG SIZE
.235	#24
.312	#22
.400 and up	#20

CATALOG NUMBER	CAP. MF.	SIZE DIAM. LENGTH	LIST PRICE
100 Volts DC Working			
AQ-1-0047	.0047	.235 x 11/16	$2.80
AQ-1-01	.01	.235 x 11/16	2.95
AQ-1-022	.022	.312 x 13/16	3.00
AQ-1-033	.033	.312 x 13/16	3.05
AQ-1-047	.047	.312 x 13/16	3.15
AQ-1-1	.1	.400 x 13/16	3.20
AQ-1-22	.22	.400 x 15/16	3.50
AQ-1-27	.27	.562 x 1 1/16	3.60
AQ-1-47	.47	.562 x 1 5/16	4.15
AQ-1-1M	1.0	.670 x 1 9/16	4.85
200 Volts DC Working			
AQ-2-0047	.0047	.235 x 11/16	2.95
AQ-2-01	.01	.312 x 13/16	3.10
AQ-2-022	.022	.312 x 13/16	3.15
AQ-2-033	.033	.312 x 13/16	3.20
AQ-2-047	.047	.400 x 13/16	3.25
AQ-2-1	.1	.400 x 1 1/16	3.35
AQ-2-22	.22	.562 x 1 1/16	3.65
AQ-2-27	.27	.562 x 1 5/16	3.75
AQ-2-47	.47	.562 x 1 9/16	4.25
AQ-2-1M	1.0	.750 x 2 1/16	5.25
400 Volts DC Working			
AQ-4-0047	.0047	.312 x 13/16	$3.15
AQ-4-01	.01	.312 x 13/16	3.30
AQ-4-022	.022	.400 x 13/16	3.35
AQ-4-033	.033	.400 x 13/16	3.40
AQ-4-047	.047	.400 x 1 1/16	3.45
AQ-4-1	.1	.562 x 1 1/16	3.55
AQ-4-22	.22	.562 x 1 9/16	3.85
AQ-4-27	.27	.670 x 1 9/16	4.55
AQ-4-47	.47	.750 x 2 1/16	4.75
600 Volts DC Working			
AQ-6-0047	.0047	.312 x 13/16	3.20
AQ-6-01	.01	.312 x 13/16	3.35
AQ-6-022	.022	.400 x 13/16	3.40
AQ-6-033	.033	.400 x 1 1/16	3.45
AQ-6-047	.047	.400 x 1 5/16	3.50
AQ-6-1	.1	.562 x 1 5/16	3.75
AQ-6-22	.22	.670 x 1 9/16	4.35
AQ-6-27	.27	.750 x 2 1/16	4.50
AQ-6-47	.47	.750 x 2 1/16	5.25

TYPE AM

Molded Paper Tubulars

ASTRON
TYPE AM

Type AM paper tubulars are molded in a high temperature, heat resistant, plastic compound. They will not cold-flow at 100°C. These units are perfectly sealed against the most severe conditions of humidity. Especially designed for continuous operation up to 85°C. Smaller than most conventional paper tubulars and well within RMA size requirements. Type AM molded paper tubulars are clearly labeled with capacity and voltage ratings.

CATALOG NUMBER	CAP. MF.	SIZE DIAM. LENGTH	LIST PRICE
200 Volts DC			
AM-2-01	.01	3/8 x 1	$0.25
AM-2-02	.02	3/8 x 1	.25
AM-2-05	.05	3/8 x 1 3/16	.25
AM-2-1	.1	7/16 x 1 3/16	.35
AM-2-2	.2	5/8 x 1 7/8	.45
AM-2-25	.25	5/8 x 1 7/8	.45
AM-2-5	.5	5/8 x 1 7/8	.60
400 Volts DC			
AM-4-01	.01	3/8 x 1	.25
AM-4-02	.02	3/8 x 1 3/16	.25
AM-4-05	.05	7/16 x 1 3/16	.30
AM-4-1	.1	1/2 x 1 5/8	.35
AM-4-2	.2	5/8 x 1 7/8	.40
AM-4-25	.25	5/8 x 1 7/8	.45
600 Volts DC			
AM-6-001	.001	3/8 x 1	.25
AM-6-002	.002	3/8 x 1	.25
AM-6-003	.003	3/8 x 1	.25
AM-6-004	.004	3/8 x 1	.25
AM-6-005	.005	3/8 x 1	.25
AM-6-006	.006	3/8 x 1	.25
AM-6-01	.01	3/8 x 1 3/16	.30
AM-6-02	.02	7/16 x 1 3/16	.35
AM-6-03	.03	1/2 x 1 5/8	.35
AM-6-05	.05	1/2 x 1 5/8	.40
AM-6-08	.08	5/8 x 1 7/8	.40
AM-6-1	.1	5/8 x 1 7/8	.45
1600 Volts DC			
AM-16-001	.001	3/8 x 1 3/16	.55
AM-16-002	.002	3/8 x 1 3/16	.55
AM-16-003	.003	3/8 x 1 3/16	.55
AM-16-005	.005	7/16 x 1 3/16	.55
AM-16-006	.006	7/16 x 1 3/16	.55
AM-16-008	.008	1/2 x 1 5/8	.60
AM-16-01	.01	1/2 x 1 5/8	.60
AM-16-015	.015	1/2 x 1 5/8	.60
AM-16-02	.02	5/8 x 1 7/8	.60
AM-16-03	.03	5/8 x 1 7/8	.60

PYRAMID

METALLIZED PAPER CAPACITORS

ENGINEERING DATA

GENERAL DATA

The major constructional difference between conventional paper capacitors and metallized paper capacitors lies in the replacement of the separate layers of metallic foil with an extremely thin metallic film, deposited directly on a lacquered surface of the paper dielectric by a high vacuum vaporizing process. This lacquer coating considerably improves the dielectric strength and insulation resistance of the paper.

The metallic films most commonly used are zinc and aluminum. Zinc has a lower melting point and is much easier to apply to the dielectric. It is not, however, as stable as aluminum and yields a slightly higher power factor. Therefore, aluminum coated paper is preferred and used for most metallized paper capacitors produced in this country.

SELF-HEALING CHARACTERISTIC

The unique characteristic of self-healing is derived from the thinness of the deposited film, which is in the order of three millionths of an inch. This film oxidizes, melts or vaporizes away from any conducting particle or other flaw within the dielectric layer when voltage is applied. Thus, the weak particle is isolated from the rest of the winding. This characteristic permits the use of less insulation between the electrodes than is commonly used in conventional capacitors. The combination of a very thin aluminum deposit and less insulation accounts for the marked reduction in volume and weight. This is dramatically shown in the following table:

Rated Voltage DC	Approximate Volume Reduction in % (as against conventional capacitors)
200	75
400	50
600	30

VOLTAGE DATA

Due to the self-healing characteristic, metallized paper capacitors will rarely fail, assuring long life when operated within proper voltage and temperature limits. As a matter of fact, the insulation resistance generally improves with time. Since the insulation is normally highly stressed, the application of over-voltages or excessive temperatures will increase the frequency of sparking. If the over-voltages are of an intermittent, momentary nature, shorts that may develop will clear themselves and the capacitor will continue to operate normally. Should over-voltages be prolonged, continuous sparking will occur, causing carbonization of the impregnant and of the dielectric. Thus, the insulation resistance is rapidly reduced making the capacitor unsuitable. It is for these reasons that accelerated life tests are not considered a reliable measure of the quality of metallized paper capacitors and are therefore not recommended.

The test voltage of metallized paper capacitors is normally not in excess of 150% of the rated working voltage at 25°C. applied for a period not exceeding 5 seconds.

The term "test voltage" as applied to metallized paper capacitors, is taken to mean the value at which the number of sparks is relatively small indicating that the faults have been cleared. The test voltage is applied through a resistance that limits the charging current to 50 milliamperes. The capacitor is then discharged through the same resistance.

DERATING

To prevent the reduction in life expectancy at high temperatures, metallized paper capacitors are derated when operated at ambient temperatures exceeding 55°C. as follows:

Reduction in Operating Voltage from Rated Voltage, in %

Temperature Centigrade	Mineral Wax Impregnant Rating up to 200 VDC	Mineral Oil Impregnant Rating 400 and 600 VDC
55°	0	0
60°	5	5
65°	10	10
70°	15	15
75°	20	20
80°	25	25
85°	35	30
90°	50	40
95°	65	50

INSULATION RESISTANCE

The average value of the insulation resistance of metallized paper capacitors is lower than that of conventional paper capacitors, particularly those with a single paper dielectric where a larger number of conducting paths are present. This is due to the higher voltage stresses employed and to a certain amount of deterioration of the impregnant around the

(continued on next page)

PYRAMID METALLIZED PAPER CAPACITORS

ENGINEERING DATA — Continued

conducting paths that occurs during self-healing, or clearing of the fault. Because the number of faults cleared varies with the number of conducting paths, the variation in insulation resistance is greater than in conventional capacitors. For most applications, the minimum insulation resistance limits exceed actual circuit requirements.

The insulation resistance measured at 25°C., and for an electrification time of two minutes maximum, equals or exceeds the megohm values listed below. The applied voltage will range from 100 VDC to not more than rated working voltage.

Working Voltage	Capacitance	Minimum Megohms/Mfd.	Capacitor Need Not Exceed Megohm Value of
150 VDC	all capacities	250	750
200 VDC	up to 2. mfd.	500	1500
400 VDC	all capacities	1000	3000
600 VDC	all capacities	1000	3000

LIFE TESTS

A resistance of one ohm per volt to 200 ohms per volt of applied voltage should be connected in series with each capacitor during life test.

Normal life tests are conducted for 1000 hours at DERATED working voltage at 85°C. for hermetically sealed units and 65°C. for non-hermetically sealed units.

As noted previously, accelerated life tests are not recommended. If conducted, however, the applied voltage should be 125% of the DERATED working voltage for 250 hours at 85°C. for hermetically sealed units, and at 65°C. for non-hermetically sealed units.

On completion of tests, the capacity change will not exceed 5% and the power factor will not exceed 1½%.

APPLICATIONS

At radio frequencies, the RF impedance of metallized capacitors is of about the same order of magnitude as for conventional capacitors. They are ideal for use as by-pass capacitors and for use in interference filters. Because of their light weight and small size, they are well suited for use in portable radios, instruments, aircraft noise suppression systems and other communications equipment.

For use in AC circuits, it is important that the capacitor selected have a DC rating in excess of the peak voltage present.

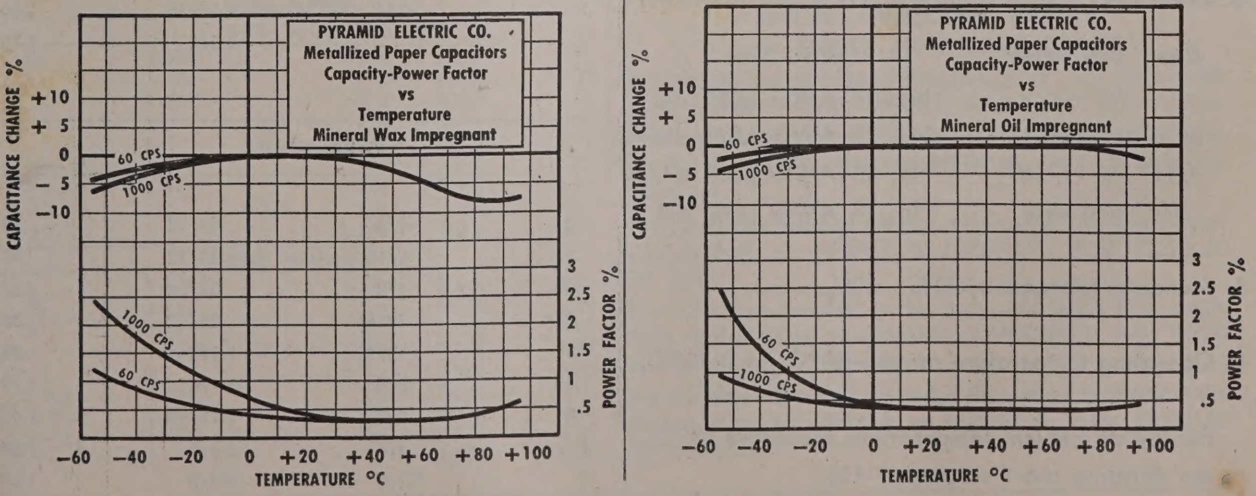
Due to the generally lower insulation resistance they are not recommended for high impedance circuits, coupling circuits, RC timing circuits, RC oscillators, or grid-plate blocking capacitors. The thinness of the aluminum film limits the current carrying capacity of metallized paper capacitors. Therefore, they are not suitable for photoflash circuits or similar heavy current pulse applications.

POWER FACTOR: The power factor limit of metallized paper capacitors is 1% maximum when measured at or referred to 1000 cycles per second at 25° C.

CAPACITY AND POWER FACTOR CHANGES WITH TEMPERATURE

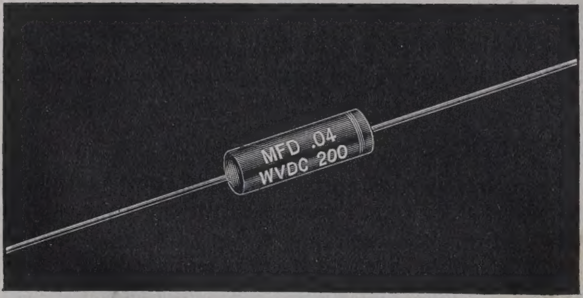
MINERAL WAX IMPREGNANT

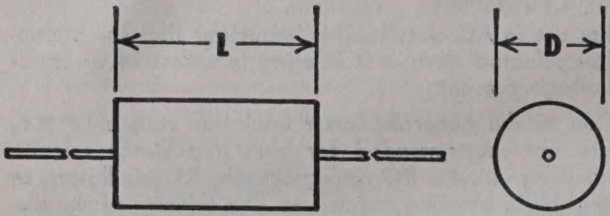
MINERAL OIL IMPREGNANT



PYRAMID METALLIZED PAPER CAPACITORS

SERIES MT
METALLIZED PAPER CAPACITORS IN IMPREGNATED KRAFT TUBES





1. CONSTRUCTION—Extended foil section assembled in phenolic impregnated kraft tube with plastic end seals. Vacuum impregnated in microcrystalline mineral wax. Overall coating of highly moisture resistant mineral wax.

2. Leads 1½″ minimum length in AWG sizes as follows:

Case Diameter	Wire Size
¼″	No. 24 AWG (.020 dia.)
5/16″ to 13/32″	No. 22 AWG (.025 dia.)
7/16″ to 11/16″	No. 20 AWG (.032 dia.)
3/4″ and over	No. 18 AWG (.040 dia.)

3. Standard tolerance +30% –20%.

4. Operating temperature range –40°C. to +70°C.

For use at ambient temperatures exceeding 55°C., see derating chart on page P-116.

TYPE MT METALLIZED PAPER CAPACITORS

Capacity MFD.	Size, in Inches D	L	List Price
200 WVDC			
.01	1/4	25/32	$ .65
.02	1/4	25/32	.65
.03	1/4	25/32	.65
.05	1/4	25/32	.65
.1	5/16	25/32	.70
.25	7/16	25/32	.90
.5	7/16	1-1/8	1.05
1.	9/16	1-1/8	1.30
2.	9/16	1-13/16	1.80
400 WVDC			
.01	1/4	25/32	.70
.02	1/4	25/32	.70
.03	5/16	25/32	.70
.05	3/8	25/32	.70
.1	13/32	1-1/8	.80
.25	9/16	1-1/8	1.00
.5	9/16	1-13/16	1.15
1.	3/4	1-13/16	1.60
2.	1	2-3/8	2.75
600 WVDC			
.01	1/4	25/32	.70
.02	5/16	25/32	.70
.03	3/8	25/32	.80
.05	7/16	25/32	.80
.1	15/32	1-1/8	.90
.25	5/8	1-1/8	1.10
.5	5/8	1-13/16	1.45
1.	3/4	2-3/8	1.80
2.	1-1/8	2-3/8	3.10

PYRAMID METALLIZED PAPER CAPACITORS

SERIES MPD

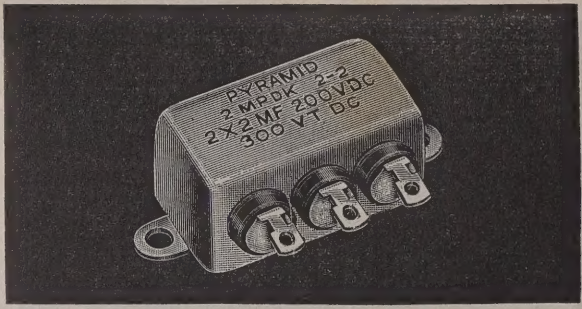
METALLIZED PAPER CAPACITORS IN DRAWN SHELL CONTAINERS

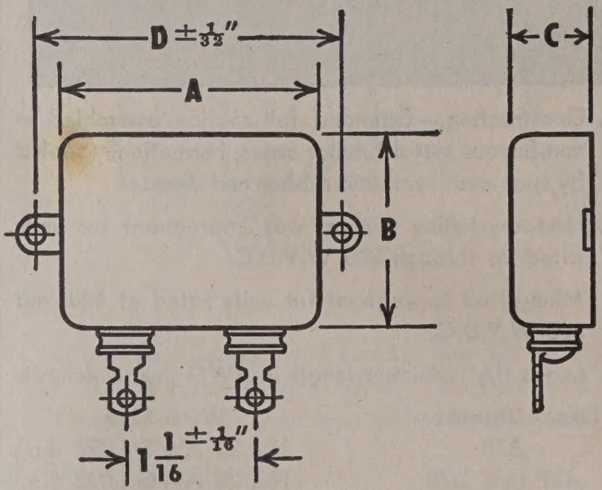
1. Construction—Extended foil section assembled in hermetically sealed, tinned bathtub type cases. Standard terminals consist of compression insulators with fixed riveted lugs, located on side.
2. Microcrystalline mineral wax impregnant for units rated up through 200 W.V.D.C.

   Mineral oil impregnant for units rated at 400 and 600 W.V.D.C.
3. Standard tolerance ± 20%.
4. Operating temperature range —55°C. to +95°C.

   For use at ambient temperatures exceeding 55°C., see derating chart on page P-116.
5. Will meet JAN tests for vibration, humidity, and temperature and immersion cycling.

Capacity MFD.	Size, in Inches A	B	C	D	List Price
Type MPDK					
150 WVDC					
3.	1-3/4	1	3/4	2-1/8	$ 5.10
4.	1-3/4	1	7/8	2-1/8	5.75
6.	2	1-3/4	7/8	2-3/8	6.10
8.	2	2	7/8	2-3/8	8.40
10.	2	2	1	2-3/8	9.70
12.	2	2	1	2-3/8	11.00
4.+4.	2	2	7/8	2-3/8	9.00
6.+6.	2	2	1	2-3/8	11.50
200 WVDC					
.5	1-3/4	1	3/4	2-1/8	3.30
1.	1-3/4	1	3/4	2-1/8	3.55
2.	1-3/4	1	3/4	2-1/8	4.45
1.+1.	1-3/4	1	3/4	2-1/8	5.00
2.+2.	1-3/4	1	7/8	2-1/8	6.30
Type MPDM					
400 WVDC					
.25	1-3/4	1	3/4	2-1/8	3.35
.5	1-3/4	1	3/4	2-1/8	3.55
1.	1-3/4	1	7/8	2-1/8	3.95
2.	2	1-3/4	7/8	2-3/8	4.90
4.	2	2	1-1/8	2-3/8	7.85
.25+.25	1-3/4	1	3/4	2-1/8	3.80
.5+.5	1-3/4	1	7/8	2-1/8	4.35
1.+1.	2	1-3/4	7/8	2-3/8	5.50
2.+2.	2	2	1-1/8	2-3/8	8.10
600 WVDC					
.1	1-3/4	1	3/4	2-1/8	3.50
.25	1-3/4	1	3/4	2-1/8	3.55
.5	1-3/4	1	3/4	2-1/8	4.25
1.	1-3/4	1-1/4	7/8	2-1/8	4.90
2.	2	2	1	2-3/8	6.25
.1+.1	1-3/4	1	3/4	2-1/8	4.10
.25+.25	1-3/4	1	3/4	2-1/8	4.95
.5+.5	1-3/4	1-1/4	7/8	2-1/8	5.70
1.+1.	2	2	1	2-3/8	6.60





Type MPDK

Microcrystalline mineral wax impregnant.
W.V.D.C. up to 200.
Terminals—Compression insulators with fixed riveted lugs, located on side.

OR

Type MPDM

Mineral oil impregnant.
W.V.D.C.—400 and 600.
Terminals—Compression insulators with fixed riveted lugs, located on side.

OTHER AVAILABLE STYLES FOR SERIES MPD CAPACITORS

With stud and nut type terminals, add suffix S to basic type designation, as MPDKS. Add $2.00 to list price.

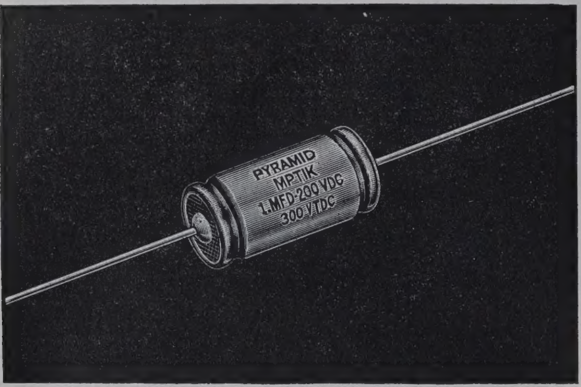
With glass to metal type terminals, add suffix G to basic type designation, as MPDKG. Add $3.00 to list price.

For terminals located on top, add suffix T to basic type designation, as MPDKT or MPDKGT. Add $2.00 to list price.

For terminals located on bottom, add suffix B to basic type designation, as MPDKB or MPDKGB. Add $2.00 to list price.

For terminals located on end, add suffix E to basic type designation, as MPDKE or MPDKGE. Add $2.00 to list price.

PYRAMID METALLIZED PAPER CAPACITORS



1. Construction — Extended foil section assembled in non-ferrous metal tubular cases, hermetically sealed by spun-over synthetic rubber end discs.
2. Microcrystalline mineral wax impregnant for units rated up through 200 W.V.D.C.

   Mineral oil impregnant for units rated at 400 and 600 W.V.D.C.
3. Leads 1½″ minimum length in AWG sizes as follows:

Case Diameter	**Wire Size**
.375	No. 22 AWG (.025 dia.)
.437 thru .670	No. 20 AWG (.032 dia.)
.750 and over	No. 18 AWG (.040 dia.)

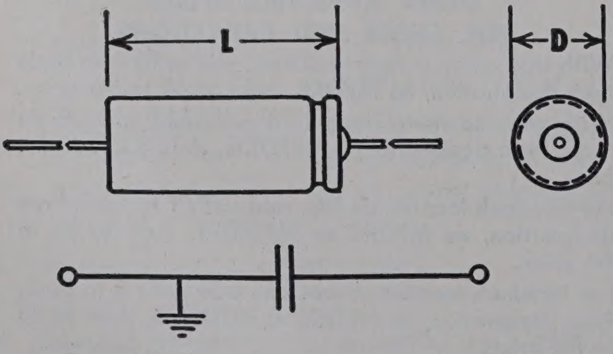
4. Standard tolerance +30% −20%.
5. Operating temperature range −55°C. to +85°C.

   For use at ambient temperatures exceeding 55°C., see derating chart on page P-116.
6. Will meet JAN tests for vibration, humidity, and temperature and immersion cycling.

SERIES MPT METALLIZED PAPER CAPACITORS IN HERMETICALLY SEALED METAL TUBES

Capacity MFD.	Size, in Inches D±.015	Size, in Inches L±1/32	List Price	Size, in Inches D±.015	Size, in Inches L±1/32	List Price
	Type MPTK Case Grounded			**Type MPTIK Case Floating**		
		150 WVDC				
3.	3/4	1-13/16	$3.35	3/4	1-15/16	$3.35
4.	7/8	1-13/16	4.35	7/8	1-15/16	4.35
6.	1	1-13/16	5.30	1	1-15/16	5.30
		200 WVDC				
.05	3/8	13/16	1.40	3/8	15/16	1.40
.1	7/16	13/16	1.45	7/16	15/16	1.45
.25	1/2	13/16	1.60	1/2	15/16	1.60
.5	1/2	1-1/8	1.70	1/2	1-1/4	1.70
1.	5/8	1-5/16	2.10	5/8	1-7/16	2.10
2.	5/8	1-13/16	2.60	5/8	1-15/16	2.60
	Type MPTM Case Grounded			**Type MPTIM Case Floating**		
		400 WVDC				
.03	3/8	13/16	1.35	3/8	15/16	1.35
.05	7/16	13/16	1.45	7/16	15/16	1.45
.1	7/16	1-1/8	1.60	7/16	1-1/4	1.60
.25	5/8	1-1/8	1.80	5/8	1-1/4	1.80
.5	5/8	1-13/16	2.00	5/8	1-15/16	2.00
1.	3/4	2-5/16	2.50	3/4	2-7/16	2.50
2.	1	2-5/16	3.60	1	2-7/16	3.60
		600 WVDC				
.01	3/8	13/16	1.35	3/8	15/16	1.35
.02	7/16	13/16	1.45	7/16	15/16	1.45
.03	7/16	13/16	1.50	7/16	15/16	1.50
.05	1/2	13/16	1.55	1/2	15/16	1.55
.1	1/2	1-5/16	1.70	1/2	1-7/16	1.70
.25	5/8	1-5/16	2.00	5/8	1-7/16	2.00
.5	3/4	1-13/16	2.40	3/4	1-15/16	2.40
1.	13/16	2-5/16	3.00	13/16	2-7/16	3.00
2.	1-1/4	2-5/16	4.00	1-1/4	2-7/16	4.00

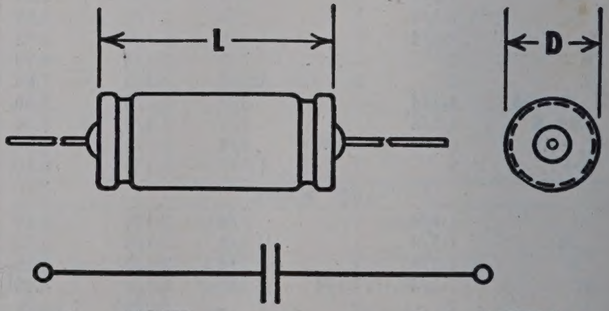
BASIC TYPES



Type MPTK
Case grounded.
Mineral wax impregnation.
W.V.D.C. up to 200.

OR

Type MPTM
Case grounded.
Mineral oil impregnation.
W.V.D.C. — 400-600.



Type MPTIK
Case floating.
Mineral wax impregnation.
W.V.D.C. up to 200.

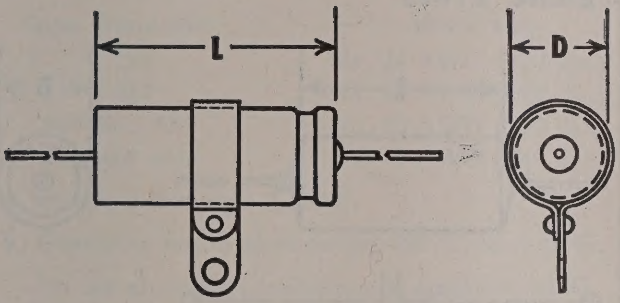
OR

Type MPTIM
Case floating.
Mineral oil impregnation.
W.V.D.C. — 400-600.

PYRAMID METALLIZED PAPER CAPACITORS

OTHER AVAILABLE STYLES FOR SERIES MPT CAPACITORS

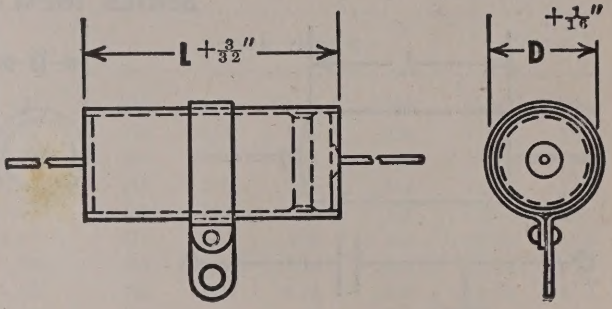
Style 4



With riveted wrap around bracket over case. Located in center unless otherwise specified. Add prefix 4 to basic type designation, as 4MPTK.

Add $.10 to list price.

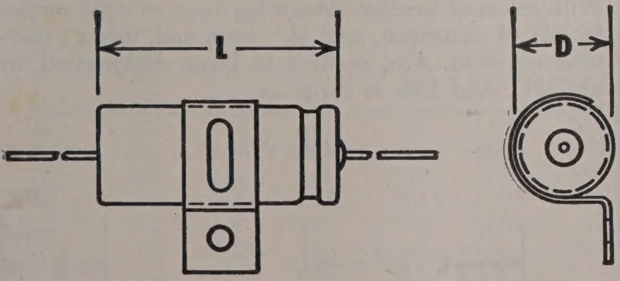
Style 4V



With riveted wrap around bracket over plastic sleeve. Located in center unless otherwise specified. Add prefix 4 and suffix V to basic type designation, as 4MPTKV.

Add $.30 to list price.

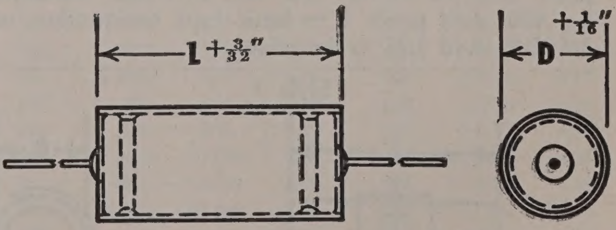
Style 7



With soldered tangential bracket. Mounting face parallel to axis of capacitor and located in center, unless otherwise specified. Add prefix 7 to basic designation, as 7MPTK.

Add $.15 to list price.

Style V



Case insulated with outer plastic sleeve. Add suffix V to basic type designation, as MPTIKV.

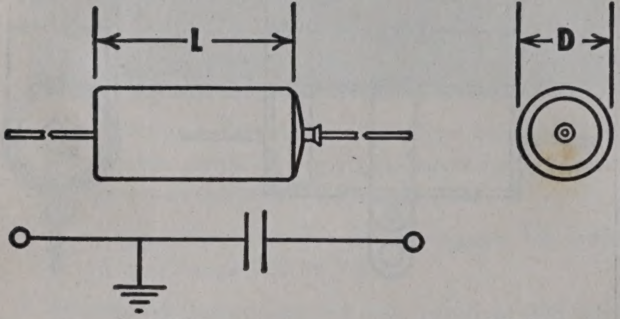
Add $.20 to list price.

PYRAMID METALLIZED PAPER CAPACITORS

MPGIM
.05-400VDC
600VTDC

SERIES MPG METALLIZED PAPER CAPACITORS IN METAL TUBES WITH "GLASSEAL" TERMINALS

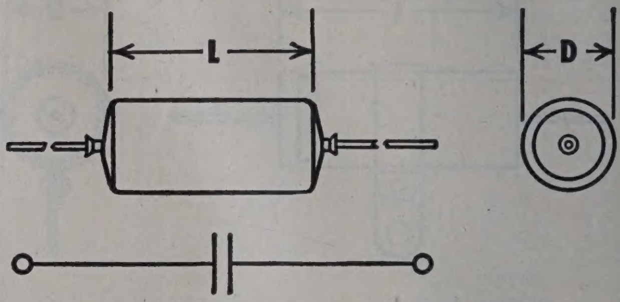
SERIES MPG — BASIC TYPES



Type MPGK
Case grounded.
Mineral wax impregnation.
W.V.D.C. up to 200.

OR

Type MPGM
Case grounded.
Mineral oil impregnation.
W.V.D.C. — 400-600.



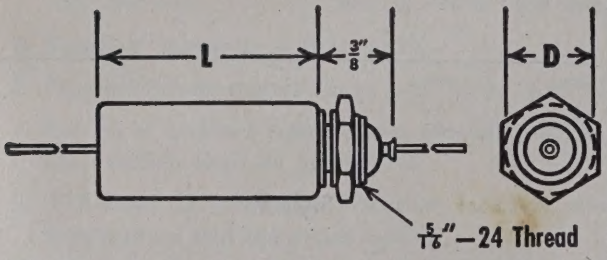
Type MPGIK
Case floating.
Mineral wax impregnation.
W.V.D.C. up to 200.

OR

Type MPGIM
Case floating.
Mineral oil impregnation.
W.V.D.C. — 400-600.

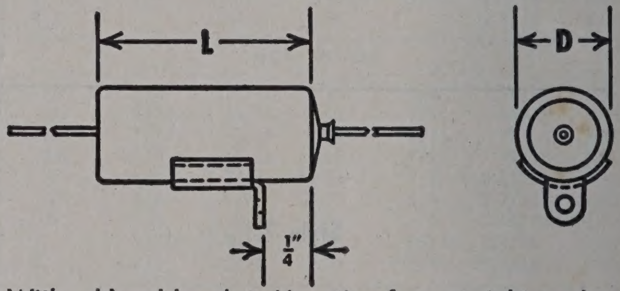
OTHER AVAILABLE STYLES FOR SERIES MPG CAPACITORS

Style 3



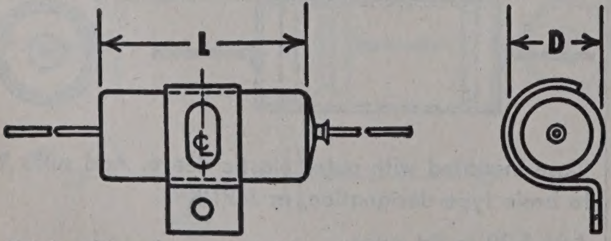
With threaded end bushing for vertical mounting. Supplied with lockwasher and nut. Minimum diameter = .400. Add prefix 3 to basic type designation, as 3MPGK. Add $.75 to list price.

Style 6



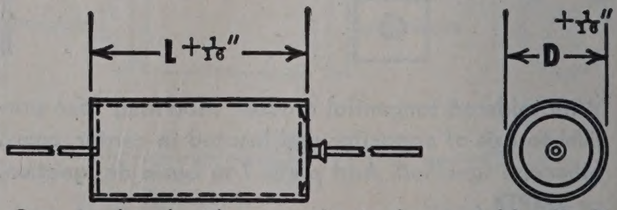
With soldered bracket. Mounting face at right angles to axis of capacitor, and 1/4" from end, unless otherwise specified. Add prefix 6 to basic designation, as 6MPGK. Add $.40 to list price.

Style 7



With soldered tangential bracket. Mounting face parallel to axis of capacitor and located in center, unless otherwise specified. Add prefix 7 to basic type designation, as 7MPGK. Add $.35 to list price.

Style V



Case insulated with outer plastic sleeve. Add suffix V to basic type designation, as MPGKV. Add $.20 to list price.

PYRAMID METALLIZED PAPER CAPACITORS

1. Construction—Extended foil sections assembled in non-ferrous metal tubular cases, hermetically sealed with glass to metal "Glasseal" solder terminals.
2. Microcrystalline mineral wax impregnant for units rated up through 200 W.V.D.C.

   Mineral oil impregnant for units rated at 400 and 600 W.V.D.C.
3. Leads 1½" minimum length in AWG sizes as follows:

Case Diameter	Wire Size
.235	No. 24 AWG (.020 dia.)
.312	No. 22 AWG (.025 dia.)
.400 thru .562	No. 20 AWG (.032 dia.)
.670 and over	No. 18 AWG (.040 dia.)

4. Standard tolerance ± 20%.
5. Operating temperature range —55°C. to +95°C.

   For use at ambient temperatures exceeding 55°C., see derating chart on page P-116.
6. Will meet JAN tests for vibration, humidity, and temperature and immersion cycling.

TYPE MPGK METALLIZED PAPER CAPACITORS MINERAL WAX IMPREGNATED

Capacity MFD.	Size, in Inches D±.010	L±1/32	List Price	Size, in Inches D±.010	L±1/32	List Price
	Type MPGK Case Grounded			**Type MPGIK Case Floating**		
			150 WVDC			
3.	.750	1-3/4	$5.95	.750	1-13/16	$ 6.95
4.	1.000	1-3/4	7.50	1.000	1-13/16	8.50
6.	1.000	1-3/4	8.75	1.000	1-13/16	9.75
8.	1.000	2-1/4	9.75	1.000	2-5/16	10.75
			200 WVDC			
.01	.235	3/4	2.65	.235	13/16	3.65
.02	.235	3/4	2.70	.235	13/16	3.70
.03	.235	3/4	2.75	.235	13/16	3.75
.04	.235	3/4	2.80	.235	13/16	3.80
.047	.235	3/4	2.85	.235	13/16	3.85
.05	.235	3/4	2.85	.235	13/16	3.85
.068	.312	3/4	2.90	.312	13/16	3.90
.1	.312	3/4	2.95	.312	13/16	3.95
.15	.312	1-1/16	3.00	.312	1-1/8	4.00
.2	.312	1-1/16	3.15	.312	1-1/8	4.15
.22	.312	1-1/16	3.25	.312	1-1/8	4.25
.25	.312	1-1/16	3.40	.312	1-1/8	4.40
.33	.400	1-1/16	3.55	.400	1-1/8	4.55
.47	.400	1-1/16	3.85	.400	1-1/8	4.85
.5	.400	1-1/16	4.00	.400	1-1/8	5.00
.68	.562	1-1/16	4.15	.562	1-1/8	5.15
1.	.562	1-1/4	4.70	.562	1-5/16	5.70
1.5	.562	1-3/4	5.40	.562	1-13/16	6.40
2.	.562	1-3/4	6.80	.562	1-13/16	7.80

TYPE MPGM METALLIZED PAPER CAPACITORS MINERAL OIL IMPREGNATED

Capacity MFD.	Size, in Inches D±.010	L±1/32	List Price	Size, in Inches D±.010	L±1/32	List Price
	Type MPGM Case Grounded			**Type MPGIM Case Floating**		
			400 WVDC			
.01	.235	3/4	$2.80	.235	13/16	$3.80
.02	.235	3/4	2.90	.235	13/16	3.90
.022	.312	3/4	2.90	.312	13/16	3.90
.03	.312	3/4	2.95	.312	13/16	3.95
.033	.312	3/4	2.95	.312	13/16	3.95
.04	.312	3/4	3.00	.312	13/16	4.00
.047	.400	3/4	3.05	.400	13/16	4.05
.05	.400	3/4	3.10	.400	13/16	4.10
.068	.400	1-1/16	3.15	.400	1-1/8	4.15
.1	.400	1-1/16	3.30	.400	1-1/8	4.30
.15	.500	1-1/16	3.55	.500	1-1/8	4.55
.2	.500	1-1/16	3.70	.500	1-1/8	4.70
.22	.562	1-1/16	3.85	.562	1-1/8	4.85
.25	.562	1-1/16	3.95	.562	1-1/8	4.95
.33	.562	1-1/4	4.10	.562	1-5/16	5.10
.47	.562	1-3/4	4.65	.562	1-13/16	5.65
.5	.562	1-3/4	4.85	.562	1-13/16	5.85
.68	.670	1-3/4	5.05	.670	1-13/16	6.05
1.	.670	2-1/4	5.65	.670	2-5/16	6.65
2.	1.000	2-1/4	6.95	1.000	2-5/16	7.95
			600 WVDC			
.01	.235	3/4	2.90	.235	13/16	3.90
.015	.312	3/4	2.95	.312	13/16	3.95
.02	.312	3/4	2.95	.312	13/16	3.95
.022	.312	3/4	3.00	.312	13/16	4.00
.03	.312	3/4	3.10	.312	13/16	4.10
.033	.400	3/4	3.15	.400	13/16	4.15
.04	.400	3/4	3.15	.400	13/16	4.15
.047	.400	3/4	3.20	.400	13/16	4.20
.05	.400	3/4	3.25	.400	13/16	4.25
.068	.400	1-1/16	3.35	.400	1-1/8	4.35
.1	.500	1-1/16	3.65	.500	1-1/8	4.65
.15	.500	1-1/16	3.85	.500	1-1/8	4.85
.2	.562	1-1/4	4.00	.562	1-5/16	5.00
.22	.562	1-1/4	4.20	.562	1-5/16	5.20
.25	.562	1-1/4	4.50	.562	1-5/16	5.50
.33	.562	1-3/4	4.80	.562	1-13/16	5.80
.47	.670	1-3/4	5.15	.670	1-13/16	6.15
.5	.670	1-3/4	5.85	.670	1-13/16	6.85
.68	.670	2-1/4	6.05	.670	2-5/16	7.05
1.	.750	2-1/4	6.70	.750	2-5/16	7.70
1.5	1.000	2-1/4	7.50	1.000	2-5/16	8.50

PYRAMID ELECTROLYTIC CAPACITORS

"TYNEE-DRY" TYPE TD

D. C. DRY ELECTROLYTIC CAPACITORS IN METAL TUBES

PYRAMID
TRADE MARK
"TYNEE-DRY"
D. C. DRY ELECTROLYTIC
NEGATIVE
POSITIVE
+

- Top quality, in minimum space.
- Low leakage, long shelf life.
- Each unit sealed in metal tube, with insulating cardboard sleeve.
- 3" bare wire leads.
- Attractively packaged.

SINGLE CAPACITANCE UNITS

Part Number	Capacity Mfd.	Outside Dimensions, Inches		List Price
		Diameter	Length	
6 VOLTS WORKING				
TD-1000-6	1000	15/16	2-1/8	$1.90
TD-1500-6	1500	1-1/16	2-1/8	2.10
TD-2000-6	2000	1-1/16	2-5/8	2.30
12 VOLTS WORKING				
TD-250-12	250	15/16	1-3/4	1.45
TD-500-12	500	15/16	2-1/8	1.70
15 VOLTS WORKING				
TD-100-15	100	11/16	1-3/4	1.25
TD-250-15	250	15/16	1-3/4	1.55
TD-500-15	500	15/16	2-1/8	1.75
25 VOLTS WORKING; 40 VOLTS PEAK				
TD-10-25	10	11/16	1-3/8	1.00
TD-25-25	25	11/16	1-3/8	1.00
TD-50-25	50	11/16	1-3/8	1.10
TD-100-25	100	13/16	1-3/4	1.35
TD-150-25	150	13/16	1-3/4	1.50
TD-200-25	200	15/16	1-3/4	1.60
TD-250-25	250	15/16	1-3/4	1.70
TD-500-25	500	1-1/16	2-1/8	2.30

Part Number	Capacity Mfd.	Outside Dimensions, Inches		List Price
		Diameter	Length	
50 VOLTS WORKING; 70 VOLTS PEAK				
TD-5-50	5	11/16	1-3/8	$1.00
TD-10-50	10	11/16	1-3/8	1.00
TD-25-50	25	11/16	1-3/8	1.05
TD-50-50	50	11/16	1-3/8	1.20
TD-100-50	100	13/16	1-3/4	1.40
100 VOLTS WORKING UNITS FOR SMALL BATTERY RECEIVERS				
TD-8-100	8	1/2	1-3/16	1.00
TD-16-100	16	9/16	1-3/16	1.00
TD-20-100	20	9/16	1-3/16	1.00
150 VOLTS WORKING; 225 VOLTS PEAK				
TD-4-150	4	11/16	1-3/4	1.00
TD-8-150	8	11/16	1-3/4	1.05
TD-12-150	12	11/16	1-3/4	1.10
TD-16-150	16	11/16	1-3/4	1.15
TD-20-150	20	11/16	1-3/4	1.20
TD-24-150	24	13/16	1-3/4	1.25
TD-30-150	30	13/16	1-3/4	1.30
TD-40-150	40	13/16	1-3/4	1.35
TD-50-150	50	13/16	1-3/4	1.40
TD-80-150	80	15/16	2-1/8	1.60

Continued on opposite page

PYRAMID ELECTROLYTIC CAPACITORS

"TYNEE-DRY" TYPE TD, continued

SINGLE CAPACITANCE UNITS—continued

250 VOLTS WORKING; 325 VOLTS PEAK

Part Number	Capacity Mfd.	Outside Dimensions, Inches Diameter	Length	List Price
TD-8-250	8	11/16	1-3/4	$1.15
TD-16-250	16	13/16	1-3/4	1.30
TD-20-250	20	13/16	1-3/4	1.35
TD-24-250	24	13/16	1-3/4	1.40
TD-30-250	30	15/16	1-3/4	1.45
TD-40-250	40	15/16	1-3/4	1.55

350 VOLTS WORKING; 425 VOLTS PEAK

Part Number	Capacity Mfd.	Outside Dimensions, Inches Diameter	Length	List Price
TD-8-350	8	11/16	1-3/4	1.20
TD-16-350	16	13/16	1-3/4	1.40
TD-20-350	20	13/16	1-3/4	1.45
TD-30-350	30	15/16	2-1/8	1.65
TD-40-350	40	1-1/16	2-1/8	1.75

450 VOLTS WORKING; 525 VOLTS PEAK

Part Number	Capacity Mfd.	Outside Dimensions, Inches Diameter	Length	List Price
TD-4-450	4	13/16	1-3/4	1.15
TD-8-450	8	13/16	1-3/4	1.25
TD-10-450	10	13/16	1-3/4	1.30
TD-12-450	12	15/16	2-1/8	1.35
TD-16-450	16	15/16	2-1/8	1.40
TD-20-450	20	15/16	2-1/8	1.55
TD-30-450	30	1-1/16	2-1/8	1.70
TD-40-450	40	1-1/16	2-5/8	1.80
TD-80-450	80	1	3-11/16	2.80

525 VOLTS WORKING; 600 VOLTS PEAK

Part Number	Capacity Mfd.	Outside Dimensions, Inches Diameter	Length	List Price
TD-8-525	8	15/16	1-3/4	1.40
TD-16-525	16	1-1/16	2-1/8	2.20

*DUAL CAPACITANCE UNITS

Two Positive Bare Wire Leads
At One End;
Common Negative At Opposite End

50 VOLTS WORKING; 70 VOLTS PEAK

Part Number	Capacity Mfd.	Outside Dimensions, Inches Diameter	Length	List Price
TD-D10-50	10+10	13/16	1-3/4	$1.40

150 VOLTS WORKING; 225 VOLTS PEAK

Part Number	Capacity Mfd.	Outside Dimensions, Inches Diameter	Length	List Price
TD-D8-150	8+8	13/16	1-3/4	1.50
TD-816-150	8+16	13/16	1-3/4	1.55
TD-D16-150	16+16	13/16	1-3/4	1.80
TD-D20-150	20+20	13/16	1-3/4	1.65
TD-D30-150	30+30	15/16	2-1/8	1.75
TD-4020-150	40+20	15/16	2-1/8	1.75
TD-D40-150	40+40	15/16	2-1/8	1.80
TD-5030-150	50+30	15/16	2-1/8	1.95
TD-D50-150	50+50	15/16	2-1/8	2.10
TD-8040-150	80+40	1-1/16	2-1/8	2.40

450 VOLTS WORKING; 525 VOLTS PEAK

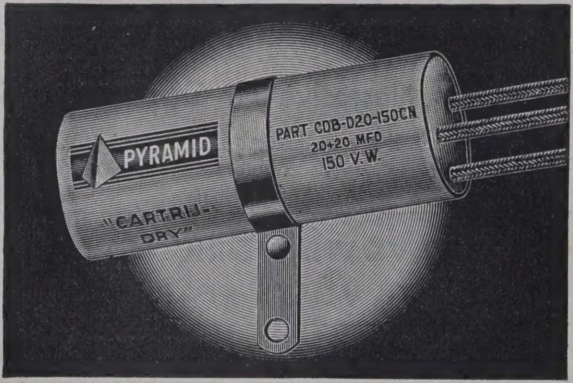
Part Number	Capacity Mfd.	Outside Dimensions, Inches Diameter	Length	List Price
TD-D4-450	4+4	15/16	2-1/8	1.60
TD-48-450	4+8	15/16	2-1/8	1.65
TD-D8-450	8+8	15/16	2-1/8	1.70
TD-D10-450	10+10	15/16	2-1/8	1.80
TD-816-450	8+16	1-1/16	2-1/8	2.00
TD-D16-450	16+16	1-1/16	2-5/8	2.40
TD-D20-450	20+20	1-1/16	2-5/8	2.50

*For dual units in wax-filled tubes, with flexible leads and assembled mounting brackets, see Type CDB capacitors on page P-126.

PYRAMID ELECTROLYTIC CAPACITORS

"CARTRIJ-DRY" TYPE CDB

D. C. DRY ELECTROLYTIC CAPACITORS IN IMPREGNATED CARDBOARD CONTAINERS



- Low leakage, long shelf life.
- Wax-filled, impregnated cardboard tubes.
- 6" flexible insulated leads at one end of tube.
- Assembled mounting strap.
- Attractively packaged.

Part Number	Capacity Mfd.	Outside Dimensions, Inches		List Price
		Diameter	Length	

*Duals, Common Negative; Three Leads; 150 Volts Working; 225 Volts Peak

Part Number	Capacity Mfd.	Diameter	Length	List Price
CDB-D16-150CN	16+16	7/8	2 3/8	$1.60
CDB-D20-150CN	20+20	7/8	2 3/8	1.65
CDB-D30-150CN	30+30	1	2 3/8	1.75
CDB-4020-150CN	40+20	1	2 3/8	1.75
CDB-D40-150CN	40+40	1	2 3/8	1.80
CDB-5030-150CN	50+30	1	2 3/8	1.95
CDB-D50-150CN	50+50	1	2 3/8	2.10
CDB-8050-150CN	80+50	1	3	2.30

*For dual units, in small metal tubes with 3" bare wire leads but less mounting strap, see Type TD capacitors on Pages P-124 and P-125.

Duals, Common Negative; Three Leads; 450 Volts Working; 525 Volts Peak

Part Number	Capacity Mfd.	Diameter	Length	List Price
CDB-D8-450CN	8+8	1	2 3/8	$1.70

Duals, Separate Sections; Four Leads; 150 Volts Working; 225 Volts Peak

Part Number	Capacity Mfd.	Diameter	Length	List Price
CDB-D16-150SS	16+16	1	2 3/8	$1.95
CDB-D20-150SS	20+20	1	2 3/8	2.05
CDB-D40-150SS	40+40	1 1/4	3	2.30

Duals, Separate Sections; Four Leads; 450 Volts Working; 525 Volts Peak

Part Number	Capacity Mfd.	Diameter	Length	List Price
CDB-D8-450SS	8+8	1	3	$2.15

Triples, Common Negative; Four Leads; 150 Volts Working; 225 Volts Peak

Part Number	Capacity Mfd., in Sequence	D.C. Working Voltage in Sequence	Outside Dimensions, Inches		List Price
			Diameter	Length	
CDB-T20-150CN	20+20+20	150	1	2 3/8	$2.15
CDB-404020-150CN	40+40+20	150	1	3	2.30
CDB-T40-150CN	40+40+40	150	1	3	2.45
CDB-21	40+40+25	150-150-25	1	3	2.20
CDB-41	50+30+25	150-150-25	1	3	2.35
CDB-43	50+30+100	150-150-25	1	3	2.55
CDB-45	50+30+200	150-150-10	1	3	2.75
CDB-47	70+30+150	150-150-25	1	3 5/8	3.25

PYRAMID ELECTROLYTIC CAPACITORS

"METL-CAN" TYPE MC

D. C. DRY ELECTROLYTIC CAPACITORS IN SCREW-BASE METAL CONTAINERS

- Low leakage, long shelf life.
- Insulated screw-base aluminum containers provide maximum protection against humidity.
- 6" flexible insulated leads.
- Supplied with palnut for mounting.
- Attractively packaged.

PYRAMID
"METL-CAN"
D.C. DRY ELECTROLYTIC CAPACITOR
Part MC-8-450
8 MFD.
450 V. W.
525 V. P.
Made in U.S.A.
PYRAMID ELECTRIC CO.
JERSEY CITY, N. J. U.S.A.

Single Section Units; Two 6" Flexible Insulated Leads

Part Number	Capacity Mfd.	Can Body Size in Inches Diameter	Height	List Price
450 VOLTS WORKING; 525 VOLTS PEAK				
MC-4-450	4	1 3/8	3 1/8	$2.00
MC-8-450	8	1 3/8	3 1/8	2.20
MC-12-450	12	1 3/8	3 1/8	2.35
MC-16-450	16	1 3/8	3 1/8	2.45
MC-20-450	20	1 3/8	3 1/8	2.70
MC-30-450	30	1 3/8	3 1/8	3.00
MC-40-450	40	1 3/8	3 1/8	3.15
525 VOLTS WORKING; 600 VOLTS PEAK				
MC-8-525	8	1 3/8	3 1/8	3.30
MC-16-525	16	1 3/8	3 1/8	3.75
600 VOLTS WORKING; HIGHEST QUALITY SERIES-WOUND CONSTRUCTION				
MC-4-600	4	1 3/8	3 1/8	3.30
MC-8-600	8	1 3/8	3 1/8	3.15
MC-12-600	12	1 3/8	3 1/8	3.50
MC-16-600	16	1 3/8	3 1/8	3.70

Dual Section Units; 450 Volts Working; 525 Volts Peak; Separate Section Construction; Four 6" Flexible Insulated Leads

Part Number	Capacity Mfd.	Can Body Size in Inches Diameter	Height	List Price
MC-D4-450SS	4+4	1 3/8	3 1/8	$2.40
MC-48-450SS	4+8	1 3/8	3 1/8	3.00
MC-D8-450SS	8+8	1 3/8	3 1/8	3.00
MC-816-450SS	8+16	1 3/8	3 1/8	3.30
MC-D16-450SS	16+16	1 3/8	3 1/8	3.55
MC-D20-450SS	20+20	1 3/8	3 1/8	4.10

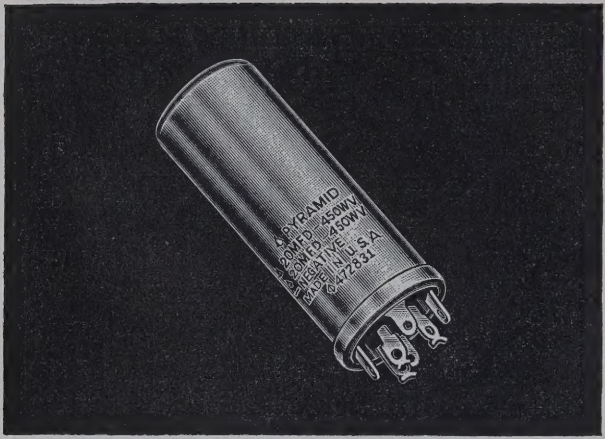
Dual Section Units; 450 Volts Working; 525 Volts Peak; Common Negative Construction; Three 6" Flexible Insulated Leads

Part Number	Capacity Mfd.	Can Body Size in Inches Diameter	Height	List Price
MC-D4-450CN	4+4	1 3/8	3 1/8	$2.40
MC-48-450CN	4+8	1 3/8	3 1/8	3.00
MC-D8-450CN	8+8	1 3/8	3 1/8	3.00
MC-816-450CN	8+16	1 3/8	3 1/8	3.30
MC-D16-450CN	16+16	1 3/8	3 1/8	3.55
MC-D20-450CN	20+20	1 3/8	3 1/8	4.10

PYRAMID ELECTROLYTIC CAPACITORS

"TWIST-MOUNT" TYPE TM

D. C. DRY ELECTROLYTIC CAPACITORS IN METAL CONTAINERS



- Grounded aluminum containers provide maximum protection against moisture.
- Low leakage, long shelf life.
- Easily identified terminal coding.
- Supplied with both metal and bakelite mounting plates.
- Attractively packaged.

SINGLE CAPACITANCE UNITS

Part Number	Capacity Mfd.	D.C. Working Voltage	Can Size, Inches Diameter	Height	List Price
TM-1000-6	1000	6	1	3	$1.90
TM-1000-12	1000	12	1	3	2.25
TM-100-25	100	25	1	2	1.60
TM-250-25	250	25	1	2	1.70
TM-500-25	500	25	1	2-1/2	2.55
TM-1000-25	1000	25	1	3	3.55
TM-500-50	500	50	1	2-1/2	2.65
TM-20-150	20	150	1	2	1.45
TM-30-150	30	150	1	2	1.55
TM-40-150	40	150	1	2	1.60
TM-80-150	80	150	1	2	1.85
TM-100-150	100	150	1	3	2.10
TM-80-300	80	300	1	3	2.55
TM-10-450	10	450	1	2	1.55
TM-20-450	20	450	1	2	1.80
TM-30-450	30	450	1	3	1.95
TM-40-450	40	450	1	3	2.05
TM-80-450	80	450	1-3/8	3	3.05
TM-10-525	10	525	1	2	1.60
TM-20-525	20	525	1	3	1.85
TM-40-525	40	525	1-3/8	3	2.50
TM-80-525	80	525	1-3/8	3-1/2	4.20

NOTE: Each of the units listed above is regularly supplied with a bakelite as well as a metal mounting plate. Where additional hardware is required, order from listing at bottom of page P-130.

PYRAMID ELECTROLYTIC CAPACITORS

"TWIST-MOUNT" TYPE TM, continued

DUAL CAPACITANCE UNITS

Part Number	Capacity Mfd.	D.C. Working Voltage	Can Size, Inches Diameter	Height	List Price
TM-D1000-15	1000+1000	15	1-3/8	3	$4.40
TM-D20-150	20+20	150	1	2	1.70
TM-D30-150	30+30	150	1	2	1.80
TM-4020-150	40+20	150	1	2	1.80
TM-D40-150	40+40	150	1	2	1.85
TM-5030-150	50+30	150	1	2	2.00
TM-D50-150	50+50	150	1	2	2.15
TM-8040-150	80+40	150	1	3	2.30
TM-D100-150	100+100	150	1-3/8	3	3.45
TM-D80-300	80+80	300	1-3/8	3	4.05
TM-D40-350	40+40	350	1-3/8	3	2.95
TM-D10-450	10+10	450	1	2	1.85
TM-D16-450	16+16	450	1	3	2.35
TM-D20-450	20+20	450	1	3	2.55
TM-3015-450	30+15	450	1-3/8	2-1/2	2.80
TM-D30-450	30+30	450	1-3/8	2-1/2	3.05
TM-D40-450	40+40	450	1-3/8	3	3.40
TM-D40-525	40+40	525	1-3/8	3-1/2	4.30

TRIPLE CAPACITANCE UNITS

Part Number	Capacity Mfd., in Sequence	D.C. Working Voltage, in Sequence	Can Size, Inches Diameter	Height	List Price
TM-1	20+20+25	150-150-25	1	2	$2.20
TM-21	20+20+100	150-150-25	1	2	2.50
TM-41	40+40+25	150-150-25	1	2-1/2	2.50
TM-49	50+30+100	150-150-25	1	3	2.70
TM-T20-150	20+20+20	150	1	2	2.30
TM-402020-150	40+20+20	150	1	2-1/2	2.45
TM-403020-150	40+30+20	150	1	2-1/2	2.45
TM-404020-150	40+40+20	150	1	2-1/2	2.50
TM-T40-150	40+40+40	150	1	3	2.60
TM-804020-150	80+40+20	150	1	3	2.80
TM-61	50+50+25	150-150-25	1	2-1/2	2.65
TM-81	80+40+25	150-150-25	1	3	2.85
TM-808060-300	80+80+60	300	1-3/8	3-1/2	4.50
TM-101	10+10+20	450-450-25	1	3	2.35
TM-T10-450	10+10+10	450	1	3	2.60
TM-T16-450	16+16+16	450	1-3/8	3	3.30
TM-T20-450	20+20+20	450	1-3/8	3	3.55
TM-111	30+15+30	450-450-150	1-3/8	3	3.70

PYRAMID ELECTROLYTIC CAPACITORS

"TWIST-MOUNT" TYPE TM, continued

QUADRUPLE CAPACITANCE UNITS

Part Number	Capacity Mfd., in Sequence	D.C. Working Voltage, in Sequence	Can Size, Inches Diameter	Height	List Price
TM-140	40+40+40+25	150-150-150-25	1-3/8	2-1/2	$3.20
TM-143	80+40+30+100	150-150-150-25	1-3/8	2-1/2	3.90
TM-151	10+10+10+20	450-450-450-25	1-3/8	2	3.10
TM-Q10-450	10+10+10+10	450	1-3/8	2	3.35
TM-Q16-450	16+16+16+16	450	1-3/8	3	3.95
TM-Q20-450	20+20+20+20	450	1-3/8	3	4.70
TM-146	20+20+20+20	450-450-450-25	1-3/8	3	3.85
TM-148	30+30+10+20	500-500-450-25	1-3/8	3-1/2	4.90

EXACT REPLACEMENTS FOR
MODEL 630 RECEIVERS

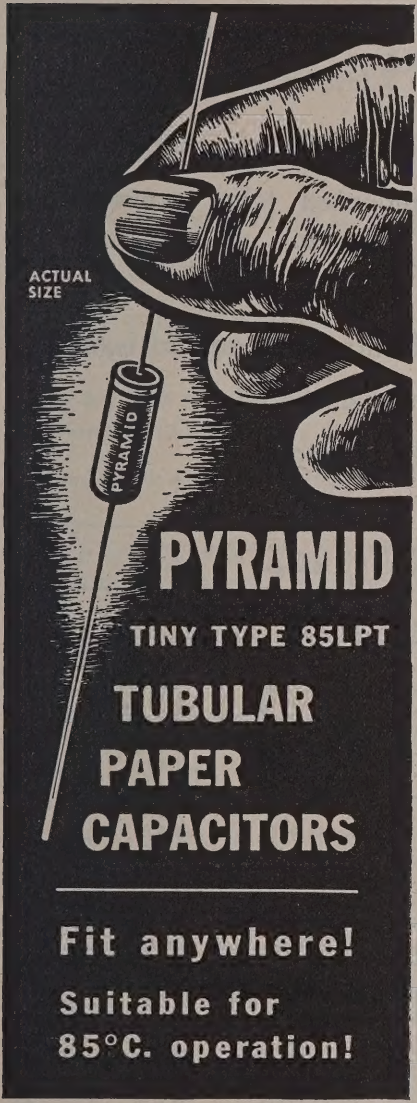
Built to Original Size and High Quality Specifications, Including Rigid Requirement for Satisfactory Operation at 85° C. (185° F.)

RCA Original Part No.	RCA Stock No.	Pyramid Replacement No.	Description	List Price
M-95681-6	71431	22.22	40+10 mfd. 450 v.w. + 80 mfd. 150 v.w.	$3.90
M-95681-7	71432	22.23	40+40+10 mfd. 450 v.w.	4.15
M-95681-8	71433	22.24	80 mfd. 450 v.w. + 50 mfd. 50 v.w.	3.50
M-95681-9	71434	22.25	40+10 mfd. 450 v.w. + 10 mfd. 350 v.w.	3.30
M-95681-10	71435	22.26	20 mfd. 450 v.w. + 80 mfd. 350 v.w.	3.60
M-95686-6	71436	22.27	250 mfd. 10 v.w. + 1000 mfd. 6 v.w.	3.90

NOTE: Each of the units listed above is regularly supplied with a bakelite as well as a metal mounting plate. Where additional hardware is required, order from this listing. ⇨

Part Number	Description	List Price
TMMP-1	Metal grounding plate for 1" dia. cans	$.06
TMMP-2	Bakelite insulating plate for 1" dia. cans	.06
TMMP-8	Metal grounding plate for 1⅜" dia. cans	.06
TMMP-9	Bakelite insulating plate for 1⅜" dia. cans	.06

PYRAMID PAPER CAPACITORS



PYRAMID

MINIATURE TUBULAR PAPER CAPACITORS

FOR 85°C. APPLICATIONS

PYRAMID TYPE 85LPT

CONSTRUCTION: Sturdily built in phenolic-impregnated tubes, plastic end-filled.

VOLTAGE: Designed for continuous operation at rated D.C. voltage.

TEMPERATURE: Will operate at maximum temperature of 85° C.

DIELECTRIC STRENGTH: Will withstand 2½ times rated voltage for 5 seconds.

HUMIDITY: Satisfactorily withstand standard RMA humidity test.

LIFE TEST: Designed to withstand life test of 250 hours at 85° C.

200 V. D. C. W.

Catalog No.	Capacity Mfd.	Dimensions, Inches Diameter	Length	List Price
85LPT2-D1	.001	1/4	5/8	$.35
85LPT2-D2	.002	1/4	5/8	.35
85LPT2-D3	.003	1/4	5/8	.35
85LPT2-D4	.004	1/4	5/8	.35
85LPT2-D5	.005	1/4	5/8	.35
85LPT2-D6	.006	1/4	5/8	.35
85LPT2-S1	.01	1/4	5/8	.40
85LPT2-S2	.02	9/32	13/16	.45
85LPT2-S5	.05	5/16	1	.50
85LPT2-P1	.1	13/32	1	.60
85LPT2-P15	.15	15/32	1-1/8	.60
85LPT2-P2	.2	15/32	1-1/8	.65
85LPT2-P25	.25	17/32	1-1/8	.70
85LPT2-P5	.5	5/8	1-1/2	.80

400 V. D. C. W.

Catalog No.	Capacity Mfd.	Dimensions, Inches Diameter	Length	List Price
85LPT4-D1	.001	1/4	5/8	$.35
85LPT4-D2	.002	1/4	5/8	.35
85LPT4-D3	.003	1/4	5/8	.35
85LPT4-D4	.004	1/4	5/8	.35
85LPT4-D5	.005	1/4	13/16	.35
85LPT4-D6	.006	1/4	13/16	.35
85LPT4-S1	.01	5/16	13/16	.40
85LPT4-S2	.02	5/16	1	.45
85LPT4-S5	.05	13/32	1	.50
85LPT4-P1	.1	15/32	1-1/8	.65
85LPT4-P15	.15	5/8	1-1/8	.65
85LPT4-P2	.2	5/8	1-1/8	.70
85LPT4-P25	.25	5/8	1-1/2	.75
85LPT4-P5	.5	5/8	2-5/16	.85

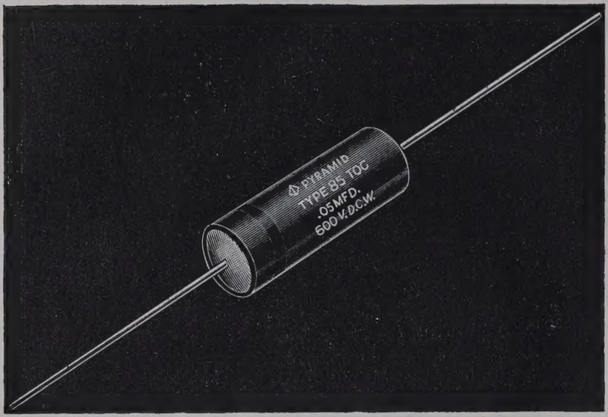
600 V. D. C. W.

Catalog No.	Capacity Mfd.	Dimensions, Inches Diameter	Length	List Price
85LPT6-T1	.0001	1/4	5/8	$.35
85LPT6-T5	.0005	1/4	5/8	.35
85LPT6-D1	.001	1/4	5/8	.35
85LPT6-D2	.002	1/4	5/8	.35
85LPT6-D3	.003	9/32	13/16	.35
85LPT6-D4	.004	9/32	13/16	.35
85LPT6-D5	.005	9/32	13/16	.40
85LPT6-D6	.006	5/16	13/16	.40
85LPT6-S1	.01	5/16	1	.45
85LPT6-S2	.02	11/32	1	.50
85LPT6-S5	.05	15/32	1-1/8	.55
85LPT6-P1	.1	5/8	1-1/8	.70
85LPT6-P15	.15	5/8	1-3/4	.75
85LPT6-P2	.2	5/8	1-3/4	.80
85LPT6-P25	.25	5/8	2	.80

PYRAMID PAPER CAPACITORS

TYPE 85TOC

TUBULAR PAPER CAPACITORS



- Designed for 85° C. operation.
- Plastic-impregnated tubes prevent absorption of moisture.
- Mineral oil impregnated.
- Ends are plastic sealed against humidity.
- Leads securely anchored.
- Attractively packaged.

Catalog Number	Capacity Mfd.	Dimensions, Inches		List Price
		Diameter	Length	
200 D.C. VOLTS WORKING				
85TOC2-S1	.01	5/16	1	$.23
85TOC2-S2	.02	3/8	1-3/16	.23
85TOC2-S25	.025	7/16	1-3/16	.27
85TOC2-S5	.05	7/16	1-1/2	.27
85TOC2-P1	.1	1/2	1-5/8	.32
85TOC2-P15	.15	9/16	1-5/8	.36
85TOC2-P2	.2	5/8	2	.36
85TOC2-P25	.25	5/8	2	.41
85TOC2-P5	.5	3/4	2	.54
85TOC2-1	1.0	1	2	.81
400 D.C. VOLTS WORKING				
85TOC4-D1	.001	5/16	1	$.23
85TOC4-D2	.002	5/16	1	.23
85TOC4-D3	.003	5/16	1	.23
85TOC4-D4	.004	3/8	1-3/16	.23
85TOC4-D5	.005	3/8	1-3/16	.23
85TOC4-S1	.01	3/8	1-3/16	.23
85TOC4-S15	.015	3/8	1-3/16	.23
85TOC4-S2	.02	7/16	1-3/16	.23
85TOC4-S25	.025	7/16	1-1/2	.27
85TOC4-S3	.03	7/16	1-1/2	.27
85TOC4-S4	.04	7/16	1-5/8	.27
85TOC4-S5	.05	7/16	1-5/8	.27
85TOC4-S6	.06	7/16	1-5/8	.32
85TOC4-P1	.1	9/16	1-5/8	.32
85TOC4-P15	.15	5/8	2	.36
85TOC4-P2	.2	3/4	1-3/4	.36
85TOC4-P25	.25	3/4	1-3/4	.41
85TOC4-P5	.5	7/8	2	.54
85TOC4-1	1.0	1	2-3/4	.81
600 D.C. VOLTS WORKING				
85TOC6-T1	.0001	5/16	1	$.23
85TOC6-T25	.00025	5/16	1	.23
85TOC6-T5	.0005	5/16	1	.23
85TOC6-D1	.001	5/16	1	.23
85TOC6-D2	.002	5/16	1	.23
85TOC6-D3	.003	5/16	1	.23
85TOC6-D4	.004	3/8	1-3/16	.23
(Continued in next column)				
600 D.C. VOLTS WORKING—Continued				
85TOC6-D5	.005	3/8	1-3/16	$.23
85TOC6-D6	.006	3/8	1-3/16	.23
85TOC6-S1	.01	7/16	1-3/16	.27
85TOC6-S15	.015	7/16	1-3/16	.27
85TOC6-S2	.02	7/16	1-1/2	.27
85TOC6-S25	.025	7/16	1-1/2	.32
85TOC6-S3	.03	1/2	1-5/8	.32
85TOC6-S4	.04	1/2	1-5/8	.32
85TOC6-S5	.05	9/16	1-5/8	.36
85TOC6-S6	.06	9/16	1-5/8	.36
85TOC6-P1	.1	11/16	1-3/4	.41
85TOC6-P2	.2	13/16	2	.50
85TOC6-P25	.25	13/16	2-1/8	.50
85TOC6-P5	.5	1-1/8	2	.72
1000 D.C. VOLTS WORKING				
85TOC10-D1	.001	5/16	1	$.45
85TOC10-D2	.002	3/8	1-3/16	.45
85TOC10-D5	.005	7/16	1-3/16	.45
85TOC10-S1	.01	7/16	1-5/8	.45
85TOC10-S2	.02	9/16	1-5/8	.45
85TOC10-S35	.035	9/16	1-7/8	.50
85TOC10-S5	.05	5/8	1-3/4	.54
85TOC10-P1	.1	13/16	2	.68
1600 D.C. VOLTS WORKING				
85TOC16-D1	.001	7/16	1-3/16	$.50
85TOC16-D2	.002	7/16	1-3/16	.50
85TOC16-D5	.005	1/2	1-1/2	.50
85TOC16-D6	.006	1/2	1-1/2	.50
85TOC16-S1	.01	9/16	1-1/2	.54
85TOC16-S2	.02	9/16	2	.54
85TOC16-S5	.05	3/4	2	.68
6000 D.C. VOLTS WORKING				
85TOC60-T5	.0005	5/8	1-7/8	$1.10
85TOC60-D1	.001	3/4	2	1.10
85TOC60-D5	.005	7/8	2-3/4	1.15

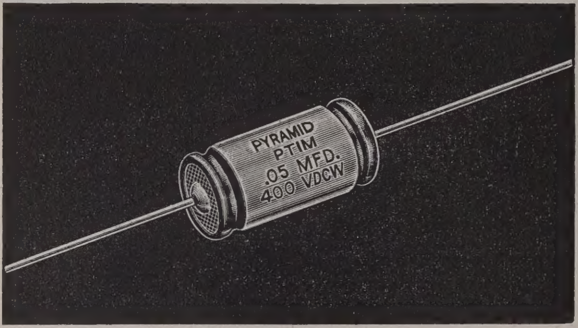
PYRAMID OIL-PAPER CAPACITORS

SERIES PTIM

(Commercial Equivalents of JAN Types CP25, CP26, CP27, CP28, CP29)

HERMETICALLY SEALED MINERAL OIL-PAPER CAPACITORS IN METAL TUBES

- Temperature range: –55° C. to +85° C.
- Highest quality, non-inductively wound sections.
- Housed in insulated metal tubes, sealed with Neoprene-bakelite end discs.
- Comply with the electrical requirements of Specification JAN-C-25.
- Standard tolerance: –10%, +20%.



NOTE: If outer insulating sleeve is required, add letter V to catalog type, as PTIMV. Add $.10 to list price. If assembled mounting strap is required, add letter S to catalog type, as PTIMS. Add $.10 to list price.

Catalog No.	Capacity Mfd.	Dimensions, Inches Diameter	Dimensions, Inches Length	List Price
400 VOLTS D.C. OPERATING				
PTIM4-D5	.005	11/16	1-5/16	$ .80
PTIM4-D6	.006	11/16	1-5/16	.80
PTIM4-D8	.008	11/16	1-5/16	.80
PTIM4-S1	.01	11/16	1-5/16	.80
PTIM4-S2	.02	11/16	1-5/16	.90
PTIM4-S3	.03	11/16	1-5/16	.95
PTIM4-S4	.04	11/16	1-5/16	.95
PTIM4-S5	.05	11/16	1-5/16	.95
PTIM4-P1	.1	11/16	1-11/16	1.10
PTIM4-P25	.25	11/16	2-3/16	1.55
PTIM4-P5	.5	1-1/16	2-11/16	2.10
600 VOLTS D.C. OPERATING				
PTIM6-D5	.005	11/16	1-5/16	$ .80
PTIM6-D6	.006	11/16	1-5/16	.80
PTIM6-D8	.008	11/16	1-5/16	.80
PTIM6-S1	.01	11/16	1-5/16	.80
PTIM6-S2	.02	11/16	1-5/16	.90
PTIM6-S3	.03	11/16	1-5/16	.95
PTIM6-S4	.04	11/16	1-5/16	.95
PTIM6-S5	.05	11/16	1-5/16	.95
PTIM6-P1	.1	11/16	1-11/16	1.10
PTIM6-P25	.25	13/16	2-3/16	1.50
PTIM6-P5	.5	1-1/16	2-11/16	2.00

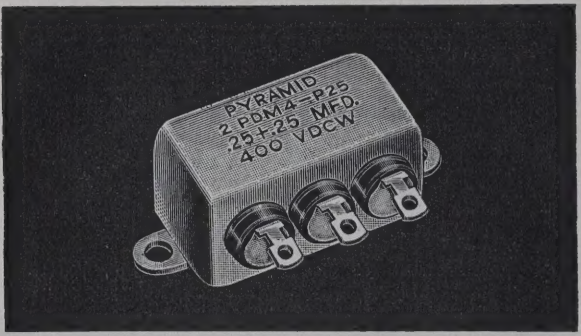
Catalog No.	Capacity Mfd.	Dimensions, Inches Diameter	Dimensions, Inches Length	List Price
1000 VOLTS D.C. OPERATING				
PTIM10-T5	.0005	11/16	1-5/16	$ .95
PTIM10-D1	.001	11/16	1-5/16	.95
PTIM10-D2	.002	11/16	1-5/16	.95
PTIM10-D5	.005	11/16	1-5/16	.95
PTIM10-D8	.008	11/16	1-5/16	.95
PTIM10-S1	.01	11/16	1-5/16	.95
PTIM10-S2	.02	11/16	1-5/16	1.05
PTIM10-S3	.03	11/16	1-5/16	1.05
PTIM10-S5	.05	11/16	1-11/16	1.10
PTIM10-S8	.08	11/16	2-1/16	1.30
PTIM10-P1	.1	11/16	2-1/16	1.35
1600 VOLTS D.C. OPERATING				
PTIM16-T5	.0005	11/16	1-5/16	$1.00
PTIM16-D1	.001	11/16	1-5/16	1.00
PTIM16-D2	.002	11/16	1-5/16	1.00
PTIM16-D5	.005	11/16	1-5/16	1.00
PTIM16-S1	.01	11/16	1-11/16	1.05
PTIM16-S2	.02	11/16	1-11/16	1.15
PTIM16-S5	.05	11/16	2-1/16	1.20
PTIM16-P1	.1	1-1/16	2-1/16	2.00
2000 VOLTS D.C. OPERATING				
PTIM20-T5	.0005	13/16	1-11/16	$1.10
PTIM20-D1	.001	13/16	1-11/16	1.10
PTIM20-D5	.005	13/16	1-11/16	1.10
PTIM20-D8	.008	13/16	1-11/16	1.10
PTIM20-S1	.01	13/16	1-11/16	1.10
PTIM20-S2	.02	13/16	2-3/16	1.20
PTIM20-S5	.05	13/16	2-15/16	1.30

PYRAMID OIL-PAPER CAPACITORS

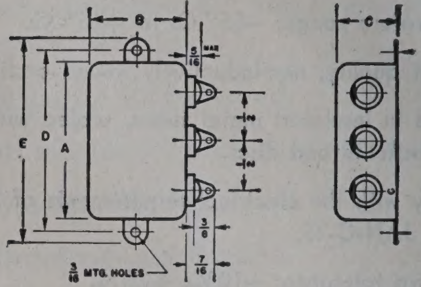
SERIES PDM

(Commercial Equivalents of JAN Types CP53, CP54, CP55)

HERMETICALLY SEALED MINERAL OIL-PAPER CAPACITORS IN DRAWN SHELL CONTAINERS



TYPE PDM



- Temperature range: —55° C. to +85° C.
- Highest quality, non-inductively wound sections.
- Mineral oil impregnated, mineral oil filled.
- Comply with the electrical requirements of Specification JAN-C-25.
- Standard tolerance: —10%, +20%.
- Housed in seamless tin-coated drawn shell containers, with rivet lug terminals.

NOTE: Where commercial equivalents of JAN types are required, use the following Pyramid type designations:

JAN TYPE	**PYRAMID COMMERCIAL EQUIVALENT TYPE**
CP53	PDM (followed by catalog number)
CP54	PDMT (followed by catalog number)
CP55	PDMB (followed by catalog number)

Catalog Number	Capacity Mfd.	Dimensions, Inches A	B	C	D	List Price
400 VOLTS D.C. OPERATING						
PDM4-S5	.05	1-13/16	1	3/4	2-1/8	$1.85
PDM4-P1	.1	1-13/16	1	3/4	2-1/8	1.95
PDM4-P25	.25	1-13/16	1	3/4	2-1/8	2.20
PDM4-P5	.5	1-13/16	1	7/8	2-1/8	2.35
PDM4-1	1.0	2	1-3/4	7/8	2-3/8	3.35
PDM4-2	2.0	2	2	1-1/8	2-3/8	4.30
2PDM4-S5	.05+.05	1-13/16	1	3/4	2-1/8	2.95
2PDM4-P1	.1+.1	1-13/16	1	3/4	2-1/8	3.05
2PDM4-P25	.25+.25	1-13/16	1	7/8	2-1/8	3.30
2PDM4-P5	.5+.5	2	1-3/4	7/8	2-3/8	3.85
2PDM4-1	1.0+1.0	2	2	1-1/8	2-3/8	4.80
3PDM4-P1	.1+.1+.1	1-13/16	1	3/4	2-1/8	3.75
3PDM4-P25	.25+.25+.25	2	1-3/4	7/8	2-3/8	4.40
3PDM4-P5	.5+.5+.5	2	2	1-1/8	2-3/8	5.10
600 VOLTS D.C. OPERATING						
PDM6-S5	.05	1-13/16	1	3/4	2-1/8	$2.85
PDM6-P1	.1	1-13/16	1	3/4	2-1/8	2.95
PDM6-P25	.25	1-13/16	1	3/4	2-1/8	3.10
PDM6-P5	.5	1-13/16	1	7/8	2-1/8	3.30
PDM6-1	1.0	2	1-3/4	7/8	2-3/8	3.75
600 VOLTS D.C. OPERATING—Continued						
PDM6-2	2.0	2	2	1-1/8	2-3/8	$4.90
2PDM6-S5	.05+.05	1-13/16	1	3/4	2-1/8	3.65
2PDM6-P1	.1+.1	1-13/16	1	3/4	2-1/8	3.70
2PDM6-P25	.25+.25	1-13/16	1	7/8	2-1/8	3.75
2PDM6-P5	.5+.5	2	1-3/4	7/8	2-3/8	4.30
2PDM6-1	1.0+1.0	2	2	1-1/8	2-3/8	5.30
3PDM6-P1	.1+.1+.1	1-13/16	1	3/4	2-1/8	4.20
3PDM6-P25	.25+.25+.25	2	1-3/4	7/8	2-3/8	4.75
3PDM6-P5	.5+.5+.5	2	2	1-1/8	2-3/8	5.75
1000 VOLTS D.C. OPERATING						
PDM10-S5	.05	1-13/16	1	3/4	2-1/8	$3.00
PDM10-P1	.1	1-13/16	1	3/4	2-1/8	3.15
PDM10-P25	.25	1-13/16	1	7/8	2-1/8	3.20
PDM10-P5	.5	2	1-3/4	7/8	2-3/8	3.55
PDM10-1	1.0	2	2	1-1/8	2-3/8	4.40
2PDM10-S5	.05+.05	1-13/16	1	3/4	2-1/8	3.85
2PDM10-P1	.1+.1	1-13/16	1	7/8	2-1/8	4.00
2PDM10-P25	.25+.25	2	1-3/4	7/8	2-3/8	4.20
2PDM10-P5	.5+.5	2	2	1-1/8	2-3/8	5.50
3PDM10-P1	.1+.1+.1	2	1-3/4	7/8	2-3/8	4.60
3PDM10-P25	.25+.25+.25	2	2	1-1/8	2-3/8	5.50

Continued in next column

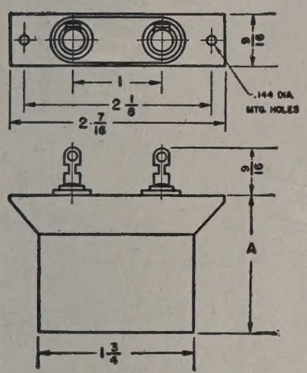
PYRAMID OIL-PAPER CAPACITORS

SERIES PEM & PKM

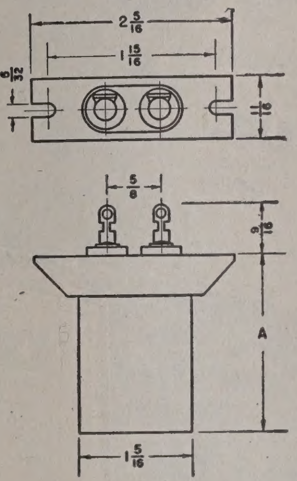
(Commercial equivalents of JAN Types CP61, CP63, CP65, CP67, CP69)

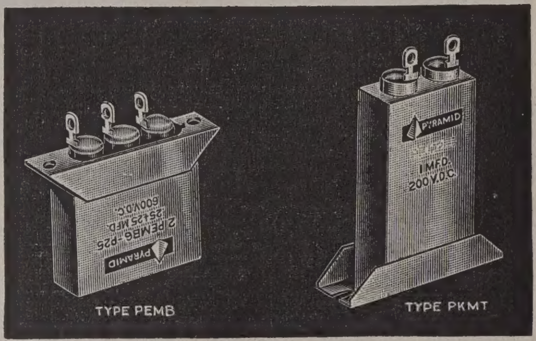
SMALL, HERMETICALLY SEALED MINERAL OIL-PAPER CAPACITORS

TYPE PEMB



TYPE PKMB





- Temperature range: −55° C. to +85° C.
- Minimum base area makes these ideal for compact equipment.
- Mineral oil impregnated and filled.
- Housed in tin-coated containers with lug terminals.
- Comply with the electrical requirements of Specification JAN-C-25.
- Standard tolerance: −10%, +20%.

NOTE: Where commercial equivalents of JAN types are required, use the following Pyramid type designations:

JAN TYPE	**PYRAMID COMMERCIAL EQUIVALENT TYPE**
CP61	PKM (followed by catalog number)
CP61 with spade mounting	PKMS (followed by catalog number)
CP61 with footed bracket	PKMF (followed by catalog number)
CP63	PKMT (followed by catalog number)
CP65	PKMB (followed by catalog number)
CP67	PEM (followed by catalog number)
CP69	PEMB (followed by catalog number)

SERIES PEM

Capacity Mfd.	Catalog Number	Can Height "A"	List Price
200 V. D.C. OPERATING			
.05	PEM2-S5	1	$2.80
.1	PEM2-P1	1	3.05
.25	PEM2-P25	1-1/2	3.10
.5	PEM2-P5	1-1/2	3.15
1.0	PEM2-1	1-7/8	3.55
.05+.05	2PEM2-S5	1	3.90
.1+.1	2PEM2-P1	1	4.05
.25+.25	2PEM2-P25	1-1/2	4.20
.5+.5	2PEM2-P5	1-7/8	4.60
.05+.05+.05	3PEM2-S5	1	4.85
.1+.1+.1	3PEM2-P1	1-1/2	5.20
.25+.25+.25	3PEM2-P25	1-7/8	5.60
400 V. D.C. OPERATING			
.05	PEM4-S5	1	$2.90
.1	PEM4-P1	1	3.15
.25	PEM4-P25	1-1/2	3.20
.5	PEM4-P5	1-7/8	3.25
1.0	PEM4-1	2-1/2	3.65
.05+.05	2PEM4-S5	1	4.00
.1+.1	2PEM4-P1	1-1/2	4.15
.25+.25	2PEM4-P25	1-7/8	4.30
.5+.5	2PEM4-P5	2-1/2	4.70
.05+.05+.05	3PEM4-S5	1	4.95
.1+.1+.1	3PEM4-P1	1-1/2	5.30
.25+.25+.25	3PEM4-P25	2-1/2	5.70

SERIES PEM—Continued

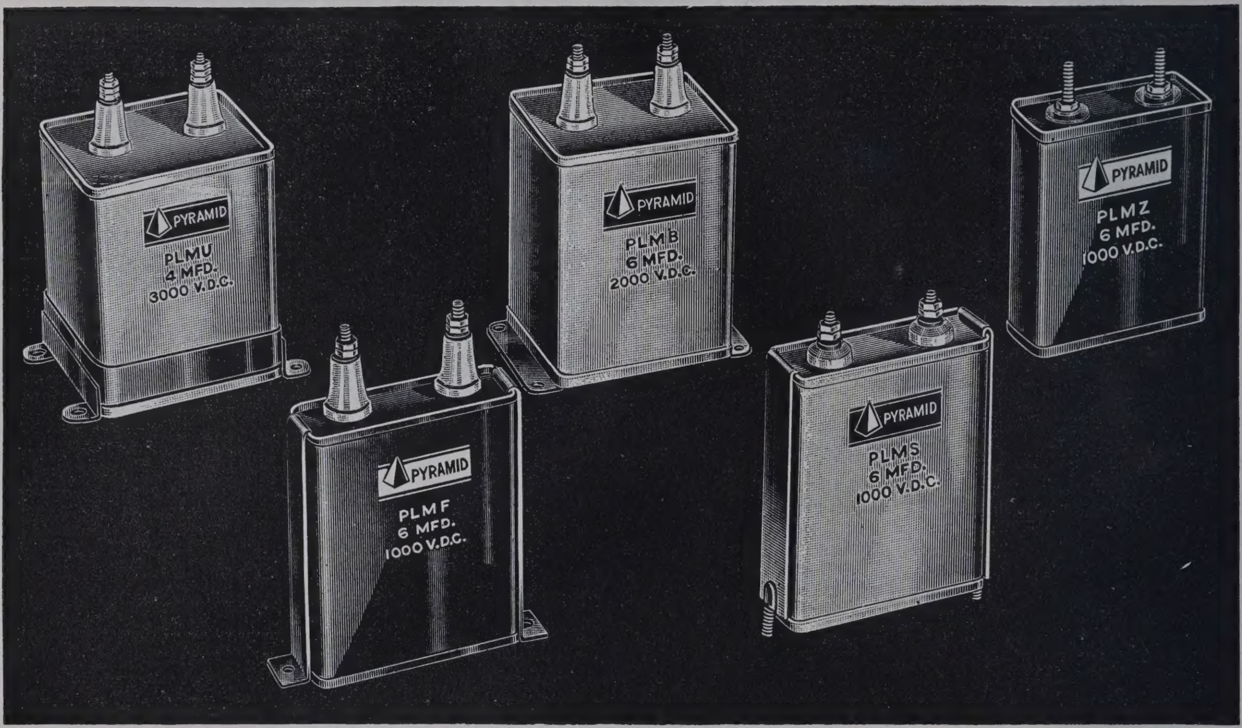
Capacity Mfd.	Catalog Number	Can Height "A"	List Price
600 V. D.C. OPERATING			
.05	PEM6-S5	1	$3.10
.1	PEM6-P1	1	3.20
.25	PEM6-P25	1-1/2	3.25
.5	PEM6-P5	1-7/8	3.35
1.0	PEM6-1	2-1/2	3.75
.05+.05	2PEM6-S5	1	4.20
.1+.1	2PEM6-P1	1-1/2	4.30
.25+.25	2PEM6-P25	1-7/8	4.55
.5+.5	2PEM6-P5	2-1/2	4.95
.05+.05+.05	3PEM6-S5	1	5.00
.1+.1+.1	3PEM6-P1	1-1/2	5.60
.25+.25+.25	3PEM6-P25	2-1/2	5.95
1000 V. D.C. OPERATING			
.05	PEM10-S5	1	$3.15
.1	PEM10-P1	1	3.25
.25	PEM10-P25	1-7/8	3.35
.5	PEM10-P5	2-1/2	3.65
.05+.05	2PEM10-S5	1-1/2	4.55
.1+.1	2PEM10-P1	1-1/2	4.90
.25+.25	2PEM10-P25	2-1/2	5.00
.05+.05+.05	3PEM10-S5	1-1/2	5.90
.1+.1+.1	3PEM10-P1	2-1/2	6.10

SERIES PKM

Capacity Mfd.	Catalog Number	Can Height "A"	List Price
200 V. D.C. OPERATING			
.05	PKM2-S5	1-7/16	$2.80
.1	PKM2-P1	1-7/16	3.05
.25	PKM2-P25	1-7/16	3.10
.5	PKM2-P5	1-11/16	3.15
1.0	PKM2-1	2-1/16	3.55
400 V. D.C. OPERATING			
.05	PKM4-S5	1-7/16	$2.90
.1	PKM4-P1	1-7/16	3.15
.25	PKM4-P25	1-11/16	3.20
.5	PKM4-P5	2-1/16	3.25
1.0	PKM4-1	2-9/16	3.65
600 V. D.C. OPERATING			
.05	PKM6-S5	1-7/16	$3.10
.1	PKM6-P1	1-7/16	3.20
.25	PKM6-P25	1-11/16	3.25
.5	PKM6-P5	2-1/16	3.35
1.0	PKM6-1	2-9/16	3.75
1000 V. D.C. OPERATING			
.05	PKM10-S5	1-7/16	$3.15
.1	PKM10-P1	1-7/16	3.25
.25	PKM10-P25	2-1/16	3.35
.5	PKM10-P5	2-9/16	3.65

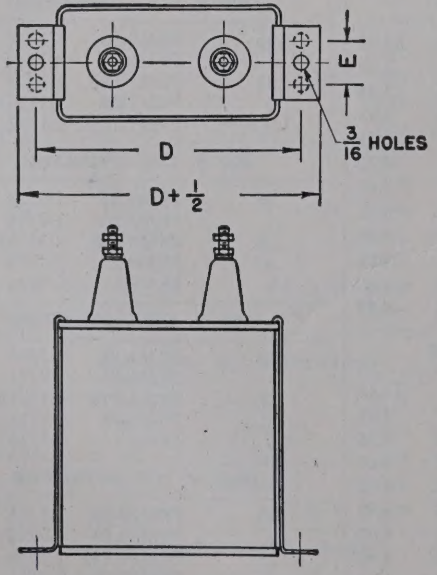
PYRAMID OIL-PAPER CAPACITORS

SERIES PLM (Commercial equivalent of JAN Type CP70)
HERMETICALLY SEALED MINERAL OIL-PAPER CAPACITORS

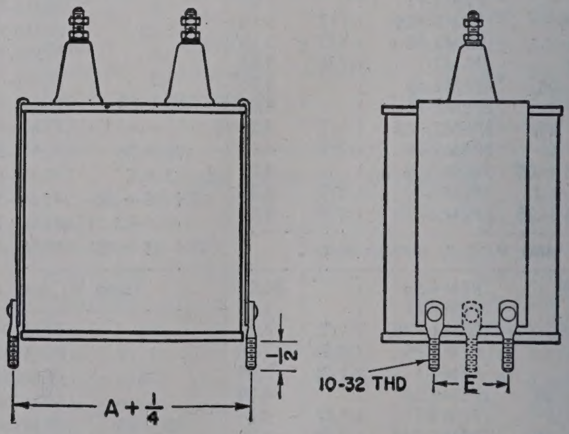

PYRAMID
PLMU
4 MFD.
3000 V.D.C.
PYRAMID
PLMB
6 MFD.
2000 V.D.C.
PYRAMID
PLMZ
6 MFD.
1000 V.D.C.
PYRAMID
PLMF
6 MFD.
1000 V.D.C.
PYRAMID
PLMS
6 MFD.
1000 V.D.C.

- Temperature range: –55° C. to +85° C.
- Designed for the exacting requirements of power supply and filter applications.
- Mineral oil impregnated, mineral oil filled.
- Housed in lacquer-finished terneplate cases with porcelain bushings.
- Comply with the electrical requirements of Specification JAN-C-25.
- Standard tolerance: –10%, +20%.

TYPE PLMF

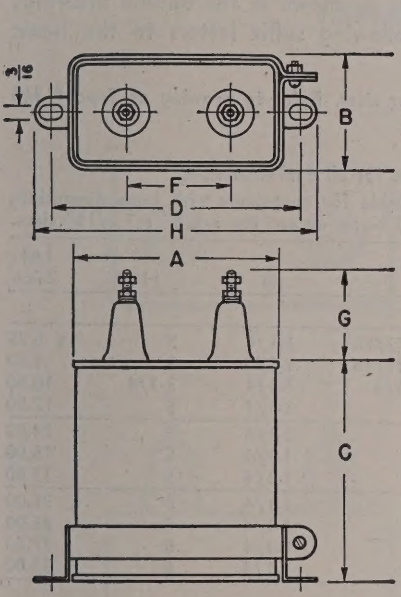

E
3/16 HOLES
D
D + 1/2

TYPE PLMS

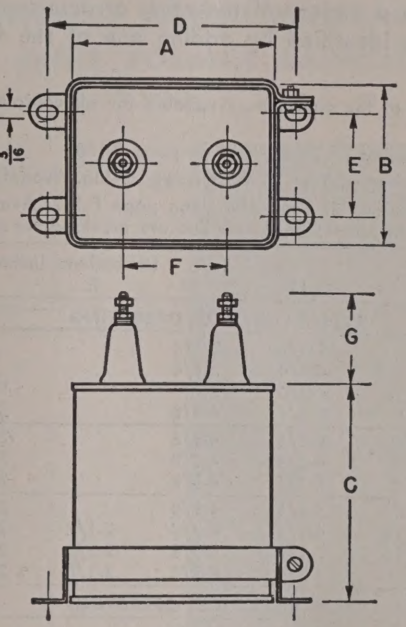

1/2
A + 1/4
10-32 THD
E

TYPE PLM—Continued

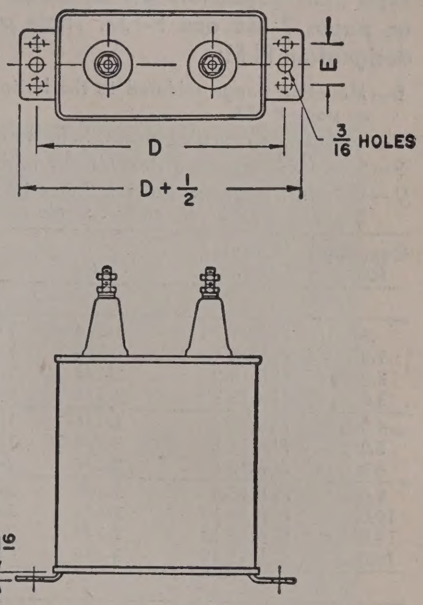
TYPE PLMU



TYPE PLMU



TYPE PLMB



IMPORTANT: CATALOG DESIGNATIONS FOR VARIOUS MOUNTING ARRANGEMENTS

Type PLM capacitors are available in a variety of mounting arrangements as shown in the outline drawings on pages P-136 and P-137. These are identified by adding one of the following suffix letters to the basic designation PLM:

B — Mounting flange soldered to the bottom of the container. Available for all container sizes. Refer to drawing of Type PLMB.

F — Footed side mounting straps. Refer to drawing of Type PLMF on page P-136.

S — Spade side mounting straps. Refer to drawing of Type PLMS on page P-136. Available for all container sizes.

U — Universal mounting bracket. Refer to drawing of Type PLMU above. Available for containers with base dimensions 3-3/4" x 3-3/16" or smaller. Single mounting holes on center line are provided for all bases except the 3-3/4" x 3-3/16" sizes.

Capacity Mfd.	Catalog Number	Dimensions, Inches A	B	C	D	E	F	G	H	List Price
				600 VOLTS D.C. OPERATING						
.5	PLM6-P5	1-3/4	1	2-1/8	2-1/4		13/16	1-1/4	3	$ 4.70
1.0	PLM6-1	1-3/4	1	2-1/8	2-1/4		13/16	1-1/4	3	5.80
2.0	PLM6-2	1-3/4	1	4	2-1/4		13/16	1-1/4	3	7.15
3.0	PLM6-3	1-3/4	1	4-3/4	2-1/4		13/16	1-1/4	3	8.25
4.0	PLM6-4	2-1/2	1-3/16	3-5/8	3		1-1/8	1-1/4	3-3/4	9.00
5.0	PLM6-5	2-1/2	1-3/16	4-3/4	3		1-1/8	1-1/4	3-3/4	10.50
8.0	PLM6-8	3-3/4	1-1/4	4-3/4	4-3/8		2	1-1/4	5	13.50
10.0	PLM6-10	3-3/4	1-1/4	4-3/4	4-3/8		2	1-1/4	5	15.00
				1000 VOLTS D.C. OPERATING						
.1	PLM10-P1	1-3/4	1	2-1/8	2-1/4		13/16	1-1/4	3	4.15
.25	PLM10-P25	1-3/4	1	2-1/8	2-1/4		13/16	1-1/4	3	4.70
.5	PLM10-P5	1-3/4	1	2-1/8	2-1/4		13/16	1-1/4	3	5.00
1.0	PLM10-1	1-3/4	1	2-7/8	2-1/4		13/16	1-1/4	3	6.35
2.0	PLM10-2	1-3/4	1	4-3/4	2-1/4		13/16	1-1/4	3	8.25
3.0	PLM10-3	2-1/2	1-3/16	3-5/8	3		1-1/8	1-1/4	3-3/4	9.50
4.0	PLM10-4	2-1/2	1-3/16	4-3/4	3		1-1/8	1-1/4	3-3/4	10.50
5.0	PLM10-5	3-3/4	1-1/4	4-3/4	4-3/8		2	1-1/4	5	12.50
6.0	PLM10-6	3-3/4	1-1/4	4-3/4	4-3/8		2	1-1/4	5	14.00
8.0	PLM10-8	3-3/4	1-3/4	4-3/4	4-3/8		2	1-1/4	5	15.00
10.0	PLM10-10	3-3/4	2	4-3/4	4-3/8		2	1-1/4	5	16.75
15.0	PLM10-15	3-3/4	2-1/2	4-3/4	4-3/8		2	1-1/4	5	20.00

Continued on page P-138

TYPE PLM—Continued

IMPORTANT: CATALOG DESIGNATIONS FOR VARIOUS MOUNTING ARRANGEMENTS

Type PLM capacitors are available in a variety of mounting arrangements as shown in the outline drawings on pages P-136 and P-137. These are identified by adding one of the following suffix letters to the basic designation PLM:

B — Mounting flange soldered to the bottom of the container. Available for all container sizes. Refer to drawing of Type PLMB on page P-137.
F — Footed side mounting straps. Refer to drawing of Type PLMF on page P-136.
S — Spade side mounting straps. Refer to drawing of Type PLMS on page P-136. Available for all container sizes.
U — Universal mounting bracket. Refer to drawing of Type PLMU on page P-137. Available for containers with base dimensions 3-3/4" x 3-3/16" or smaller. Single mounting holes on center line are provided for all bases except the 3-3/4" x 3-3/16" sizes.

Capacity Mfd.	Catalog Number	Dimensions, Inches								List Price
		A	B	C	D	E	F	G	H	
					1500 VOLTS D.C. OPERATING					
.5	PLM15-P5	1-3/4	1	2-7/8	2-1/4		13/16	1-1/4	3	$ 6.25
1.0	PLM15-1	1-3/4	1	4-3/4	2-1/4		13/16	1-1/4	3	7.50
2.0	PLM15-2	2-1/2	1-3/16	4-3/4	3		1-1/8	1-1/4	3-3/4	10.50
3.0	PLM15-3	3-3/4	1-1/4	4-3/4	4-3/8		2	1-1/4	5	12.50
4.0	PLM15-4	3-3/4	1-1/2	4-3/4	4-3/8		2	1-1/4	5	14.00
5.0	PLM15-5	3-3/4	1-3/4	4-3/4	4-3/8		2	1-1/4	5	15.00
6.0	PLM15-6	3-3/4	2-1/4	4-3/4	4-3/8		2	1-1/4	5	17.00
8.0	PLM15-8	3-3/4	2-1/4	4-3/4	4-3/8		2	1-1/4	5	21.00
10.0	PLM15-10	3-3/4	3-3/16	4-3/4	4-3/8	2-1/2	2	1-1/4	5	25.00
12.0	PLM15-12	3-3/4	3-3/16	5-1/2	4-3/8	2-1/2	2	1-1/4	5	27.50
15.0	PLM15-15	3-3/4	4-9/16	4-3/4	4-3/8	3-3/8	2	1-1/4	5	30.00
					2000 VOLTS D.C. OPERATING					
.1	PLM20-P1	1-3/4	1	2-1/8	2-1/4		13/16	1-7/16	3	6.50
.25	PLM20-P25	1-3/4	1	2-7/8	2-1/4		13/16	1-7/16	3	7.00
.5	PLM20-P5	1-3/4	1	4	2-1/4		13/16	1-7/16	3	7.50
1.0	PLM20-1	2-1/2	1-3/16	4-3/4	3		1-1/8	1-7/16	3-3/4	9.00
2.0	PLM20-2	3-3/4	1-1/4	4-3/4	4-3/8		2	1-7/16	5	10.75
3.0	PLM20-3	3-3/4	1-3/4	4-3/4	4-3/8		2	1-7/16	5	13.25
4.0	PLM20-4	3-3/4	2-1/4	4-3/4	4-3/8		2	1-7/16	5	15.00
5.0	PLM20-5	3-3/4	3-3/16	4-3/4	4-3/8	2-1/2	2	1-7/16	5	16.75
6.0	PLM20-6	3-3/4	3-3/16	4-3/4	4-3/8	2-1/2	2	1-7/16	5	20.00
8.0	PLM20-8	3-3/4	4-9/16	4-3/4	4-3/8	3-3/8	2	1-7/16	5	25.00
10.0	PLM20-10	3-3/4	4-9/16	5-1/2	4-3/8	3-3/8	2	1-7/16	5	30.50
12.0	PLM20-12	3-3/4	4-9/16	6-1/2	4-3/8	3-3/8	2	1-7/16	5	33.00
					2500 VOLTS D.C. OPERATING					
.5	PLM25-P5	3-3/4	1-1/4	3-3/4	4-3/8		2	1-7/16	5	11.50
1.0	PLM25-1	3-3/4	1-1/4	4-3/4	4-3/8		2	1-7/16	5	13.00
2.0	PLM25-2	3-3/4	2-1/4	4-3/4	4-3/8		2	1-7/16	5	21.50
4.0	PLM25-4	3-3/4	3-3/16	4-3/4	4-3/8	2-1/2	2	1-7/16	5	30.00
10.0	PLM25-10	3-3/4	4-9/16	8-1/2	4-3/8	3-3/8	2	1-7/16	5	75.00
					3000 VOLTS D.C. OPERATING					
.1	PLM30-P1	1-3/4	1	2-7/8	2-1/4		13/16	1-7/16	3	14.00
.25	PLM30-P25	2-1/2	1-3/16	3-5/8	3		1-1/8	1-7/16	3-3/4	15.00
.5	PLM30-P5	2-1/2	1-3/16	4-3/4	3		1-1/8	1-7/16	3-3/4	17.00
1.0	PLM30-1	3-3/4	2-1/4	4-3/4	4-3/8		2	1-7/16	5	20.00
2.0	PLM30-2	3-3/4	3-3/16	4-3/4	4-3/8	2-1/2	2	1-7/16	5	25.00
4.0	PLM30-4	3-3/4	4-9/16	5-1/2	4-3/8	3-3/8	2	1-7/16	5	36.50
					4000 VOLTS D.C. OPERATING					
.1	PLM40-P1	2-1/2	1-3/16	3-5/8	3		1-1/8	1-7/16	3-3/4	25.00
.25	PLM40-P25	2-1/2	1-3/16	4-3/4	3		1-1/8	1-7/16	3-3/4	26.50
.5	PLM40-P5	3-3/4	2-1/4	4-3/4	4-3/8		2	1-7/16	5	30.00
1.0	PLM40-1	3-3/4	3-3/16	4-3/4	4-3/8	2-1/2	2	1-7/16	5	36.50
2.0	PLM40-2	3-3/4	4-9/16	5-1/2	4-3/8	3-3/8	2	1-7/16	5	46.50
4.0	PLM40-4	3-3/4	4-9/16	9-1/2	4-3/8	3-3/8	2	1-7/16	5	67.00
					5000 VOLTS D.C. OPERATING					
.5	PLM50-P5	3-3/4	2-1/4	4-3/4	4-3/8		2	1-7/16	5	33.00
1.0	PLM50-1	3-3/4	4-9/16	5-1/2	4-3/8	3-3/8	2	1-7/16	5	42.00
2.0	PLM50-2	3-3/4	4-9/16	7-1/2	4-3/8	3-3/8	2	1-7/16	5	53.50

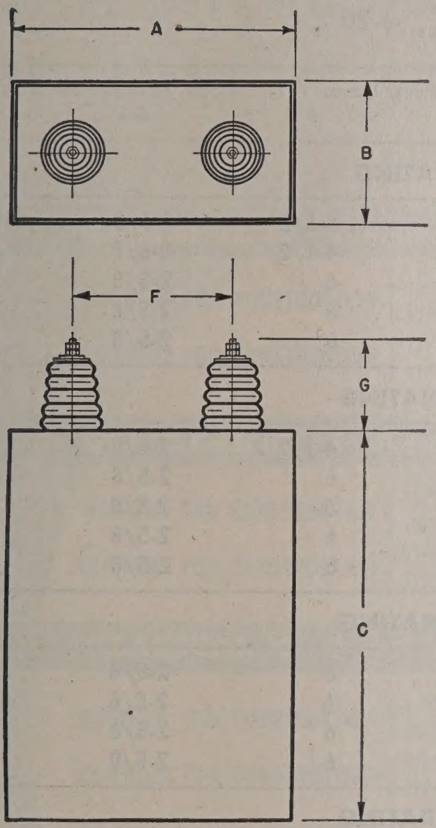
FOR HIGHER VOLTAGES, SEE TYPE PJ ON PAGE P-139

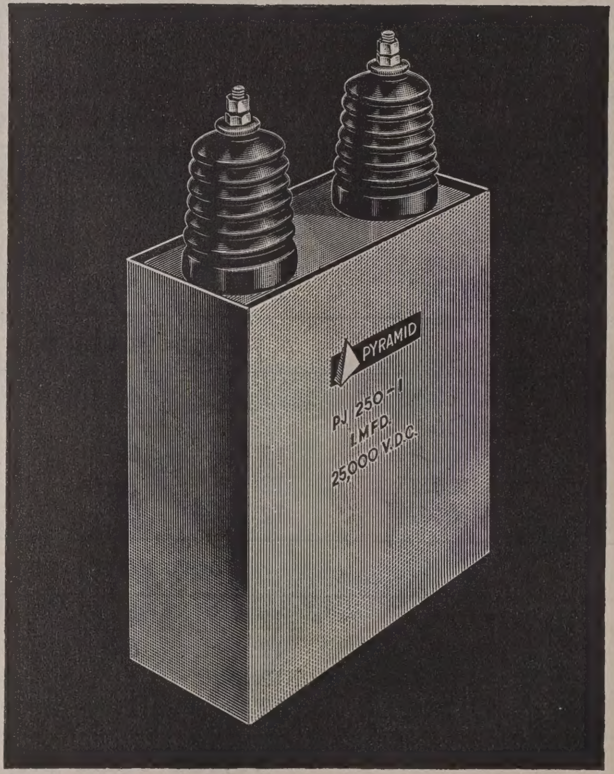
PYRAMID OIL-PAPER CAPACITORS

TYPE PJ

(Commercial equivalent of JAN Type CP70)

HERMETICALLY SEALED MINERAL OIL-PAPER HIGH VOLTAGE CAPACITORS





- Temperature range: —55°C. to +85° C.
- Mineral oil impregnated and filled.
- Rugged, dependable construction.
- Housings are heavy gauge steel, welded oil tight and hot tinned.
- Comply with the electrical requirements of Specification JAN-C-25.
- Standard tolerance: —10%, +20%.

Capacity Mfd.	Catalog Number	Dimensions, Inches A	B	C	F	G	List Price
600 V.D.C.W. TO 5000 V.D.C.W.: SEE SERIES PLM ON PAGES P-136 THROUGH P-138							
6000 VOLTS D.C. OPERATING							
2	PJ60-2	8	4	11	4-1/2	2-5/8	$147.00
4	PJ60-4	12	4	11	6	2-5/8	180.00
5	PJ60-5	12	6	11	6	2-5/8	210.00
6	PJ60-6	12	6	11	6	2-5/8	230.00
10	PJ60-10	12	6	16	6	2-5/8	295.00

(Continued on page P-140)

PYRAMID OIL-PAPER CAPACITORS

TYPE PJ—Continued

(Commercial equivalent of JAN Type CP70)

HERMETICALLY SEALED MINERAL OIL-PAPER HIGH VOLTAGE CAPACITORS

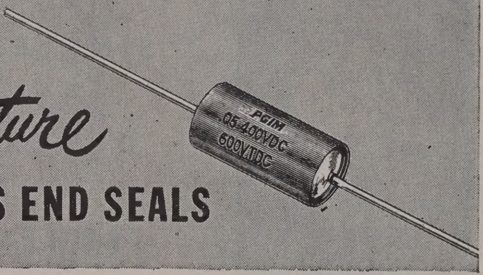
Standard tolerance: —10%, +20%

Capacity Mfd.	Catalog Number	Dimensions, Inches					List Price
		A	B	C	F	G	
7500 VOLTS D.C. OPERATING							
.5	PJ75-P5	8	4	11	4-1/2	2-5/8	$ 83.00
1	PJ75-1	8	4	11	4-1/2	2-5/8	110.00
2	PJ75-2	12	4	11	6	2-5/8	165.00
4	PJ75-4	12	6	13	6	2-5/8	245.00
6	PJ75-6	12	7-1/2	15	6	2-5/8	300.00
10,000 VOLTS D.C. OPERATING							
.5	PJ100-P5	8	4	11	4-1/2	2-5/8	175.00
1	PJ100-1	12	4	11	6	2-5/8	215.00
2	PJ100-2	12	6	11	6	2-5/8	275.00
4	PJ100-4	12	7-1/2	16	6	2-5/8	330.00
5	PJ100-5	12	8	18	6	2-5/8	370.00
12,500 VOLTS D.C. OPERATING							
.5	PJ125-P5	12	4	11	6	2-5/8	185.00
1	PJ125-1	12	6	11	6	2-5/8	230.00
2	PJ125-2	12	6	16	6	2-5/8	290.00
5	PJ125-5	12	12	18	6	2-5/8	550.00
15,000 VOLTS D.C. OPERATING							
.25	PJ150-P25	8	4	11	4-1/2	4-3/4	175.00
.5	PJ150-P5	12	4	11	6	4-3/4	210.00
1	PJ150-1	12	6	13	6	4-3/4	290.00
2	PJ150-2	12	8	18	6	4-3/4	385.00
3	PJ150-3	12	11	18	6	4-3/4	520.00
20,000 VOLTS D.C. OPERATING							
.25	PJ200-P25	12	4	11	4-1/2	4-3/4	210.00
.5	PJ200-P5	12	6	13	6	4-3/4	265.00
1	PJ200-1	12	8	18	6	4-3/4	360.00
1.5	PJ200-1.5	12	12	18	6	4-3/4	485.00
25,000 VOLTS D.C. OPERATING							
.25	PJ250-P25	12	6	11	6	4-3/4	290.00
.5	PJ250-P5	12	7-1/2	16	6	4-3/4	315.00
.75	PJ250-P75	12	11	16	6	4-3/4	400.00
1	PJ250-1	12	12	18	6	4-3/4	475.00

PYRAMID

GLASSEAL

HERMETICALLY SEALED *Miniature* PAPER CAPACITORS with METAL-GLASS END SEALS



"GLASSEAL H": Temperature Range −40 to +85° C.

INSERTED TAB CONSTRUCTION
TYPE PGH—Section grounded to container.
TYPE PGIH—Section insulated from container.

EXTENDED FOIL CONSTRUCTION
TYPE EPGH—Section grounded to container.
TYPE EPGIH—Section insulated from container.

"GLASSEAL M": Temperature Range −55 to +85° C.

INSERTED TAB CONSTRUCTION
TYPE PGM—Section grounded to container.
TYPE PGIM—Section insulated from container.

EXTENDED FOIL CONSTRUCTION
TYPE EPGM—Section grounded to container.
TYPE EPGIM—Section insulated from container.

"GLASSEAL X": Temperature Range −55 to +125° C.

INSERTED TAB CONSTRUCTION
TYPE PGX—Section grounded to container.
TYPE PGIX—Section insulated from container.

EXTENDED FOIL CONSTRUCTION
TYPE EPGX—Section grounded to container.
TYPE EPGIX—Section insulated from container.

TYPE COMPARISONS

PYRAMID	SPRAGUE	CORNELL-DUBILIER
PGH	78P	TWH----G
PGM	81P	TWC----G
PGX	86P	
PGIH	88P	TWH
PGIM	91P	TWC
PGIX	96P	
EPGH	178P	TWH----EG
EPGM	181P	TWC----EG
EPGX	186P	
EPGIH	188P	TWH----E
EPGIM	191P	TWC----E
EPGIX	196P	

For complete catalog, contact your local distributor or write to:

PYRAMID ELECTRIC COMPANY
1445 Hudson Blvd., North Bergen, N. J., U. S. A.

TYPE AFH (85°C) TWIST-PRONG ELECTROLYTIC CAPACITORS

AEROVOX
CAPACITOR
AFH 4444 J
AFH 4-14

•

SINGLES

•

DUALS

•

TRIPLES

•

QUADS

AFH SINGLES

CAT. NO.	CAP. MFD.	VOLT	SIZE	LIST
AFH 1-01	3000	10	1⅜x3	$2.90
AFH 1-02	1000	15	1x3	2.55
AFH 1-03	2000	15	1⅜x3	3.45
AFH 1-04	3000	15	1⅜x3	3.50
AFH 1-05	25	25	¾x2	1.25
AFH 1-06	40	25	¾x2	1.35
AFH 1-07	100	25	¾x2	1.60
AFH 1-08	500	25	1x2½	2.55
AFH 1-10	1000	25	1⅜x2	3.55
AFH 1-11	100	50	¾x2	1.65
AFH 1-12	150	50	¾x2	1.80
AFH 1-13	500	50	1⅜x2½	2.65
AFH 1-14	1000	50	1⅜x3½	3.75
AFH 1-15	25	150	1x2	1.50
AFH 1-16	30	150	1x2	1.55
AFH 1-17	40	150	1x2	1.60
AFH 1-18	50	150	1x2	1.65
AFH 1-19	60	150	1x2	1.75
AFH 1-20	80	150	1x2	1.85
AFH 1-21	100	150	1x2	2.00
AFH 1-22	120	150	1x3	2.10
AFH 1-23	140	150	1x3	2.15
AFH 1-24	150	150	1x3	2.15
AFH 1-25	40	200	1x2	1.70
AFH 1-26	15	250	1x2	1.55
AFH 1-27	20	250	¾x2	1.60
AFH 1-28	30	250	¾x2	1.70
AFH 1-29	40	250	1x2	1.80
AFH 1-30	60	250	1x2½	2.05
AFH 1-31	80	250	1x3	2.15
AFH 1-32	15	300	1x2	1.60
AFH 1-33	30	300	1x2	1.75
AFH 1-34	50	300	1x2½	2.10
AFH 1-35	80	300	1x3	2.55
AFH 1-36	100	300	1x3½	2.90
AFH 1-37	125	300	1⅜x3	3.50
AFH 1-38	15	350	1x2	1.65
AFH 1-39	30	350	1x2	1.90
AFH 1-40	40	350	1x2½	2.00
AFH 1-41	50	350	1x3	2.10
AFH 1-42	80	350	1⅜x2½	2.85
AFH 1-43	125	350	1⅜x3	3.95
AFH 1-44	10	400	¾x2	1.50
AFH 1-45	20	400	1x2	1.75
AFH 1-46	40	400	1⅜x2	2.00
AFH 1-47	80	400	1⅜x2½	2.95
AFH 1-48	10	450	1x2	1.55
AFH 1-49	15	450	1x2	1.70
AFH 1-50	20	450	1x2	1.80
AFH 1-51	30	450	1x2½	1.95
AFH 1-52	40	450	1x3	2.05
AFH 1-53	50	450	1x3	2.35
AFH 1-54	60	450	1⅜x2½	2.60
AFH 1-55	80	450	1⅜x3	3.05
AFH 1-56	30	475	1x3	2.00
AFH 1-57	90	475	1⅜x3½	3.50
AFH 1-58	10	500	1x2	1.60
AFH 1-59	20	500	1x2½	1.85
AFH 1-60	30	500	1x3	2.00
AFH 1-61	40	500	1x3½	2.50
AFH 1-62	80	500	1⅜x3	3.20
AFH 1-63	90	500	1⅜x3½	3.50
AFH 1-64	10	525	1x2	1.70
AFH 1-65	10 ohm-30 cps	3VNP	¾x2	2.00
AFH 1-66	0.5 ohm-15750 cps	3VNP	1x2	2.20
AFH 1-67	1 ohm-60 cps	3VNP	1⅜x3	4.00

AFH DUALS

CAT. NO.	CAP. MFD.	VOLT	SIZE	LIST
AFH 2-02	1000-1000	15	1x3½	$4.40
AFH 2-03	20-20	25	1x2	1.45
AFH 2-04	40-40	25	1x2	1.60
AFH 2-05	150-50	25	1x2	1.90
AFH 2-06	50-50	50	1x2	1.70

AFH DUALS—(Continued)

CAT. NO.	CAP. MFD.	VOLT	SIZE	LIST
AFH 2-07	10-20	150	1x2	1.60
AFH 2-08	20-20	150	1x2	1.70
AFH 2-09	30-15	150	1x2	1.75
AFH 2-10	30-20	150	1x2	1.75
AFH 2-11	30-30	150	1x2	1.85
AFH 2-12	40-20	150	1x2	1.80
AFH 2-13	40-30	150	1x2	1.85
AFH 2-14	40-40	150	1x2	1.90
AFH 2-15	50-30	150	1x2	2.00
AFH 2-16	50-50	150	1x2½	2.15
AFH 2-17	60-60	150	1x3	2.35
AFH 2-18	75-75	150	1x3	2.60
AFH 2-19	80-40	150	1x3	2.30
AFH 2-20	80-80	150	1⅜x2	2.65
AFH 2-22	200-125	150	1⅜x3	3.75
AFH 2-23	200-200	150	1⅜x3	4.00
AFH 2-24	60-60	200	1⅜x2	2.55
AFH 2-25	10-10	250	1x2	1.70
AFH 2-26	20-20	250	1x2	1.90
AFH 2-27	30-30	250	1x2½	2.30
AFH 2-28	40-20	250	1x2½	2.20
AFH 2-29	40-40	250	1x3	2.50
AFH 2-30	150-150	250	1⅜x4	5.15
AFH 2-31	10-10	300	1x2	1.75
AFH 2-32	15-15	300	1x2	1.85
AFH 2-33	50-50	300	1⅜x2½	3.35
AFH 2-34	80-80	300	1⅜x3	4.05
AFH 2-35	120-20	300	1⅜x3	4.00
AFH 2-36	15-15	350	1x2	2.25
AFH 2-37	20-20	350	1x2½	2.30
AFH 2-38	30-20	350	1x3	2.60
AFH 2-39	30-30	350	1x3	2.90
AFH 2-40	50-30	350	1⅜x2½	3.15
AFH 2-41	80-80	350	1⅜x3½	4.70
AFH 2-42	10-30	400	1x3	2.30
AFH 2-43	15-15	400	1x2½	2.25
AFH 2-44	60-60	400	1⅜x3½	4.40
AFH 2-45	80-10	400	1⅜x3	3.40
AFH 2-46	5-5	450	1x2	1.60
AFH 2-47	10-10	450	1x2	1.90
AFH 2-48	15-10	450	1x2½	2.05
AFH 2-49	15-15	450	1x2½	2.25
AFH 2-50	20-10	450	1x2½	2.25
AFH 2-51	20-20	450	1x3	2.55
AFH 2-52	30-10	450	1x3	2.50
AFH 2-53	30-15	450	1⅜x2	2.65
AFH 2-54	30-30	450	1⅜x2	3.05
AFH 2-56	40-20	450	1⅜x2	3.00
AFH 2-57	40-40	450	1⅜x3	3.45
AFH 2-60	60-20	450	1⅜x3	3.55
AFH 2-61	60-40	450	1⅜x3½	3.95
AFH 2-62	80-10	450	1⅜x3	3.60
AFH 2-63	80-20	450	1⅜x3½	3.90
AFH 2-64	80-40	450	1⅜x3½	4.35
AFH 2-65	30-10	475	1⅜x2	2.60
AFH 2-66	40-10	475	1⅜x2½	3.10
AFH 2-67	10-10	500	1x2½	1.95
AFH 2-69	20-20	500	1⅜x2½	2.85
AFH 2-70	25-40	500	1⅜x3	3.65
AFH 2-71	30-10	500	1⅜x2½	2.60
AFH 2-72	40-40	500	1⅜x3	4.40
AFH 2-73	60-40	500	1⅜x3½	4.60
AFH 2-74	250-1000	10/6	1⅜x2	2.85
AFH 2-75	250-2000	10/6	1⅜x2	3.30
AFH 2-77	40-20	150/50	1x2	1.70
AFH 2-78	40-150	150/25	1x2	2.05
AFH 2-79	40-20	250/25	1x2	2.00
AFH 2-80	50-100	250/50	1⅜x2	2.60
AFH 2-81	100-150	250/50	1⅜x3	3.65
AFH 2-82	20-20	300/25	1x2	1.85
AFH 2-83	30-30	300/350	1x3	2.65
AFH 2-84	20-20	350/25	1x2	1.90
AFH 2-85	40-20	350/25	1x2½	2.35
AFH 2-86	40-10	350/200	1⅜x2	2.40
AFH 2-87	10-20	450/25	1x2	1.70
AFH 2-88	20-20	450/25	1x2	2.00
AFH 2-89	40-20	450/25	1x3	2.45
AFH 2-90	80-20	450/25	1⅜x3	3.40
AFH 2-91	80-50	450/50	1⅜x3	3.75
AFH 2-92	10-50	450/100	1⅜x2	2.05
AFH 2-93	20-100	450/100	1⅜x2	2.90
AFH 2-94	30-40	450/150	1⅜x2	2.50
AFH 2-95	20-80	450/350	1⅜x3	3.60
AFH 2-96	40-10	450/350	1⅜x2	2.60
AFH 2-97	40-40	450/350	1⅜x3	3.30
AFH 2-99	75-50	475/50	1⅜x3	3.65
AFH 2-100	20-100	475/300	1⅜x3	3.35
AFH 2-101	40-40	475/400	1⅜x3	3.75
AFH 2-102	80-50	500/50	1⅜x3½	3.80
AFH 2-103	60-80	500/150	1⅜x3	3.75
AFH 2-104	40-50	500/200	1⅜x3	3.30
AFH 2-105	15-20	500/300	1x2½	2.30
AFH 2-106	20-100	500/300	1⅜x3	3.90
AFH 2-107	40-40	500/400	1⅜x3	3.75
AFH 2-108	0.5 ohm-15750 cps 2.5 ohm-60 cps	12 6	1⅜x2	3.60

TYPE AFH (85°C) TWIST-PRONG ELECTROLYTIC CAPACITORS

AFH TRIPLES

CAT. NO.	CAP. MFD.	VOLT	SIZE	LIST
AFH 3-01	20-20-20	25	1x2	$1.95
AFH 3-02	40-40-40	25	1x2	2.15
AFH 3-03	30-30-30	50	1x2	2.15
AFH 3-04	10-30-30	150	1x2	2.35
AFH 3-05	20-20-20	150	1x2	2.30
AFH 3-06	30-30-10	150	1x2	2.35
AFH 3-07	40-20-10	150	1x2	2.35
AFH 3-08	40-20-20	150	1x2	2.40
AFH 3-09	40-30-20	150	1x2	2.50
AFH 3-10	40-40-40	150	1x2½	2.60
AFH 3-11	40-70-40	150	1x3	2.95
AFH 3-12	60-40-20	150	1x3	2.75
AFH 3-13	80-40-20	150	1x3	2.90
AFH 3-14	10-15-15	250	1x2	2.45
AFH 3-16	15-15-30	250	1x2	2.75
AFH 3-17	20-20-10	250	1x2	2.50
AFH 3-18	30-20-10	250	1x2½	2.70
AFH 3-19	40-20-10	250	1x3	2.85
AFH 3-20	40-20-20	250	1x3	2.90
AFH 3-21	80-80-60	250	1⅜x3	4.90
AFH 3-22	10-10-10	300	1x2	2.40
AFH 3-24	20-80-10	300	1⅜x2½	3.80
AFH 3-25	60-20-10	300	1⅜x2	3.45
AFH 3-26	120-50-40	300	1⅜x4	5.65
AFH 3-27	10-10-10	350	1x2½	2.40
AFH 3-28	20-20-10	350	1x3	2.95
AFH 3-29	60-40-20	350	1⅜x3½	4.25
AFH 3-30	10-10-10	400	1x2½	2.40
AFH 3-31	10-10-10	450	1x3	2.60
AFH 3-32	10-30-30	450	1⅜x3	3.75
AFH 3-33	15-15-10	450	1x3	2.95
AFH 3-34	15-15-15	450	1x3	3.10
AFH 3-35	20-10-10	450	1x3	2.95
AFH 3-36	20-20-20	450	1⅜x2½	3.60
AFH 3-37	30-20-20	450	1⅜x3	3.85
AFH 3-38	30-30-20	450	1⅜x3	4.10
AFH 3-39	30-30-30	450	1⅜x3	4.35
AFH 3-40	30-60-10	450	1⅜x3½	4.50
AFH 3-41	40-10-10	450	1⅜x3	3.35
AFH 3-42	40-30-20	450	1⅜x3	4.30
AFH 3-43	40-40-10	450	1⅜x3	4.20
AFH 3-44	40-40-40	450	1⅜x3½	4.90
AFH 3-45	60-20-20	450	1⅜x3½	4.60
AFH 3-46	80-40-20	450	1⅜x4	5.40
AFH 3-47	10-10-10	475	1x3	2.70
AFH 3-48	30-20-20	475	1⅜x3	3.95
AFH 3-49	30-30-10	475	1⅜x3	4.00
AFH 3-50	40-10-10	475	1⅜x3	3.85
AFH 3-51	10-10-10	500	1x3	2.70
AFH 3-52	30-20-20	500	1⅜x3	4.20
AFH 3-53	40-10-10	500	1⅜x3	3.90
AFH 3-54	40-40-10	500	1⅜x3½	5.05
AFH 3-55	100/50-25	100/25	1x3	2.65
AFH 3-58	30-20/100	150/6	1x2	2.40
AFH 3-59	20-20/100	150/10	1x2	2.35
AFH 3-60	20-20/250	150/10	1x2	2.60
AFH 3-61	30-30/200	150/10	1x2½	2.50
AFH 3-62	40-20/150	150/10	1x2	2.40
AFH 3-63	40-20/200	150/10	1x2½	2.70
AFH 3-64	40-20/250	150/10	1x2½	2.70
AFH 3-65	20/250-100	150/15	1⅜x2	2.90
AFH 3-67	20-20/20	150/25	1x2	2.20
AFH 3-68	20-20/200	150/25	1x3	2.60
AFH 3-69	30-20/20	150/25	1x2	2.25
AFH 3-70	30-30/20	150/25	1x2	2.30
AFH 3-72	40-20/20	150/25	1x2	2.30
AFH 3-73	40-20/100	150/25	1x3	2.50
AFH 3-74	40-20/200	150/25	1x3	2.70
AFH 3-75	40-30/20	150/25	1x2½	2.35
AFH 3-76	40-40/20	150/25	1x2½	2.40
AFH 3-77	50-30/20	150/25	1x2½	2.50
AFH 3-78	50-30/100	150/25	1x3	2.70
AFH 3-79	50-50/20	150/25	1x3	2.65
AFH 3-80	60-20/20	150/25	1x2	2.55
AFH 3-81	60-40/20	150/25	1x2½	2.65
AFH 3-82	80-40/20	150/25	1x2½	2.80
AFH 3-83	120-60/20	150/25	1⅜x2½	3.35
AFH 3-84	30-20/20	200/25	1x2	2.55
AFH 3-86	100-10/40	200/50	1⅜x2	3.15
AFH 3-87	15-15/20	250/25	1x2	2.35
AFH 3-88	20-15/20	250/25	1x2	2.35
AFH 3-89	30-30/20	250/25	1x2½	2.80
AFH 3-90	70-70/20	250/50	1⅜x3	3.90
AFH 3-93	40-20/10	250/150	1⅜x2	2.70
AFH 3-95	10-20/30	250/350	1x3	3.00
AFH 3-96	80-80/10	250/450	1⅜x3½	4.20
AFH 3-97	20-20/20	300/25	1x2	2.75
AFH 3-98	40-15/20	300/25	1x2½	2.95
AFH 3-99	30-30/25	300/50	1x3	2.90
AFH 3-100	40-40/20	300/150	1⅜x2	3.60
AFH 3-101	10-10/15	300/250	1x2	2.45
AFH 3-102	120/15-10	300/450	1⅜x3½	4.50
AFH 3-103	10-10/20	350/25	1x2	2.25
AFH 3-104	15-10/20	350/25	1x2	2.50
AFH 3-105	15-15/20	350/25	1x2½	2.70
AFH 3-106	20-10/20	350/25	1x2½	2.55
AFH 3-107	20-20/20	350/25	1x2½	2.80
AFH 3-108	30-10/20	350/25	1x2½	3.05
AFH 3-109	30-20/20	350/25	1x3	3.10
AFH 3-110	30-30/20	350/25	1⅜x2	3.40

AFH TRIPLES—(Continued)

CAT. NO.	CAP. MFD.	VOLT	SIZE	LIST
AFH 3-111	40-40/50	350/25	1⅜x2½	$3.75
AFH 3-112	10-5/150	350/50	1x3	2.70
AFH 3-113	40-20/10	350/100	1⅜x2	2.85
AFH 3-114	20-40/10	350/150	1x3	3.20
AFH 3-115	20-10/5	350/250	1x2½	2.55
AFH 3-116	30/20-10	350/250	1x3	3.00
AFH 3-117	30-10/20	350/250	1x3	3.05
AFH 3-119	15-15/40	400/25	1x2½	2.80
AFH 3-120	20-20/20	400/25	1x3	2.85
AFH 3-121	30-10/150	400/50	1⅜x2½	3.40
AFH 3-122	80-40/150	400/50	1⅜x4	5.15
AFH 3-123	80/20-10	400/300	1⅜x3½	4.25
AFH 3-124	10-10/10	450/25	1x2	2.35
AFH 3-125	10-10/20	450/25	1x2	2.40
AFH 3-126	10-20/20	450/25	1x3	2.70
AFH 3-127	15-15/20	450/25	1x3	2.70
AFH 3-128	20-15/20	450/25	1x3	2.90
AFH 3-129	20-20/20	450/25	1x3	3.05
AFH 3-130	30/100-25	450/25	1⅜x2	2.95
AFH 3-131	30-30/20	450/25	1⅜x2½	3.55
AFH 3-132	40-20/20	450/25	1⅜x2½	3.50
AFH 3-133	40-40/20	450/25	1⅜x3	3.95
AFH 3-134	40-40/40	450/25	1⅜x3	3.95
AFH 3-135	80-40/100	450/25	1⅜x4	5.10
AFH 3-136	10-10/40	450/50	1x2½	2.50
AFH 3-137	20-10/40	450/50	1x3	2.80
AFH 3-138	20-10/50	450/50	1x3	2.85
AFH 3-139	30-30/40	450/50	1⅜x3	3.65
AFH 3-140	40-10/100	450/50	1⅜x3	4.30
AFH 3-141	40-40/80	450/50	1⅜x3½	4.10
AFH 3-142	40-40/100	450/50	1⅜x3½	4.30
AFH 3-143	10-10/50	450/100	1⅜x2	2.65
AFH 3-144	30-20/30	450/150	1⅜x2½	3.50
AFH 3-145	40/90-50	450/150	1⅜x3	3.95
AFH 3-146	40-10/80	450/150	1⅜x3	3.75
AFH 3-147	40-40/40	450/150	1⅜x3½	4.10
AFH 3-148	40-10/80	450/200	1⅜x3	3.90
AFH 3-149	20/40-10	450/250	1⅜x2	3.15
AFH 3-150	15-15/10	450/300	1x3	2.85
AFH 3-151	20/15-10	450/300	1x3	2.85
AFH 3-152	15-5/15	450/350	1x3	2.85
AFH 3-153	20-20/60	450/350	1⅜x3	4.05
AFH 3-154	40-10/10	450/350	1⅜x2	3.30
AFH 3-155	40-40/10	450/500	1⅜x3½	4.15
AFH 3-156	10-10/100	500/50	1x3½	2.85
AFH 3-157	20-10/100	500/50	1x4	3.30
AFH 3-158	30-10/20	500/50	1⅜x2½	3.10
AFH 3-159	40-40/100	500/200	1⅜x4	5.85
AFH 3-160	10-10/5	500/350	1x2½	2.50
AFH 3-161	20-20/60	500/400	1⅜x3½	4.80
AFH 3-162	40/25/130	150/25/15	1x3	3.30
AFH 3-164	80/40/50	250/150/50	1⅜x2½	2.35
AFH 3-165	100/60/20	300/150/25	1⅜x3	4.20
AFH 3-166	20/50/100	350/100/75	1x3	3.10
AFH 3-167	10/50/100	350/150/50	1x3	2.85
AFH 3-168	50/10/500	350/250/5	1⅜x2½	3.60
AFH 3-169	30/30/20	350/300/25	1x3	3.15
AFH 3-171	60/40/20	400/300/25	1⅜x3½	4.20
AFH 3-172	10/40/10	400/300/150	1⅜x2	2.90
AFH 3-173	55/50/80	400/300/250	1⅜x3½	5.35
AFH 3-174	10/50/30	400/350/25	1x3	3.10
AFH 3-175	10/50/100	450/150/25	1x3	2.75
AFH 3-176	40/40/130	450/150/50	1⅜x3	3.75
AFH 3-177	40/100/50	450/150/50	1⅜x3	3.95
AFH 3-178	20/60/100	450/250/25	1⅜x2½	3.65
AFH 3-179	10/40/10	450/300/150	1⅜x2	3.10
AFH 3-180	10/10/20	450/350/25	1x2	2.30
AFH 3-182	20/80/100	450/350/50	1⅜x3½	4.50
AFH 3-183	15/20/20	450/350/250	1⅜x2	2.95
AFH 3-184	20/15/10	450/350/300	1x3	3.05
AFH 3-186	30/50/40	450/400/25	1⅜x3	3.90
AFH 3-187	10/30/30	450/400/300	1⅜x2½	3.35
AFH 3-188	10/100/40	475/200/50	1⅜x2½	3.30
AFH 3-189	20/20/40	475/300/25	1⅜x2	3.05
AFH 3-190	40/40/25	475/400/50	1⅜x3	4.30
AFH 3-191	10/100/40	500/200/50	1⅜x2½	3.35
AFH 3-192	40/40/100	500/250/50	1⅜x3	4.30
AFH 3-193	20/20/40	500/300/25	1⅜x2	3.10
AFH 3-194	40/40/25	500/400/50	1⅜x3	4.30
AFH 3-195	30/20/20	500/500/25	1⅜x2½	3.55

AFH QUADS

CAT. NO.	CAP. MFD.	VOLT	SIZE	LIST
AFH 4-01	40-40-40-30	150	1⅜x2	$3.35
AFH 4-02	40-40-20-10	300	1⅜x2½	4.55
AFH 4-03	10-10-10-10	350	1⅜x2	3.10
AFH 4-05	80-10-10-10	350	1⅜x3	4.55
AFH 4-06	30-30-20-20	400	1⅜x3	4.85
AFH 4-07	80-20-10-10	400	1⅜x3½	5.05
AFH 4-09	5-5-5-5	450	1⅜x2	3.00
AFH 4-10	10-10-10-10	450	1⅜x2	3.35
AFH 4-11	15-30-30-10	450	1⅜x3	4.70
AFH 4-12	15-30-30-30	450	1⅜x4	5.30
AFH 4-13	20-10-10-10	450	1⅜x2½	3.70
AFH 4-14	20-20-20-20	450	1⅜x2½	4.70
AFH 4-15	30-15-15-15	450	1⅜x3	4.45
AFH 4-16	35-35-10-5	450	1⅜x3½	4.65
AFH 4-17	40-10-10-10	450	1⅜x3	4.15

TYPE AFH TWIST-PRONG ELECTROLYTIC CAP.

AFH QUADS—(Continued)

CAT. NO.	CAP. MFD.	VOLT	SIZE	LIST
AFH 4-18	40-20-10-10	450	1⅜x3	$4.45
AFH 4-19	10-10-10-10	475	1⅜x2	3.50
AFH 4-20	10-10-10-10	500	1⅜x2	3.50
AFH 4-21	30-20-20/200	150/10	1⅜x2	3.15
AFH 4-22	40-40-20/200	150/10	1⅜x2	3.25
AFH 4-23	60-40-20/200	150/10	1⅜x2	3.50
AFH 4-24	10-20-60/20	150/25	1⅜x2	3.10
AFH 4-25	20-20-20/20	150/25	1⅜x2	2.90
AFH 4-26	30-30-30/40	150/25	1⅜x2	3.10
AFH 4-27	40-20-20/20	150/25	1⅜x2	2.95
AFH 4-28	40-40-30/20	150/25	1⅜x2	3.10
AFH 4-29	40-40-40/20	150/25	1⅜x2	3.15
AFH 4-30	40-40/40-40	150/25	1⅜x2	3.05
AFH 4-31	40-40-40/100	150/25	1⅜x2	3.35
AFH 4-32	40-40-40/160	150/25	1⅜x2	3.55
AFH 4-33	40-40/100-100	150/25	1⅜x2	3.35
AFH 4-34	50-30-30/100	150/25	1⅜x2	3.45
AFH 4-35	50-50-50/20	150/25	1⅜x2	3.55
AFH 4-36	75-75-75/30	150/25	1⅜x3	4.30
AFH 4-37	80-40-40/20	150/25	1⅜x2	3.55
AFH 4-38	80-40-40/100	150/25	1⅜x2½	3.75
AFH 4-39	40-20-10/20	200/25	1⅜x2	3.20
AFH 4-40	40-20-10/20	250/25	1⅜x2	3.40
AFH 4-41	100-40-10/100	250/50	1⅜x3½	5.15
AFH 4-42	80-60-40/20	250/150	1⅜x3½	5.10
AFH 4-43	10-10-10/20	300/25	1⅜x2	2.95
AFH 4-44	40-20-20/25	300/25	1⅜x2	4.00
AFH 4-45	40-40-20/20	300/25	1⅜x3	4.40
AFH 4-46	60-40-20/50	300/25	1⅜x3	4.65
AFH 4-47	40-40-40/20	300/150	1⅜x3	4.90
AFH 4-48	10-10-10/20	350/25	1⅜x2	2.95
AFH 4-49	20-10-5/20	350/25	1⅜x2	3.10
AFH 4-50	30-20-20/20	350/25	1⅜x2½	4.10
AFH 4-51	40-20-20/25	350/25	1⅜x2½	4.25
AFH 4-52	40-40-20/20	350/25	1⅜x3	4.70
AFH 4-53	40-40-40/40	350/25	1⅜x3	5.20
AFH 4-54	15-15-15/50	350/50	1⅜x2	3.80
AFH 4-55	40-30-10/50	350/50	1⅜x3	4.40
AFH 4-56	40-40-40/150	350/50	1⅜x3½	5.70
AFH 4-57	20-20-20/20	400/25	1⅜x2½	3.85
AFH 4-58	40-10/80-10	400/250	1⅜x3½	4.70
AFH 4-59	10-10-10/20	450/25	1⅜x2	3.15
AFH 4-60	10-10-10/25	450/25	1⅜x2	3.15
AFH 4-61	10-10-10/100	450/25	1⅜x2	3.35
AFH 4-62	10-10-10/150	450/50	1⅜x2½	3.70
AFH 4-63	10-10/20/20	450/25	1⅜x2	2.95
AFH 4-65	20-10-10/100	450/25	1⅜x2	3.70
AFH 4-66	20-15/20-20	450/25	1⅜x2	3.55
AFH 4-67	20-20-20/20	450/25	1⅜x2½	4.15
AFH 4-68	30-15-15/40	450/25	1⅜x2½	4.15
AFH 4-69	30-20-20/20	450/25	1⅜x3	4.40
AFH 4-70	30-30-10/20	450/25	1⅜x3	4.35
AFH 4-71	30-30-20/20	450/25	1⅜x3	4.65
AFH 4-72	40-10-10/250	450/25	1⅜x3	4.65
AFH 4-73	40-10-10/300	450/25	1⅜x3	4.85
AFH 4-74	40-15-10/25	450/25	1⅜x3	4.05
AFH 4-75	40-20-10/20	450/25	1⅜x3	4.25
AFH 4-76	40-20-20/20	450/25	1⅜x3	4.60
AFH 4-77	40-20-20/40	450/25	1⅜x3	4.65
AFH 4-78	40-30-10/20	450/25	1⅜x3	4.50
AFH 4-79	40-40-20/20	450/25	1⅜x3½	5.00
AFH 4-80	20-20-20/100	450/50	1⅜x3	4.55
AFH 4-81	30-30-15/30	450/50	1⅜x3	4.55
AFH 4-82	30-30-15/100	450/50	1⅜x3½	4.90
AFH 4-83	40-20-10/100	450/50	1⅜x3½	4.60
AFH 4-84	40-40-10/20	450/50	1⅜x3	4.70
AFH 4-85	40-40/10-30	450/50	1⅜x3	4.50
AFH 4-86	60-10-10/20	450/50	1⅜x3	4.55
AFH 4-87	40-40-10/100	450/100	1⅜x3½	5.35
AFH 4-88	60-10-10/20	450/150	1⅜x3	4.60
AFH 4-89	20-20/30-30	450/300	1⅜x3	4.50
AFH 4-91	20-20/30-30	450/350	1⅜x3	5.05
AFH 4-92	40-10/35-10	450/350	1⅜x3	4.60
AFH 4-93	40-40/30-30	450/350	1⅜x4	5.90
AFH 4-94	40-10-20/10	475/25	1⅜x3	4.85
AFH 4-95	20-20-10/10	500/300	1⅜x2½	4.30
AFH 4-96	50-30-10/20	500/300	1⅜x4	5.60
AFH 4-97	100/40/80-20	300/50/25	1⅜x2½	4.55
AFH 4-99	15/80-40/200	350/200/25	1⅜x3	4.50
AFH 4-100	40/40-20/20	350/300/25	1⅜x3	4.50
AFH 4-101	5-5/50/80	400/300/250	1⅜x3	4.65
AFH 4-102	10/50-30/30	400/350/25	1⅜x3	4.40
AFH 4-103	40-60/40/10	400/350/50	1⅜x3½	5.75
AFH 4-104	40/10/80-10	400/350/250	1⅜x3	4.65
AFH 4-105	30/125-125/30	450/25/450	1⅜x3	8.55
AFH 4-106	40/40/10-30	450/150/50	1⅜x3	3.75
AFH 4-107	10-10/60/100	450/200/50	1⅜x3	3.85
AFH 4-108	20/80-20/50	450/200/50	1⅜x3	4.15
AFH 4-109	10/60-40/25	450/350/25	1⅜x3½	4.60
AFH 4-110	10/100-10/20	450/350/25	1⅜x3½	5.25
AFH 4-111	20/15-15/20	450/350/25	1⅜x2	3.80
AFH 4-112	30/40-40/10	450/350/200	1⅜x3½	5.15
AFH 4-113	15-15/80/40	475/300/50	1⅜x3	4.80
AFH 4-114	10-5/80/40	475/450/50	1⅜x3½	4.95
AFH 4-115	120/20/20/100	300/250/25/50	1⅜x4	5.05
AFH 4-117	20/40/10/250	350/300/150/50	1⅜x3	4.60
AFH 4-118	80/10/30/40	450/400/300/150	1⅜x4	5.25
AFH 4-119	20/40/100/80	475/300/50/25	1⅜x3	4.50
AFH 4-120	10/40/80/100	475/350/200/100	1⅜x3½	4.80
AFH 4-121	10/10/80/50	475/450/200/50	1⅜x2½	3.85
AFH 4-122	25/20/40/100	475/450/300/50	1⅜x3½	4.95
AFH 4-123	10/60/30/125	475/450/400/50	1⅜x4	5.45

AEROVOX
CAPACITOR
AEP 3J

TYPE AEP PLUG-IN ELECTROLYTIC CAPACITORS

Quick change, hermetically sealed dry electrolytic. Plugs into standard octal socket for fast replacement or testing when continuous service is important. High capacity and ultra-compact, using etched foil in small can sizes. Non-corrosive aluminum internal construction throughout. Vented for safety.

Single Element Units

Type	Cap. Mfds.	VDCW	Dia. x Hgt.	List
AEP5A	25	25	1 5/32 x 2½	$3.75
AEP4D	20	150	1 5/32 x 2½	3.95
AEP8D	40	150	1 5/32 x 2½	4.10
AEP2J	10	450	1 5/32 x 2½	4.05
AEP3J	15	450	1 5/32 x 2½	4.20
AEP4J	20	450	1 5/32 x 2½	4.30
AEP6J	30	450	1 5/32 x 2½	4.45
AEP8J	40	450	1 5/32 x 2½	4.55
AEP16J	80	450	1⅜ x 3½	5.55
AEP2L	10	600	1⅜ x 4¼	4.20

Dual Element Units

Type	Cap. Mfds.	VDCW	Dia. x Hgt.	List
AEP44D	20-20	150	1 5/32 x 2½	$4.20
AEP88D	40-40	150	1 5/32 x 2½	4.35
AEP22J	10-10	450	1 5/32 x 2½	4.40
AEP44J	20-20	450	1⅜ x 2½	5.05
AEP88J	40-40	450	1⅜ x 3	5.95

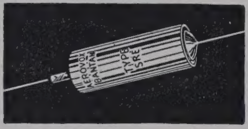
Triple Element Units

Type	Cap. Mfds.	VDCW	Dia. x Hgt.	List
AEP444D	20-20-20	150	1 5/32 x 2½	$4.80
AEP88D4A	40-40 x 150/20	25	1 5/32 x 2½	4.85
AEP222J	10-10-10	450	1 5/32 x 2½	5.10
AEP22J4A	10-10 x 450/20	25	1 5/32 x 2½	4.85
AEP44J4A	20-20 x 450/20	25	1⅜ x 2½	5.55
AEP444J	20-20-20	450	1⅜ x 3	6.10

Quadruple Element Units

Type	Cap. Mfds. x V.D.C.W.	Size—D. x H.	List
AEPG444D4A	20-20-20 x 150/20 x 25*	1⅜ x 2½	$5.35
AEP2222J	10-10-10-10 x 450	1⅜ x 2½	5.85
AEPG444J4A	20-20-20 x 450/20 x 25*	1⅜ x 3	6.65

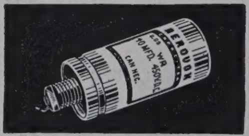
*Ground lug provided for cathode connection.



TYPE SRE BANTAM CAPACITORS

Tiniest Aerovox electrolytic. Handles full sized jobs, especially suitable for hearing aids, personal radios, screen filter circuits and similar functions. Hermetically sealed, aluminum tube with waxed cardboard insulating jacket. New stud terminals with #18 gauge tinned copper wire leads.

Volts	Cap Mfd.	Size Dia. x Length	List
3	100	⅜ x 1	$1.10
3	200	⅜ x 1⅝	1.15
3	300	½ x 1⅛	1.30
3	500	½ x 1⅝	1.40
6	50	⅜ x 1	.95
6	100	⅜ x 1⅝	1.20
12	50	⅜ x 1⅛	1.00
12	100	½ x 1	1.20
12	200	½ x 1⅝	1.35
25	25	⅜ x 1	1.00
25	50	⅜ x 1⅝	1.10
25	100	½ x 1⅝	1.35
50	10	⅜ x 1	1.00
50	15	⅜ x 1⅛	1.00
50	25	⅜ x 1⅝	1.05
150	5	⅜ x 1	1.00
150	10	⅜ x 1⅝	1.05
150	15	½ x 1⅛	1.15
150	25	½ x 1⅝	1.25



REPLACEMENT FOR WET ELECTROLYTIC - TYPE WR

Dry electrolytic for replacement of wet electrolytic units. Furnished in round aluminum cans, the range of capacities covers most applications in standard radio receivers and other equipment originally using wet type electrolytic capacitors. 450 V.D.C.

Cap. Mfd.	Replacement For	Size—Dia. x Hght.	List
10	4 to 12 mfd.	1⅜ x 3	$2.30
20	16 to 20 mfd.	1⅜ x 3	2.70
30	20 to 30 mfd.	1⅜ x 3	2.95
40	30 to 40 mfd.	1⅜ x 3	3.15

TYPE PRS • DANDEES • TUBULAR ALUMINUM CAN ELECTROLYTICS

AEROVOX
DUAL DANDEE
ELECTROLYTIC CAP.
D.C.W.V.
150
PATENT NOTICE
MADE IN U.S.A.
AEROVOX CORPORATION
NEW BEDFORD, MASS.

- Singles
- Duals
- Triples
- Quads

Tubular units encased in aluminum containers especially suited for compact assemblies. Single element units have solid wire leads. Dual, triple, and quad units are supplied with stranded wire leads and safety sleeves.

The higher voltage listings meet the new radio and electronic circuit potentials, particularly in cathode-ray applications like television receivers and oscillographs.

PRS units are normally supplied with etched foil, but plain foil is available. High-purity aluminum construction. Vented for excessive gas pressures.

SINGLE ELEMENT UNITS

Cap Mfd.	V.D.C.W.	Size Diameter x Length	List
100	6	11/16 x 1¼	$1.20
250	6	11/16 x 1¾	1.35
500	6	13/16 x 1¾	1.55
1000	6	15/16 x 2¼	1.90
1500	6	1 1/16 x 2¼	2.10
2000	6	1 1/16 x 2¾	2.30
100	12	11/16 x 1½	1.20
250	12	13/16 x 1¾	1.45
500	12	15/16 x 2¼	1.70
1000	12	1 1/16 x 3¼	2.25
100	15	11/16 x 1½	1.25
250	15	13/16 x 2¼	1.55
500	15	15/16 x 2¼	1.75
10	25	9/16 x 1¼	1.00
16	25	9/16 x 1¼	1.00
25	25	9/16 x 1¼	1.00
50	25	11/16 x 1½	1.10
100	25	13/16 x 1½	1.35
250	25	15/16 x 2¼	1.70
500	25	1 1/16 x 2½	2.30
10	50	9/16 x 1¼	1.00
20	50	11/16 x 1¼	1.00
25	50	11/16 x 1¼	1.05
50	50	11/16 x 1¾	1.20
100	50	13/16 x 1¾	1.40
4	150	9/16 x 1¼	1.00
8	150	11/16 x 1¼	1.05
12	150	11/16 x 1¼	1.10
16	150	11/16 x 1½	1.15
20	150	11/16 x 1¾	1.20
24	150	11/16 x 1¾	1.25
30	150	13/16 x 1½	1.30
40	150	13/16 x 1¾	1.35
50	150	15/16 x 1¾	1.40
100	150	15/16 x 2¼	1.75
150	150	1 1/16 x 3	1.90
4	250	11/16 x 1¼	1.00
8	250	11/16 x 1½	1.15
12	250	11/16 x 1¾	1.25
16	250	13/16 x 1½	1.30
20	250	13/16 x 1½	1.35
40	250	13/16 x 2¼	1.55
4	350	11/16 x 1½	1.05
8	350	13/16 x 1½	1.20
10	350	13/16 x 1¾	1.25
12	350	13/16 x 1¾	1.30
16	350	13/16 x 1¾	1.40
24	350	15/16 x 1¾	1.55
4	450	11/16 x 1½	1.15
8	450	13/16 x 1½	1.25
10	450	13/16 x 1¾	1.30
12	450	15/16 x 1½	1.35
16	450	15/16 x 1¾	1.40
20	450	1 1/16 x 1¾	1.55
30	450	1 1/16 x 2¼	1.70
40	450	1 1/16 x 2½	1.80
50	450	1 x 3	2.10
80	450	1 1/16 x 3¾	2.80
8	500	13/16 x 3 1/16	2.30
10	500	15/16 x 3 1/16	2.45
12	500	15/16 x 3 1/16	2.50
16	500	1 1/16 x 3 1/16	2.55
8	600	15/16 x 3 1/16	2.75
10	600	15/16 x 3 1/16	2.95
12	600	1 1/16 x 3 1/16	3.10
16	600	1 1/16 x 3 9/16	3.25
8	700	15/16 x 3 1/16	3.00
10	700	1 1/16 x 3 1/16	3.50
12	700	1 1/16 x 3 9/16	3.75
16	700	1 1/16 x 3 9/16	4.50

DUAL DANDEES

Common (Dual-Element Units) Negative

Cap. Mfd.	V.D.C.W.	Size—Diameter x Length	List
10-10	25	11/16 x 1¼	$1.40
10-10	50	11/16 x 1½	1.40
8-8	150	11/16 x 1¾	1.50
8-16	150	11/16 x 2¼	1.55
20-20	150	13/16 x 1¾	1.65
20-30	150	13/16 x 2¼	1.70
20-40	150	15/16 x 1¾	1.75
30-30	150	15/16 x 1¾	1.80
30-40	150	15/16 x 2¼	1.80
30-50	150	15/16 x 2¼	1.95
40-40	150	15/16 x 2¼	1.80
40-80	150	15/16 x 2¾	2.20
50-30	150	15/16 x 2¼	1.95
50-50	150	15/16 x 2¼	2.10
80-40	150	15/16 x 2¾	2.25
100-100	150	1 1/16 x 3¼	3.20
8-8	200	11/16 x 1¾	1.50
8-16	200	11/16 x 2¼	1.60
16-16	200	13/16 x 1¾	1.70
30-30	200	15/16 x 2¼	2.15
8-16	250	13/16 x 1¾	1.65
10-10	250	13/16 x 1¾	1.65
16-16	250	13/16 x 2¼	1.70
20-20	250	15/16 x 2¼	1.85
30-30	250	15/16 x 2¼	2.25
8-8	450	13/16 x 2¼	1.70
8-16	450	15/16 x 2¼	2.00
10-10	450	15/16 x 2¼	1.85
16-16	450	1 1/16 x 2¼	2.25
20-20	450	1 1/16 x 3¼	2.50
*30-30	450	1⅜ x 2¾	3.00
*40-20	450	1⅜ x 2¾	2.95
*40-40	450	1⅜ x 3¼	3.35

*Supplied in paper cases only.

TRIPLE DANDEES

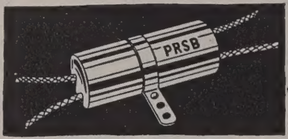
(Triple-Element Units)

Cap. Mfd.	V.D.C.W.	Size—Diameter x Length	List
20-20-20	150	15/16 x 1¾	$2.20
30-20-10	150	15/16 x 1¾	2.15
30-30-30	150	15/16 x 2¼	2.35
40-20-20	150	15/16 x 2¼	2.25
40-30-20	150	15/16 x 2¼	2.35
40-40-40	150	1 1/16 x 2¼	2.45
50-30-10	150	15/16 x 2¼	2.35
50-30-20	150	1 1/16 x 2¼	2.45
80-40-20	150	1 1/16 x 2½	2.75

TYPE PRS MULTIPLES

(Common Negative)

Type	Cap. Mfd. x V.D.C.W.	Size—Dia. x Lgth.	List
PRS 64D20A	30-20 × 150 + 100 × 25	15/16 x 2¼	$2.20
PRS 86D4A	40-30 × 150 + 20 × 25	15/16 x 2¼	2.20
PRS 106D20A	50-30 × 150 + 100 × 25	1 1/16 x 2¼	2.55
PRS 106D50A	50-30 × 150 + 250 × 25	1 1/16 x 2¾	3.10
PRS 1010D4A	50-50 × 150 + 20 × 25	1 1/16 x 2¼	2.50



TYPE PRS-B 150

150V.D.C.W. 200v Surge Peak

Cap. Mfd.	Can Size Dia. x Lgth.	List
20-20	1 x 2½	$2.05
20-40	1 x 3	2.20

TYPE PRSB
DUAL ELEMENT — 4 LEADS

TYPE PRS-B 450

450V.D.C.W. 500v Surge Peak

Cap. Mfd.	Can Size Dia. x Lgth.	List
8-8	1 x 3	$2.15
8-16	1⅛ x 3½	2.45
16-16	1⅜ x 3½	2.80

TYPE PRS-B 250

250V.D.C.W. 300v Surge Peak

Cap. Mfd.	Can Size Dia. x Lgth.	List
8-16	1 x 2½	2.10
16-16	1 x 3	2.20

TYPE HCLV

AEROVOX
HCLV

HIGH CAPACITY LOW VOLTAGE

High capacity—low voltage units used in electric fence control and other applications requiring these capacity-voltage values. Unit supplied with outer insulating tube and mounting ring. External tube sizes indicated below.

Cap. Mfds.	Size Dia. x Hght.	List
Type HCLV12—12 V.D.C.W.		
500	1 7/16 x 3	$2.70
1000	1 7/16 x 3½	3.25
2000	1 7/16 x 4½	3.65
3000	2 1/16 x 4½	4.55
4000	2 1/16 x 4½	4.75
Type HCLV18—18 V.D.C.W.		
500	1 7/16 x 3	3.00
1000	1 7/16 x 4½	3.80
2000	1 7/16 x 4½	4.75
4000	2 9/16 x 4½	8.45
Type HCLV25—25 V.D.C.W.		
500	1 7/16 x 3	3.30
1000	1 7/16 x 4½	4.30
2000	2 1/16 x 3½	5.25
3000	2 9/16 x 4½	8.00
4000	2 9/16 x 4½	9.50
Type HCLV50—50 V.D.C.W.		
1000	2 1/16 x 3½	6.50
2000	2 9/16 x 4½	8.60

CAPACITORS AEROVOX RESISTORS

TYPE PRVC

Cleat-Mounting Metal-Can Capacitors

Originally designed by Aerovox. Replaces other electrolytics requiring mounting hole in chassis. Installed in a jiffy by center screw and metal cleat. Separate sections, two leads each section. Coded leads.

TYPE PRVC 600

600V.D.C.W. Single Section

Cap. Mfds.	Size Dia. x Hght.	List
4	1⅜ x 4	$2.95
8	1½ x 4	3.15
16	1½ x 4	3.75

TYPE PRVC 475

475V.D.C.W. Single & Double

8	1⅜ x 3	2.75
12	1⅜ x 3	2.95
16	1⅜ x 3	3.15
8-8	1⅜ x 4	4.10

TYPE PRVC 450

450V.D.C.W. Single Section

4	1⅜ x 3	2.00
8	1⅜ x 3	2.20
10	1⅜ x 3	2.30
12	1⅜ x 3	2.40
16	1⅜ x 3	2.45
20	1⅜ x 3	2.70
30	1⅜ x 3	3.00
40	1⅜ x 3	3.15
80	1⅜ x 4	4.90

TYPE PRVC 450

Double Section

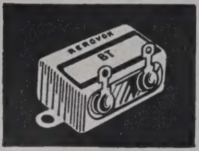
8-8	1⅜ x 4	3.00
8-16	1⅜ x 4	3.30
10-10	1⅜ x 4	3.10
12-12	1⅜ x 4	3.20
16-16	1⅜ x 4	3.55
20-20	1⅜ x 4	3.80

TYPE PRVC 450

Triple Section

8-8-8	1⅜ x 4	5.00
10-10-10	1⅜ x 4	5.30

TYPE BT



DRAWN-CASE "BATHTUB"

Designed for rigid mounting in minimum space. Extra sturdy construction, immersion proof.

TYPE BT500

500 V.D.C.W.

Cap. Mfd.	L. x W. x H.	List
4	2 x 2 x 1⅛	$4.70
8	2 x 2 x 1⅛	4.85

TYPE BT450

450 V.D.C.W.

8	1¾ x 1 x 1	4.25
12	1¾ x 1¼ x 1	4.75
16	2 x 1¾ x 1	5.00

TYPE BT350

350 V.D.C.W.

8	1¾ x 1 x ⅞	3.70
12	1¾ x 1 x ⅞	4.20
16	1¾ x 1 x 1	4.40
20	1¾ x 1¼ x 1⅛	4.60

TYPE BT150

150 V.D.C.W.

8	1¾ x 1 x ⅞	2.75
12	1¾ x 1 x ⅞	2.80
16	1¾ x 1 x ⅞	2.85
24	1¾ x 1 x ⅞	3.00
30	1¾ x 1 x 1	3.10
40	1¾ x 1 x 1	3.20

TYPE BT50

50 V.D.C.W.

10	1¾ x 1 x ⅞	2.65
25	1¾ x 1 x ⅞	2.75
50	1¾ x 1 x ⅞	3.00

TYPE BT25

25 V.D.C.W.

10	1¾ x 1 x ⅞	2.60
25	1¾ x 1 x ⅞	2.70
50	1¾ x 1 x ⅞	2.80

TYPE E

Upright or Inverted Mounting Capacitors

Can be mounted in any position with ring-type clamp provided with unit. Single or multiple elements. Two terminals on singles, three on dual, and 4 terminals on triple element units.

SINGLE ELEMENT

TYPE E475

475 V.D.C.W. 525 V. Surge Peak

Cap. Mfds.	Can Size Dia. x Hght.	List
4	1⅜ x 2¼	$2.20

TYPE E450

450 V.D.C.W. 500 V. Surge Peak

4	1⅜ x 2¼	2.15
8	1⅜ x 2¼	2.25
10	1⅜ x 2¼	2.30
12	1⅜ x 2¼	2.35
16	1⅜ x 2¼	2.40
20	1⅜ x 2¼	2.55
30	1⅜ x 2¼	2.70
40	1⅜ x 2¾	2.75
80	1⅜ x 4¼	3.80

TYPE E50

50 V.D.C.W. 75 V. Single Peak

10	1 x 1¾	2.00
25	1 x 1¾	2.05

TYPE E25

25 V.D.C.W. 40 V. Surge Peak

10	1 x 1¾	2.00
25	1 x 1¾	2.00

DUAL ELEMENT

TYPE E450

450 V.D.C.W. 500 V. Surge Peak

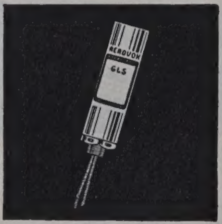
8-8	1⅜ x 2¼	3.25
8-16	1⅜ x 2¼	3.50
10-10	1⅜ x 2¼	3.35
12-12	1⅜ x 2¼	3.45
16-16	1⅜ x 2¾	3.80
20-20	1⅜ x 2¾	4.05

TRIPLE ELEMENT

TYPE E450

8-8-8	1⅜ x 2¼	3.90
10-10-10	1⅜ x 2¼	4.10

TYPE GLS



Midget Screw-Mounting Wire-Lead Capacitors

Similar to Type GL. Smaller diameter cans and minimum length. Best for compact assemblies.

TYPE GLS450

SINGLE-ELEMENT

450 V.D.C.W. 500 V. Surge Peak

Cap. Mfds.	Can Size Dia. x Hght.	List
4	1 x 2 3/16	$2.00
8	1 x 2 11/16	2.20
12	1 x 3¼	2.40
16	1 x 3¼	2.45

TYPE GLS450

DOUBLE-ELEMENT

8-8	1⅜ x 3	3.00

TYPE GLS250

SINGLE-ELEMENT

250 V.D.C.W. 300 V. Surge Peak

4	1 x 2 3/16	1.40
8	1 x 2 11/16	1.65
12	1 x 2 11/16	1.75
16	1 x 3¼	1.80

TYPE G

Insulated Screw-Mounting Capacitors

Hermetically - sealed aluminum can unit, threaded cover with hex nut and washer for convenient mounting on chassis. Washer can be used to insulate can from chassis. Terminals molded in cover. Cathode connection through terminal in cover.

TYPE G475

SINGLE ELEMENT

475 V.D.C.W. 525 V. Surge Peak

Cap. Mfds.	Can Size Dia. x Hght.	List
4	1⅜ x 2¼	$2.20
8	1⅜ x 2¼	2.30

TYPE G450

450 V.D.C.W. 500 V. Surge Peak

4	1⅜ x 2¼	2.15
8	1⅜ x 2¼	2.25
10	1⅜ x 2¼	2.30
12	1⅜ x 2¼	2.35
16	1⅜ x 2¼	2.40
20	1⅜ x 2¼	2.55
30	1⅜ x 2¼	2.70
40	1⅜ x 2¾	2.75
80	1⅜ x 4¼	2.80

TYPE G450

DUAL-ELEMENT

8-8	1⅜ x 2¼	3.25
8-16	1⅜ x 2¼	3.50
10-10	1⅜ x 2¼	3.35
12-12	1⅜ x 2¼	3.45
16-16	1⅜ x 2¾	3.80
20-20	1⅜ x 2¾	4.05

TYPE GL

SCREW-MOUNTING WIRE-LEAD CAPACITORS

Inverted mounting, aluminum can unit in single, double and triple elements. Two separate color-coded leads, 5" long brought out from each section. Convenient mounting with palnut and threaded neck.

TYPE GL600

SINGLE-ELEMENT

600 V.D.C.W. 750 V. Surge Peak

Cap. Mfds.	Can Size Dia. x Hght.	List
4	1⅜ x 4	$2.95
8	1⅜ x 4½	3.15
16	1⅜ x 4½	3.75

TYPE GL475

SINGLE-ELEMENT

475 V.D. C. W. 525 V. Surge Peak

8	1⅜ x 3	2.75
12	1⅜ x 3	2.95
16	1⅜ x 3	3.15

TYPE GL475

DUAL-ELEMENT

8-8	1⅜ x 4	4.10

TYPE GL450

SINGLE-ELEMENT

450 V.D.C.W. 500 V. Surge Peak

4	1⅜ x 3	2.00
8	1⅜ x 3	2.20
10	1⅜ x 3	2.30
12	1⅜ x 3	2.40
16	1⅜ x 3	2.45
20	1⅜ x 3	2.75
30	1⅜ x 3	3.00
40	1⅜ x 3	3.15
80	1⅜ x 4	4.90

TYPE GL450

DUAL-ELEMENT

8-8	1⅜ x 4	3.00
8-16	1⅜ x 4	3.30
10-10	1⅜ x 4	3.10
12-12	1⅜ x 4	3.20
16-16	1⅜ x 4	3.55
20-20	1⅜ x 4	3.80

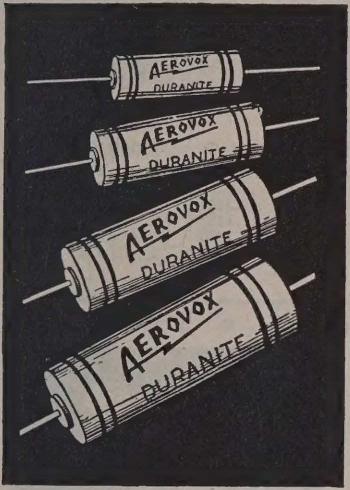
TYPE GL450

TRIPLE-ELEMENT

8-8-8	1⅜ x 4	5.00
10-10-10	1⅜ x 4	5.30

DURANITE MOLDED TUBULAR CAPACITORS • TYPE P-88

Toughest capacitors ever offered for radio-electronic equipment. DURANITE capacitors are entirely new—in design, impregnant, processing, and casing. New technique glove-fitting contact and seal throughout. DURANITE provides a permanent, non-varying, rock-hard casing, does not dry out, does not develop cracks or fissures. Pig-tail leads firmly imbedded, won't pull out, won't work loose. Moisture-proof; operate from sub-zero to over 212°F. Exposure to temperatures of 250°F. will not impair life or performance, no deterioration on the shelf.



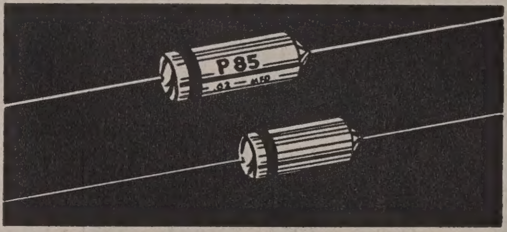
Mfds.	200 Volts Size	200 Volts List	400 Volts Size	400 Volts List	600 Volts Size	600 Volts List	1000 Volts Size	1000 Volts List	1600 Volts Size	1600 Volts List
.001					A	.25	A	.50	B	.60
.0015					A	.25	A	.50	B	.60
.002					A	.25	A	.50	B	.60
.0022					A	.25	A	.50	B	.60
.003					A	.25	B	.50	B	.60
.0033					A	.25	B	.50	B	.60
.004					A	.25	B	.50	B	.60
.0047					A	.25	B	.50	D	.60
.005					A	.25	B	.50	D	.60
.006			A	.25	C	.25	B	.50	D	.60
.0068			A	.25	B	.25	B	.50	D	.65
.007									E	.65
.0075			A	.25	D	.30	B	.50	E	.65
.008									E	.65
.01			A	.25	D	.30	B	.50	E	.65
.015	A	.25	B	.25	D	.30	D	.50	E	.65
.02			B	.25	D	.30	E	.50	F	.65
.022			B	.30	D	.30	E	.50	F	.65
.025			B	.30	D	.35	E	.50	F	.65
.03			B	.30	E	.35	E	.50	F	.65
.033			B	.30	E	.35	E	.60	F	.70
.04	B	.30			E	.35	F	.60		
.047	B	.30	D	.30	E	.35	F	.60		
.05	B	.30	D	.30	E	.40	F	.60		
.06					F	.40				
.068	C	.35	E	.35	F	.40	F	.70		
.075	C	.35	E	.35	F	.45				
.1	C	.35	E	.35	F	.45				
.15	E	.40	F	.40						
.22			F	.45						
.25			F	.45						
.33	F	.50								
.47	F	.60								
.5	F	.60								

Size	Length x Dia.	Size	Length x Dia.
A	1⅛ x 11/32	D	1⅜ x 15/32
B	1⅜ x 13/32	E	1⅝ x 17/32
C	1⅛ x 15/32	F	2 x 21/32

AEROCON MINIATURE CAPACITORS • TYPE P-85

SIZE: Diameter x Length

CAP. MFD.	200 VDCW	LIST	400 VDCW	LIST	600 VDCW	LIST
.00025	3/16 x 9/16	$.35	3/16 x ⅝	$.35	3/16 x ⅝	$.35
.0005	3/16 x 9/16	.35	3/16 x 11/16	.35	3/16 x 11/16	.35
.001	3/16 x 9/16	.35	3/16 x 11/16	.35	7/32 x 11/16	.35
.0015	3/16 x 9/16	.35	3/16 x 11/16	.35	7/32 x 11/16	.35
.002	3/16 x 9/16	.35	3/16 x 11/16	.35	¼ x 11/16	.35
.0022	3/16 x 9/16	.35	3/16 x 11/16	.35	¼ x 11/16	.35
.003	3/16 x 9/16	.35	7/32 x 11/16	.35	9/32 x 11/16	.35
.0033	3/16 x 9/16	.35	7/32 x 11/16	.35	9/32 x 11/16	.35
.004	3/16 x 9/16	.35	7/32 x 11/16	.35	9/32 x ¾	.40
.0047	7/32 x 9/16	.35	7/32 x ¾	.35	9/32 x ¾	.40
.005	7/32 x 9/16	.35	7/32 x ¾	.35	9/32 x ¾	.40
.006	7/32 x 9/16	.35	¼ x ¾	.35	5/16 x ¾	.45
.0068	¼ x 9/16	.40	¼ x ¾	.40	5/16 x 13/16	.45
.01	¼ x ⅝	.40	¼ x 13/16	.45	5/16 x ⅞	.45
.015	9/32 x ⅝	.45	9/32 x ⅞	.45	11/32 x 1	.50
.02	9/32 x 11/16	.45	5/16 x ⅞	.45	⅜ x 1 1/16	.50
.022	9/32 x ¾	.45	5/16 x ⅞	.45	⅜ x 1⅛	.50
.03	9/32 x 13/16	.45	11/32 x 15/16	.45	7/16 x 1⅛	.55
.033	5/16 x 13/16	.50	11/32 x 1	.50	7/16 x 1 3/16	.55
.04	5/16 x 15/16	.50	13/32 x 1	.50	15/32 x 1 3/16	.55
.047	5/16 x 15/16	.50	13/32 x 1	.50	15/32 x 1¼	.55
.05	5/16 x 15/16	.50	13/32 x 1	.50	½ x 1¼	.60
.068	⅜ x 1	.55	7/16 x 1 3/16	.55	9/16 x 1¼	.60
.1	13/32 x 1	.60	15/32 x 1 3/16	.65	21/32 x 1¼	.70

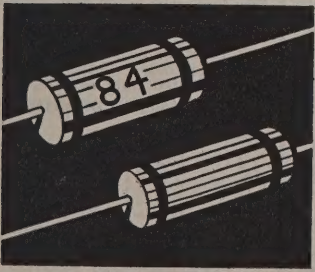


The new, tiny, Aerolene-impregnated tubular unit. Duranite endfill excludes humidity. Designed especially for personal radios, hearing aids and electronic assemblies requiring good performance and minimum size.

TYPE P-85
SIZE: Diameter x Length

Cap. Mfd.	100 VDCW	List
.25	15/32 x 1⅛	$.70
.5	⅝ x 1⅛	.80

TYPE 84 LO-VOLTAGE TUBULAR PAPER CAPACITORS



LO-VOLTAGE TYPE 84

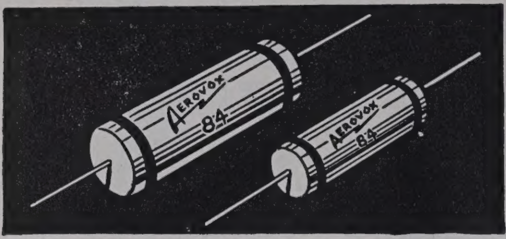
Lo-voltage, type 84 units are wax-impregnated, wax-sealed capacitors in paper cases. These capacitors are available with HYVOL H impregnation for operation at temperatures from 70°C. up to 85°C. For over 600 VDC, and 85°C. operation units are available with HYVOL M impregnation. Units are obtainable with a radial mounting band on request at extra cost.

WAX-IMPREGNATED WAX-SEALED CARDBOARD TUBULAR CAPACITORS

CAP. MFD.	400 VDCW	LIST	600 VDCW	LIST	1000 VDCW	LIST	1600 VDCW	LIST
.001	⅜ x 1⅛	$.23	⅜ x 1⅛	$.23	⅜ x 1⅛	$.45	7/16 x 1¼	$.50
.002	⅜ x 1⅛	.23	⅜ x 1⅛	.23	⅜ x 1¼	.45	7/16 x 1¼	.50
.003	⅜ x 1⅛	.23	⅜ x 1⅛	.23	⅜ x 1¼	.45	7/16 x 1½	.50
.004	⅜ x 1⅛	.23	⅜ x 1⅛	.23	⅜ x 1¼	.45	7/16 x 1½	.50
.005	⅜ x 1¼	.23	⅜ x 1¼	.23	7/16 x 1¼	.45	½ x 1½	.50
.006	⅜ x 1¼	.23	⅜ x 1¼	.23	7/16 x 1¼	.45	½ x 1½	.50
.0075	⅜ x 1¼	.23	⅜ x 1¼	.27	7/16 x 1⅜	.45	½ x 1½	.54
.01	⅜ x 1¼	.23	⅜ x 1¼	.27	7/16 x 1½	.45	9/16 x 1½	.54
.015	⅜ x 1¼	.23	7/16 x 1¼	.27	½ x 1½	.45	⅝ x 1½	.54
.02	⅜ x 1¼	.23	7/16 x 1¼	.27	½ x 1½	.45	9/16 x 2	.54
.025	⅜ x 1½	.27	7/16 x 1½	.32	9/16 x 1½	.45	9/16 x 2	.54
.03	⅜ x 1½	.27	7/16 x 1½	.32	⅝ x 1½	.45	⅝ x 2	.63
.04		....	7/16 x 1½	.36				
.05	7/16 x 1½	.27	½ x 1⅝	.36	9/16 x 2	.54	13/16 x 2	.68
.06	½ x 1½	.32	9/16 x 1½	.36	⅝ x 2	.54	⅞ x 2⅛	.72
.075	½ x 1½	.32	9/16 x 1½	.41	11/16 x 2	.63	1 x 2 5/16	.81
.1	9/16 x 1½	.32	9/16 x 1¾	.41	¾ x 2	.68	1⅛ x 2 5/16	.90
.15	9/16 x 1¾	.36	⅝ x 2	.45	⅞ x 2⅛	.81		
.2	⅝ x 2	.36	11/16 x 2	.50	1 x 2⅛	.90		
.25	11/16 x 2	.41	¾ x 2	.50	1 3/16 x 2 5/16	1.04		
.5	⅞ x 2	.54	1 x 2⅛	.72				
1.0	1 1/16 x 2½	.81	1¼ x 2½	1.13				

CAPACITORS AEROVOX RESISTORS

HI-VOLTAGE • TYPE 84 • TUBULAR PAPER CAPACITORS



Hi-voltage type 84 oil impregnated, tubular capacitors are compact high-grade units. Overall wax dipped for high resistance to humidity.

Units rated from 2500 VDCW and up are designed to meet the elevated peaks and transients encountered in television and other cathode-ray tube applications and to reduce the effects of corona.

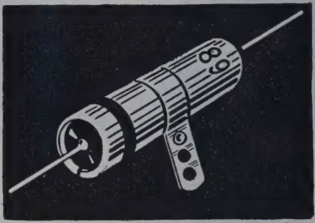
These high-voltage units are encased in cardboard tubes with tinned wire leads, and have an improved end-seal for longer life under operating conditions to which they are subjected. Supplied with radial mounting band at no extra cost.

CAP.	2500 VDC	LIST	5000 VDC	LIST	6000 VDC	LIST
.0001	7/16 x 1½	$.95	7/16 x 1⅝	$1.05	7/16 x 1⅝	$1.10
.00025	7/16 x 1½	.95	7/16 x 1⅝	1.05	7/16 x 1⅝	1.10
.0005	7/16 x 1½	.95	7/16 x 1⅝	1.05	7/16 x 1⅝	1.10
.001	7/16 x 1½	.95	½ x 1⅝	1.05	½ x 1⅝	1.10
.003	7/16 x 1⅝	.95	½ x 2	1.05	9/16 x 2	1.15
.005	½ x 1⅝	1.00	⅝ x 2	1.10	⅝ x 2	1.15
.01	9/16 x 1⅞	1.05	13/16 x 2	1.15	13/16 x 2	1.40
.03	¾ x 2⅛	1.10	1 x 2½	1.30	1 3/16 x 2½	1.50
.05	¾ x 2⅝	1.20	1⅛ x 3	1.40	1 3/16 x 3	1.60
.1	1 x 2⅝	1.50				
.15	1 x 3⅛	1.65				

CAP.	7500 VDC	LIST	10000 VDC	LIST	15000 VDC	LIST
.0001	7/16 x 1⅞	$1.10	7/16 x 2⅛	$1.15	9/16 x 2⅜	$1.75
.00025	7/16 x 1⅞	1.10	9/16 x 2⅛	1.15	11/16 x 2⅜	1.75
.0005	½ x 1⅞	1.10	⅝ x 2⅛	1.15	13/16 x 2⅜	1.75
.001	11/16 x 1⅞	1.10	13/16 x 2⅛	1.15	1 x 2⅜	1.75
.003	¾ x 2⅜	1.15	15/16 x 2⅝	1.20	1¼ x 2⅞	1.85
.005	⅞ x 2⅜	1.15	1 x 2⅞	1.35	1⅜ x 3⅛	2.00
.01	1 x 2⅞	1.50	1⅜ x 2⅞	1.60		
.03	1⅜ x 3⅜	1.75				

OIL FILLED PAPER TUBULAR CAPACITORS • TYPE 89

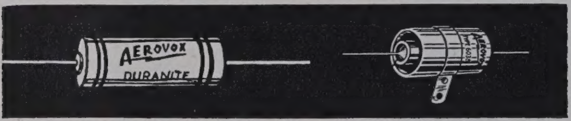
CAP. MFD.	400 VDCW	LIST	600 VDCW	LIST	1000 VDCW	LIST	2000 VDCW	LIST
.001	11/32 x 1⅛	$1.00	13/32 x 1⅛	$1.05	15/32 x 1⅛	$1.20	13/16 x 1 11/16	$1.40
.002	11/32 x 1⅛	1.00	13/32 x 1⅛	1.05	15/32 x 1⅛	1.20	13/16 x 1 11/16	1.40
.003	11/32 x 1⅛	1.00	13/32 x 1⅛	1.05	15/32 x 1⅛	1.20	13/16 x 1 11/16	1.40
.004	11/32 x 1⅛	1.00	13/32 x 1⅛	1.05	15/32 x 1⅛	1.20	13/16 x 1 11/16	1.40
.005	11/32 x 1⅛	1.00	13/32 x 1⅛	1.05	15/32 x 1⅛	1.20	13/16 x 1 11/16	1.40
.006	11/32 x 1⅛	1.00	13/32 x 1⅛	1.05	15/32 x 1⅛	1.20	13/16 x 1 11/16	1.40
.0075	13/32 x 1⅛	1.00	13/32 x 1⅛	1.05	15/32 x 1⅛	1.20	13/16 x 1 11/16	1.40
.01	13/32 x 1⅛	1.00	13/32 x 1⅛	1.05	15/32 x 1⅛	1.20	13/16 x 1 11/16	1.40
.015	15/32 x 1⅛	1.10	15/32 x 1⅛	1.10	15/32 x 1¼	1.30	13/16 x 1 11/16	1.45
.02	15/32 x 1¼	1.10	15/32 x 1¼	1.15	15/32 x 1⅜	1.30	13/16 x 1 13/16	1.50
.03	15/32 x 1¼	1.15	15/32 x 1⅜	1.20	9/16 x 1 7/16	1.30	⅞ x 1 13/16	1.55
.04	9/16 x 1 7/16	1.15	9/16 x 1 7/16	1.20	⅝ x 1 7/16	1.30	⅞ x 1 15/16	1.55
.05	9/16 x 1 7/16	1.15	⅝ x 1 7/16	1.20	⅝ x 1 9/16	1.45	⅞ x 2 1/16	1.60
.075	⅝ x 1 11/16	1.20	⅝ x 1 11/16	1.30	11/16 x 1 11/16	1.55	15/16 x 2 3/16	1.95
.1	⅝ x 1 13/16	1.30	11/16 x 1 13/16	1.40	11/16 x 1 13/16	1.65	1 1/16 x 2 3/16	2.20
.25	¾ x 2 1/16	1.60	⅞ x 2 1/16	1.85	15/16 x 2 3/16	2.20		
.5	1 x 2 1/16	1.90	1 1/16 x 2 3/16	2.40				



Immersion-proof, oil-impregnated, oil-filled units in handy, space-saving tubes. Ideal for vibrator applications, coupling and by-pass functions in transmitters, high-voltage and in test equipment. Fully sealed against oil leakage or moisture penetration. Case is insulated, not connected to the capacitor section. Supplied with mounting strap and outer insulating tube.

CAP. MFD.	2500 VDCW	LIST	3000 VDCW	LIST	3500 VDCW	LIST	4000 VDCW	LIST	5000 VDCW	LIST	6000 VDCW	LIST
.0005	13/16 x 1 9/16	$1.50	15/16 x 1 11/16	$1.65	1 1/16 x 1 13/16	$1.95	1 1/16 x 1 13/16	$2.20	1 1/16 x 1 13/16	$2.50	1 1/16 x 2 1/16	$2.75
.001	13/16 x 1 9/16	1.50	15/16 x 1 11/16	1.65	1 1/16 x 1 13/16	1.95	1 1/16 x 1 13/16	2.20	1 1/16 x 1 13/16	2.50	1 1/16 x 2 3/16	2.75
.005	13/16 x 1 11/16	1.50	15/16 x 1 13/16	1.65	1 1/16 x 1 15/16	1.95	1 1/16 x 2 1/16	2.20	1 1/16 x 2 3/16	2.50	1 1/16 x 2 11/16	2.75
.01	13/16 x 1 15/16	1.50	15/16 x 1 15/16	1.65	1 1/16 x 2 3/16	1.95	1 1/16 x 2 7/16	2.20	1 1/16 x 2 11/16	2.50	1 1/16 x 3 7/16	2.75
.02	13/16 x 2 3/16	1.65	15/16 x 2 3/16	1.80	1 1/16 x 2 7/16	2.10	1 1/16 x 3 3/16	2.35	1 7/16 x 2 11/16	2.65	1 7/16 x 3 3/16	2.90
.03	13/16 x 2 7/16	1.75	1 1/16 x 2 7/16	1.95	1 1/16 x 2 11/16	2.20	1 7/16 x 2 11/16	2.50	1 7/16 x 3 3/16	2.75	1 7/16 x 3 15/16	3.05
.05	15/16 x 2 11/16	1.95	1 1/16 x 2 11/16	2.10	1 1/16 x 3 7/16	2.35	1 7/16 x 3 7/16	2.65	1 7/16 x 4 3/16	2.90	1 7/16 x 5 3/16	3.20
.1	1 1/16 x 3 3/16	2.65	1 7/16 x 2 15/16	2.90	1 7/16 x 3 7/16	3.20	1 7/16 x 4 15/16	3.45				

TELEVISION CAPACITORS



TYPE 38
OIL FILLED METAL-CASED

Cap. Mfd.	6000 V.D.C.	List
.0005	1 1/16 x 1 15/16	$2.75
.001	1 1/16 x 1 15/16	2.75
.005	1 1/16 x 2 1/16	2.75
.01	1 1/16 x 2 7/16	2.75
.05	1 5/16 x 3 7/16	3.20

TYPE P88
MOLDED TUBULAR CAPACITORS

Cap. Mfd.	6000 V.D.C.	List
.0005	21/32 x 2	$1.35
.001	21/32 x 2	1.35
.005	21/32 x 2	1.35
Cap. Mfd.	**10000 V.D.C.**	**List**
.0005	21/32 x 2	$1.50

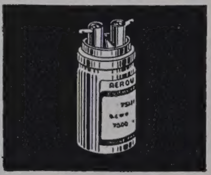
ENERGY-STORAGE CAPACITORS • TYPE PX

VDC PEAK	NOMINAL CAP. MFD.	TYPE NO.	LIST
	22.5 Watt Seconds		
1500	20	PX10D1	$15.00
	50.0 Watt Seconds		
2000	28	PX14D3	22.00
	75.0 Watt Seconds		
2500	24	PX14D2	22.00
3000	16	PX18D1	25.00
	100.0 Watt Seconds		
2500	30	PX15D1B	37.00
4000	12.5	PX20D1	24.00

SIZE:	Length x Width x Height
PX10D1	2½″ x 3¾″ x 4⅝″
PX15D1B	4 9/16″ x 3¾″ x 6½″
ALL OTHERS	4 9/16″ x 3¾″ x 4⅝″

For high-speed flash photography, flash signaling equipment, pulsing and other energy storage uses.

TYPE 12



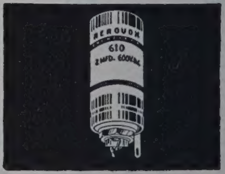
Vertical-Mounting Oil-Impregnated Oil-Filled

Inverted Mounting Oil-Impregnated Oil-Filled

High-voltage, inverted or vertical, immersion-proof unit suitable for such high-voltage circuit applications as in television, cathode-ray tube power supplies, high-voltage rectifiers, or as a high-voltage by-pass capacitor.

Mfd.	Hght. x Dia.	List
	2000 VDCW	
1.0	3¾ x 2¼	$ 8.10
2.0	5¼ x 2¼	10.00
	3000 VDCW	
.05	2¼ x 2¼	10.25
.1	2¼ x 2¼	11.00
.25	3¼ x 2¼	12.10
.5	3¾ x 2¼	13.20
1.0	5¼ x 2¼	16.80
	4000 VDCW	
.05	2¾ x 2¼	9.90
.1	3¾ x 2¼	10.25
.25	5¼ x 2¼	11.55
	6000 VDCW	
.03	2¾ x 2¼	13.20
.05	3¾ x 2¼	14.85
.1	4¾ x 2¼	18.15

TYPE 10



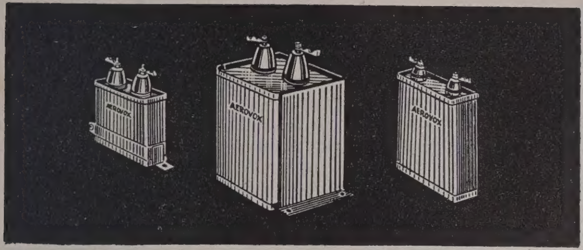
New immersion-proof unit, physically interchangeable with the old single terminal type unit. One piece molded bakelite terminal assembly. Both terminal lugs insulated from container.

SIZE: Height x Diameter

CAP. MFD.		LIST
	TYPE 1510—1500 VDCW	
.5	2⅞ x 1½	$5.00
1.0	4½ x 1½	$5.45
	TYPE 1010—1000 VDCW	
1.0	2⅞ x 1½	$4.20
2.0	4½ x 1½	$5.45
	TYPE 610—600 VDCW	
2.0	2⅞ x 1½	$4.55
4.0	4½ x 1½	$6.25

	7500 VDCW	
.01	3¼ x 2¼	13.20
.02	3¼ x 2¼	14.30
.03	3¾ x 2¼	15.40
.05	4¼ x 2¼	17.05
.1	4¾ x 2¼	19.90
.5	4¾ x 2¼	26.00

CAPACITORS **AEROVOX** RESISTORS



AEROVOX HYVOLS* • TYPE 09

Immersion-proof in sturdy rectangular metal can. High-voltage screw type pillar terminals fitted with soldering lugs. Use of "HYVOL" allows exceptionally compact size for capacity, working voltage, and safety factor. Intended for heavy-duty continuous service in transmitters, amplifiers, etc. Type MB bracket is supplied unless otherwise specified, except on units with base sizes 3¾" x 3-3/16" and 3¾" x 4-9/16" where Type MS bracket is supplied. MSB is available for all types upon request.

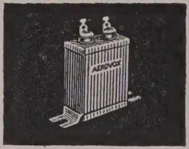
Cap. Mfds	600 VDCW Size H. x W. x D.	List	1000 VDCW Size H. x W. x D.	List	1500 VDCW Size H. x W. x D.	List	2000 VDCW Size H. x W. x D.	List	2500 VDCW Size H. x W. x D.	List
.1			2 x 1 13/16 x 1 1/16	$4.15			2 x 1 13/16 x 1 1/16	$6.60		
.25			2⅛ x 1 13/16 x 1 1/16	4.70			2⅛ x 1 13/16 x 1 1/16	7.15		
.5	2⅛ x 1 13/16 x 1 1/16	$4.70	2⅛ x 1 13/16 x 1 1/16	4.95	2⅞ x 1 13/16 x 1 1/16	$6.35	2⅞ x 1 13/16 x 1 1/16	7.45	3½ x 2½ x 1 3/16	$11.55
1.0	2⅛ x 1 13/16 x 1 1/16	5.80	2⅛ x 1 13/16 x 1 1/16	6.35	4 x 1 13/16 x 1 1/16	7.45	3⅜ x 2½ x 1 3/16	9.10	3¼ x 3¾ x 1¾	13.20
2.0	2⅞ x 1 13/16 x 1 1/16	7.15	3⅞ x 1 13/16 x 1 1/16	8.25	4⅛ x 2½ x 1 3/16	10.45	4 x 3¾ x 1¼	10.75	4⅝ x 3¾ x 1¾	21.45
3.0	3⅞ x 1 13/16 x 1 1/16	8.25	3½ x 2½ x 1 3/16	9.65	4¾ x 2½ x 1 3/16	12.40	4¾ x 3¾ x 1¼	13.20		
4.0	3¼ x 2½ x 1 3/16	9.10	4⅝ x 2½ x 1 3/16	10.45	4⅝ x 3¾ x 1¼	14.05	3⅞ x 3¾ x 2¼	15.15	4⅝ x 3¾ x 3 3/16	30.00
5.0	4⅜ x 2½ x 1 3/16	10.45	3⅞ x 3¾ x 1¼	12.65	4¾ x 3¾ x 1¾	15.15	4¾ x 3¾ x 2¼	16.80		
6.0	4⅝ x 2¼ x 1 3/16	11.30	4¾ x 3¾ x 1¼	14.05	4¾ x 3¾ x 1¾	17.05	4⅝ x 3¾ x 3 3/16	20.10		
8.0	3⅞ x 3¾ x 1¼	13.50	4¾ x 3¾ x 1¼	15.15	4¾ x 3¾ x 2½	20.90	4⅝ x 3¾ x 3 3/16	25.05		
10.0	4⅝ x 3¾ x 1¼	15.15	4⅝ x 3¾ x 1¾	16.80	4¾ x 3¾ x 3 3/16	25.05	4¾ x 3¾ x 4 9/16	30.55	6⅜ x 3¾ x 4 9/16	75.10
12.0	4¾ x 3¾ x 1½	16.70	3⅞ x 3¾ x 2¼	18.15	4¾ x 3¾ x 3 3/16	27.25	5⅜ x 3¾ x 4 9/16	33.30		
15.0	4¾ x 3¾ x 1¾	18.50	4¾ x 3¾ x 2½	20.10	4¾ x 3¾ x 4 9/16	30.00	6½ x 3¾ x 4 9/16	40.15		

Cap. Mfds	3000 VDCW Size H. x W. x D.	List	4000 VDCW Size H. x W. x D.	List	5000 VDCW Size H. x W. x D.	List	6000 VDCW Size H. x W. x D.	List	7500 VDCW Size H. x W. x D.	List
.1	2 x 2½ x 1 3/16	$14.05	2¾ x 3¾ x 2¼	$25.05	2¾ x 3¾ x 2¼	$26.70	3⅜ x 3¾ x 2¼	$33.55	3⅞ x 3¾ x 2¼	$47.30
.25	2½ x 2½ x 1 3/16	14.85	2¾ x 3¾ x 2¼	26.40	3⅜ x 3¾ x 2¼	30.25	4⅝ x 3¾ x 2¼	41.80	5⅛ x 3¾ x 2½	50.05
.5	3⅞ x 2½ x 1 3/16	16.80	3⅞ x 3¾ x 2¼	30.00	4¼ x 3¾ x 2¼	33.30	4⅜ x 3¾ x 4 9/16	47.30	5⅛ x 3¾ x 4 9/16	54.20
1.0	3⅞ x 3¾ x 1¾	20.10	5⅛ x 3¾ x 2¼	36.85	4⅜ x 3¾ x 4 9/16	41.80	8 x 3¾ x 4 9/16	83.60		
2.0	4⅛ x 3¾ x 3 3/16	25.05	5⅛ x 3¾ x 4 9/16	46.75	6 x 3¾ x 4 9/16	53.65				
4.0	4¾ x 3¾ x 4 9/16	36.85	8 x 3¾ x 4 9/16	66.85						

COMPACT HYVOL* CAPACITORS • TYPE 16CT

Cap. Mfd.	400 VDCW	List	600 VDCW	List	1000 VDCW	List
.01	1 1/16	$2.85	1 1/16	$2.90	1 1/16	$3.10
.05	1 1/16	2.90	1 1/16	3.10	1⅜	3.15
.1	1 1/16	3.15	1⅜	3.20	1⅜	3.25
.25	1⅜	3.20	1⅝	3.25	1⅝	3.35
.5	1⅝	3.25	2	3.35	2	3.65
1.0	2	3.65	2½	3.75		

Compact, immersion-proof unit, of minimum size and weight. Corrosion-proof metal container. Special immersion-proof terminals for severe atmospheric and climatic conditions. Type 16CT is standard, but Type 16CB (terminals on bottom) units also available.



COMPACT HYVOL* CAPACITORS • TYPE 18CB

Compact, immersion-proof unit. Different base sizes make units adaptable for duals and triples. Even on single sections, different base sizes make units fit in particular applications where Type 16's do not fit. Type 18CB is standard, but Type 18CT (terminals on top) also available.

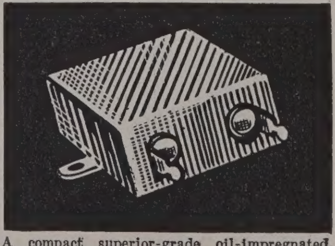
Cap. Mfd.	400 VDCW	List	600 VDCW	List	1000 VDCW	List
SINGLE-ELEMENT						
.05	1	$3.15	1	$3.20	1	$3.35
.1	1	3.25	1	3.35	1	3.45
.25	1¼	3.35	1⅜	3.45	1½	3.65
.5	1½	3.45	1 11/16	3.70	1 13/16	3.85
1.0	2	3.85	2½	4.00		
DUAL-ELEMENT						
.05-.05	1	$4.00	1	$4.20	1 1/16	$4.55
.1 -.1	1¼	4.15	1⅜	4.30	1½	4.90
.25-.25	1½	4.30	1 11/16	4.55	1 13/16	5.00
.5 -.5	2	4.70	2½	4.95		
TRIPLE-ELEMENT						
.05-.05-.05	1	$4.95	1 1/16	$5.00	1⅜	$5.90
.1 -.1 -.1	1½	5.30	1½	5.95	1⅝	5.85
.25-.25-.25	2	5.70	2½	6.85		

Standard Width 1¾" — Depth 1 9/16"

BATHTUB CASE HYVOL CAPACITORS • TYPE 30

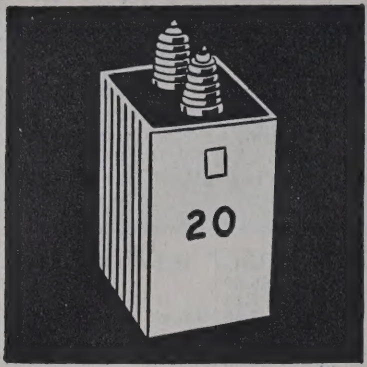
SIZE: Length x Width x Height

Cap. Mfds.	400 VDCW	List	600 VDCW	List	1000 VDCW	List
SINGLE-ELEMENT						
.05	1¾ x 1 x ¾	$1.95	1¾ x 1 x ¾	$2.85	1¾ x 1 x ¾	$3.05
.1	1¾ x 1 x ¾	2.20	1¾ x 1 x ¾	2.90	1¾ x 1 x ¾	3.15
.25	1¾ x 1 x ¾	2.50	1¾ x 1 x ¾	3.10	1¾ x 1 x ¾	3.25
.5	1¾ x 1 x ⅞	2.65	1¾ x 1 x ⅞	3.30	2 1/16 x 1¼ x ⅞	3.50
.75	2 1/16 x 1¼ x ¾	2.95	2 1/16 x 1¼ x ⅞	3.50	2 x 1¾ x ⅞	4.20
1.0	2 x 1¾ x 13/16	3.15	2 x 1¾ x ⅞	3.75	2 x 1¾ x 1	4.40
2.0	2 x 2 x 1⅛	3.95	2 x 2 x 1 3/16	5.00		
DUAL-ELEMENT						
.05- .05	1¾ x 1 x ¾	$3.05	1¾ x 1 x ¾	$3.65	1¾ x 1 x ¾	$3.85
.1 - .1	1¾ x 1 x ¾	3.30	1¾ x 1 x ¾	3.70	1¾ x 1 x ¾	3.95
.25- .25	1¾ x 1 x ⅞	3.60	1¾ x 1 x ⅞	3.75	2 1/16 x 1¼ x ⅞	4.20
.5 - .5	2 x 1¾ x 13/16	4.15	2 x 1¾ x ⅞	4.30	2 x 1¾ x 1	5.45
1.0 -1.0	2 x 2 x 1⅛	4.95	2 x 2 x 1 3/16	5.30		
TRIPLE-ELEMENT						
.05-.05-.05	1¾ x 1 x ¾	$3.85	1¾ x 1 x ¾	$4.05	1¾ x 1 x 13/16	$4.25
.1 -.1 -.1	1¾ x 1 x 13/16	4.00	1¾ x 1 x 13/16	4.20	1¾ x 1¼ x ⅞	4.55
.25-.25-.25	2 x 1¾ x ⅞	4.40	2 x 1¾ x ⅞	4.75	2 x 2 x 1	5.50



A compact superior-grade oil-impregnated, oil-filled, drawn-metal case capacitor. Hermetically sealed, immersion-proof. Built for severe operating conditions as in aircraft, police, broadcast, public address and other types of communications equipment. The Aerovox-designed terminals are constructed with "doublerubber bakelite" insulators permanently riveted to the case, and make a sturdy, absolutely immersion-proof assembly.

TYPE 20 • HIGH VOLTAGE TRANSMITTER CAPACITORS



High quality oil-capacitors designed to meet the exacting service requirements of communications and electronic equipment, and general DC applications in industrial equipment. Single capacitors or parallel grouped capacitors available in ratings from 6000 to 50,000 VDCW. These units consist of precision wound, adequately insulated sections connected in parallel and assembled in heavy, welded copper bearing steel tanks, designed to expand or contract with changes in temperature. Finished in long lasting dark grey lacquer. Heavy duty, wet process porcelain insulator assemblies are gasketed, pressure sealed, and oil-filled to prevent internal creepage and corona. The assembled units are heat vacuum dried, vacuum impregnated with Aerovox Hyvol and hermetically sealed for long life under exacting, operating conditions. Single units rated at 30 KV or less are normally supplied with the capacitor element insulated from ground. Type 20 units not carried in stock but are built to order. Submit full application information when ordering.

SIZE: Height x Width x Depth

CAP. MFDS.	6000 VDCW	LIST	7500 VDCW	LIST	10,000 VDCW	LIST	12,500 VDCW	LIST
.1								
.2								
.25								
.5			11 x 8 x 4	$ 83.00			11 x 8 x 4	$184.00
1.0			11 x 8 x 4	108.00	11 x 8 x 4	$217.00	11 x 12 x 4	233.00
1.5								
2.0	11 x 8 x 4	$150.00	11 x 8 x 4	166.00	11 x 12 x 4	275.00	13 x 12 x 6	292.00
3.0								
4.0	11 x 12 x 4	184.00	13 x 12 x 4	250.00	13 x 12 x 6	336.00		
5.0	11 x 12 x 4	208.00			13 x 12 x 6	368.00	15 x 12 x 9½	551.00
6.0	13 x 12 x 4	233.00	13 x 12 x 6	300.00				
10.0	13 x 12 x 6	290.00						
0.25-0.25								
0.5-0.5								

CAP. MFDS.	15,000 VDCW	LIST	20,000 VDCW	LIST	25,000 VDCW	LIST
.1						
.2					11 x 12 x 4	$217.00
.25	11 x 8 x 4	$175.00	11 x 8 x 4	$208.00	11 x 12 x 4	292.00
.5	11 x 12 x 4	208.00	11 x 12 x 4	267.00	11 x 12 x 6	317.00
1.0	13 x 12 x 4	292.00	13 x 12 x 6	359.00	15 x 12 x 9½	475.00
1.5			15 x 12 x 9½	484.00		
2.0	15 x 12 x 9½	384.00	15 x 12 x 9½	576.00		
3.0	15 x 12 x 9½	526.00				
4.0			15 x 14 x 16	1011.00		
5.0						
6.0						
10.0						
0.25-0.25						
0.5-0.5						

37,500 VDCW	50,000 VDCW
13x13½x4	13x13½x4
13x13½x6	15x13½x8½
15x13½x8½	15x15½x15
15x13½x15	

TYPE 12520 VD
25,000 Volts Output
(12,500—12,500 Volts)
Dual Units
(For Voltage-Doubler Circuits)
11 x 8 x 4   11 x 12 x 4
PRICES ON REQUEST

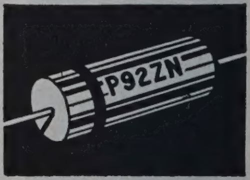
HIGH TEMPERATURE METALLIZED — PAPER CAPACITORS

Sizes given are D x L

Capacity	200 Volt Size	List	400 Volt Size	List	600 Volt Size	List
.01	3/16 x 9/16	$1.30	¼ x 11/16	$1.35	9/32 x 11/16	$1.45
.02	¼ x 11/16	1.40	5/16 x 11/16	1.45	⅜ x 11/16	1.55
.03	¼ x 11/16	1.50	⅜ x 11/16	1.55	13/32 x 11/16	1.65
.05	¼ x 27/32	1.60	⅜ x 27/32	1.65	13/32 x 27/32	1.75
.1	9/32 x 27/32	1.75	⅜ x 1 5/32	1.80	13/32 x 1 5/32	1.90
.25	⅜ x 27/32	2.00	9/16 x 1 5/32	2.10	⅝ x 1 5/32	2.25
.5	13/32 x 1 5/32	2.50	⅝ x 1⅜	2.85	11/16 x 1½	3.00
1.0	9/16 x 1 5/32	3.00	11/16 x 1⅞	3.50	13/16 x 1⅞	4.00
2.0	⅝ x 1½	4.00	13/16 x 2⅜	5.50	15/16 x 2⅜	6.00

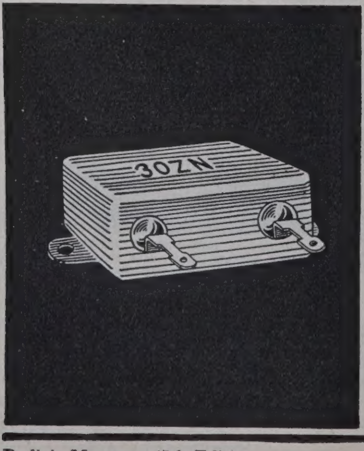
TYPE P92ZN

Aerovox type P92ZN Aerolene impregnated metallized - paper capacitors are modified plastic tubular type, Duranite end-sealed capacitors in paper cases. Operating temperature range is -30°C to +100°C.



Standard Tolerances ±20%. For lower tolerances, ask for quotations.

TYPE P30ZN



HIGH TEMPERATURE METALLIZED — PAPER CAPACITORS

Sizes given are L x W x H

Capacity	200 Volt	List	400 Volt	List	600 Volt	List
.1	1¾ x 1 x ¾	$5.75	1¾ x 1 x ¾	$7.00	1¾ x 1 x ¾	$8.00
.25	1¾ x 1 x ¾	6.00	1¾ x 1 x ¾	7.30	1¾ x 1 x ¾	8.30
.5	1¾ x 1 x ¾	6.25	1¾ x 1 x ¾	7.60	1¾ x 1 x ¾	8.75
1.0	1¾ x 1 x ¾	6.75	1¾ x 1 x ⅞	8.20	1¾ x 1¼ x ⅞	9.50
2.0	1¾ x 1 x ¾	7.80	2 x 1¾ x 13/16	9.50	2 x 2 x ⅞	11.00
3.0			2 x 1¾ x 15/16	11.00	2 x 2 x 1⅛	13.25
4.0			2 x 2 x 1	12.20		
5.0			2 x 2 x 1¼	14.30		

Cap. Mfd.	150 Volt	List
3.0	1¾ x 1 x ⅞	$9.00
4.0	1¾ x 1 x ⅞	9.80
5.0	1¾ x 1 x ⅞	11.20
6.0	1¾ x 1¼ x ⅞	12.40
8.0	2 x 2 x 13/16	14.70
10.0	2 x 2 x 13/16	17.20
12.0	2 x 2 x ⅞	19.60
15.0	2 x 2 x 1	23.50

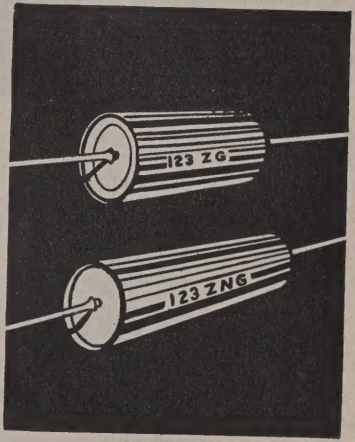
Aerovox type P30ZN Aerolene empregnated metallized-paper capacitors housed in "bathtub" metal-cases with vitrified ceramic or glass terminal seals. Operating termperature range —55°C to +100°C at full rating with operation to +125°C at 75 per cent of voltage rating.

Standard Tolerances ±20%. For lower tolerances, ask for quotations.

METAL-CASED METALLIZED-PAPER CAPACITORS • TYPE P123ZG

Cap. Mfd.	200 V	List	400 V	List	600 V	List
.0005	.175 x 7/16	$2.50	.235 x 7/16	$2.60	.235 x 7/16	$2.70
.001	.175 x 7/16	2.55	.235 x 7/16	2.65	.235 x 7/16	2.70
.002	.175 x 7/16	2.55	.235 x 7/16	2.65	.235 x 7/16	2.70
.003	.175 x 7/16	2.60	.235 x 7/16	2.70	.235 x 9/16	2.80
.005	.175 x 7/16	2.65	.235 x 9/16	2.75	.235 x 9/16	2.85
.01	.175 x 7/16	2.65	.235 x 9/16	2.80	.312 x 23/32	2.90
.015	.195 x ½	2.65	.235 x 23/32	2.85	.312 x 23/32	2.95
.02	.195 x ½	2.70	.235 x 23/32	2.90	.312 x 23/32	2.95
.033	.195 x ½	2.70	.235 x 23/32	2.90	.312 x 23/32	3.00
.022	.235 x 9/16	2.75	.312 x 23/32	2.95	.400 x 23/32	3.15
.040	.235 x 9/16	2.85	.312 x 23/32	3.00	.400 x 23/32	3.15
.047	.235 x 23/32	2.85	.400 x 23/32	3.05	.400 x 23/32	3.20
.050	.235 x 23/32	2.85	.400 x 23/32	3.10	.400 x 23/32	3.25
.068	.312 x 23/32	2.90	.400 x 1 1/32	3.15	.400 x 1 1/32	3.25
.10	.312 x 23/32	2.95	.400 x 1 1/32	3.30	.500 x 1 1/32	3.65
.15	.312 x 1 1/32	3.00	.500 x 1 1/32	3.55	.500 x 1 1/32	3.85
.2	.312 x 1 1/32	3.15	.500 x 1 1/32	3.70	.562 x 1 7/32	4.00
.22	.312 x 1 1/32	3.25	.562 x 1 1/32	3.85	.562 x 1 7/32	4.20
.25	3.12 x 1 1/32	3.40	.562 x 1 1/32	3.95	.562 x 1 11/32	4.50
.33	.400 x 1 1/32	3.55	.562 x 1 7/32	4.10	.562 x 1 23/32	4.80
.47	.400 x 1 1/32	3.85	.562 x 1 23/32	4.65	.670 x 1 23/32	5.15
.50	.400 x 1 1/32	4.00	.562 x 1 23/32	4.85	.670 x 1 23/32	5.85
.68	.562 x 1 1/32	4.15	.670 x 1 23/32	5.05	.670 x 2 7/32	6.05
1.00	.562 x 1 7/32	4.70	.670 x 2 7/32	5.65	.750 x 2 7/32	6.70
1.5	.562 x 1 23/32	5.40				
2.0	.562 x 1 23/32	6.80				

Ultra-compact, tiny capacitors in hermetically-sealed, metal cases. Bonded glass to metal terminal construction to minimize size. Can be supplied with Plastic insulating tubes. Std. Tolerance ±20%.



HIGH TEMPERATURE METAL-CASED METALLIZED PAPER CAPACITORS • TYPE 123ZNG

Capacity	200 V	List	400 V	List	600 V	List
.0005	.175 x 7/16	$2.95	.235 x 7/16	$3.10	.235 x 7/16	$3.15
.001	.175 x 7/16	2.95	.235 x 7/16	3.10	.235 x 7/16	3.15
.002	.175 x 7/16	2.95	.235 x 7/16	3.10	.235 x 7/16	3.15
.003	.175 x 7/16	3.00	.235 x 9/16	3.15	.235 x 9/16	3.25
.005	.175 x 7/16	3.00	.235 x 9/16	3.15	.235 x 9/16	3.25
.01	.175 x 7/16	3.10	.235 x 9/16	3.20	.312 x ¾	3.35
.015	.195 x 9/16	3.10	.235 x 9/16	3.35	.312 x ¾	3.40
.02	.195 x 9/16	3.10	.235 x ¾	3.40	.312 x ¾	3.50
.022	.195 x 9/16	3.10	.235 x ¾	3.40	.312 x ¾	3.50
.033	.235 x 9/16	3.25	.312 x ¾	3.45	.400 x ¾	3.65
.040	.235 x 9/16	3.35	.312 x ¾	3.55	.400 x ¾	3.70
.047	.235 x 9/16	3.35	.312 x ¾	3.55	.400 x ¾	3.70
.050	.235 x 9/16	3.40	.312 x ¾	3.60	.400 x ¾	3.85
.068	.312 x ¾	3.40	.400 x 1 1/16	3.70	.400 x 1 1/16	3.95
.10	.312 x ¾	3.45	.400 x 1 1/16	3.85	.400 x 1 1/16	4.30
.15	.312 x 1 1/16	3.50	.500 x 1 1/16	4.15	.500 x 1 1/16	4.50
.2	.312 x 1 1/16	3.80	.500 x 1 1/16	4.35	.562 x 1¼	4.70
.22	.312 x 1 1/16	3.80	.500 x 1 1/16	4.50	.562 x 1¼	4.90
.25	.312 x 1 1/16	4.00	.500 x 1 1/16	4.65	.562 x 1¼	5.25
.33	.400 x 1 1/16	4.15	.562 x 1¼	4.80	.562 x 1¾	5.60
.47	.400 x 1 1/16	4.50	.562 x 1¾	5.45	.670 x 1¾	6.00
.50	.400 x 1 1/16	4.70	.562 x 1¾	5.70	.670 x 1¾	6.75
.68	.562 x 1 1/16	4.85	.670 x 1¾	5.90	.670 x 2¼	7.55
1.00	.562 x 1 1/16	5.50	.670 x 2¼	7.00	.750 x 2¼	8.60
1.5	.562 x 1¾	6.25				
2.0	.562 x 1¾	7.00				

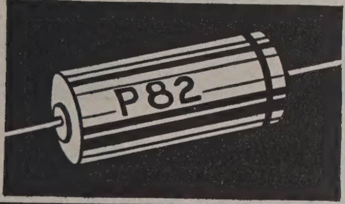
Aerovox type P123ZNG Aerolene impregnated metallized-paper capacitors housed in tubular metal cases with vitrified ceramic terminal seal. Operating temperature range -55°C to +100°C at full rating with operation to +125°C at 75 per cent of voltage rating.

NOTE: For insulated section (insulating terminal at both ends) — specify type P123ZN — add 1/16 inch to lengths listed above.

For mounting bracket add Suffix "B" to type designation.

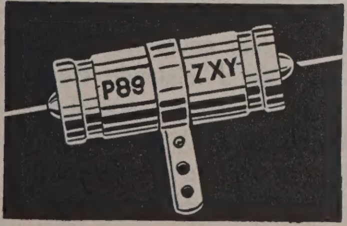
For threaded terminal mounting add Suffix "T" to type designation.

TYPE P82 METALLIZED-PAPER CAPACITORS • CARDBOARD TUBES



Cap. Mfds.	200 V	List	400 V	List	600 V	List
.01	⅜ x ⅝	$ .60	⅜ x ⅝	$ .65	⅜ x ⅝	$ .70
.02	⅜ x ⅝	.60	⅜ x ⅝	.65	⅜ x ⅝	.70
.03	⅜ x ⅝	.60	⅜ x ⅝	.65	15/32 x ⅝	.80
.05	⅜ x ⅝	.65	15/32 x ⅝	.70	15/32 x ⅝	.80
.1	⅜ x ⅝	.70	15/32 x 1⅛	.80	15/32 x 1⅛	.90
.25	15/32 x ⅝	.90	9/16 x 1⅛	1.00	⅝ x 1⅛	1.10
.5	15/32 x 1⅛	1.05	⅝ x 1⅝	1.15	23/32 x 1⅝	1.45
1.0	9/16 x 1⅛	1.30	23/32 x 2⅛	1.60	23/32 x 2⅝	1.80
2.0	⅝ x 1⅝	1.80				

TYPE 89ZXY • METALLIZED-PAPER CAPACITORS



Tubular Aerolites in hermetically-sealed, metal cases. Hyvol K or M impregnated. Unique self-healing feature and Aerovox service-proven, double-rubber bakelite terminal seals. Ideal for extreme conditions and hard use. Tolerance ±20%.

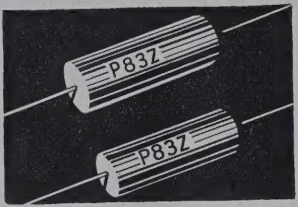
Cap. Mfds.	Size 200 V.D.C.	List	Size 400 V.D.C.	List	Size 600 V.D.C.	List
.01					⅜ x 1	$1.40
.02					⅜ x 1	1.45
.03			⅜ x 1	$1.40	7/16 x 1	1.50
.05	⅜ x 1	$1.40	7/16 x 1	1.45	½ x 1	1.55
.1	7/16 x 1	1.45	7/16 x 1 5/16	1.60	½ x 1½	1.70
.25	½ x 1	1.60	⅝ x 1 5/16	1.80	⅝ x 1⅝	2.00
.5	½ x 1 5/16	1.70	⅝ x 2	2.00	¾ x 2	2.40
1.0	⅝ x 1½	2.10	¾ x 2½	2.50	13/16 x 2½	3.00
2.0	⅝ x 2	2.60	1 x 2½	3.60	1¼ x 2½	4.00

Cap. Mfds.	Size 150 V.D.C.	List
3.0	¾ x 2	$3.40
4.0	13/16 x 2	4.35
6.0	1 x 2	5.30

Sizes shown are for floating case without insulating tube.

CAPACITORS **AEROVOX** RESISTORS

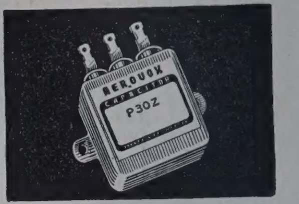
TYPE P83Z MICROMINIATURES METALLIZED-PAPER CAPACITORS



Ultra-small, new metallized-dielectric capacitor particularly applicable in the electronic field to replace the low capacity paper units now being used. Hyvol K impregnated in humidity resistant molded thermo-plastic cases.

Cap. Mfd.	Voltage	Case Size (Inches) Dia. x Lgth.	List
.004	200 VDC	3/16 x 7/16	$.30
.005	200 VDC	3/16 x 7/16	.30
.01	200 VDC	3/16 x 7/16	.30
.02	200 VDC	1¼ x 9/16	.35
.04	200 VDC	¼ x 9/16	.35
.00025	400 VDC		.30
.002	400 VDC	3/16 x 7/16	.30
.003	400 VDC	3/16 x 7/16	.30
.008	400 VDC	¼ x 9/16	.35
.01	400 VDC	¼ x 9/16	.35
.0005	600 VDC	3/16 x 7/16	.30
.0008	600 VDC	3/16 x 7/16	.30
.001	600 VDC	3/16 x 7/16	.30
.002	600 VDC	¼ x 9/16	.35
.0022	600 VDC	¼ x 9/16	.35
.0047	600 VDC	¼ x 9/16	.35
.005	600 VDC	¼ x 9/16	.35
.0068	600 VDC	¼ x 9/16	.35

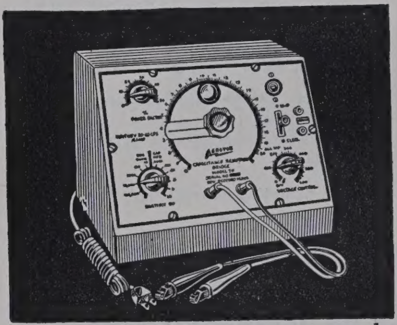
TYPE P30Z BATHTUBS METALLIZED-PAPER CAPACITORS



Aerolite Metallized-Paper capacitors. Hyvol K or M impregnated in bathtub, hermetically-sealed metal cases. Meets rigid JAN requirements for moisture immersion and vibration testing. Std. Tolerance ±20%.

Cap. Mfds.	Volts	Size	List
.5	200	1¾ x 1 x ¾	$3.30
1.0	200	1¾ x 1 x ¾	3.55
2.0	150	1¾ x 1 x ¾	4.45
4.0	150	1¾ x 1 x ⅞	5.75
6.0	150	2 x 1¾ x ⅞	6.10
8.0	150	2 x 2 x 13/16	8.40
10.0	150	2 x 2 x ⅞	9.70
12.0	150	2 x 2 x 1	11.00
.25	400	1¾ x 1 x ¾	3.35
.5	400	1¾ x 1 x ¾	3.55
1.0	400	1¾ x 1 x ⅞	3.95
2.0	400	2 x 1¾ x ⅞	4.90
4.0	400	2 x 2 x 1⅛	7.85
.1	600	1¾ x 1 x ¾	3.50
.25	600	1¾ x 1 x ¾	3.55
.5	600	1¾ x 1 x ¾	4.25
1.0	600	1¾ x 1¼ x ⅞	4.90
2.0	600	2 x 2 x 1	6.25

TEST INSTRUMENTS



Aerovox Capacitance and Resistance Bridge

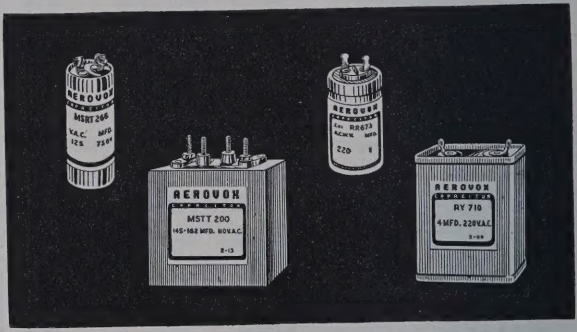
AEROVOX MODEL 76 Resistance Capacitance Bridge is the new postwar general-utility instrument combining simplicity of operation, remarkable degree of accuracy, and modest price. Extreme ruggedness makes it equally suitable out on the job, in the shop, or in the laboratory.

Sloping panel 10" x 6". Aluminum, etched and anodized. Steel cabinet, black crackle finish. All readings taken from main 4" dial. Same calibrated scale eliminates trouble and chances for errors in reading. Linear scale, also an exclusive feature, means no crowding at high end to make readings difficult and inaccurate. Both the resistance and the capacitance readings are covered by six overlapping ranges, as against two or three in usual service instruments, for maximum sensitivity and accuracy. Positive "magic eye" indicator.

Here is what Model 76 bridge does: (1) Measures capacitance from 100 mmf. to 200 mfd. in six ranges. (2) Measures resistance from 10 ohms to 20 megohms in six ranges. (3) Measures power factor from 0 to 50%. (4) Provides D.C. polarizing potential for leakage measurements, from 0 to 600 V.D.C., continuously variable and calibrated in volts. (5) Checks leakage or insulation resistance.

Instrument is provided with shockproof, color-coded test leads fitted with banana plugs for panel jacks, and with clips. Instructions. Measures 10" x 7¾" x 8¼". Weight 8 lbs. 3 oz.

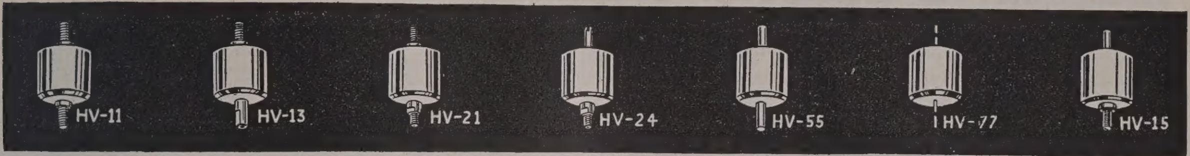
Aerovox *Motor-Starting* Capacitors



A TYPE FOR *EVERY* APPLICATION

Aerovox motor capacitors are available in two general categories: (1) Exact-Duplicate Replacements, precisely matching the mechanical and electrical features of the original equipment; and (2) Universal Replacements, for a minimum stock of numbers taking care of the maximum range of motor applications. Exact-Duplicate Replacements do the "same-as-new" service job insisted upon by critical customers. Universal Replacements mean maximum convenience with minimum investment. And of course Aerovox also supplies the hardware, housings, caps, mountings.

HI-Q HIGH VOLTAGE CERAMIC CAPACITORS • TYPE HV



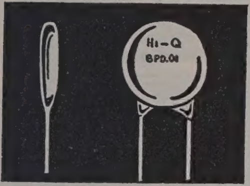
TYPE	MMFD.	VOLT	LIST
HV	500	10,000	$1.75
HV	500	20,000	2.25

These Hi-Q high voltage capacitors of the slug type (thick disk dielectrics) are thoroughly tested units capable of assuring dependable service while withstanding high voltages.

The piercing pressure of the dielectric material is greatly decreased by a meticulously exacting jacketing procedure in conjunction with a newly developed plastic with excellent arc resistant properties. Terminals are silvered brass and integrally soldered to the silver electrodes which are fired directly to the ceramic dielectric.

The HV capacitors provide an excellent working parameter when used in conjunction with high voltage horizontal output transformers.

HI-Q DISK CAPACITORS • TYPE BPD

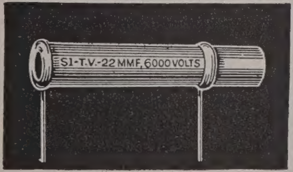


Hi-Q disk capacitors are available in 7 sizes for by-passing, blocking and coupling applications. Hi-Q disks are also available for temperature compensating where high Q and stability of capacity are essential and there is also a line of Hi-Q disks where extended temperature compensating applications require a very large gradient of capacity versus temperature.

Type	A Diameter	B Lead width	List
BPD .00001	5/16″ max.	3/16″ ± 1/16″	$.25
BPD .000015	5/16″ max.	3/16″ ± 1/16″	.25
BPD .000022	5/16″ max.	3/16″ ± 1/16″	.25
BPD .000025	5/16″ max.	3/16″ ± 1/16″	.25
BPD .000033	5/16″ max.	3/16″ ± 1/16″	.25
BPD .000047	5/16″ max.	3/16″ ± 1/16″	.25
BPD .00005	5/16″ max.	3/16″ ± 1/16″	.25
BPD .000068	5/16″ max.	3/16″ ± 1/16″	.25
BPD .0001	5/16″ max.	3/16″ ± 1/16″	.25
BPD .00012	5/16″ max.	3/16″ ± 1/16″	.25
BPD .00015	5/16″ max.	3/16″ ± 1/16″	.25
BPD .0002	5/16″ max.	3/16″ ± 1/16″	.25
BPD .60027	5/16″ max.	3/16″ ± 1/16″	.25
BPD .00033	5/16″ max.	3/16″ ± 1/16″	.25
BPD .00047	5/16″ max.	3/16″ ± 1/16″	.25
BPD .0005	5/16″ max.	3/16″ ± 1/16″	.25
BPD .00068	5/16″ max.	3/16″ ± 1/16″	.25
BPD .0008	5/16″ max.	3/16″ ± 1/16″	.25
BPD .001	7/16″ max.	¼″ ± 1/16″	.25
BPD .0015	7/16″ max.	¼″ ± 1/16″	.25
BPD .002	19/32″ max.	¼″ ± ⅛″	.25
BPD .0022	19/32″ max.	¼″ ± ⅛″	.25
BPD .0033	19/32″ max.	¼″ ± ⅛″	.25
BPD .004	19/32″ max.	¼″ ± ⅛″	.25
BPD .0047	19/32″ max.	¼″ ± ⅛″	.25
BPD .005	19/32″ max.	¼″ ± ⅛″	.25
BPD .01	¾″ max.	⅜″ ± ⅛″	.30
BPD 2 x .001	19/32″ max.	⅜″ ± ⅛″	.40
BPD 2 x .0015	19/32″ max.	⅜″ ± ⅛″	.40
BPD 2 x .002	19/32″ max.	⅜″ ± ⅛″	.40
BPD 2 x .0022	19/32″ max.	⅜″ ± ⅛″	.40
BPD 2 x .003	¾″ max.	⅜″ ± ⅛″	.45
BPD 2 x .004	¾″ max.	⅜″ ± ⅛″	.45
BPD 2 x .0047	¾″ max.	⅜″ ± ⅛″	.45
BPD 3 x .0015	¾″ max.	⅜″ ± ⅛″	.50
BPD 3 x .002	¾″ max.	⅜″ ± ⅛″	.50

Tolerances — Guaranteed Minimum Value (GMV)

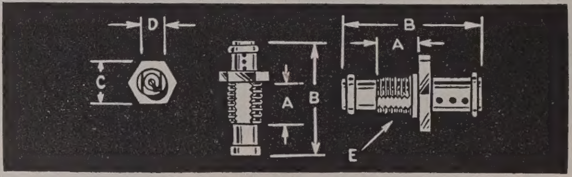
SI-TV HIGH VOLTAGE CERAMIC CAPACITORS



A new addition to the already complete line of Aerovox Hi-Q Ceramic capacitors. Especially adapted to television applications this capacitor is available in two sizes. For capacities from 4.7 mmf. to 30. mmf. the size is .312 x 1.125. For 47. mmf. the case size is .385 x 1.850. All units referred to here are 6000 Volts.

Cap. Mmf.	VOLT	LIST	Cap. Mmf.	VOLT	LIST
4.7	6000	$1.00	22.	6000	$1.00
8.2	6000	1.00	24.	6000	1.00
12.	6000	1.00	27.	6000	1.00
15.	6000	1.00	30.	6000	1.00
18.	6000	1.00	47.	6000	1.00
20.	6000	1.00			

HI-Q FEED-THRU CAPACITORS



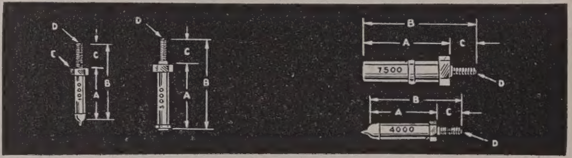
Hi-Q Feed-Thru Capacitors provide means to transmit thru shields or ground potentials and simultaneously by-pass unwanted frequencies. A good mechanical connection is provided by the silver-plated bushing. These are excellent dependable units even under severe mechanical vibrations as in aircraft, missiles and automotive requirements. The minimum standard tolerance for feed-thru capacitors is ±20%. All units are flash tested at 1000 volts D.C.

DIMENSIONS — INCHES

TYPE	CAP. MMF	A	B	C	D	THREAD E	LIST
CF-1	1500	9/32	11/16	5/16	11/64	¼-28	$1.00
CF-2	3000	5/16	⅞	⅜	¼	5/16-24	1.00
CF-3	4000	5/16	13/32	⅜	¼	5/16-24	1.00
CF-4	7000	5/16	1 1/16	9/16	5/16	⅜-24	1.00
CFS-1	1500	9/32	11/16	5/16	11/64	¼-28	1.00

CFS-1 not illustrated Tolerance ±20%

HI-Q STAND OFF CAPACITORS



Hi-Q "stand-off" capacitors are tubular with a screw fixture for mounting to the chassis or common ground. Close coupling and their unique construction make them an excellent choice for by-passing R.F. in the high frequencies.

The multiple tapped model is a compact, by-passing unit when mounted next to tube sockets. Three capacitors can be supplied as one unit, with capacity ranges available up to 2000 MMF per section. When fewer than three taps are required, it is possible to obtain higher capacities. Standard capacity tolerance is ±20% and GMV for "stand-off" capacitors and —20%, +30% and GMV for multiple tap units. Closer tolerances are available on the lower capacity units wherever economical manufacturing permits.

All units are flash tested for 1000 V.D.C., power factor is under 3% maximum and the insulation resistance is above 7500 megohms. All units are coated with a polymerized high temperature enamel, stamped for capacity and supplied with a nut, if desired. Leads are 20 gauge and a minimum of 1½″ long for CS units and 1¼″ for CIS units.

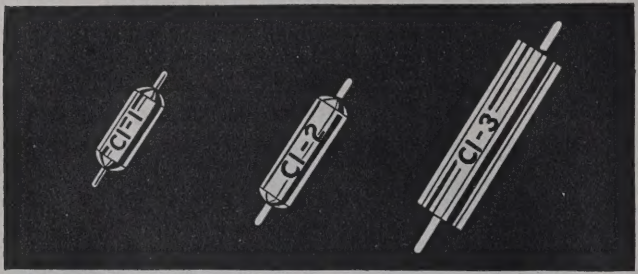
Type	Cap. MMF.	Dimension — inches A	B	C	Thread D	Across Flats–in. E	List
CS-1	50	21/32	1	11/32	#4-40	¼	$.60
	100						.60
	500						.60
	1000						.60
	1500						.60
CS-2	3000	27/32	1 3/16	11/32	#4-40	¼	.60
CS-3	4000	29/32	1¼	11/32	#4-40	¼	.60
CS-4	7500	1 5/32	1½	11/32	#6-32	⅜	.60
CIS-1	50	⅝	⅞	¼	#6-32	¼	.60
	100						.60
	500						.60
CIS-2	1000	⅞	1⅛	¼	#6-32	¼	.60
	1500						.60

HI-Q TUBULAR CERAMIC CAPACITORS

STYLE SI: Style SI provides a radial lead unit for applications requiring an insulated capacitor. Performance is comparable to that of insulated capacitors manufactured in accordance with JAN and REC specifications.

STYLE CI: Tubular ceramic capacitors, in three standard sizes, insulated with a ceramic (Steatite) cover-tube sealed with a special end seal which allows the wax, vacuum impregnant to enter and thoroughly fill all voids inside the cover tube. Axial leads in three sizes to meet all requirements of the JAN C20A specifications for insulated capacitors.

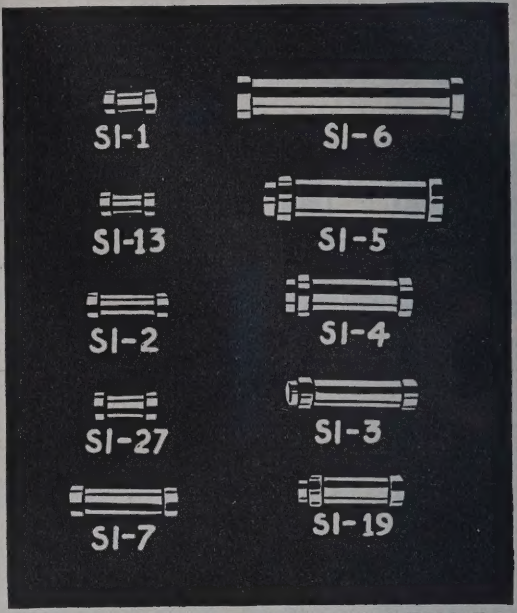
STYLE CN: Style CN is not listed but is available. It identifies the non-insulated tubular ceramic capacitors as established by the Armed Services Electronics Standards Agency (JAN C20A) and (RMA, REC107) specifications. This style capacitor has radial leads and is coated with a high moisture proof, low factor, non-hydroscopic styrene resin.



Cap. MMFD.	Type	Max. Dimensions	List
5	SI-1	.234 x .437	$.25
10	SI-1	.234 x .437	.25
12	SI-1	.234 x .437	.25
15	SI-1	.234 x .437	.25
18	SI-1	.234 x .437	.25
20	SI-1	.234 x .437	.25
22	SI-1	.234 x .437	.25
24	SI-1	.234 x .437	.25
25	SI-1	.234 x .437	.25
27	SI-1	.234 x .437	.25
30	SI-1	.234 x .437	.25
33	SI-1	.234 x .437	.25
39	SI-1	.234 x .437	.25
47	SI-1	.234 x .437	.25
50	SI-1	.234 x .437	.25
51	SI-1	.234 x .437	.25
56	SI-1	.234 x .437	.25
68	SI-1	.234 x .437	.25
75	SI-1	.234 x .437	.25
82	SI-1	.234 x .437	.25
100	SI-1	.234 x .437	.25
110	SI-1	.234 x .437	.25
120	SI-1	.234 x .437	.25
150	SI-1	.234 x .437	.25
180	SI-1	.234 x .437	.25
200	SI-1	.234 x .437	.25
220	SI-1	.234 x .437	.25
240	SI-1	.234 x .437	.25
250	SI-1	.234 x .437	.25
270	SI-1	.234 x .437	.25
300	SI-1	.234 x .437	.25
330	SI-1	.234 x .437	.25
360	SI-1	.234 x .437	.25
390	SI-1	.234 x .437	.25
470	SI-1	.234 x .437	.25
500	SI-1	.234 x .437	.25
510	SI-1	.234 x .437	.25
560	SI-1	.234 x .437	.25
680	SI-1	.234 x .437	.25
750	SI-1	.234 x .437	.25
1000	SI-1	.234 x .687	.25
1200	SI-2	.234 x .687	.25
1500	SI-2	.234 x .687	.25
1800	SI-2	.234 x .687	.25
2000	SI-2	.234 x .687	.25
2200	SI-7	.275 x .875	.25
2400	SI-7	.275 x .875	.25
2500	SI-7	.275 x .875	.25
2700	SI-2GMV	.234 x .687	.25
3000	SI-19	.312 x .937	.25
3300	SI-19	.312 x .937	.25
4000	SI-19	.312 x .937	.25
4700	SI-7GMV	.275 x .875	.30
5000	SI-3	.312 x .125	.30
5100	SI-3	.312 x .125	.30
6000	SI-3	.312 x .125	.30
6800	SI-4	.375 x 1.093	.30
7500	SI-4	.375 x 1.093	.30
10000	SI-5	.375 x 1.600	.30
15000	SI-6	.375 x 1.968	1.00
17500	SI-6	.375 x 1.968	1.00
20000	SI-5GMV	.375 x 1.600	1.00
25000	SI-5GMV	.375 x 1.600	1.00
30000	SI-6GMV	.375 x 1.968	1.00
33000	SI-6GMV	.375 x 1.968	1.00

Cap. MMFD.	Type	Max. Dimensions	List
5	CI-1	.250 x .562	$.25
10	CI-1	.250 x .562	.25
12	CI-1	.250 x .562	.25
15	CI-1	.250 x .562	.25
18	CI-1	.250 x .562	.25
20	CI-1	.250 x .562	.25
22	CI-1	.250 x .562	.25
24	CI-1	.250 x .562	.25
25	CI-1	.250 x .562	.25
27	CI-1	.250 x .562	.25
30	CI-1	.250 x .562	.25
33	CI-1	.250 x .562	.25
39	CI-1	.250 x .562	.25
47	CI-1	.250 x .562	.25
50	CI-1	.250 x .562	.25
51	CI-1	.250 x .562	.25
56	CI-1	.250 x .562	.25
68	CI-1	.250 x .562	.25
75	CI-1	.250 x .562	.25
82	CI-1	.250 x .562	.25
100	CI-1	.250 x .562	.25
110	CI-1	.250 x .562	.25
120	CI-1	.250 x .562	.25
150	CI-1	.250 x .562	.25
180	CI-1	.250 x .562	.25
200	CI-1	.250 x .562	.25
220	CI-1	.250 x .562	.25
240	CI-1	.250 x .562	.25
250	CI-1	.250 x .562	.25
270	CI-1	.250 x .562	.25
300	CI-1	.250 x .562	.25
330	CI-1	.250 x .562	.25
360	CI-1	.250 x .562	.25
390	CI-1	.250 x .562	.25
470	CI-1	.250 x .562	.25
500	CI-1	.250 x .562	.25
510	CI-1	.250 x .562	.25
560	CI-1	.250 x .562	.25
680	CI-1	.250 x .562	.25
750	CI-1	.250 x .562	.25
1000	CI-2	.250 x .812	.25
1200	CI-2	.250 x .812	.25
1500	CI-2	.250 x .812	.25
1800	CI-2	.250 x .812	.25
2000	CI-2	.250 x .812	.25
2200	CI-3	.340 x 1.320	.25
2400	CI-3	.340 x 1.320	.25
2500	CI-3	.340 x 1.320	.25
2700	CI-3	.340 x 1.320	.25
3000	CI-3	.340 x 1.320	.25
3300	CI-3	.340 x 1.320	.25
4000	CI-3	.340 x 1.320	.25
4700	CI-3	.340 x 1.320	.30
5000	CI-3	.340 x 1.320	.30
5100	CI-3	.340 x 1.320	.30
6000	CI-3	.340 x 1.320	.30

CN types, non insulated are available in the same capacities as SI's.
Types SI and CI, std. tol. ±20



HI-Q ZERO TEMPERATURE COEFFICIENT CAPACITORS

The temperature coefficient of ceramic capacitors is an inherent characteristic of the ceramic body. By controlling this coefficient, the use of ceramics has been extended to countless applications in the electronic and communications fields. Temperature coefficient is determined by the ceramic mix and therefore certain tolerances are standardized. Following is a list of standard recommended tolerances used in this listing:

Temp. Coef.	Tolerance—PPM
NPO	± 30
NO80	± 30
N750	±100

The tolerances shown are maximum deviation. The actual average temperature coefficient usually runs close to nominal.

NPO TYPE SI

The zero temperature coefficient capacitor is the most stable ceramic commercial capacitor available. The type SI is a tubular ceramic insulated with a synthetic coating (Durez) and impregnated with a high-melting point, Low-loss, micro-crystalline wax.

When ordering the above units, designate type and MMFD fully. For example: NPOSI-1-1.5 MMFD.

For full information on coding and characteristics refer to ASESA chart on page 25.

ZERO TEMPERATURE COEFFICIENT CAP.

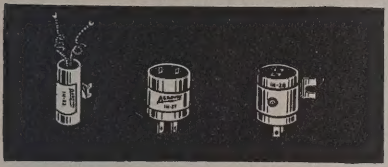
TYPE NPO	MMFD	LIST
SI-1	1.5	$.50
SI-1	3.	.50
SI-1	3.3	.50
SI-1	4.7	.50
SI-1	5.	.50
SI-1	6.8	.50
SI-1	8.2	.50
SI-1	10	.50
SI-1	20	.50
SI-13	25	.50
SI-2	33	.50
SI-27	50	.55
SI-7	75	.55
SI-7	100	.55
SI-3	150	.60
SI-4	175	.60

NEGATIVE TEMP. COEFFICIENT CAP.

TYPE N750	MMFD	LIST
SI-1	5	$.50
SI-1	10	.50
SI-27	47	.50
SI-7	75	.50
SI-7	100	.50

TYPE NO80	MMFD	LIST
SI-1	10	$.60
SI-1	22	.60
SI-2	33	.60
SI-27	47	.60
SI-7	62	.60

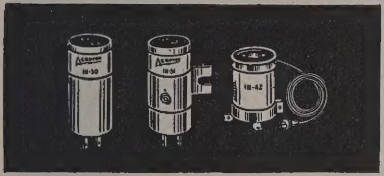
INTERFERENCE FILTERS



TYPE IN-23. Especially used for neon sign fixtures. Convenient mounting bracket. One filter for each fixture. Flexible leads. Also used on small motors. Size 1 x 2⅛ inches. **List $1.05**

TYPE IN-27. Simple, inexpensive, plug-in unit where interference is slight. Size 1⅜ x 1½ inches. **List $1.50**

TYPE IN-28. For use where ground is at considerable distance. Most efficent when mounted on appliance. Bracket supplied. Size: 1⅜ x 2 inches. **List $2.00**



TYPE IN-29. Effective plug-in unit for local noise sources of variable character but strong intensity. Especially suited for shavers and other vibrating devices. Size: 1⅜ x 3 inches. **List $1.75**

TYPE IN-30. Similar to IN-29 but with greater inductance to handle more severe noise interference. Size: 1⅜ x 3 inches. **List $2.50**

TYPE IN-31. Bracket mounted unit with high inductance. Size: 1⅜ x 3 inches. **List $3.00**

TYPE IN-42. Heavy duty unit for serious interference from power transmission lines, etc. Plugs into outlet. Appliance or radio plugs into receptacle in filter. Mounting ring provided. Rating: 110/220 v. AC; 6 amps. Size: 2½" dia. x 3¾". **List $7.50**

UHF — INTERFERENCE FILTERS

These latest filter units provide maximum attenuation from 150 KC well up into the UHF range. And they are extra-rugged, extra-compact, extra-efficient, by any comparison with previous filters.

Primary applications are in r.f. noise suppression work in military or commercial aircraft and for vehicular low-voltage d.c. applications. Also, for special applications such as battery or low-voltage d.c. filters, for shield room applications, and for critical equipment.

Available in seven standard types meeting a wide variety of applications. For extraordinary requirements, special filters can be developed and built to your order.

Aerovox Type	Amps.	VDC	Size (l. x w. x h.)	List
IN 148	2.0	150	1¾"x1"x⅞"	$11.00
IN 150	3.0	150	1 13/16"x1"x1"	12.50
IN 151	5.0	150	1 13/16"x1¼"x1"	14.00
IN 152	10.0	150	2 1/16"x1¼"x1"	16.25
IN 153	25.0	150	2"x2"x1 3/16"	23.00
IN 156	40.0	150	5 1/16"x1 13/32"x1 1/16"	29.50
IN 154	100.0	150	3 1/16"x2⅛"x2⅞"	39.00

AEROVOX RESEARCH WORKER

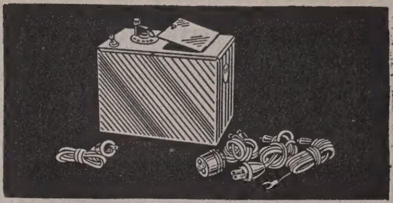
A snappy, informative, practical engineering paper, issued monthly, the AEROVOX RESEARCH WORKER is free to servicemen, engineers, hams, and other interested radio workers. Ask your AEROVOX jobber how you may subscribe, or write direct.

INTERFERENCE ANALYZER

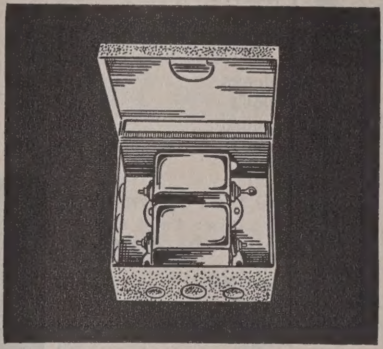
TYPE ANL-37

The Aerovox Filter Selector eliminates the guess work in determining the proper filter to use. Plugs between interfering device and outlet. Adjust selector switch until noise is eliminated or minimized. Dial then indicates type filter (IN27 thru IN42) to be used.

Unit in handsome, sturdy metal cabinet. Compartment contains necessary attachment plugs and clips. Size: 5½ x 5½ x 8 inches.



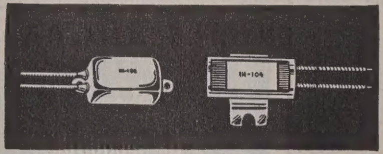
HEAVY DUTY INDUSTRIAL FILTERS



Heavy duty, industrial-type interference filters consisting of one or more highly efficent radio noise filter elements. Enclosed in black painted steel surface cabinet for permanent installations of power equipment. One element per line. Cabinets meet Underwriters' requirements, and have standard knockouts. Rating: 250 v. AC —25 to 60 cps. or 600 v. DC.

Type	Max. Amps.	Elements	List
SINGLE-PHASE BALANCED NETWORK			
INB-104	5	1	$12.50
INB-100	10	1	7.50
INB-101	30	1	27.50
INB-105	5	2	20.00
INB-102	10	2	30.00
INB-103	30	2	49.00
THREE-PHASE NETWORK			
INB-106	5	3	27.50
INB-107	10	3	42.50
INB-108	30	3	71.00

Other INB filters available for up to 200 amperes. Write for information.



TYPE IN-105. Same as IN-104 except container is bathtub type metal can. Size: 1¾" x 1" x ¾" high. **List $1.25**

TYPE IN-106. Best filter for fluorescents. Balanced network. Especially suited for radio and television salesrooms. One unit per fixture in series where power leads enter. Metal container with four stranded wire leads. Rating: 125 v. AC or DC; 2.6 amps. Size: 1⅞" x 3" x 1⅜" high. **List $3.80**

TYPE IN-104. Small, inexpensive filter unit of low impedance, delta-connected capacitors. Connect one unit for each fluorescent light fixture or across line leads every eight feet in core lighting. Tubular with single hole mounting bracket. 6" stranded wire insulated leads. Can common for grounding. Rating: 125 v. AC or DC. Size: 1" dia. x 2⅜". **List $1.20**

TYPE IN-109. Balanced network filter for severe r-f noises from small appliances. Metal container and four insulated, stranded wire leads. Case common for grounding. Rating: 125 v. AC or DC; 2.5 amps. Size: 1⅞" x 3" x 1⅜" high. **List $3.80**

TYPE IN-133. Hermetically sealed, metal cased unit — bracket mounted. Delta-connected capacitor combination for connecting across line. Excellent for use in areas near radio stations. 6" insulated stranded wire leads. Can common for grounding. Rating: 125 v. AC or DC. Size: 1⅞" x 1 5/16" x 15/16" high. **List $1.75**

BUILT-IN FILTERS

High attenuation type, hermetically sealed units for use where severe interference is encountered and dependability is required. For permanently mounted applications.

Aerovox special "Pi type" construction insures efficient radio noise reduction over low frequency broadcast, shortwave, and television bands. Suitable for Army-Navy or aircraft equipment where immersion and severe humidity tests must be met.

For single wire unbalanced applications. For two wire filtering use one filter in each line. Filter case must be securely bonded to the filter appliance and ground for maximum efficiency. These filters when used on high-voltage AC should be used only on permanently grounded equipment.

Aerovox Type	Maximum Voltage	Maximum Amperes	Size L x W x H	List
IN-101	125 VAC	1.5	2 1/16 x 1¼ x ¾	$ 3.75
IN-103	50 VDC	50	3 1/16 x 2⅛ x 2⅞	22.00
IN-110	250 VAC	5	2 x 2 x 1	7.50
IN-111	250 VAC	10	2 x 2 x 1¼	12.50
IN-112	250 VAC	30	3 1/16 x 2⅛ x 2⅞	22.00

AEROVOX
R-F NOISE CAPACITANCE SUPPRESSORS
Type INA-116 Type INA-117 Type INA-118

AEROVOX
INA 116

These radio-noise suppression capacitors have been especially designed for use in military or commercial, aircraft and vehicular applications. Primary application is as an r-f bypass capacitor from line to ground in low voltage dc supply lines. Units are especially treated to assure extremely long, noise-free life.

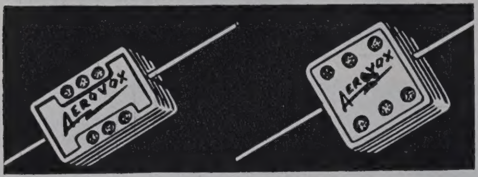
Operating temperature range is minus 55 degrees C to plus 95 degrees C. For full 150 volt rating the operating temperature range is minus 55 degrees C to plus 50 degrees C. Units may be used at operating voltages up to 120 vdc over a temperature range of minus 55 degrees C to plus 71 degrees C; and 60 vdc over a range of minus 55 degrees C to plus 95 degrees C.

Aerovox Type	Voltage	Max. Imped. at 150 Kc (Ohms)	Nom. Cap. Rating (Mfd	Case Size	Mounting Centers	List
INA-117	150 VDC	.6	2.	1¾ x 1 x ¾	2⅛	$ 6.00
INA-116	150 VDC	.3	4.	1¾ x 1 x ⅞	2⅛	7.50
INA-118	150 VDC	.12	10.	2 x 2 x ⅞	2⅜	10.00

CAPACITORS AEROVOX RESISTORS

"POSTAGE-STAMP" MOLDED-IN-BAKELITE MICA CAPACITORS

Wide choice of designs, sizes, mountings, terminals offer the correct Aerovox unit for every application, as listed. Units built of selected mica and foil; molded bakelite casing impervious to moisture, heat, mechanical damage. Micrometer test for mica thickness maintains capacity values for long life. Capacity values indicated on units.



TYPE 1441W

Compact, with wire leads.

500 V.D.C.W. • 1000 V.D.C.T.

Cap. Mfd.	List	Cap. Mfd.	List
.0005	$.25	.003	$.50
.00075	.25	.004*	.55
.001	.30	.005*	.60
.0015	.30	.006*	.75
.002	.40	.007*	.90
.0025	.45	.008*	1.00

TYPE 1441WX

Compact, with wire leads.

300 V.D.C.W. • 600 V.D.C.T.

Cap. Mfd.	List	Cap. Mfd.	List
.004	$.50	.008*	$.90
.005	.55	.009*	1.00
.006	.70	.01*	1.10
.007*	.80		

Size: 1" x ⅝" x $\frac{3}{16}$" Std. Tolerance ±20%

*Thickness $\frac{5}{16}$"

TYPE 1467

Compact, with wire leads.

500 V.D.C.W. • 1000 V.D.C.T.

Cap. Mfd.	List	Cap. Mfd.	List
.0005	$.25	.004	$.55
.00075	.25	.005	.60
.001	.30	.006	.75
.0015	.30	.007*	.90
.002	.40	.008*	1.00
.0025	.45	.009*	1.10
.003	.50	.01*	1.20

TYPE 1467X

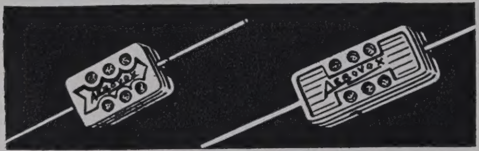
Compact, with wire leads.

300 V.D.C.W. • 600 V.D.C.T.

Cap. Mfd.	List	Cap. Mfd.	List
.007	$.80	.013*	$1.35
.008	.90	.014*	1.45
.01	1.10	.015*	1.55
.012*	1.25		

Std. Size: $\frac{53}{64}$" x $\frac{53}{64}$" x $\frac{9}{32}$" Std. Tolerance ±20%

*Thickness $\frac{21}{64}$"



TYPE 1468

Midget size with wire leads.

500 V.D.C.W. • 1000 V.D.C.T.

Cap. Mfd.	List	Cap. Mfd.	List
.000001	$.25	.00025	$.25
.000005	.25	.0003	.25
.00001	.25	.00035	.25
.000025	.25	.0004	.25
.00004	.20	.0005	.25
.00005	.20	.00075	.25
.000075	.20	.001	.30
.0001	.20		
.00015	.20		
.0002	.20		

Size: $\frac{45}{64}$" x $\frac{29}{64}$" x $\frac{3}{16}$" Std. Tolerance ±20%

TYPE 1478

Midget size with wire leads.

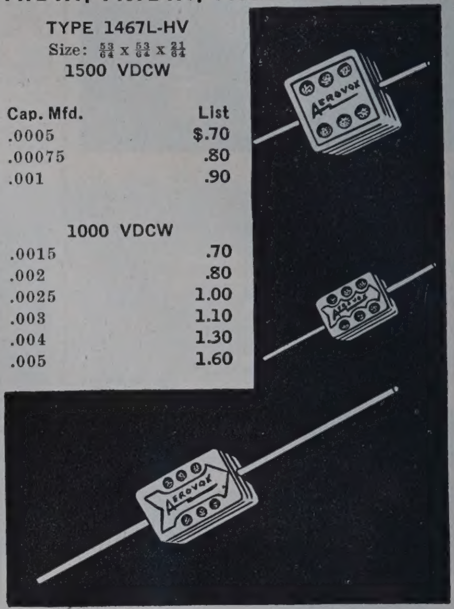
500 V.D.C.W. • 1000 V.D.C.T.

Cap. Mfd.	List	Cap. Mfd.	List
.0005	$.30	.0015	$.45
.00075	.30	.002	.50
.001	.40		

Size: 1$\frac{1}{16}$" x $\frac{7}{16}$" x $\frac{3}{16}$" Std. Tolerance ±20%

HI-VOLTAGE MICA CAPACITORS

TYPE 1441WL-HV, 1467L-HV, 1468L-HV



TYPE 1468L-HV

Size: $\frac{45}{64}$ x $\frac{29}{64}$ x $\frac{3}{16}$

1500 VDCW

Cap. Mfd.	List
.000005	$.30
.00001	.30
.000025	.30
.00005	.30
.000075	.30
.0001	.35
.00015	.35
.0002	.40
.00025	.45
.0003	.50
.00035	.50
.0004	.55

TYPE 1467L-HV

Size: $\frac{53}{64}$ x $\frac{53}{64}$ x $\frac{21}{64}$

1500 VDCW

Cap. Mfd.	List
.0005	$.70
.00075	.80
.001	.90

1000 VDCW

Cap. Mfd.	List
.0015	.70
.002	.80
.0025	1.00
.003	1.10
.004	1.30
.005	1.60

TYPE 1441WL-HV

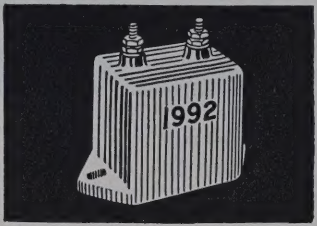
Size: 1 x ⅝ x $\frac{5}{16}$

2000 VDCW

Cap. Mfd.	List
.0005	$.65
.00075	.75
.001	.95

Std. Tolerance ±20%

PORCELAIN-CASED MICA CAPACITORS



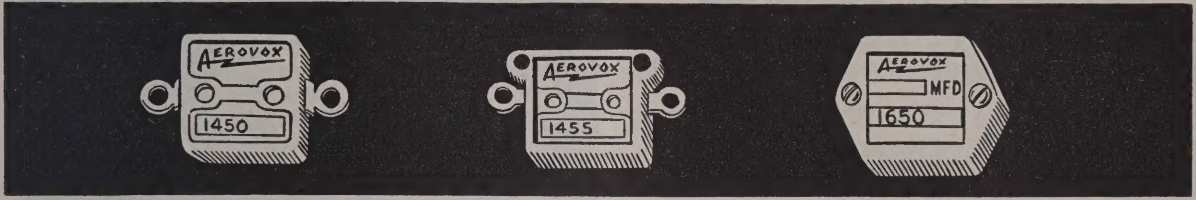
Ideal for high-frequency application. Glazed porcelain case, high temperature wax sealed. Heavy duty power terminals. Minimum power loss due to dielectric absorption. No heating at full load.

SIZE: 4" overall by 3" high; 3½" between mounting holes.

TYPES 1991-1996

Cap.	DC Voltage Rating	Type	Max. Current Capacity—Amps. 15 mc	7.5 mc	3750 kc	1875 kc	List
.00005	12,500	1996	3	2.5	1.5	1	$10.40
.0001	12,500	1996	5	4	3	2	10.40
.00025	12,500	1996	7	8	6	4	10.40
.0005	12,500	1996	8	9	8	7	10.40
	7,000	1994	7	8	6	4	8.45
.001	12,500	1996	9	10	11	12	10.40
	7,000	1994	8	9	10	8	9.45
	3,500	1992	8	9	8	5	8.45
.0015	12,500	1996	9	10	11	12	12.35
	7,000	1994	9	9	10	8	10.40
	5,000	1993	8	9	9	7	13.65
	3,500	1992	8	9	8	5	8.45
	2,000	1991	7	8	8	5	6.50
.002	12,500	1996	9	12	13	15	14.30
	7,000	1994	9	9	10	10	12.35
	5,000	1993	8	9	9	8	11.40
	3,500	1992	8	8	9	7	10.40
	2,000	1991	7	8	8	6	8.45
.003	12,500	1996	9	12	13	15	19.85
	7,000	1994	9	10	10	10	13.35
	5,000	1993	8	9	9	9	12.35
	3,500	1992	8	9	9	8	11.40
	2,000	1991	7	8	8	7	9.10
.005	10,000	1995	10	13	14	15	18.85
	7,000	1994	9	11	12	11	14.30
	5,000	1993	9	11	12	10	13.65
	3,500	1992	9	10	11	9	13.65
	2,000	1991	8	9	10	8	11.05
.01	7,000	1994	10	13	15	15	19.85
	5,000	1993	10	13	15	15	19.85
	3,500	1992	10	13	14	14	20.80
	2,000	1991	10	13	14	14	18.20
.02	3,500	1992	10	14	16	17	20.80
	2,000	1991	10	13	15	15	19.20
.05	3,500	1992	10	14	17	18	24.05
	2,000	1991	10	14	16	17	22.10
.1	2,000	1991	10	14	17	18	24.05

HI-VOLTAGE MOLDED-IN-BAKELITE MICA CAPACITORS



TYPE 1450

For critical service in low-powered transmitting circuits, buffer stages, power amplifiers, laboratory equipment, etc. Non-magnetic parts are used to reduce r.f. losses to minimum. Heavy terminals for minimum r.f. and contact resistance. Intended for point-to-point wiring, supported entirely by soldered connections.

600 V.D.C.D.		1000 V.D.C.T.	
Cap. Mfd.	**List**	**Cap. Mfd.**	**List**
.00025	$.45	.006	$.80
.0003	.45	.008	.90
.00035	.45	.01	1.00
.0004	.45	.015*	1.35
.0005	.45	.02*	1.45
.001	.50	.025*	1.75
.0015	.55	.03*†	2.05
.002	.55	.04*†	2.65
.0025	.60	.05*†	3.30
.003	.70		
.004	.70		
.005	.70		

*300 V.D.C.W. 600 V.D.C.T.

Size: 1¼" x 1¼" x $\frac{5}{16}$". Std. Tolerance ±10%

†Thickness ¾"

TYPES 1455-57

Same as Types 1445-47 except for sizes and capacitance ranges. Distance between mounting holes is 1½".

TYPE 1455

600V.D.C.W.		1000 V.D.C.T.	
Cap. Mfd.	**List**	**Cap. Mfd.**	**List**
.00005	$1.20	.0025	$1.30
.0001	1.20	.003	1.45
.00015	1.20	.004	1.50
.0002	1.20	.005	1.55
.00025	1.20	.006	1.80
.0003	1.20	.008	1.90
.00035	1.20	.01	2.15
.0004	1.20	.015	2.65
.0005	1.20	.02	3.05
.001	1.20	.025	3.60
.0015	1.20	.03	4.45
.002	1.30		

TYPE 1456

1200 V.D.C.W.		2500 V.D.C.T.	
Cap. Mfd.	**List**	**Cap. Mfd.**	**List**
.00005	$1.60	.0015	$2.30
.0001	1.60	.002	2.40
.00015	1.60	.0025	2.80
.0002	1.60	.003	3.05
.00025	1.60	.004	3.05
.0003	1.60	.005	3.30
.00035	1.60	.006	3.30
.0004	1.60	.008	3.85
.0005	1.60	.01	5.10
.001	1.80		

TYPE 1457

2500 V.D.C.W.		5000 V.D.C.T.	
Cap. Mfd.	**List**	**Cap. Mfd.**	**List**
.00005	$1.90	.0005	$2.40
.000075	1.90	.001	2.80
.0001	1.90	.0015	3.55
.00015	1.90	.002	4.15
.0002	1.90	.0025	4.60
.00025	2.20	.003	4.90
.0003	2.25		
.00035	2.25		
.0004	2.30		

Size: 1¼" x 1$\frac{25}{32}$" x $\frac{11}{32}$". Std. Tolerance ±10%.

TYPES 1650-1654

Heaviest-duty molded in bakelite mica capacitors of the AEROVOX line. Threaded mounting holes for roundhead screw terminals or plain holes available. Add suffix A for plain holes. Types 1650, 1651, and 1652 are supplied in brown or low-loss bakelite. Types 1653L and 1654L in low-loss bakelite only.

TYPE 1650

600 VDCW - 1000 VDCT
350 VACW - 700 VACT

Cap. Mfd.	List
.00005	$1.45
.0001	1.45
.00025	1.45
.0003	1.45
.00035	1.45
.0004	1.45
.0005	1.45
.001	1.45
.0015	1.45
.002	1.65
.0025	1.70
.003	1.85
.004	2.00
.005	2.10
.006	2.20
.008	2.45
.01	2.80
.015	3.05
.02	3.55
.025	4.35
.03	4.55
.04*	5.85
.05*	7.10
.06*	8.05

TYPE 1651

1200 VDCW - 2500 VDCT
875 VACW - 1750 VACT

Cap. Mfd.	List
.00005	$1.60
.0001	1.60
.00025	1.60
.0003	1.60
.00035	1.60
.0004	1.60
.0005	1.60
.001	$1.90
.0015	2.25
.002	2.50
.0025	2.80
.003	2.95
.004	3.10
.005	3.30
.006	3.45
.008	4.10
.01	4.70
.015	5.80
.02*	7.05
.025*	7.90
.03*	8.10

TYPE 1652

2500 VDCW - 5000 VDCT
1750 VACW - 3500 VACT

.00005	$1.90
.000075	1.90
.0001	1.90
.00015	2.00
.0002	2.10
.00025	2.15
.0003	2.20
.00035	2.25
.0004	2.50
.0005	2.55
.001	2.90
.0015	3.90
.002	4.25
.0025	4.60
.003	5.10
.004	5.65
.005	6.20
.006	6.35
.008*	6.85
.01*	7.30

TYPE 1653L

3750 VDCW - 7500 VDCT
2625 VACW - 5250 VACT

Cap. Mfd.	List
.00005	$3.30
.000075	3.65
.0001	3.80
.00015	4.15
.0002	4.30
.00025	4.75
.0003	4.90
.00035	5.75
.0004	5.90
.0005	6.50
.001	7.70
.0015	10.10
.002	11.50
.0025	12.90
.003*	14.25

TYPE 1654L

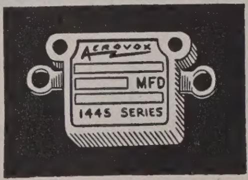
5000 VDCW 10000 VDCT
3500 VACW - 7000 VACT

.00005	$3.75
.000075	4.15
.0001	4.65
.00015	5.05
.0002	6.25
.00025	6.80
.0003	7.15
.00035	7.50
.0004	7.70
.0005	9.90
.001*	12.50

Size: 1¾"x1$\frac{5}{16}$"x$\frac{7}{16}$"
*Thickness ¾"
Std. Tolerance ±10%

HIGH VOLTAGE MICAS

TYPES 1445-47



Designed with insulated mounting holes 1$\frac{5}{16}$" apart independent of soldering lugs. Used to shunt meter windings, large or small meter-mounting brackets available. Specify by suffix (A) for large or (E) for small brackets.

TYPE 1445

600 VDCW - 1000 VDCT

Cap. Mfd.	List
.00005	$1.20
.0001	1.20
.00015	1.20
.0002	1.20
.00025	1.20
.0003	1.20
.00035	1.20
.0004	1.20
.0005	1.20
.001	1.20
.0015	1.20
.002	1.30
.0025	1.30
.003	1.45
.004	1.50
.005	1.55
.006	1.80
.008	1.90
.01	2.15
.015*	2.65
.02*	3.05
.025*	3.60
.03*	4.45
.04*	5.65

TYPE 1446

1200 VDCW - 2500 VDCT

Cap. Mfd.	List
.00005	$1.60
.0001	1.60
.00015	1.60
.0002	1.60
.00025	1.60
.0003	1.60
.00035	1.60
.0004	1.60
.0005	1.60
.001	1.80
.0015	2.30
.002	2.40
.0025	2.80
.003	3.05
.004*	3.05
.005*	3.30
.006*	3.30
.008*	3.85
.01*	5.10
.015*	6.00

TYPE 1447

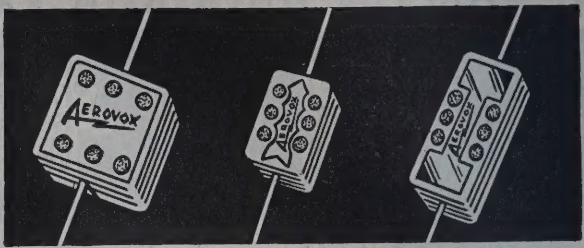
2500 VDCW - 5000 VDCT

Cap. Mfd.	List
.00005	$1.90
.000075	1.90
.0001	1.90
.00015	1.90
.0002	1.90
.00025	2.20
.0003	2.25
.00035	2.25
.0004	2.30
.0005	2.40
.001	2.80
.0015	3.55
.002*	4.15
.0025*	4.60
.003*	4.90
.004*	5.65
.005*	6.40

Size: 1⅛" x 1⅝" x $\frac{11}{32}$"
*Thickness $\frac{7}{16}$" Tolerance ±10%

CAPACITORS AEROVOX **RESISTORS**

SILVERED MICA CAPACITORS



AEROVOX silvered mica units for most critical applications where precise capacity values are required. Encased in red low-loss bakelite. Similar in external appearance to standard bakelite molded mica units.

Available with temperature coefficient and retrace characteristics as defined by characteristics A to F inclusive of REC-115 and JAN-C-5 specifications for molded capacitors. Exceptionally high "Q." Mechanically protected against physical damage and changes in electrical characteristics due to varying atmospheric conditions. Wax impregnated externally. Ideal for circuits where inductance and capacity product must remain constant under all operating conditions.

TYPE 1464 • 500 VDCW - 1000 VDCT

Cap. Mfd.	List	Cap. Mfd.	List
.00075	$.90	.0025	$1.80
.0008	.95	.003	2.05
.0009	1.00	.004*	2.15
.001	1.10	.005*	2.25
.0015	1.35	.006*	3.00
.002	1.35		

TYPE 1464X • 300 VDCW - 600 VDCT

.004	$2.15	.007*	3.40
.005	2.25	.008*	4.00
.006	3.00	.01*	4.80

Size: $\frac{53}{64}$" x $\frac{53}{64}$" x $\frac{9}{32}$" provided with wire leads
Standard Tolerance ±5%.
*Thickness $\frac{21}{64}$".

TYPE 1469 • 500 VDCW - 1000 VDCT

Cap. Mfd.	List	Cap. Mfd.	List
.000005	$.45	.00015	$.45
.00001	.40	.0002	.45
.000025	.40	.00025	.45
.00004	.40	.0003	.55
.00005	.40	.00035	.60
.00007	.40	.0004	.65
.000075	.40	.0005	.70
.0001	.40		

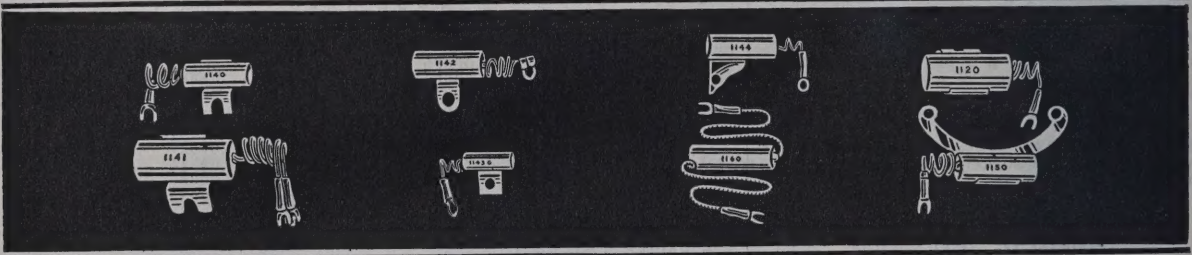
Size: $\frac{45}{64}$" x $\frac{29}{64}$" x $\frac{3}{16}$" provided with wire leads.

TYPE 1479 • 500 VDCW - 1000 VDCT

Cap. Mfd.	List	Cap. Mfd.	List
.0001	$.40	.0005	$.70
.00015	.45	.0007	.85
.0002	.45	.00075	.90
.00025	.45	.0008	.95
.0003	.55	.0009	1.00
.00035	.60	.001	1.10
0004	.65		

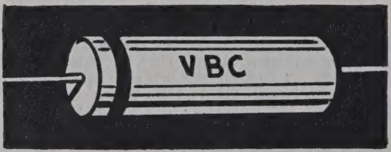
Size: 1$\frac{1}{16}$" x $\frac{7}{16}$" x $\frac{3}{16}$" provided with wire leads.
Maximum characteristic available F.

AUTO-RADIO CAPACITORS



Car Generators		
Type 1120	1.0 Cap. Mfd.	$1.75
Type 1140	0.5 Cap. Mfd.	.90
	Dual Element	
Type 1141	0.5-0.5 Cap. Mfd.	3.25
Ford Auto Radios		
Type 1144	0.5 Cap. Mfd.	.90
For 1936 Models		
Type 1150	0.5 Cap. Mfd.	.90

Motorola Auto Radios		
Type 1466	.0008 Cap. Mfd.	$ .90
Ammeter Condenser		
Type 1160	0.5 Cap. Mfd.	.90
Gas Gage Filter Condenser		
Type 1143-G	0.05 Cap. Mfd.	.90
Oil Gage Filter Condenser		
Type 1142-O	0.25 Cap. Mfd.	.90



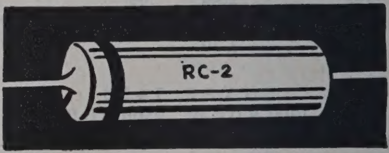
TYPE VBC

VIBRATOR BUFFER CAPACITORS

Type	Cap. Mfd.	Size	List
VBC-2	.001	$\frac{7}{16}$ x 1½	$.50
VBC-3	.002	$\frac{7}{16}$ x 1½	.50
VBC-4	.0022	$\frac{7}{16}$ x 1½	.50
VBC-5	.003	$\frac{7}{16}$ x 1½	.50
VBC-6	.0033	$\frac{7}{16}$ x 1½	.50
VBC-7	.004	$\frac{7}{16}$ x 1½	.50
VBC-8	.0047	½ x 1½	.50
VBC-9	.005	½ x 1½	.50
VBC-22	.006	½ x 1½	.50
VBC-23	.0068	½ x 1½	.50
VBC-24	.007	½ x 1½	.55
VBC-25	.0075	$\frac{9}{16}$ x 1½	.55
VBC-26	.008	$\frac{9}{16}$ x 1½	.55
VBC-27	.01	$\frac{9}{16}$ x 1½	.55
VBC-28	.015	$\frac{9}{16}$ x 1¾	.55
VBC-29	.02	$\frac{9}{16}$ x 2	.55
VBC-32	.025	⅝ x 2	.55
VBC-33	.03	$\frac{11}{16}$ x 2	.65
VBC-34	.05	$\frac{13}{16}$ x 2	.70
VBC-35	.015-.015	¾ x 2	.80

VIBRATOR "HASH" CAPACITOR VHC36
.5 Mfd. 100 Volts WVDC

RC SERIES



AEROVOX RESONANT CAPACITORS

Again the radio-electronic art imposes still more critical capacitor requirements. This time it's adequate bypassing of IF circuits in order to keep IF frequencies from entering such circuits and causing troublesome squeals and howls. And Aerovox comes up with the new AEROVOX RESONANT CAPACITORS.

AEROVOX RESONANT CAPACITORS, Series RC, are now available in conventional paper tubular design, wax impregnated and wax sealed as follows:

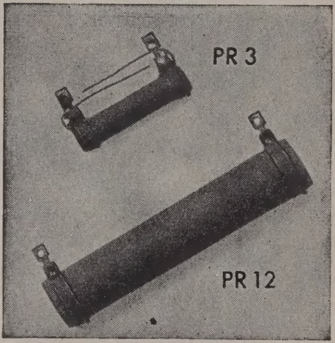
CAT. #	MFD.	WVDC	O. D.	LIST
RC2	.05	400	½ d. x 1⅛	$.50
RC3	.1	400	½ d. x 1⅝	.65
RC4	.2	400	$\frac{9}{16}$ d. x 1⅞	.70

AEROVOX RESEARCH WORKER

A snappy, informative, practical engineering paper, issued monthly, the AEROVOX RESEARCH WORKER is free to servicemen, engineers, hams, and other interested radio workers. Ask your AEROVOX jobber how you may subscribe, or write direct.

WIRT PRODUCTS
DIVISION OF EBY SALES CO.

WIRE WOUND FIXED RESISTORS



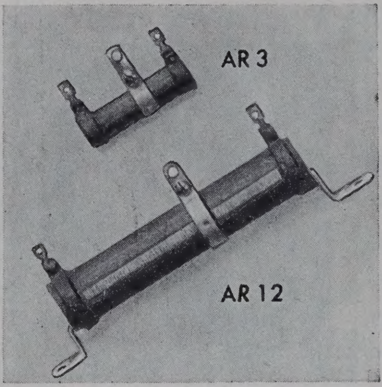
To satisfy the most exacting needs of the Radio and Electronic Industries, Wirt Fixed Wire-wound Resistors are regularly furnished in PHENOCOTE protective coatings, developed and steadily improved over a period of many years in the Wirt Laboratories. The resistor wire is space wound on low loss ceramic tubes. The PHENOCOTE covering is an exclusive organic cement coating offering maximum protection to the resistance winding against the detrimental effects of moisture, humidity and electrolysis. Absolutely inert chemically, it will not effect the most delicate windings. It is particularly recommended for fine wire sizes and all applications where the maximum temperature of the unit will not exceed 300° F. These Resistors are universally used in the Radio, Electronic, Instrument, Public Address and Test Equipment fields.

TABLE OF SPECIFICATIONS OF FIXED RESISTORS

Cat. No.	Sizes Watts	Sizes Phys.	Resistance Limits (Ohms)	List Price (Ea.)	Accessories Terminals	Mounting Brackets	Mounting Centers	Packing
PR 1	5	⅜"x1"	1 to 10000	$0.53	Soldering Lugs & Wire Leads	None	......	10 to a box
PR 3	10	⅜"x1¾"	1 to 10000	.59	Soldering Lugs & Wire Leads	None	......	10 to a box
			11 to 25000	.65				
PR 4	20	½"x2"	5 to 15000	.91	Soldering Lugs & Wire Leads	None	......	10 to a box
			16000 to 50000	1.11				
			51000 to 100000	1.43				
PR 12	50	¾"x4"	5 to 5000	1.56	Soldering Lugs	2	5"	Individual
			5100 to 25000	1.82				
			26000 to 100000	2.08				
PR 19	100	1⅛"x6½"	5 to 5000	2.15	Soldering Lugs	2	7"	Individual
			5100 to 25000	2.54				
			26000 to 50000	2.86				
			51000 to 75000	3.25				
			76000 to 100000	3.58				
PR 22	160	1⅛"x8½"	5 to 10000	2.86	Soldering Lugs	2	9"	Individual
			11000 to 50000	3.43				
			51000 to 100000	3.86				
PR 23	200	1⅛"x10½"	5 to 10000	3.58	Soldering Lugs	2	11"	Individual
			11000 to 100000	4.29				

When ordering state: Quantity, Catalogue Number and Resistance Value.

WIRT PRODUCTS
DIVISION OF EBY SALES CO.



WIRE WOUND ADJUSTABLE RESISTORS

WIRT Adjustable Resistors are space wound on low loss ceramic tubes to which the resistance wire is bonded, resulting in dependability and long life. Protection of the windings is afforded by the PHENOCOTE covering which is described fully on the preceeding page. One adjustable Slider Band, screw driver type, is furnished as standard. Bakelite knob type bands can be furnished on special order at slightly higher prices as shown below. These bands are made with small contact buttons located on the inside of the band so that a number of taps may be made without shorting out excessive resistance.

TABLE OF SPECIFICATIONS OF ADJUSTABLE RESISTORS

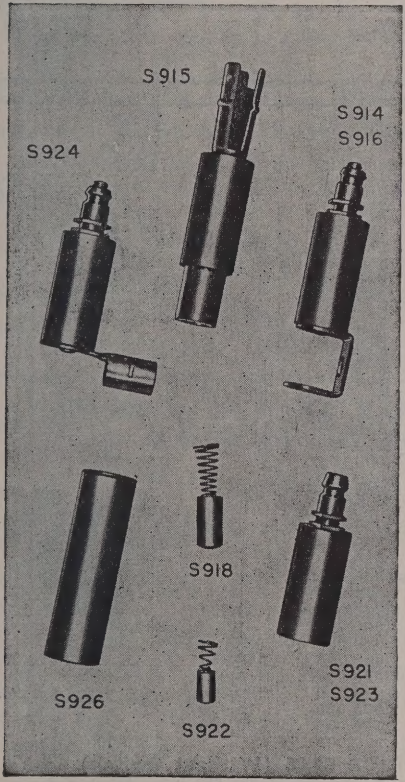
Cat. No.	Sizes		Resistance Limits (Ohms)	List Price (Ea.)	Accessories			Mounting Centers	Packing
	Watts	Phys.			Terminals	Brackets Mounting	Slider Bands		
AR 3	10	⅜"x1¾"	1 to 10000	$0.98	Soldering Lugs	None	1	......	Individual
AR 7	25	¾"x2"	1 to 5000 6000 to 15000 20000 to 25000	1.24 1.43 1.56	Soldering Lugs	2	1	3"	Individual
AR 12	50	¾"x4"	5 to 5000 7000 to 25000 30000 to 50000 60000 to 100000	1.95 2.15 2.47 2.86	Soldering Lugs	2	1	5"	Individual
AR 15	75	¾"x6"	10 to 5000 7500 to 25000 30000 to 50000 60000 to 100000	2.54 2.86 3.25 3.58	Soldering Lugs	2	1	7"	Individual
AR 19	100	1⅛"x6½"	5 to 10000 15000 to 50000 75000 to 100000	2.86 3.25 3.90	Soldering Lugs	2	1	7"	Individual
AR 22	160	1⅛"x8½"	5 to 10000 15000 to 50000 60000 to 100000	3.25 4.15 4.65	Soldering Lugs	2	1	9"	Individual
AR 23	200	1⅛"x10½"	5 to 10000 15000 to 100000	4.29 5.01	Soldering Lugs	2	1	11"	Individual

Extra Adjustable Slider Bands are obtainable and priced as follows:

Wattage Size	Screw Driver Type		Bakelite Knob Type
10, 25, 50, 75	$0.26	List Price Each	$0.39
100, 160, 200	.33	List Price Each	.50

When ordering state: Quantity, Catalogue Number and Resistance Value.

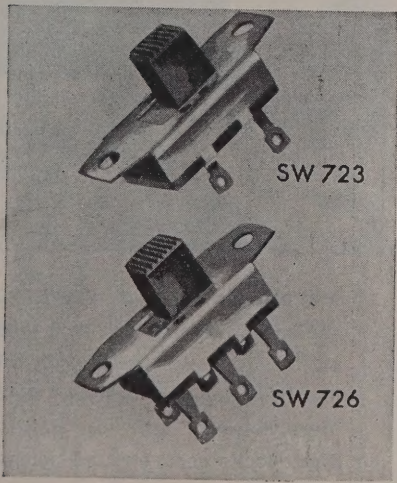
WIRT PRODUCTS
DIVISION OF EBY SALES CO.



AUTO RADIO IGNITION SUPPRESSORS

Wirt Suppressors are made with moulded black bakelite housings. All metal parts are made of rugged unfinished brass. Terminals are securely fastened to casings and sealed with special moisture and heat resisting dielectric cement. Resistor pills are sprayed with zinc and then double impregnated with a special moisture-proofing compound. Resistance value of all standard types is 10000 ohms ±20%; for FV8 types 50000 ohms ±20%. The distributed capacity is less than 1.5 mmf. Resistance values will not change more than 7% after being submerged in water for 100 hours. Test by sparking 1800 times per minute at 10,000 volts for 100 hours produces resistance change of not more than 3%. Wirt Suppressors are impervious to heat, oil, moisture and mild acids, and will not change in resistance more than 10% in 50,000 miles of operation.

Cat. No.	Type	List Price
S914	Bracket—Standard	$0.30 Each
S916	Bracket—For FV-8	.30 Each
S915	Distributor—Slip Fitting	.30 Each
S918	FV-8 Brush—Years 1933-34-35	.30 Each
S922	FV-8 Brush—Years 1936 to 1940	.30 Each
S921	Universal Screw—Standard	.30 Each
S923	Universal Screw—For FV-8	.30 Each
S924	Snap-on Plug	.30 Each
S926	Cable—Screw Fitting	.30 Each



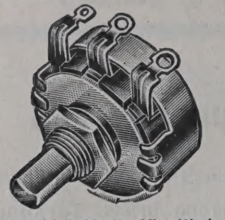
WIRT SLIDE SWITCHES

General: All Wirt Slide Switches are compact and sturdy. Housings are made of steel and are cadmium plated. The physical dimensions of the switches have been standardized, width 35/64", length 1-13/32" and mounting centers 1⅛". Standard buttons are of black bakelite. All contacts and terminals are silver plated. Switches SW723 and SW725 are supplied with a dot which indicates the "On" position. These switches are used in the Radio, Signal, Phonograph and Instrument industries.

Cat. No.	Type	List Price
SW723	SPST Slide Switch, .75A-125V-AC-DC, 2 Terminals	$0.31 Each
SW724	SPDT Slide Switch, .75A-125V-AC-DC, 3 Terminals	.37 Each
SW725	DPST Slide Switch, .50A-125V-AC-DC, 4 Terminals	.44 Each
SW726	DPDT Slide Switch, .50A-125V-AC-DC, 6 Terminals	.55 Each

CLAROSTAT

SERIES "M" AND "AM" COMPOSITION-ELEMENT CONTROLS



Dia.: 1⅛". Shaft: 3" milled. ⅜-32 brass bushing.

★ Composition element affording greatest stability. Clarostat Series "A" Switch may be added. Series 59-186 High-Voltage Coupler may be attached for high-voltage operation. Series "M" incorporates factory-attached 3" flatted shaft. Series "AM" uses any Clarostat Pick-A-Shaft.

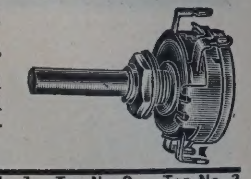
Cat. No.	Cat. No.	Ohms	Curve	Suggested Use
AM-5-S	M-5-S	500	S	Std. Pot.
AM-8-S	M-8-S	1000	S	Std. Pot.
AM-11-S	M-11-S	2000	S	Std. Pot.
AM-15-S	M-15-S	3000	S	Std. Pot.
AM-80-S	M-80-S	4000	S	Std. Pot.
AM-19-S	M-19-S	5000	S	Std. Pot.
AM-20-U	M-20-U	5000	U	Ant. & C — Bias
AM-23-S	M-23-S	7500	S	Std. Pot.
AM-27-S	M-27-S	10,000	S	Std. Pot.
AM-29-U	M-29-U	10,000	U	Ant. & C — Bias
AM-30-V	M-30-V	10,000	V	C Bias Rheo.
AM-31-W	M-31-W	10,000	W	Sc. Grid & Phono.
AM-81-Z	M-81-Z	10,000	Z	Ant. Shunt
AM-32-S	M-32-S	15,000	S	Std. Pot.
AM-33-U	M-33-U	15,000	U	Ant. & C — Bias
AM-34-V	M-34-V	15,000	V	C Bias Rheo.
AM-35-W	M-35-W	15,000	W	Sc. Grid & Phono.
AM-36-S	M-36-S	20,000	S	Std. Pot.
AM-37-U	M-37-U	20,000	U	Ant. & C — Bias
AM-40-S	M-40-S	25,000	S	Std. Pot.
AM-41-W	M-41-W	25,000	W	Sc. Grid & Phono.
AM-72-V	M-72-V	25,000	V	C Bias Rheo.
AM-42-S	M-42-S	30,000	S	Std. Pot.
AM-43-S	M-43-S	40,000	S	Std. Pot.
AM-44-S	M-44-S	50,000	S	Std. Pot.
AM-45-W	M-45-W	50,000	W	Sc. Grid & Phono.
AM-46-Z	M-46-Z	50,000	Z	Auto Grid & Tone
AM-47-S	M-47-S	75,000	S	Std. Pot.
AM-48-V	M-48-V	75,000	V	C Bias Rheo.
AM-49-S	M-49-S	100,000	S	Std. Pot.
AM-51-Z	M-51-Z	100,000	Z	Audio & Tone
AM-52-S	M-52-S	200,000	S	Std. Pot.
AM-55-S	M-55-S	250,000	S	Std. Pot.
AM-64-Z	M-64-Z	250,000	Z	Audio & Tone
AM-57-S	M-57-S	300,000	S	Std. Pot.
AM-58-S	M-58-S	500,000	S	Std. Pot.
AM-59-Y	M-59-Y	500,000	Y	Audio Shunt
AM-60-Z	M-60-Z	500,000	Z	Audio & Tone
AM-79-Z	M-79-Z	750,000	Z	Audio & Tone
AM-61-S	M-61-S	1,000,000	S	Std. Pot.
AM-63-Z	M-63-Z	1,000,000	Z	Audio & Tone
AM-83-S	M-83-S	2,000,000	S	Std. Pot.
AM-66-Z	M-66-Z	2,000,000	Z	Tone & AVC
AM-84-S	M-84-S	2,500,000	S	Std. Pot.
AM-67-Z	M-67-Z	3,000,000	Z	Tone & AVC
AM-68-Z	M-68-Z	4,000,000	Z	Tone & AVC
AM-85-S	M-85-S	5,000,000	S	Std. Pot.
AM-69-Z	M-69-Z	5,000,000	Z	Tone & AVC
AM-86-S	M-86-S	10,000,000	S	Std. Pot.
AM-99-Z	M-99-Z	10,000,000	Z	Tone & AVC

LIST PRICE $1.25

Standard Packing — 10 (ten) per carton

SERIES "T" AND "AT" TAPPED CONTROLS

★ Tapped for most common needs. Composition element. Standard units listed. Series "T" incorporates factory-attached shaft. Series "AT" may be used with any Clarostat Pick-A-Shaft.

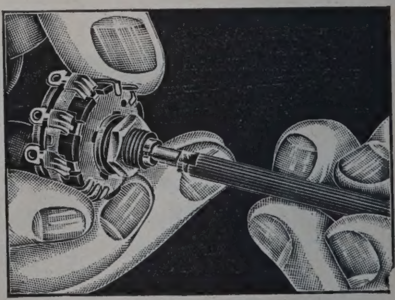


Cat. No.	Cat. No.	Ohms	Tap No. 1	Tap No. 2	Tap No. 3
AT-25	T-25	50,000		25,000	
AT-38	T-38	200,000			100.000
AT-39	T-39	250,000		25,000	
AT-42	T-42	250,000		125,000	
AT-43	T-43	250,000			50,000
AT-44	T-44	250,000	60,000		125,000
AT-45	T-45	250,000	30,000	60,000	
AT-60	T-60	350,000		25,000	
AT-69	T-69	350,000	75,000		
AT-70	T-70	350,000		75,000	
AT-78	T-78	500,000		100,000	
AT-80	T-80	500,000			100,000
AT-81	T-81	500,000	25,000		
AT-82	T-82	500,000			200,000
AT-88	T-88	500,000		50,000	
AT-90	T-90	500,000		250,000	
AT-92	T-92	500,000	100,000		300,000
AT-98	T-98	1,000,000	250,000		
AT-101	T-101	1,000,000		50,000	
AT-102	T-102	1,000,000	100,000		500,000
AT-103	T-103	1,000,000		100,000	
AT-109	T-109	1,000,000		225,000	
AT-110	T-110	1,000,000		170,000	
AT-111	T-111	1,000,000			200,000
AT-112	T-112	1,000,000		500,000	
AT-95	T-95	1,500,000	250,000		500,000
AT-125	T-125	1,500,000		350,000	
AT-114	T-114	2,000,000		100,000	
AT-115	T-115	2,000,000		500,000	
AT-116	T-116	2,000,000		1,000,000	
AT-118	T-118	2,000,000	20,000		
AT-119	T-119	2,000,000		200,000	
AT-120	T-120	2,000,000		400,000	
AT-121	T-121	2,000,000	250,000		500,000
AT-124	T-124	2,000,000	5,000		
AT-126	T-126	2,000,000	200,000		400,000
AT-129	T-129	2,000,000	15,000		
AT-123	T-123	2,500,000	250,000		500,000
AT-128	T-128	4,000,000		500,000	

LIST PRICE $1.85 (Without Switch)

For Power Switch, see Series SW listed below.
Standard Packing — 10 (ten) per carton

PICK-A-SHAFT CONTROLS



★ Clarostat Pick-A-Shaft, as shown at left may be used with any AM, AT, AK, or AG control. Easily attached in the field. Merely insert and tap lightly. Shaft locks securely and permanently.

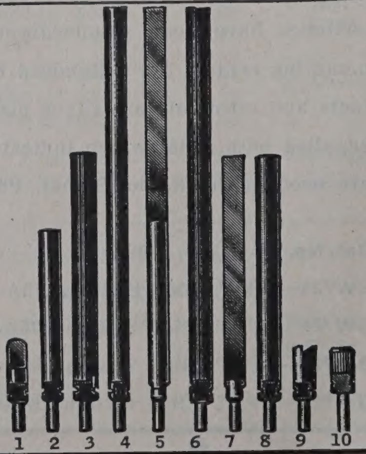
Choice of Pick-A-Shafts

★ A choice of Pick-A-Shafts (shown at right) covers all requirements, as follows:

Cat No.	Description
(1) SS-⅜" length	(Male) to take female fitting
(2) RS-2	Round shaft, 2" long
(3) KSS-3	Knurled, split shaft 3" lg.
(4) RS-5	Round shaft, 5" long
(5) FS-5	Flatted shaft, 5" long
(6) KSS-5	Knurled, split shaft, 5" lg.
(7) FS-3	Flatted shaft, 3" long
(8) RS-3	Round Shaft, 3" long
(9) DFS-½	Double flatted Philco Type ½" long
(10) FKS-¼	Fine knurled slotted shaft ¼" long

List price of each shaft..............................$0.30

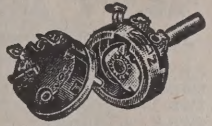
One selected shaft furnished FREE with each Pick-A-Shaft control.



CLAROSTAT

Original "AD-A-SWITCH" Feature for Series "M," "AM," "T," "AT" Controls

Cat. No.	Wiring	List Price
SW-A	Single-Pole Single-Throw.	$0.60
SW-A1	Three-Way, No "Off" position S.P.D.T.	.75
SW-A2	Double-Pole, Single-Throw..	.75
SW-A4	Four-Wire (to control A, B and C voltages)...........	.75
SW-A5	S.P.S.T. (reverse action)..	.75
SW-A6	S.P.S.T. with dummy lug..	.75



Ad-A-Switch is used in place of usual dust-protection cover, and lugs bend over to hold it in place.

DUAL SERIES DC CONTROLS

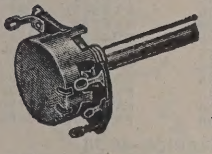
★ The Series DC controls are carbon dual units—two controls of the same resistance values and tapers, connected in tandem for joint operation.

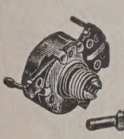
Cat. No.	Panel Unit	Rear Unit	Cat. No.	Panel Unit	Rear Unit
DC-34-S	10,000-S	25,000-S	DC-10-Z	500,000-Z	500,000-Z
DC-23-S	10,000-S	50,000-S	DC-11-Z	1,000,000-Z	1,000,000-Z
DC- 5-S	50,000-S	50,000-S	DC-35-S	1,000,000-S	1,000,000-S
DC- 6-Z	100,000-Z	100,000-Z	DC-36-S	2,000,000-S	2,000,000-S
DC-29-S	250,000-S	250,000-S	DC-37-S	5,000,000-S	5,000,000-S
DC- 8-Z	250,000-Z	250,000-Z			

LIST PRICE $3.10

Standard packing—Individual carton.

SERIES "K" AND "AK" TAPPED 15/16" DIAMETER CONTROLS





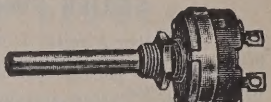
★ Series "K" Tapped Controls are of the composition-element type tapped at most commonly needed values. Factory equipped with 3" flatted shaft. Takes any one of Series SWB Ad-A-Switches. Series "AK" Controls same as Series "K" controls except offering the added advantage of Clarostat Pick-A-Shafts in addition to Ad-A-Switches.

Cat. No.	Cat. No.	Ohms	Tap No. 1	Tap No. 3
AK38	K38	200,000		100,000
AK43	K43	250,000		50,000
AK69	K69	350,000	75,000	
AK80	K80	500,000		100,000
AK81	K81	500,000	25,000	
AK82	K82	500,000		200,000
AK98	K98	1,000,000	250,000	
AK111	K111	1,000,000		200,000
AK118	K118	2,000,000	20,000	
AK124	K124	2,000,000	5,000	
AK129	K129	2,000,000	15,000	

LIST PRICE $1.85

Standard Packing—10 (ten) per carton.

ROTARY SWITCHES



★ Compact, positive contact, bakelite, molded and Underwriters' approved. Rated 1 amp. 250 volt; 3 amp. 125 volt. The physical dimensions of the switch are as follows:

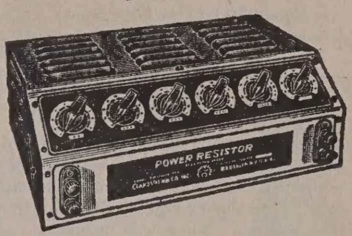
Diameter 1$\frac{3}{32}$", body depth $\frac{9}{16}$", lug protrusion ¼", locking projection on a $\frac{17}{32}$" radius, rotation for actuation 30 degrees. All standard stock numbers have ⅜" bushing, 1½" shaft, and 1 locking projection.

Cat. No.	Switch Description	List Price
8590	Single Pole Single-Throw	$0.60
8591	Single Pole Bussing Lug	.75
8592	Double Pole Single Throw	.75
8593	Single Pole Double Throw	.75
8594	Single Pole Reversed Action	.75
8595	Four Wire Single Throw	.75

Standard packing 10 (ten) per carton.

POWER RESISTOR DECADE BOX

★ For power resistance measurements under actual load. Any value from 1 ohm to 999,999 ohms in steps of 1 ohm. No resistance breakdown between steps. Power rating of 225 watts and maximum voltage of 1000 volts DC and 660 volts AC. Heavy gauge metal case in frosted gray wrinkle, and etched panel.

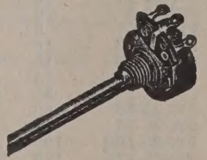


Dimensions: 13 in. long; 8½ in. deep; 5¾ in. high. Weight, 11 lbs. Suggested Uses: Resistance determination. Load Resistance. Meter Multiplier. Calibrating Meters. Providing any desired ohmage as a universal power resistor.

List Price $90.00

SERIES "G" AND "AG" 15/16" DIAMETER CONTROLS

★ Series "G" Composition element controls fill most commonly needed values. Any Series SWB switch may be added. Series "AG" controls same as Series "G" except utilizes Pick-A-Shaft construction in addition to Ad-A-Switch.



Cat. No.	Cat. No.	Ohms	Curve	Suggested Use
AG-5-S	G-5-S	500	S	Std. Pot.
AG-8-S	G-8-S	1,000	S	Std. Pot.
AG-11-S	G-11-S	2,000	S	Std. Pot.
AG-15-S	G-15-S	3,000	S	Std. Pot.
AG-80-S	G-80-S	4,000	S	Std. Pot.
AG-19-S	G-19-S	5,000	S	Std. Pot.
AG-23-S	G-23-S	7,500	S	Std. Pot.
AG-27-S	G-27-S	10,000	S	Std. Pot.
AG-30-V	G-30-V	10,000	V	C Bias Rheo.
AG-31-W	G-31-W	10,000	W	Sc. Grid & Phono.
AG-81-Z	G-81-Z	10,000	Z	Ant. Shunt
AG-32-S	G-32-S	15,000	S	Std. Pot.
AG-34-V	G-34-V	15,000	V	C Bias Rheo.
AG-35-W	G-35-W	15,000	W	Sc. Grid & Phono.
AG-36-S	G-36-S	20,000	S	Std. Pot.
AG-40-S	G-40-S	25,000	S	Std. Pot.
AG-41-W	G-41-W	25,000	W	Sc. Grid & Phono.
AG-72-V	G-72-V	25,000	V	C Bias Rheo.
AG-42-S	G-42-S	30,000	S	Std. Pot.
AG-43-S	G-43-S	40,000	S	Std. Pot.
AG-44-S	G-44-S	50,000	S	Std. Pot.
AG-45-W	G-45-W	50,000	W	Sc. Grid & Phono.
AG-46-Z	G-46-Z	50,000	Z	Audio & Tone

Cat. No.	Cat. No.	Ohms	Curve	Suggested Use
AG-47-S	G-47-S	75,000	S	Std. Pot.
AG-48-V	G-48-V	75,000	V	C Bias Rheo
AG-49-S	G-49-S	100,000	S	Std. Pot.
AG-51-Z	G-51-Z	100,000	Z	Audio & Tone
AG-52-S	G-52-S	200,000	S	Std. Pot.
AG-55-S	G-55-S	250,000	S	Std. Pot.
AG-64-Z	G-64-Z	250,000	Z	Audio & Tone
AG-57-S	G-57-S	300,000	S	Std. Pot.
AG-58-S	G-58-S	500,000	S	Std. Pot.
AG-60-Z	G-60-Z	500,000	Z	Audio & Tone
AG-79-Z	G-79-Z	750,000	Z	Audio & Tone
AG-61-S	G-61-S	1,000,000	S	Std. Pot.
AG-63-Z	G-63-Z	1,000,000	Z	Audio & Tone
AG-66-Z	G-66-Z	2,000,000	Z	Audio & Tone
AG-83-S	G-83-S	2,000,000	S	Std. Pot.
AG-84-S	G-84-S	2,500,000	S	Std. Pot.
AG-67-Z	G-67-Z	3,000,000	Z	Audio & Tone
AG-68-Z	G-68-Z	4,000,000	Z	Audio & Tone
AG-69-Z	G-69-Z	5,000,000	Z	Audio & Tone
AG-85-S	G-85-S	5,000,000	S	Std. Pot.

LIST PRICE $1.25

Standard Packing—10 (ten) per carton.

CLAROSTAT

SERIES SWB AD-A-SWITCH FOR "G," "AG," "K" AND "AK" CONTROLS

For the first time a switch is offered for installation in the field to popular-sized 15/16" controls. Now the serviceman does not have to stock all the popular controls in duplication—with switches and without switches.

These switches add to all Clarostat Series K, AK, G and AG controls in a matter of seconds for a permanent, excellent assembly. All are rated at 5 amperes at 125 Volts A.C.

AD-A-SWITCH Feature for "G," "AG," "K," "AK" Controls

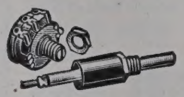
These Switches are rated 5 Amperes at 125 Volts A.C.

Cat. No.	Wiring	List Price
SWB	—Single Pole Single Throw	$0.60
SWB-1	—Threeway No "Off" Position S.P.D.T.	.75
SWB-2	—Double Pole Single Throw	.75

Standard Packing—10 (ten) per carton.

★ Handy, inexpensive, ceramic-cased midget wire-wound resistors for tight spots, especially with point-to-point wiring. These tiny resistors take the place of more cumbersome and costlier bracket-mounted units. This "junior" version of the well-known Greenohm power resistors features a wire winding on fibre-glass core, 1½" axial pigtail leads, and a steatite protective casing sealed with exclusive Greenohm cold-setting inorganic cement. This resistor will not blister, crack, or change shape. Type C7GJ, 1¾" long by 5/16" dia., rated at 7 watts. Smaller Type C4GJ, 1" long by 5/16" dia., rated at 4 watts. In characteristic Greenohm green, with printed values on casing.

Cat. No.	List Price
Type C7GJ (1 to 5000 ohms)	$0.55
Type C4GJ (1 to 1000 ohms)	.55



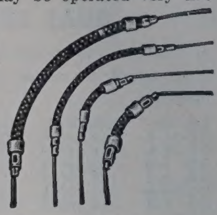
Pick-A-Shaft High-Voltage Coupler

May be used with Clarostat Pick-A-Shaft Controls Types AT and AM, AG and AK.

Cat. No.		List Price
59-186	Spacer and Bushing Assembly	$1.00
RN-3"	Non-Metallic Shaft, (Round)	$0.85

GLASOHMS*

★ A resistance wire-winding on a fibre-glass core. Covering of braided glass-fibre. Completely flexible. May be operated very hot as there is nothing to char. Handy and inexpensive.



TYPE FYG — 2-WATT

1" Fabric Length with 2" Pigtails

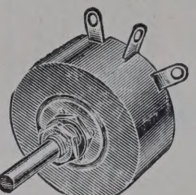
⅛" dia. core. RMA Color-coded

Cat. No.	Ohms	Cat. No.	Ohms
FYG5	5	**FYG350**	350
FYG10	10	**FYG375**	375
FYG15	15	**FYG400**	400
FYG25	25	**FYG500**	500
FYG35	35	**FYG600**	600
FYG40	40	**FYG700**	700
FYG50	50	**FYG750**	750
FYG60	60	**FYG800**	800
FYG75	75	**FYG850**	850
FYG100	100	**FYG900**	900
FYG125	125	**FYG1000**	1000
FYG150	150	**FYG1250**	1250
FYG200	200	**FYG1500**	1500
FYG225	225	**FYG1600**	1600
FYG250	250	**FYG1750**	1750
FYG300	300	**FYG2000**	2000

LIST PRICE $0.30

Standard Packing—10 (ten) per carton.

POWER RHEOSTATS



★ Exceptionally rugged. Trouble-free design. Withstands severe overloading without smoking, burning, charring. Element imbedded in cold-setting cement. Resistance winding supported on insulated metal core for maximum heat conduction and radiation, even at partial rotation settings. Single-hole mounting. Adjustable locking pin firmly anchors unit against bodily rotation. Shaft and bushing insulated from current-carrying arm for safety. 25 and 50 watt sizes.

Series PW-25—25 Watt

Cat. No.	Total Resis. Ohms	Max. Cur. at Total Res. Amps.	Max. Cur. Up to ⅓ Res. Amps.	List Price
PW-25-1	1	5.000	7.500	$5.85
PW-25-2	2	3.536	5.304	5.20
PW-25-3	3	2.887	4.330	5.20
PW-25-6	6	2.041	3.062	5.20
PW-25-8	8	1.768	2.652	5.20
PW-25-10	10	1.581	2.372	5.20
PW-25-15	15	1.291	1.936	5.20
PW-25-25	25	1.000	1.500	5.20
PW-25-35	35	.845	1.268	5.20
PW-25-50	50	.707	1.061	5.20
PW-25-75	75	.577	.866	5.20
PW-25-100	100	.500	.750	5.20
PW-25-125	125	.447	.671	5.20
PW-25-175	175	.378	.567	5.20
PW-25-250	250	.316	.474	5.20
PW-25-350	350	.267	.401	5.20
PW-25-500	500	.224	.335	5.20
PW-25-750	750	.183	.274	5.20
PW-25-1000	1000	.158	.237	5.85
PW-25-1500	1500	.129	.194	5.85
PW-25-2500	2500	.100	.150	5.85
PW-25-3500	3500	.085	.127	6.20
PW-25-5000	5000	.071	.107	6.50

Standard Packing—Individual Carton

Series PW-50—50 Watt

Cat. No.	Total Resis. Ohms	Max. Cur. at Total Res. Amps.	Max. Cur. Up to ⅓ Res. Amps.	List Price
PW-50-0.5	0.5	10.000	15.000	$6.50
PW-50-1	1	7.071	10.607	6.50
PW-50-2	2	5.000	7.500	6.50
PW-50-4	4	3.536	5.304	5.85
PW-50-6	6	2.887	4.330	5.85
PW-50-8	8	2.500	3.750	5.85
PW-50-12	12	2.041	3.062	5.85
PW-50-16	16	1.768	2.652	5.85
PW-50-22	22	1.508	2.261	5.85
PW-50-35	35	1.195	1.793	5.85
PW-50-50	50	1.000	1.500	5.85
PW-50-80	80	.791	1.186	5.85
PW-50-125	125	.632	.949	5.85
PW-50-150	150	.577	.866	5.85
PW-50-225	225	.471	.707	5.85
PW-50-300	300	.408	.612	5.85
PW-50-500	500	.316	.474	5.85
PW-50-800	800	.250	.375	6.20
PW-50-1000	1000	.224	.335	6.20
PW-50-1600	1600	.177	.265	6.20
PW-50-2500	2500	.141	.212	6.20
PW-50-3500	3500	.120	.179	6.50
PW-50-5000	5000	.100	.150	6.50

Standard Packing—Individual Carton

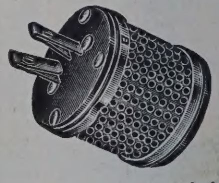
CLAROSTAT SPECIAL ITEMS

★ Clarostat Mfg. Co. Inc. is now the leading manufacturer of precision wire-wound and composition-element controls. This type of item is not listed herewith. However, engineering bulletins and technical data are available upon request.

Clarostat Mfg. Co., Inc. is now engaged in a miniaturization program and controls of either wire-wound or composition element as small as ⅝" diameter are available.

Clarostat precision controls are available as single units or multiple units. Special mechanical requirements such as bushings, water-tight bushings, slip-drives, etc., can be met by Clarostat. The Clarostat engineering department will give prompt and full attention to any control problems you may wish to submit.

AUTOMATIC LINE-VOLTAGE REGULATORS



★ A device that minimizes line-voltage surges or increases up to 140 volts. Does not raise voltage. At the normal 110-volt line voltage the resistance of the unit is low and the voltage drop across it is negligible. However, as the line voltage increases, the resistance of the unit increases proportionately, with a constant increase in voltage drop across it. This control operates on the ballast action principle.

Dimensions are 1¾" dia. x 1¾" long.

Standard female and male receptacle.

Standard packing—Ten (10) to a carton.

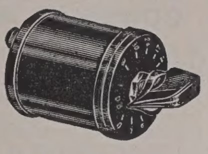
CLAROSTAT

CONSTANT IMPEDANCE OUTPUT ATTENUATORS

Series CIB—10 Watts

Cat. No.	Resistance in Ohms
CIB-6	6
CIB-8	8
CIB-15	15
CIB-50	50
CIB-200	200
CIB-250	250
CIB-500	500
CIB-600	600

Net Price **$6.50***



db steps are 3, 6, 9, 12, 15, 18, 21, 24 and 30. Absolutely noiseless and distortionless in operation.

★ Developed to meet the need for a constant-impedance attenuator capable of handling considerable power without measurable insertion loss, Series CIB attenuators provide linear attenuation with ample power-handling capacity.

These units are rated at 10 watts when used on DC or constant frequency signals. However, they have successfully been used up to 30 watts on audio circuits.

Compact, capable of safely handling the rated wattages at any setting of the dial, these units are recommended as an output level control for power amplifiers or as an input attenuator for individual or group speakers in a public address system. Linear attenuation is provided in steps of 3 decibels up to 30, with final step to infinity.

Unit is furnished in black baked-enamel metal casing, 2" in diameter by 2¾" long, equipped with dial plate and bar knob. Not available with power switch. One-hole mounting ⅜" diameter bushing. Shaft 1" long.

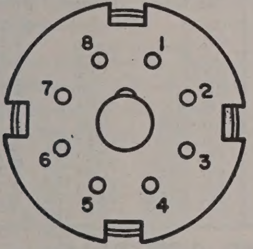
CLAROSTAT RTV PROGRAM

★ Clarostat has made available through their distributors the most comprehensive and complete program for identification and supply of television controls and resistors. This program includes the availabillity of over 99% of all controls used in 2500 different TV receivers.

These exact-duplicate replacement controls are factory-assembled, ready-to-install units.

Complete cross-reference manuals and supplements are available through Clarostat distributors. Listings as to the frequency of use of the various units are included to prevent the overstocking of the less popular models.

TUBE-TYPE WIRE-WOUND RESISTORS



★ Clarostat developed and pioneered the tube-type resistor for voltage-reducing purposes and for supplying needed voltage for pilot lamp operation in AC-DC receivers. Strictly non-inflammable, with the resistance element wound on a mica form firmly secured in the metal tube and connected with the base prongs, the Clarostat construction is notably superior to others.

To simplify servicing of receivers using tube-type resistors, Clarostat has selected the most popular values for so-called Universal numbers serving most replacement needs. Standard resistor tubes of the most popular types are also listed below.

In connection with listings, the following nomenclature applies: Prefixes: K denotes 6.3 volt 150 ma. No. 40 pilot lamp.

L denotes 6.3 volt 250 ma. No. 46 pilot lamp.

M denotes 6.3 volt 200 ma. No. 51 pilot lamp.

The numeral indicates total voltage drop across resistance unit.

Suffixes designate:
A—No pilot lamp taps.
B—1 pilot lamp tap for 1 lamp.
C —1 pilot lamp tap for 2 lamps.
D —2 pilot lamp taps for 2 lamps.
E —3 pilot lamp taps for 3 lamps.
E1—1 pilot lamp tap for 3 lamps.
F —1 pilot lamp tap for 1 lamp.
G —1 pilot lamp tap for 2 pilot lamps. (Tapped sections isolated from main reducing body.)

H —2 pilot lamp taps for 2 pilot lamps. (Tapped section isolated from main reducing body.)

The letter "J" following any of the suffixes denotes a shorted connection between 2 prongs of the tube, i.e., K-67-BJ, the short is located between Nos. 3 and 4 prongs.

Care must be exercised when replacing any tube whose number ends in "J", as the shorted pins are not always as in above example. Some are between Nos. 6 and 7 prongs, and others between 5 and 3.

When replacing any plug-in resistor tube with a Clarostat Universal type, note prongs missing on replaced tube and cut off corresponding prongs on the Universal Replacement tube.

The numeral indicates total voltage drop across resistance unit.

Standard Resistor Tubes

Cat. No.
BK-29-B
BK-29-D
BK-32-D
BK-36-B
BK-36-D
BK-36-H
BK-42-B
BK-42-C
BK-49-B
BK-49-C
BK-55-B
BK-67-BJ
BL-42-B
BL-42-D
BM-49-B
BM-55-B
K-26J-218
K-36-D
K-42-A
K-42-AJ
K-42-B
K-42-C
K-42-D
K-49-A
K-49-B
K-49-C
K-49-D
K-49-H
K-55-A
K-55-B
K-55-C
K-55-CPR
K-55-D
K-55-H
K-67-A
K-67-B
K-67-BJ
K-72-B

Cat. No.
K-74-B
K-80-B
K-82-B
K-86-B
K-90-A
K-90-B
K-92-A
K-92-B
L-42-B
L-42-C
L-42-D
L-49-A
L-49-B
L-49-C
L-49-D
L-49-H
L-55-B
L-55-CJ
L-55-C
L-55-CPR
L-55-D
M-30-H
M-42-B
M-49-B
M-55-B
M-55-H
M-80-B
M-86892-9
10-610
100-37
100-70
100-76
100-77
100-79
115-78
5459
28602
43X106

List Price..........**$1.00**
Standard Packing —
10 per carton

UNIVERSAL RESISTOR TUBES

Universal Tube No.	Replaces AC-DC Tubes Beginning with Letters	Having Numbers From	Ending in Letter
10—23-A	BK, BL, K, L, M	10 to 23	A, B, C, D
10—23-E	BK, BL, K, L, M	10 to 23	E
10—23-F	BK, BL, K, L, M	10 to 23	F, G, H
23—55-A	BK, BL, K, L, M	23 to 55	A, B, C, D
23—55-E	BK, BL, K, L, M	23 to 55	E
23—55-F	BK, BL, K, L, M	23 to 55	F, G, H
60—92-A	BK, BL, K, L, M	60 to 92	A, B, C, D
60—92-E	BK, BL, K, L, M	60 to 92	E
60—92-F	BK, BL, K, L, M	60 to 92	F, G, H
92—105-A	BK, BL, K, L, M	92 to 105	A, B, C, D

List Price..........................**$1.50**
Standard Packing — 10 (ten) per carton

TELEVISION BALLASTS

	List Price
B9M16067 for Belmont Television	$3.00
B9M16534 for Belmont Television	3.00
B9M15822 for Belmont Television	3.00
B9M17571 for Belmont Television	3.00
B9M18941 for Belmont Television	3.00
17A470303 for Motorola Television	3.00
17A485459 for Motorola Television	3.00
TBR 102D for Teletone Television	3.00
TBR 103D for Teletone Television	3.00
TBR 104D for Teletone Television	3.00

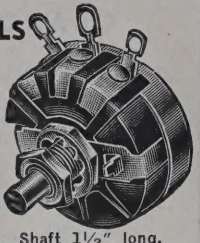
	List Price
*397021 for Emerson Television	$3.00
*397022 for Emerson Television	3.00
*397023 for Emerson Television	3.00
*397036 for Emerson Television	1.25
ST507300 for Stewart-Warner Television	3.00
35-37 for Pilot Television	3.00

* These Emerson ballast tubes are used as protective resistors and any internal failure in the circuit may burn them out. Therefore, this unit is expendable.

CLAROSTAT

SERIES 58 WIRE-WOUND CONTROLS

★ Sturdy and reliable, yet capable for delicate control use. Noiseless in operation. Ideal for radio and laboratory work. Switch position at extreme counter-wise direction. Tested at 500 Volts A.C.



Shaft 1½″ long. ⅜″ bushing.

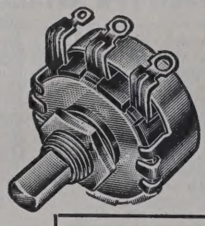
Cat. No.	Res. Ohms	List	Cat. No.	Res. Ohms	List
58-1	1	$1.25	58-15	15	1.25
58-2	2	1.25	58-20	20	1.25
58-4	4	1.25	58-25	25	1.25
58-6	6	1.25	58-30	30	1.25
58-10	10	1.25			

Cat. No.	Res. Ohms	List	Cat. No.	Res. Ohms	List
58-40	40	$1.25	58-2000	2000	$1.25
58-50	50	1.25	58-2500	2500	1.25
58-60	60	1.25	58-3000	3000	1.25
58-75	75	1.25	58-5000	5000	1.25
58-100	100	1.25	58-7500	7500	1.25
58-200	200	1.25	58-10K	10,000	1.25
58-300	300	1.25	58-15K	15,000	1.60
58-400	400	1.25	58-20K	20,000	1.60
58-500	500	1.25	58-25K	25,000	1.60
58-750	750	1.25	58-30K	30,000	2.25
58-1000	1000	1.25	58-40K	40,000	2.25
58-1500	1500	1.25	58-50K	50,000	2.25

Power switch attached at factory. Designate with "S." S.P.S.T. standard. If other type desired, state so.

SERIES 43 WIRE-WOUND CONTROLS

★ Space-saving wire-wound type. Winding on bakelite strip. Rotor sweeps inside of winding. Molded bakelite housing. 1⅛″ dia. x 9/16″ body depth. ⅞″ deep with switch. ⅜″ bushing. Switch attached at factory.

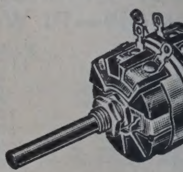


Resistance Ohms	Current-carrying Capacity in Ma.	Type No. Without Switch	Type No. With Switch
5	630	43-5	43S-5
10	450	43-10	43S-10
20	320	43-20	43S-20
25	280	43-25	43S-25
30	260	43-30	43S-30
40	225	43-40	43S-40
50	200	43-50	43S-50
75	165	43-75	43S-75
100	140	43-100	43S-100
150	115	43-150	43S-150
200	100	43-200	43S-200
300	90	43-300	43S-300
400	70	43-400	43S-400
500	65	43-500	43S-500
750	55	43-750	43S-750
1,000	45	43-1000	43S-1000
1,500	37	43-1500	43S-1500
2,000	31	43-2000	43S-2000
2,500	28	43-2500	43S-2500
3,000	26	43-3000	43S-3000
4,000	22	43-4000	43S-4000
5,000	20	43-5000	43S-5000
7,500	16	43-7500	43S-7500
10,000	14	43-10000	43S-10000

LIST PRICE $1.25. With switch $1.85
Standard packing — 10 (ten) per carton.

CONSTANT IMPEDANCE CONTROLS

★ Self-compensating volume controls or attenuators known as L-pads and T-pads are essential in eliminating the distortion that arises from the mismatching of impedances in broadcast transmission, sound recording or public address systems. With Clarostat constant-impedance L-pads and T-pads the input and output impedances of associated equipment in a circuit can be kept within the limits of a constant required value.



These pads have a continuous range from 0.5 to 30 decibels attenuation in 90% of rotation, the last 10% affording infinite attenuation. Employable at either the source or the load in a circuit (see diagrams) these units are readily one-hole mounted. They afford a wide range of uses as mixers, faders, multiple-speaker controls, etc. Such controls can be used as individual volume controls for multiple-speaker systems, without affecting or changing the source impedance.

These units are rated at 2½ watts when used on DC or constant frequency signals. However, they have successfully been used up to 10 watts on audio circuits.

SERIES CIT
Wire-Wound T-Pads

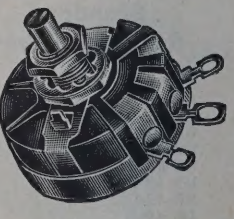
Cat. No.	Resistance in Ohms	List Price
CIT-4	4	$4.25
CIT-6	6	4.25
CIT-8	8	4.25
CIT-15	15	4.25
CIT-50	50	4.25
CIT-100	100	4.25
CIT-200	200	4.25
CIT-250	250	4.25
CIT-500	500	4.25
CIT-600	600	4.25
CIT-1000	1000	4.25
CIT-2000	2000	4.25

SERIES CIL
Wire-Wound L-Pads

Cat. No.	Resistance in Ohms	List Price
CIL-4	4	$3.75
CIL-6	6	3.75
CIL-8	8	3.75
CIL-15	15	3.75
CIL-50	50	3.75
CIL-100	100	3.75
CIL-200	200	3.75
CIL-250	250	3.75
CIL-500	500	3.75
CIL-600	600	3.75
CIL-1000	1000	3.75
CIL-2000	2000	3.75

SERIES 10 WIRE-WOUND CONTROLS

★ Series 10 wire-wound controls rated at 4 watts. All units are of linear taper. Molded bakelite case same dimensions as Series 58 with the exception of depth which measures 31/32″. Switch units attached at factory. Can be ordered in any ohmage from 1 ohm to 100K ohms. For example if a 4-watt 100-ohm control is desired it would be ordered as a 10-100 ohm. For prices on Series 10 add 60c to the list on the Series 58 control. For Series 10S controls, add the price of the switch to the price of the Series 10 controls. In accordance with RTMA standards, overall tolerances are plus/minus 10% for all values.



Cat. No. Without Switch	Cat. No. With Switch	Resistance in Ohms	List Price
10-75K	10S-75K	75,000	$3.50
10-100K	10S-100K	100,000	3.50

GREENOHM KIT

★ Wall Card holding 20 most popular size 10-watt Greenohm resistors. As units are removed, value appears on card for reordering. Metal clips afford easy mounting of units replaced. Dimensions: 10½″ x 12″.

Cat. No. GK-1 — List Price $11.00

Wall card contains Wire-Wound Fixed Power Resistors as follows:

1 each............. 25 ohms
1 each............. 250 ohms
2 each............. 500 ohms
1 each............. 750 ohms
2 each............. 1,000 ohms
1 each............. 1,250 ohms
1 each............. 1,500 ohms
1 each........... 2,000 ohms
1 each........... 2,500 ohms
2 each........... 5,000 ohms
1 each........... 7,500 ohms
2 each........... 10,000 ohms
1 each........... 12,500 ohms
2 each........... 15,000 ohms
1 each........... 25,000 ohms

TV TUBE BEAM BENDERS

★ Initial equipment with most leading TV receiver manufacturers. Available in either single or double magnet types. Spring collar provides mounting on tube neck. No screws to titghten.

TV-3 Double Magnet for Use with the Following Tubes

10BP4
10BP4A
10EP4
10MP4
12JP4
12LP4
12TP4
12UP4
12UP4A
12UP4B
12VP4
14BP4
14DP4
15CP4
16AP4
16AP4A
16CP4
16DP4
16DP4A
16EP4
16EP4A
16EP4B
16HP4
16HP4A
16JP4
16KP4
16KP4A
16LP4
16LP4A
16MP4
16QP4
16QP4A
16RP4
16SP4
16SP4A
16SPA4
16WP4
19DP4A
19EP4
19FP4
16WP4A
16XP4
16ZP4
19DP4

For all tubes requiring two bends in beam.

LIST PRICE........$3.00 Standard Packing — Individual Carton

TV-2 Single Magnet for Use with the Following Tubes

12LP4A
12QP4
12QP4A
12RP4
14CP4
14EP4
15DP4
16CP4A
16FP4
16GP4
16GP4A
16GP4B
16TP4
16UP4
16VP4
16YP4
17AP4
17BP4
17CP4
19AP4
19AP4A
19AP4B
19AP4C
19BP4
19BP4A
19DP4
19DP4A
19EP4
19FP4
19GP4
19JP4
20CP4
20DP4
22AP4
22AP4A
24AP4
24AP4A
30BP4

For all tubes requiring only one bend in beam.

LIST PRICE........$2.00 Standard Packing — Individual Carton

CLAROSTAT

GREENOHM POWER RESISTORS—FIXED VALUES

SERIES PR-5-F—5-WATT

Dimensions: $\frac{5}{16}$" dia. x 1" long.

The baby member of the famous Clarostat Greenohm family. Available in standard resistance value from 1 ohm to 10,000 ohms (See exact values in listings for **Series AC-10-F** up to 10,000).

All ohmages......................List Price $0.50
Standard Packing — 10 (ten) per carton.

Series AC-10-F—10-Watt

Dimensions: $\frac{5}{16}$" dia. x 1¾" long

Ohms	Ohms	Ohms	Ohms
1	125	1200	10000
2	150	1250	11000
3	200	1500	12000
4	225	1750	12500
5	250	2000	13500
7.5	300	2250	14500
10	350	2500	15000
12	400	3000	16000
15	450	3500	17500
20	500	4000	18000
25	600	4500	20000
30	700	5000	22500
35	750	6000	25000
40	800	7000	30000
50	900	7500	35000
75	1000	8000	40000
100	1100	8500	50000
		9000	

All ohmages — List Price $0.55
Standard Packing — 10 (ten) per carton

Series AC-20-K—20-Watt

Dimensions: $\frac{9}{16}$" dia. x 2" long

Ohms	Ohms	Ohms	Ohms
	800	6000	65000
5	850	7000	70000
10	1000	7500	75000
25	1200	8000	80000
50	1250	9000	85000
75	1500	10000	90000
100	1750	12500	95000
150	1850	15000	100000
200	2000	20000	
250	2250	25000	
300	2500	30000	
350	2750	35000	
400	3000	40000	
500	3500	45000	
650	4000	50000	
700	4500	55000	
750	5000	60000	

LIST PRICE:

5 to 15,000 ohms....	$0.65
20,000 to 50,000 ohms....	.85
55,000 to 100,000 ohms....	1.10

Standard Packing — 5 (five) per carton

Series A-25-K—25-Watt

Dimensions: $\frac{9}{16}$" dia. x 2½" long

Ohms	Ohms	Ohms	Ohms	Ohms
1	150	2250	10000	75000
2	200	2500	12000	80000
3	250	3000	15000	85000
5	300	3500	20000	90000
7.5	400	4000	25000	100000
10	500	4500	30000	
15	750	5000	35000	
20	800	6000	40000	
25	1000	7000	45000	
50	1250	7500	50000	
75	1500	8000	60000	
100	2000	9000	70000	

LIST PRICES:

1 to 5000 ohms	$0.75
6000 to 15000 ohms	.85
20000 to 50000 ohms	1.00
60000 ohms	1.15
70000 ohms	1.25
75000 ohms	1.30
80000 ohms	1.35
85000 ohms	1.50
90000 ohms	1.60
100000 ohms	1.75

Supplied with Mounting Brackets at No Extra Cost
Standard Packing — Individually Boxed

Series K-40-N—40-Watt

Dimensions: ¾" dia. x 3½" long

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
5	125	1000	7500	35000	125000
10	150	1500	8500	40000	150000
15	200	2000	10000	50000	175000
20	250	2500	12500	60000	200000
25	300	3000	15000	70000	
50	400	4000	20000	80000	
75	500	5000	25000	90000	
100	750	6000	30000	100000	

LIST PRICES:

5 to 5000 ohms	$0.90
6000 to 25000 ohms	1.00
30000 to 100000 ohms	1.20
125000 to 150000 ohms	1.40
175000 ohms	1.50
200000 ohms	1.60

Supplied with Mounting Brackets at No Extra Cost

Standard Packing—Individually Boxed

ADJUSTABLE GREENOHM RESISTORS

Series AC-10-FA—10-Watt

Dimensions: $\frac{5}{16}$" dia. x 1¾" long

Ohms	Ohms	Ohms	Ohms
1	100	1000	6000
2	150	1250	7000
3	200	1500	7500
5	250	2000	8000
7.5	300	2250	8500
10	350	2500	9000
15	400	3000	10000
20	500	3500	
25	600	4000	
50	750	4500	
75	800	5000	

LIST PRICE: All Sizes $0.85

Standard Packing—10 (ten) per carton

Series A-25-KA—25-Watt

Dimensions: $\frac{9}{16}$" dia. x 2½" long

Ohms	Ohms	Ohms	Ohms
1	100	1500	7500
2	150	2000	8000
3	200	2250	9000
5	250	2500	10000
7.5	300	3000	12000
10	400	3500	15000
15	500	4000	20000
20	750	4500	25000
25	800	5000	50000
50	1000	6000	
75	1250	7000	

LIST PRICES:

1 to 5000 ohms........	$0.95
6000 to 15000 ohms........	1.10
20000 to 25000 ohms........	1.25
50000 ohms	1.50

Supplied with Mounting Brackets at No Extra Cost.
Extra Slider Bands......$0.10 each
Standard Packing — Individually Boxed

Ohms	Series K-50-N ¾" dia. x 4½" l. 50-watt	Series K-80-N ¾" dia. x 6½" l. 80-watt	Series K-100-W 1⅛" dia. x 6½" l. 100-watt	Series K-160-W 1⅛" dia. x 8½" l. 160-watt	Series K-200-W 1⅛" dia. x 10½" 1 200-watt
5	$1.10	$1.25	$1.75	$2.25	$2.50
10	1.10	1.25	1.75	2.25	2.50
25	1.10	1.25	1.75	2.25	2.50
50	1.10	1.25	1.75	2.25	2.50
75	1.10	1.25	1.75	2.25	2.50
100	1.10	1.25	1.75	2.25	2.50
150	1.10	1.25	1.75	2.25	2.50
200	1.10	1.25	1.75	2.25	2.50
250	1.10	1.25	1.75	2.25	2.50
300	1.10	1.25	1.75	2.25	2.50
400	1.10	1.25	1.75	2.25	2.50
500	1.10	1.25	1.75	2.25	2.50
750	1.10	1.25	1.75	2.25	2.50
1,000	1.10	1.25	1.75	2.25	2.50
1,250	1.10	1.25	1.75	2.25	2.50
1,500	1.10	1.25	1.75	2.25	2.50
2,000	1.10	1.25	1.75	2.25	2.50
2,250	1.10	1.25	1.75	2.25	2.50
2,500	1.10	1.25	1.75	2.25	2.50
3,000	1.10	1.25	1.85	2.25	2.50
3,500	1.10	1.25	1.85	2.25	2.50
4,000	1.10	1.25	1.85	2.25	2.50
4,500	1.10	1.25	1.95	2.25	2.50
5,000	1.10	1.25	1.95	2.25	2.50
6,000	1.35	1.50	1.95	2.25	2.50
7,500	1.35	1.50	1.95	2.25	2.50
8,000	1.35	1.50	1.95	2.25	2.50
9,000	1.35	1.50	1.95	2.25	2.50
10,000	1.35	1.50	1.95	2.25	2.50
12,000	1.35	1.50	1.95	2.30	2.75
12,500	1.35	1.50	1.95	2.35	2.85
15,000	1.35	1.50	1.95	2.65	3.00
20,000	1.35	1.50	1.95	2.65	3.00
25,000	1.35	1.50	1.95	2.65	3.00
30,000	1.70	1.75	2.50	2.65	3.00
35,000	1.70	1.75	2.50	2.65	3.00
40,000	1.70	1.75	2.50	2.65	3.00
50,000	1.70	1.75	2.50	2.65	3.00
60,000	1.70	2.00	2.75	3.00	3.00
70,000	1.70	2.00	2.75	3.00	3.00
75,000	1.70	2.00	2.75	3.00	3.00
80,000	1.70	2.10	2.85	3.00	3.00
100,000	1.70	2.25	3.00	3.00	3.00
125,000	2.00		3.10	3.20	3.75
150,000	2.25		3.25	3.50	3.75
175,000	2.25		3.35		
200,000	3.00		3.75		

All resistors furnished with mounting brackets at no extra cost.
Standard Packing — Individually Boxed.

ADJUSTABLE GREENOHM RESISTORS

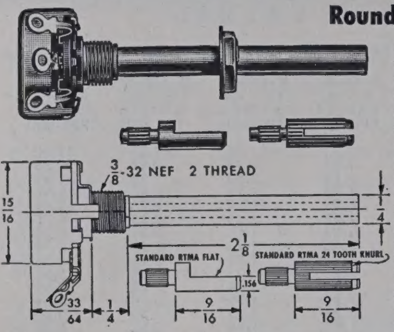
Ohms	Series K-50-NA ¾" dia. x 4½" l. 50-watt	Series K-80-NA ¾" dia. x 6½" l. 80-watt	Series K-100-WA 1⅛" dia. x 6½" l. 100-watt	Series K-160-WA 1⅛" dia. x 8½" l. 160-watt	Series K-200-WA 1⅛" dia. x 10½" 1 200-watt
5	$1.50	$1.75	$2.00	$2.50	$3.00
10	1.50	1.75	2.00	2.50	3.00
15	1.50	1.75	2.00	2.50	3.00
20	1.50	1.75	2.00	2.50	3.00
25	1.50	1.75	2.00	2.50	3.00
50	1.50	1.75	2.00	2.50	3.00
75	1.50	1.75	2.00	2.50	3.00
100	1.50	1.75	2.00	2.50	3.00
150	1.50	1.75	2.00	2.50	3.00
200	1.50	1.75	2.00	2.50	3.00
250	1.50	1.75	2.00	2.50	3.00
300	1.50	1.75	2.00	2.50	3.00
400	1.50	1.75	2.00	2.50	3.00
500	1.50	1.75	2.00	2.50	3.00
750	1.50	1.75	2.00	2.50	3.00
1,000	1.50	1.75	2.00	2.50	3.00
1,250	1.50	1.75	2.00	2.50	3.00
1,500	1.50	1.75	2.00	2.50	3.00
2,000	1.50	1.75	2.00	2.50	3.00
2,500	1.50	1.75	2.00	2.50	3.00
3,500	1.50	1.75	2.25	2.50	3.00
4,000	1.50	1.75	2.25	2.50	3.00
4,500	1.50	1.75	2.25	2.50	3.00
5,000	1.50	1.75	2.25	2.65	3.25
6,000	1.75	2.00	2.25	2.65	3.25
7,000	1.75	2.00	2.25	2.65	3.25
7,500	1.75	2.00	2.25	2.65	3.25
8,000	1.75	2.00	2.25	2.65	3.25
9,000	1.75	2.00	2.25	2.65	3.25
10,000	1.75	2.00	2.25	2.65	3.25
12,000	1.75	2.00	2.25	2.90	3.50
15,000	1.75	2.00	2.25	3.25	3.75
20,000	1.75	2.00	2.25	3.25	3.75
25,000	1.75	2.00	2.25	3.25	3.75
30,000	2.00	2.25	2.75	3.25	3.75
35,000	2.00	2.25	2.75	3.25	3.75
40,000	2.00	2.25	2.75	3.25	3.75
45,000	2.00	2.25	2.75	3.25	3.75
50,000	2.00	2.25	2.75	3.25	3.75
60,000	2.50	2.50	3.00	3.75	3.75
75,000	2.50	2.50	3.00	3.75	3.75
80,000	2.50	2.50	3.50	3.75	4.25
100,000	2.50	2.50	3.50	3.75	4.25
125,000			3.50	4.25	
150,000			3.75	4.25	

MIDGETROL® VOLUME AND TONE CONTROLS

P.R. MALLORY & CO. Inc.
MALLORY

P. R. MALLORY & CO., INC. · INDIANAPOLIS

Round Shaft Midgetrols



Compact, 15/16" diameter carbon element control. Used in industrial electronic equipment; also, in control circuits of television sets, home radios, auto radios and audio amplifiers. AC-DC power switches are available which may be attached quickly and permanently. Has 2⅛" long, ¼" round brass shaft. 2 shaft-end knob adaptors for knurled, push-on knobs, and one hex nut furnished. List Price **$1.25** each.

Cat. No.	Ohms	Taper†	Cat. No.	Ohms	Taper†
U12	5M	1	**U41**	100M	4
U14	5M	4	**U42**	150M	1
U18	10M	1	**U43**	200M	4
U19	10M	2	**U44**	250M	1
U20	10M	4	**U45**	250M	2
U21	15M	1	**U46**	250M	4
U22	15M	2	**U48**	500M	1
U24	20M	1	**U50**	500M	4
U26	20M	4	**U51**	750M	1
U28	25M	2	**U53**	1 Meg.	1
U29	25M	4	**U54**	1 Meg.	4
U33	50M	1	**U55**	2 Meg.	1
U34	50M	2	**U56**	2 Meg.	4
U35	50M	4	**U255**	2.5 Meg.	4
U36	75M	1	**U57**	3 Meg.	1
U39	100M	1	**U59**	3 Meg.	4
U40	100M	2	**U65**	5 Meg.	1

†See Explanation of Mallory Tapers, page 2, Mallory Resistors and Controls section, this catalog.

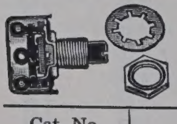
Single Tapped Midgetrols—List Price **$1.85** Each

Cat. No.	Ohms	Tap At	Cat. No.	Ohms	Tap At
UT-420	250M	50M	**UT-443**	1 Meg.	450M
UT-425	350M	70M	**UT-450**	2 Meg.	125M
UT-429	500M	50M	**UT-448**	2 Meg.	250M
UT-427	500M	100M	**UT-454**	2 Meg.	400M
UT-430	500M	150M	**UT-449**	2 Meg.	600M
UT-431	500M	225M	**UT-451**	2 Meg.	900M
UT-440	1 Meg.	200M	**UT-457**	3 Meg.	900M
UT-438	1 Meg.	300M			

Double Tapped Midgetrols—List Price **$1.85** Each

Catalog Number	Overall Resistance	Tap Resistance	
		Tap 1	Tap 2
UDT-283	500M	100M	200M
UDT-289	1 Meg.	250M	500M
UDT-291	1.5 Meg.	225M	500M
UDT-295	2.25 Meg.	250M	500M
UDT-296	2.25 Meg.	500M	1 Meg.

Television and Special Application Midgetrols

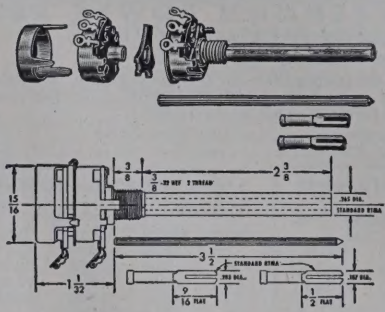


For use as exact replacement. Meet physical and electrical requirements for special applications. Equipped with fixed, knurled and screw driver-slotted phenolic shafts, ¼" in diameter and ¼" long. List Price **$1.50** each

Cat. No.	Ohms	Cat. No.	Ohms
SU-14	5M	**SU-50**	500M
SU-20	10M	**SU-54**	1 Meg.
SU-29	25M	**SU-56**	2 Meg.
SU-35	50M	**SU-565**	2.5 Meg.
SU-41	100M	**SU-59**	3 Meg.
SU-46	250M	**SU-67**	5 Meg.

All SU-No. 4—Linear Taper. (see Explanation of Mallory Tapers, page 2, Mallory Resistors and Controls section, this catalog).

Dual Midgetrol Volume Controls and Accessories



Mallory Midgetrol Volume Control Parts and Accessories enable the serviceman to duplicate the physical and electrical characteristics of hundreds of Concentric Shaft Dual Carbon Controls, Single Shaft Dual Carbon Controls and Concentric Shaft Dual Wire-Wound Carbon control combinations for fast replacement in TV, home and auto radio sets. Supplied as separate front and rear control sections, these parts are easy to assemble, practical and economical, and eliminate delays while waiting delivery of manufacturer's original controls. UF is 15/16" diameter carbon front section; UR is 15/16" carbon rear section; WF is wire-wound front section. A kit of standard assembly parts is supplied with each front section. For accessory fittings and switches, see page 2, Mallory Resistors and Controls Section, this catalog. Average mounting depth behind panel for a carbon dual is 1⅛"; with switch, is 1⅝".

Front Section List Price—**$2.00** Catalog Number	Rear Section List Price—**$1.00** Catalog Number	Resistance Ohms	Taper†
UF13R	**UR13R**	1000	4
UF13L	**UR13L**	1000	4
UF152R	**UR152R**	1500	4
UF23R	**UR23R**	2000	4
UF23L	**UR23L**	2000	4
UF33L		3000	4
UF53R	**UR53R**	5000	2
UF53L	**UR53L**	5000	4
UF73R		7000	2
	UR14R	10M	2
UF14L	**UR14L**	10M	4
UF253R		25M	2
UF253L	**UR253L**	25M	4
UF34A		30M	1
UF54A		50M	1
UF54L	**UR54L**	50M	4
UF15A		100M	1
UF15R	**UR15R**	100M	2
UF15L	**UR15L**	100M	4
UF254A	**UR254A**	250M	1
UF254L	**UR254L**	250M	4
	UR354A	350M	1
UF55A	**UR55A**	500M	1
UF55R		500M	2
UF55L	**UR55L**	500M	4
UF16A	**UR16A**	1 Meg.	1
UF16L	**UR16L**	1 Meg.	4
UF26A	**UR26A**	2 Meg.	1
UF26L	**UR26L**	2 Meg.	4
	UR36A	3 Meg.	1
	UR56L	5 Meg.	4
UF46A		4 Meg.	1

†See Explanation of Mallory Tapers, page 2, Mallory Resistors and Controls section, this catalog.

Tapped Sections

Front Section List Price—**$2.25** Catalog Number	Rear Section List Price—**$1.25** Catalog Number	Resistance Ohms	Tapped at
	UR254-T753	250M	75M
	UR354-T74	350M	70M
UF55-T54	**UR55-T54**	500M	50M
UF55-T254	**UR55-T254**	500M	250M
	UR16-T1253	1 Meg.	125M
UF16-T25	**UR16-T25**	1 Meg.	200M
UF16-T154		1 Meg.	150M
	UR16-T254	1 Meg.	250M
UF16-T35	**UR16-T35**	1 Meg.	300M
	UR26-T25	2 Meg.	200M
UF26-T55		2 Meg.	500M
	UR26-T95	2 Meg.	900M

Two Watt Wire-Wound Front Sections

Catalog Number	Res. Ohms	List Price	Catalog Number	Res. Ohms	List Price
WF751-T251	750*	**$2.50**	**WF33**	3000	**$2.10**
WF13	1000	**2.10**	**WF53**	5000	**2.10**
WF13-T251	1000*	**2.50**	**WF73**	7000	**2.10**
WF252	2500	**2.10**			

* Tapped at 250 Ohms.

For Midgetrol accessory parts, see Page 2, Mallory Resistors and Controls Section, this catalog.

Wire-Wound Controls and Pads • Control Accessories

Midgetrol Accessory Parts

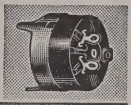
DS-35—Flatted split knurl shaft end. Special for Zenith.
List Price **$0.45**

DS-36—Special 3″ extension shaft for tubular shaft Midgetrols and 2-watt, wire-wound controls. Also used for coupling a front and rear section together to make a single-shaft, dual control for oscilloscope and other push-pull amplifier service.
List Price **$0.45**

DS-37—3/16″ diameter shafts for use with round-shaft Midgetrols to accommodate knobs requiring 3/16″ shaft. List Price **$0.45**

EB-158—Special bushing. 7/16″-28 thread, 1 1/16″ long with 3/8″ milled double flat. List Price **$0.60**

EB-214—Special bushing: 1/2″-28 thread, 2 3/16″ long with .403 milled flat. List Price **$ 0.60**



Attachable Midgetrol Switches

Cat. No.	Description	List Price
US-26	Single Pole—Single Throw...........	**$0.60**
US-26T	Single Pole—Single Throw (with dummy terminal)..................	.75
US-27	Double Pole—Single Throw...........	.75
US-28	Single Pole—Double Throw...........	.75

Explanation of Mallory Tapers

Taper Number 1 is a modified logarithmic left hand taper in the carbon type of control and an approximation to this logarithmic taper in the wire-wound type. This taper should always be used in shunt circuits, as in usual antenna and audio circuits, or where only the center and left hand terminals are used.

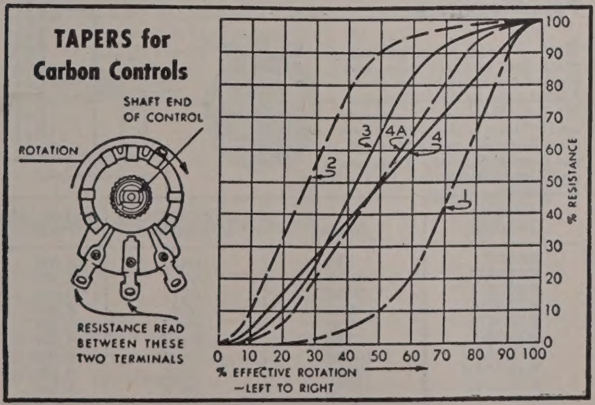
Taper Number 2 is a right hand logarithmic taper in the carbon and an approximation in the wire-wound type. Used in series circuits, as in cathode voltage controls, or where only the center and right hand terminals are used.

Taper Number 3 is a combination left and right hand taper. Has a limited use in circuits where the control must perform both as a shunt and as a series circuit control as in combination antenna shunt plus bias circuits. This is the most common use for such a taper.

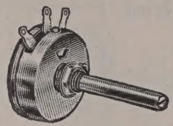
Taper Number 4 is a linear taper. Strictly speaking it is not a "taper" although commonly referred to as such. A linear "taper" is used wherever a control should be such that voltage change is proportional to the degree of rotation.

Taper Number 4A is a modification of the regular linear taper Number 4.

Taper Number 7 is made only in the wire-wound type of control and is a form of left hand taper. This taper is desirable for the antenna shunt plus bias control, wherein greater attenuation is obtained by increasing the bias voltage. The slight left taper then suffices to gradually reduce the signal to zero volume by the shunting action in the antenna circuit.



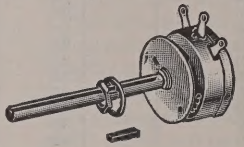
TV Focus Controls



These 1 5/8″ diameter units are designed especially for focus control replacement in TV sets. They are 4 watt, wire-wound, and have a special taper. One control, plus accessories and complete instructions per display carton.

Catalog Number	Ohms Resistance (Maximum)	Type Element	Shaft Length	List Price
TVF140	1500	WW	2″	**$1.85**
TVF143	2500	WW	2″	**1.85**

1 5/8″ Dia. Fixed Shaft Wire-Wound Controls



For bias control and voltage divider circuits. Provided with stop plate for bias feature. Has 3″ channel shaft. Case diameter is 1 5/8″. Will carry 4 watts power.

List Price **$1.50** each

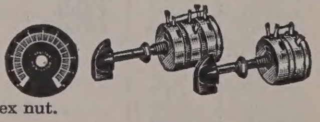
Catalog Number	Ohms Resistance	Taper†	Catalog Number	Ohms Resistance	Taper†
Q	2	4	**D12§**	3000	1
R	6	4	**D§**	3000	2
S	10	4	**A3MP§**	3000	4
T	20	4	**D7§**	3000	7
U	30	4	**A4MP§**	4000	4
V	60	4	**E§**	5000	2
W	100	4	**A5MP§**	5000	4
X	200	4	**E7§**	5000	7
A400P	400	4	**F§**	7500	2
A	500	1	**F7§**	7500	7
A550P	550	4	**G§**	10000	2
B	1000	1	**A10MP§**	10000	4
UC500	1000	2	**G7§**	10000	7
A1MP	1000	4	**H§**	15000	2
C12§	2000	1	**H7§**	15000	7
C§	2000	2	**A20MP§**	20000	4
A2MP§	2000	4			

§ Have exclusive Mallory adjustable bias feature, providing 500 ohms in 100 ohm steps in all values over 1000 ohms.

† See Explanation of Mallory Tapers, this page.

T and L Pad Attenuators

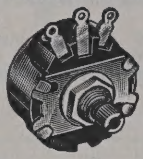
High quality attenuators having a peak audio rating of 15 watts and a continuous DC dissipation rating of 4 watts. Packaged with instructions, 366 knob, 395 dial plate and hex nut.

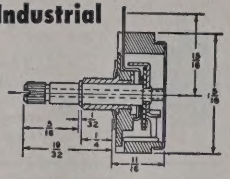


"T" Pad Attenuators List Price $4.25 each Catalog Number	"L" Pad Attenuators List Price $3.75 each Catalog Number	Ohms Impedance
T2	**L2**	2
T4	**L4**	4
T6	**L6**	6
T8	**L8**	8
T15	**L15**	15
T50	**L50**	50
T100	**L100**	100
T200	**L200**	200
T250	**L250**	250
T500	**L500**	500
T600	**L600**	600
T1000	**L1000**	1000
T2000	**L2000**	2000
T3000	**L3000**	3000

Variable Wire-Wound Potentiometers and Rheostats

Two Watt Wire-Wound TV and Industrial Potentiometers





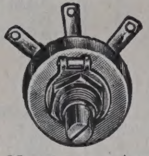
For replacement of positioning, hold and focus controls in TV. Also ideal for industrial circuits up to 1500 volts AC. Completely enclosed in 1⁵⁄₁₆″ diameter phenolic case. Thumb-knurled ¼″ diameter, ⁵⁄₁₆″ long, screw driver, slotted, insulated shaft. All have linear resistance change.

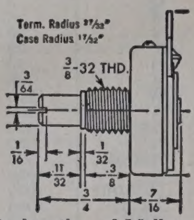
For special 3″ extension shaft, DS-36, see page 2, Mallory Resistors and Controls Section, this catalog.

Catalog Number	Total Ohms	List Price
R20L	20	**$1.25**
R20CT	20	**1.85**
R25L	25	**1.25**
R30L	30	**1.25**
R30CT	30	**1.85**
R50L	50	**1.25**
R250L	250	**1.25**
R500L	500	**1.25**
R1000L	1000	**1.40**
R1500L	1500	**1.40**
R2500L	2500	**1.40**
R5000L	5000	**1.40**

All R type are linear No. 4 taper (see Explanation of Mallory Tapers, page 2, Mallory Resistors and Controls section, this catalog).

Two Watt Wire-Wound Potentiometers and Rheostats



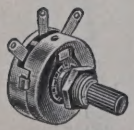


1¹⁄₁₆″ diameter. ¼″ diameter by ⅜″ long shaft with screw driver slot. For use in test and special instruments, bias control and bridge circuits. Has grounded contact arm. Rheostat has "open" or "off" position—all have linear No. 4 taper (see Explanation of Mallory Tapers, page 2, Mallory Resistors and Controls section, this catalog).

For Dial plate 393, see page 4, Mallory Resistors and Controls Section, this catalog.

Potentiometer		Rheostat			
Catalog Number	List Price	Catalog Number	List Price	Ohms	Cap. in Amperes
C6P	**$1.50**	**C6R**	**$1.25**	6	.58
C10P	**1.50**	**C10R**	**1.25**	10	.45
C15P	**1.50**	**C15R**	**1.25**	15	.37
C20P	**1.50**	**C20R**	**1.25**	20	.32
C30P	**1.50**	**C30R**	**1.25**	30	.26
C40P	**1.50**	**C40R**	**1.25**	40	.22
C50P	**1.50**	**C50R**	**1.25**	50	.2
C100P	**1.50**	**C100R**	**1.25**	100	.14
C200P	**1.50**			200	.1
C400P	**1.50**			400	.07
C1MP	**1.75**			1M	.045
C3MP	**1.75**			3M	.025
C5MP	**2.00**			5M	.02
C6MP	**2.00**			6M	.018
C10MP	**2.00**			10M	.014
C15MP	**2.00**			15M	.011

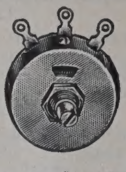
Theater Speaker Controls

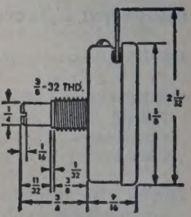


Designed for use with Motiograph, Simplex, International and other outdoor theater motion picture equipment. Quality constructed with pig-tail rotor connections and corrosion-resistant finish to assure long, noise-free life. Housed in 1¹⁄₁₆″ diameter metal case. Mounting nut supplied.

Cat. No.	Description	List Price
TSA-10	4-Ohm L Pad..........................	**$2.00**
TSA-35	35-ohm Potentiometer................	**1.50**
TSA-6	6-ohm Potentiometer..................	**1.50**

Four Watt Wire-Wound Potentiometers and Rheostats





Four-watt, wire-wound controls designed especially for low voltage TV, test equipment, industrial and electronic applications. These controls are supplied with a ⅜″ long bushing and have ¼″ round screw driver slotted shafts ⅜″ long. Overall case diameter is 1⅝″. Mounting radius, including solder lugs, is 1¼″ and mounting depth is ⅝″. Rheostat styles have "off" position. All have linear resistance change and insulated shaft. For Dial Plate No. 395, see page 4, Mallory Resistors and Controls Section, this catalog.

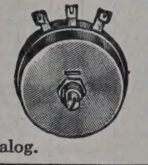
Potentiometer		Rheostat*			
Catalog Number	List Price	Catalog Number	List Price	Ohms	Cap. in Amperes
		M05R	**$1.25**	½	2.80
M1P	**$1.50**	**M1R**	**1.25**	1	2.00
		M2R	**1.25**	2	1.4
M3P	**1.50**	**M3R**	**1.25**	3	1.15
		M4R	**1.25**	4	1.0
M6P	**1.50**	**M6R**	**1.25**	6	.82
M10P	**1.50**	**M10R**	**1.25**	10	.63
M15P	**1.50**	**M15R**	**1.25**	15	.52
M20P	**1.50**	**M20R**	**1.25**	20	.45
M25P	**1.50**	**M25R**	**1.25**	25	.40
M30P	**1.50**	**M30R**	**1.25**	30	.37
M40P	**1.50**	**M40R**	**1.25**	40	.32
M50P	**1.50**	**M50R**	**1.25**	50	.28
M60P	**1.50**	**M60R**	**1.25**	60	.26
M75P	**1.50**	**M75R**	**1.25**	75	.23
M100P	**1.50**	**M100R**	**1.25**	100	.20
M200P	**1.50**			200	.14
M400P	**1.50**			400	.10
M500P	**1.50**			500	.09
M600P	**1.50**			600	.082
M1MP	**1.75**			1M	.063
M2MP	**1.75**			2M	.045
M3MP	**1.75**			3M	.037
M4MP	**1.75**			4M	.032
M5MP	**1.75**			5M	.028
M10MP	**2.00**			10M	.020
M15MP	**2.00**			15M	.016
M20MP	**2.00**			20M	.014
M25MP	**2.00**			25M	.013
M50MP	**2.40**			50M	.009
M70MP	**2.40**			70M	.0075

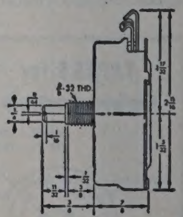
* "Open" or "Off" position counter-clockwise.

Center Tapped Potentiometer

MT10P	**$2.25**			10	.63
MT20P	**2.25**			20	.45
MT30P	**2.25**			30	.37

Seven Watt Wire-Wound Potentiometers





Has 7-watt dissipation, grounded contact arm and linear resistance change. Metal case is 2⅝″ diameter, ⅞″ deep. Shaft is ¼″ diameter and ⅜″ long with screw driver slot. For Dial plate No. 399, see page 4, Mallory Resistors and Controls Section, this catalog.

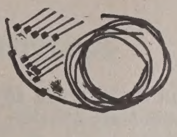
Catalog Number	Ohms	Capacity in Amperes	List Price
E5MP	5M	.042	**$3.50**
E10MP	10M	.03	**3.50**
E20MP	20M	.021	**3.50**
E25MP	25M	.019	**3.90**
E50MP	50M	.0135	**3.90**
E75MP	75M	.011	**3.90**
E100MP	100M	.0095	**3.90**
E125MP	125M	.0085	**3.90**
E150MP	150M	.0078	**3.90**

RESISTANCE KITS • CONTROL HARDWARE

P. R. MALLORY & CO., INC. • INDIANAPOLIS

P. R. MALLORY & CO. Inc.
MALLORY

Yard-Ohm Resistance Kits



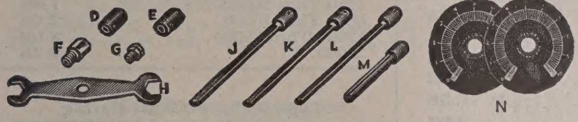
Each Yard-Ohm Kit consists of the following: 1 yard spiral wound resistance wire; 1 yard insulated braid; 24 spiral wire leads. The kit is available in eight resistance values.

Dissipation—all types: ½ watt per inch.

List Price $0.75 each

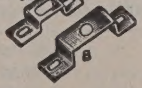
Catalog Number	Resistance Value (Ohms per Inch)	Carrying Capacity in Amperes	Catalog Number	Resistance Value (Ohms per Inch)	Carrying Capacity in Amperes
YO-1	1	.707	**YO-50**	50	.100
YO-5	5	.315	**YO-100**	100	.071
YO-10	10	.223	**YO-250**	250	.044
YO-25	25	.141	**YO-500**	500	.031

Shafts—Couplers—Bushings—Dial Plates



Cat. No.	Description	List Price
EC240	For coupling two ¼" shafts or ¼" and 3/16" (D)	$0.30
EB247	5/8" Extension Bushing (F)	.25
UB241	Panel Bushing for ¼" shaft (G)....per 10	.95
EC257	Insulated shaft coupler (E)	.30
178	½" and 9/16" Wrench (H)	.25
RS242	4" long x ¼" diameter x 1/32" flat (K)	.40
RS243	4" long x ¼" diameter x 3/32" flat (J)	.40
RS244	4" long x 3/16" diameter x 1/64" flat (L)	.40
RS245	2" long x ¼" diameter x slotted 3/32" (M)	.45
369	0-100 All Rheostats and Potentiometers (compromise scale) 2¼" (N)	.25
391	Increase Volume—All Rheostats and Potentiometers—1½" (N)	.15
393	0-10 For "C" Type Rheostats and Potentiometers—2¼" (N)	.25
395	0-10 For Standard Wire-Wound Controls with Plain cover; also "M" Type Rheostats and Potentiometers—2¼" (N)	.25
396	0-10 For Standard Wire-Wound Controls with switch type cover—2¼" (N)	.25
397	0-10 For Standard Carbon Controls with Plain cover—2¼" (N)	.25
398	0-10 For Standard Carbon Controls with switch type cover—2¼" (N)	.25
399	0-10 For "E" Type Potentiometers—2¼" (N)	.25

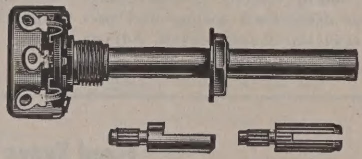
Adjustable Mounting Brackets



Cat. No.	Description	List Price
RB248	1¾" Mounting Centers (A)	$0.25
RB249	2½" Mounting Centers (B)	.25
RB254	Universal	.25

NEW MALLORY MIDGETROL

SINGLE SECTION

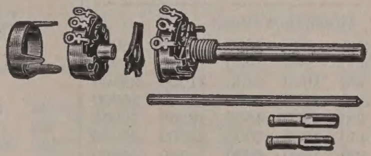


Now the *time-proved* Mallory Midgetrol offers two important new time-saving features.

This sturdy 15/16" control is supplied with a *permanently fixed, tubular brass shaft* that can be adapted for split-knurl or flatted type knobs in a few seconds by inserting one of the two steel shaft-ends packaged with every Mallory Midgetrol. It gives you utmost convenience—without sacrificing a stable, permanently secured shaft.

Also, switch attachment is made simple and sure by positive indexing. Switch locks securely in position without removing the control housing.

DUAL SECTION



This revolutionary new control can be assembled in five easy steps, in less than five minutes—permits you to match a wide range of combinations immediately from convenient distributor stocks, and without high "time" costs.

The "exploded" view above illustrates the parts and assembled control sections supplied. Extremely simple instructions show you how to assemble them quickly and surely—without soldering—with only the simplest of tools.

Both front and rear sections are *factory-assembled and carefully inspected.* You can be sure that your final dual assembly will give the performance you want!

The Mallory Midgetrol gives you fast, sure, simple installation—with precision-controlled carbon element, smooth taper, quiet operation, accurate resistance value and less drift in TV sets.

For Complete Listing and Description see Page 1, Mallory Resistors and Controls Section, This Catalog

Mallory Fixed and Adjustable Vitreous Enamel Resistors

Wire-wound, covered with a special, vitreous, non-alkaline, non-hygroscopic enamel coating which assures exceptional sealing and permanence of electrical characteristics. Adjustable types equipped with slider. 5 and 10 watt sizes have tinned-copper leads. All others supplied with mounting feet.

Fixed Types

Type HHJ-5 Watt Rating
Tube Size 5/16″ x 1″

Resistance Ohms

1	10	40	250	700	1250	3500
1.5	12	50	300	750	1500	4000
2	15	75	350	800	1750	4500
3	20	100	400	900	2000	5000
4	25	125	450	1000	2250	
5	30	150	500	1100	2500	
7.5	35	200	600	1200	3000	

Ohms	List Price
1 Thru 1000	$0.67
1100 Thru 5000	.75

Type 1HJ-10 Watt Rating
Tube Size 5/16″ x 1¾″

Resistance Ohms

1	25	225	800	2500	8500	18000
2	30	250	900	3000	10000	20000
3	35	300	1000	3500	11000	22500
4	40	350	1100	4000	12000	25000
5	50	400	1200	4500	12500	30000
7.5	75	450	1250	5000	13500	35000
10	100	500	1500	6000	14300	40000
12	125	600	1750	7000	15000	45000
15	150	700	2000	7500	16000	50000
20	200	750	2250	8000	17500	

Ohms	List Price
1 Thru 1000	$0.75
1100 Thru 5000	.80
6000 Thru 10000	.92
11000 Thru 20000	1.03
22500 Thru 50000	1.11

Type 2HJ-20 Watt Rating
Tube Size ½″ x 2″

Resistance Ohms

5	100	500	2000	4000	12500	40000
10	150	750	2250	4500	15000	50000
15	200	1000	2500	5000	20000	75000
25	250	1250	2750	6000	25000	100000
50	300	1500	3000	7500	30000	
75	400	1750	3500	10000	35000	

Ohms	List Price
5 Thru 1000	$0.95
1250 Thru 5000	.97
6000 Thru 10000	1.12
12500 Thru 20000	1.20
25000 Thru 40000	1.37
50000	1.50
75000 Thru 100000	1.75

Type 5HJ—50 Watt Rating
Tube Size ¾″ x 4½″

Resistance Ohms

10	250	1500	7500	20000	50000
25	500	2000	10000	25000	75000
50	750	2500	12500	30000	100000
100	1000	5000	15000	40000	

Ohms	List Price
10 Thru 5000	$1.75
7500 Thru 10000	1.92
12500 Thru 20000	2.12
25000 Thru 40000	2.33
50000	2.58
75000	2.92
100000	3.20

Type 10HJ—100 Watt Rating
Tube Size 1⅛″ x 6½″

Resistance Ohms

25	500	2000	10000	25000	50000
50	750	2500	15000	30000	75000
100	1000	5000	20000	40000	100000
250	1500	7500			

Ohms	List Price
25 Thru 1000	$2.48
1500 Thru 5000	2.53
7500 Thru 10000	2.70
15000 Thru 20000	2.97
25000 Thru 40000	3.26
50000	3.37
75000	3.58
100000	3.80

Type 20HJ—200 Watt Rating
Tube Size 1⅛″ x 10½″

Resistance Ohms

25	100	750	2000	5000	20000	50000
50	250	1000	2500	7500	30000	75000
75	500	1500	3000	10000	40000	100000

Ohms	List Price
25 Thru 1000	$3.29
1500 Thru 5000	3.34
7500 Thru 10000	3.54
20000	3.75
30000 Thru 40000	3.90
50000	4.03
75000	4.25
100000	4.53

Adjustable Types

Type 1AV—10 Watt Rating
Tube Size 5/16″ x 1¾″

Resistance Ohms

1	15	150	500	1500	4000	8000
2	20	200	600	2000	4500	8500
3	25	250	750	2250	5000	9000
5	50	300	800	2500	6000	10000
7.5	75	350	1000	3000	7000	
10	100	400	1250	3500	7500	

Ohms	List Price
1 Thru 1000	$1.47
1100 Thru 5000	1.53
6000 Thru 10000	1.63

Type 2AV—25 Watt Rating
Tube Size ⅝″ x 2½″

Resistance Ohms

1	25	200	750	2500	6000	20000
3	50	250	1000	3000	7500	25000
5	75	300	1250	3500	10000	
10	100	400	1500	4000	12000	
15	150	500	2000	5000	15000	

Ohms	List Price
1 Thru 1000	$1.84
1250 Thru 5000	1.88
6000 Thru 10000	2.03
12000 Thru 20000	2.08
25000	2.28

Type 5AV—50 Watt Rating
Tube Size ⅝″ x 4½″

Resistance Ohms

5	75	250	1500	4000	15000	40000
10	100	500	2000	5000	20000	50000
25	150	750	2500	7500	25000	
50	200	1000	3000	10000	30000	

Ohms	List Price
5 Thru 1000	$2.37
1500 Thru 5000	2.47
7500 Thru 10000	2.63
15000 Thru 20000	2.83
25000 Thru 40000	3.08
50000	3.31

Type 10AV—100 Watt Rating
Tube Size 1⅛″ x 6½″

Resistance Ohms

50	2000	5000	15000	30000	50000
100	2500	7500	20000	35000	75000
500	3000	10000	25000	40000	
1000	4000				

Ohms	List Price
50 Thru 1000	$3.55
2000 Thru 5000	3.67
7500 Thru 10000	3.87
15000 Thru 20000	4.12
25000 Thru 40000	4.37
50000	4.57
75000	4.75

Type 20AV—200 Watt Rating
Tube Size 1⅛″ x 10½″

Resistance Ohms

50	1000	2500	20000	50000
100	1500	5000	25000	75000
500	2000	10000	30000	

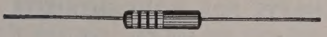
Ohms	List Price
50 Thru 1000	$4.37
1500 Thru 5000	4.45
10000	4.70
20000	4.92
25000 Thru 30000	5.03
50000	5.17
75000	5.42

INSULATED RESISTORS

Preferred for Performance

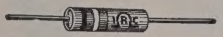
ADVANCED TYPE BT
INSULATED COMPOSITION RESISTORS

IRC Advanced Type BT Resistors are supplied in 4 miniature units from ⅓ to 2 watts. They are particularly suited to television requirements. Extremely low operating temperature and excellent power dissipation are assured. All types, except BTR, are clearly stamped with value and wattage, plus color code.



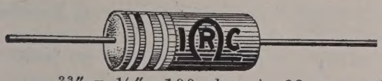
BTR ⅓ WATT

$\frac{13}{32}$″ x $\frac{3}{32}$″—82 ohms to 22 meg.—250 volts max.
10% Tolerance — **LIST 17¢** 5% Tolerance — **LIST 33¢**



BTS ½ WATT

$\frac{13}{32}$″ x ⅛″—82 ohms to 22 meg.—350 volts max.
10% Tolerance — **LIST 17¢** 5% Tolerance — **LIST 33¢**



BTA 1 WATT

$\frac{23}{32}$″ x ¼″—100 ohms to 22 meg.—500 volts max.
10% Tolerance — **LIST 25¢** 5% Tolerance — **LIST 50¢**

BTB 2 WATTS

1¼″ x ¼″—330 ohms to 22 meg.—500 volts max.
10% Tolerance — **LIST 33¢** 5% Tolerance — **LIST 66¢**

RTMA RANGES—Advanced Type BT Resistors and Type BW Insulated Wire Wounds are supplied in RTMA Ranges subject to the minimum and maximum values for each type. These stock values are listed below.

VALUES AVAILABLE AT ±10% TOLERANCE

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Meg	Megs	Megs
—	1.0	10	100	1,000	10,000	0.1	1.0	10
—	1.2	12	120	1,200	12,000	0.12	1.2	12
—	1.5	15	150	1,500	15,000	0.15	1.5	15
—	1.8	18	180	1,800	18,000	0.18	1.8	18
—	2.2	22	220	2,200	22,000	0.22	2.2	22
0.27	2.7	27	270	2,700	27,000	0.27	2.7	—
0.33	3.3	33	330	3,300	33,000	0.33	3.3	—
0.39	3.9	39	390	3,900	39,000	0.39	3.9	—
0.47	4.7	47	470	4,700	47,000	0.47	4.7	—
0.56	5.6	56	560	5,600	56,000	0.56	5.6	—
0.68	6.8	68	680	6,800	68,000	0.68	6.8	—
0.82	8.2	82	820	8,200	82,000	0.82	8.2	—

VALUES AVAILABLE AT ±5% TOLERANCE

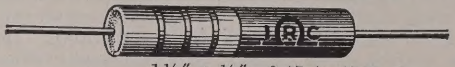
Ohms	Ohms	Ohms	Ohms	Meg	Megs	Megs
10	100	1,000	10,000	0.1	1.0	10
11	110	1,100	11,000	0.11	1.1	11
12	120	1,200	12,000	0.12	1.2	12
13	130	1,300	13,000	0.13	1.3	13
15	150	1,500	15,000	0.15	1.5	15
16	160	1,600	16,000	0.16	1.6	16
18	180	1,800	18,000	0.18	1.8	18
20	200	2,000	20,000	0.20	2.0	20
22	220	2,200	22,000	0.22	2.2	22
24	240	2,400	24,000	0.24	2.4	—
27	270	2,700	27,000	0.27	2.7	—
30	300	3,000	30,000	0.30	3.0	—
33	330	3,300	33,000	0.33	3.3	—
36	360	3,600	36,000	0.36	3.6	—
39	390	3,900	39,000	0.39	3.9	—
43	430	4,300	43,000	0.43	4.3	—
47	470	4,700	47,000	0.47	4.7	—
51	510	5,100	51,000	0.51	5.1	—
56	560	5,600	56,000	0.56	5.6	—
62	620	6,200	62,000	0.62	6.2	—
68	680	6,800	68,000	0.68	6.8	—
75	750	7,500	75,000	0.75	7.5	—
82	820	8,200	82,000	0.82	8.2	—
91	910	9,100	91,000	0.91	9.1	—

TYPE BW
INSULATED WIRE WOUND RESISTORS

Exceptionally stable, inexpensive wire wound resistors for low range requirements. Small and completely insulated. Double width color code band distinguishes Type BW from Type BT. Wire resistance element is tightly wound on an insulated core.

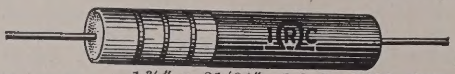
BW-½ ½ WATT

⅝″ x $\frac{3}{16}$″—0.27 to 820 ohms
10% Tolerance .... **LIST 17¢**
5% Tolterance (10 ohms and above) .... **LIST 33¢**



BW-1 1 WATT

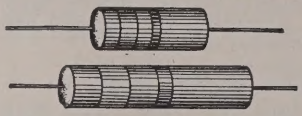
1¼″ x ¼″—0.47 to 4700 ohms
10% Tolerance .... **LIST 25¢**
5% Tolerance (10 ohms and above) .... **LIST 50¢**



BW-2 2 WATTS

1¾″ x 21/64″—1.0 to 8,200 ohms
10% Tolerance .... **LIST 33¢**
5% Tolerance (10 ohms and above) .... **LIST 66¢**

INSULATED CHOKES



IRC Insulated Chokes are available in two sizes designated as types CLA and CL-1. Both types are fully insulated in molded phenolic housings for full protection against high humidity. The insulated housing also guards the winding from abrasion and physical damage, and prevents any possibility of shorting to chassis. Color coded for easy identification.

The wide range of size and characteristic combinations available permits accurate replacement with respect to space and electrical requirements.

TYPE CLA .... **LIST 35c each**
TYPE CL-1 .... **LIST 35c each**

TYPE CLA

Inductance (Microhenrys)	Approx. "Q" at 12 Megacyles (higher at higher frequencies)	D.C. Resistance (Ohms)	Approx. Self Resonant Frequency (Megacycles)	Current Rating Milliamperes (1)*	(2)*
0.47 ± 15%	26	0.22 ± 30%	300	890	1510
0.56 ± 15%	25	0.31 ± 30%	280	750	1270
0.68 ± 15%	25	0.44 ± 30%	260	630	1070
0.82 ± 15%	24	0.59 ± 30%	240	540	920
1.0 ± 10%	24	0.80 ± 30%	210	470	790
1.2 ± 10%	23	0.85 ± 20%	190	450	770
1.5 ± 10%	23	1.2 ± 20%	160	380	650
1.8 ± 10%	22	1.6 ± 20%	150	330	560
2.2 ± 10%	22	1.8 ± 20%	130	310	530
2.7 ± 10%	22	2.2 ± 10%	120	280	480
3.3 ± 10%	21	3.0 ± 10%	110	240	390

TYPE CL-1

Inductance (Microhenrys)	Approx. "Q" at 12 Megacycles (higher at higher frequencies)	D.C. Resistance (Ohms)	Approx. Self Resonant Frequency (Megacycles)	Current Rating Milliamperes (1)*	(2)*
0.47 ± 15%	30	0.14 ± 30%	220	1460	2310
0.56 ± 15%	30	0.20 ± 30%	210	1220	1940
0.68 ± 15%	30	0.22 ± 30%	200	1170	1850
0.82 ± 15%	30	0.27 ± 30%	190	1050	1670
1.0 ± 10%	30	0.41 ± 30%	180	850	1350
1.2 ± 10%	30	0.51 ± 20%	170	770	1210
1.5 ± 10%	29	0.72 ± 20%	160	650	1020
1.8 ± 10%	29	0.77 ± 20%	150	620	990
2.2 ± 10%	29	1.1 ± 20%	140	520	820
2.7 ± 10%	28	1.5 ± 20%	130	450	710
3.3 ± 10%	28	2.0 ± 20%	120	390	610
3.9 ± 10%	27	2.6 ± 10%	110	340	540
4.7 ± 10%	26	2.8 ± 10%	95	330	520
5.6 ± 10%	24	4.0 ± 10%	85	270	430
6.8 ± 10%	22	5.6 ± 10%	75	230	370
8.2 ± 10%	21	6.1 ± 10%	70	220	350
10.0 ± 10%	20	8.2 ± 10%	65	190	300

(1) *Current which will cause resistance to increase approximately 10% due to temperature coefficient of copper wire.

(2) *Current which will cause resistance to increase approximately 25% due to temperature coefficient of copper wire.

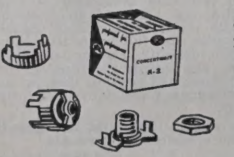
UNIVERSAL REPLACEMENTS
for TV Concentric Dual Controls
Preferred for Performance

NEW, SIMPLIFIED CONCENTRIKITS FOR LESS-THAN-A-MINUTE ASSEMBLY OF TV CONCENTRIC DUALS

Two new, four-piece CONCENTRIKITS of improved design—plus a full line of Exact Duplicate Shafts, Base Elements and Switches—provide less-than-a-minute assembly of concentric dual replacements. Both carbon and wire-wound replacements are covered for more than 5,000 TV models—at a fraction of the cost of factory assembled controls. Assembled CONCENTRIKIT replacements are IRC Exact Duplicate Controls.

No other device on the market gives such wide replacement coverage at such low stock cost. Each control you assemble requires only two Base Elements, and a pair of Shafts plus CONCENTRIKIT. (In some instances, a switch also is needed.) IRC's Replacement Listing by Trade Name Part Number (Form SO12—available on request) gives complete listing of parts needed for each manufacturer's part number.

K-2 CONCENTRIKIT



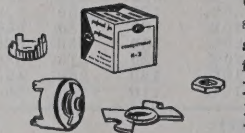
For assembly of concentric dual controls having two carbon sections. Contains four parts: Panel Cover, Rear Cover, Bushing and Mounting Nut. Assembly instructions included. Requires following additional parts, depending upon specification desired:

2—Base Elements (Type B)
1—Outer Shaft (Types P1 or P2)
1—Inner Shaft (Types R1, R2, R3, or R4)
1—Switch—when needed (Types 76-1 or 76-2)

LIST $.80

(KS-2 Universal Shaft Kit may be used with K-2 CONCENTRIKIT in place of Special Replacement Outer and Inner Shafts.)

K-3 CONCENTRIKIT



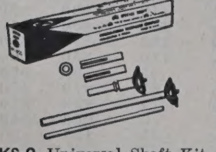
For assembly of concentric dual controls having wire-wound panel section and carbon rear section. Contains four parts: Panel Cover, Rear Cover, Ground Plate and Mounting Nut. Assembly instructions included. Requires additional parts, depending upon specification desired, as follows:

1—Panel Base Element (Type W)
1—Rear Base Element (Type B)
1—Outer Shaft (Types P3 or P4)
1—Inner Shaft (Types R1, R2, R3 or R4)
1—Switch — when needed — (Types 76-1 or 76-2)

LIST $.80

(K-3 Universal Shaft Kit may be used with K-3 CONCENTRIKIT in place of Special Replacement Outer and Inner Shafts.)

UNIVERSAL SHAFT KITS FOR CONCENTRIKIT



For use with CONCENTRIKITS in place of Exact Duplicate Shafts. Require shaft modification to desired specification. KS-2 Shaft Kit with K-2 CONCENTRIKIT are equivalent to former K-1 CONCENTRIKIT. Shaft Ends E-187 and E-202 are included in both Shaft Kits.

KS-2 Universal Shaft Kit for use with K-2 CONCENTRIKIT. **List $1.20**

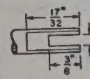
KS-3 Universal Shaft Kit for use with K-3 CONCENTRIKIT. **List $1.20**

NEW EXACT DUPLICATE SHAFTS FIT WITHOUT ALTERATION

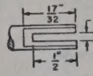
IRC Exact Duplicate Shafts are ready for assembly into completed concentric duals. No filing, slotting, soldering or cutting required. No special tools needed. Shafts are supplied in proper lengths and with factory-tooled ends for satisfactory fit. Accurate specifications are assured. Both inner and outer shafts are of one-piece construction with contactors attached.

EXACT DUPLICATE SHAFTS FOR CONCENTRIKITS

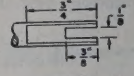
TYPE P1 OUTER SHAFTS. ⅛″ wide slot and flat. Use with K-2 CONCENTRIKIT only.



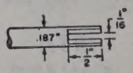
Types P_1 and P_3



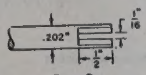
Type P_2



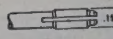
Type P_4



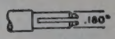
Type R_1



Type R_2



Type R_3 (Zenith)



Type R_4 (Motorola)

Stock Number	Shaft Length*	Stock Number	Shaft Length*	Stock Number	Shaft Length*
P1-020	⅝″	P1-126	$1\frac{13}{16}$″	P1-224	2¾″
P1-028	⅞″	P1-128	1⅞″	P1-229	$2\frac{29}{32}$″
P1-102	$1\frac{1}{16}$″	P1-200	2″	P1-304	3⅛″
P1-106	$1\frac{3}{16}$″	P1-204	2⅛″	P1-310	$3\frac{5}{16}$″
P1-109	$1\frac{9}{32}$″	P1-210	$2\frac{5}{16}$″	P1-400	4″
P1-112	1⅜″	P1-212	2⅜″	P1-405	$4\frac{5}{32}$″
P1-114	$1\frac{7}{16}$″	P1-216	2½″		
P1-121	$1\frac{21}{32}$″	P1-220	2⅝″		

TYPE P2 OUTER SHAFTS. $\frac{1}{16}$″ wide slot and flat. Use with K-2 CONCENTRIKIT only.

P2-031	$\frac{31}{32}$″	P2-128	1⅞″	P2-214	$2\frac{7}{16}$″
P2-116	1½″	P2-200	2″	P2-218	$2\frac{9}{16}$″
P2-118	$1\frac{9}{16}$″	P2-209	$2\frac{9}{32}$″	P2-226	$2\frac{13}{16}$″

TYPE P3 OUTER SHAFTS. ⅛″ wide slot and flat. Use with K-3 CONCENTRIKIT only.

P3-100	1″	P3-116	1½″	P3-131	$1\frac{31}{32}$″
P3-104	1⅛″	P3-118	$1\frac{9}{16}$″	P3-203	$2\frac{3}{32}$″
P3-106	$1\frac{3}{16}$″	P3-121	$1\frac{21}{32}$″	P3-208	2¼″
P3-111	$1\frac{11}{32}$″	P3-123	$1\frac{23}{32}$″	P3-223	$2\frac{23}{32}$″
P3-114	$1\frac{7}{16}$″	P3-127	$1\frac{27}{32}$″	P3-400	4″

TYPE P4 OUTER SHAFTS. ⅛″ wide slot and flat. Use with K-3 CONCENTRIKIT only.

P4-124	1¾″

TYPE R1 INNER SHAFTS. .187″ diameter. Flatted and slotted. Use with K-2 and K-3 CONCENTRIKITS.

R1-028	⅞″	R1-207	$2\frac{7}{32}$″	R1-300	3″
R1-115	$1\frac{15}{32}$″	R1-210	$2\frac{5}{16}$″	R1-304	3⅛″
R1-118	$1\frac{9}{16}$″	R1-212	2⅜″	R1-308	3¼″
R1-122	$1\frac{11}{16}$″	R1-216	2½″	R1-312	3⅜″
R1-126	$1\frac{13}{16}$″	R1-220	2⅝″	R1-326	$3\frac{13}{16}$″
R1-130	$1\frac{15}{16}$″	R1-223	$2\frac{23}{32}$″	R1-417	$4\frac{17}{32}$″
R1-202	$2\frac{1}{16}$″	R1-226	$2\frac{13}{16}$″	R1-420	4⅝″
R1-205	$2\frac{5}{32}$″	R1-228	2⅞″		

TYPE R2 INNER SHAFTS. .202″ diameter. Flatted and slotted. Use with K-2 and K-3 CONCENTRIKITS.

R2-110	$1\frac{5}{16}$″	R2-131	$1\frac{31}{32}$″	R2-226	$2\frac{13}{16}$″
R2-115	$1\frac{15}{32}$″	R2-204	2⅛″	R2-230	$2\frac{15}{16}$″
R2-117	$1\frac{17}{32}$″	R2-206	$2\frac{3}{16}$″	R-2306	$3\frac{3}{16}$″
R2-119	$1\frac{19}{32}$″	R2-212	2⅜″	R2-314	$3\frac{7}{16}$″
R2-124	1¾″	R2-216	2½″	R2-322	$3\frac{11}{16}$″
R2-127	$1\frac{27}{32}$″	R2-218	$2\frac{9}{16}$″	R2-420	4⅝″

TYPE R3 INNER SHAFTS. .190″ diameter. Split knurl. Use with K-2 or K-3 CONCENTRIKITS.

R3-223	$2\frac{23}{32}$″

TYPE R4 INNER SHAFTS. .180″ diameter. Round and slotted. Use with K-2 or K-3 CONCENTRIKIT.

R4-210	$2\frac{5}{16}$″
R4-226	$2\frac{13}{16}$″

*Shaft lengths shown are when used with K-2 only. Shaft lengths are $\frac{3}{32}$″ shorter when used with K-3 CONCENTRIKIT.

EXACT DUPLICATE SHAFTS **List $.60**

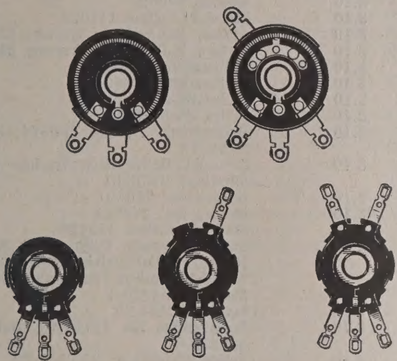
UNIVERSAL REPLACEMENTS

for TV Concentric Dual Controls

Preferred for Performance

IRC

BASE ELEMENTS FOR CONCENTRIKITS



New Base Elements for CONCENTRIKITS are a revolutionary advance in concentric dual replacement. A relatively small stock at low investment provides wide coverage of electrical requirements in many concentric duals. Each unit is a complete molded control base with element, terminals and collector ring installed. There are no loose parts. Two Base Elements are required for each concentric dual.

Two types of Base Elements are available: Type B for panel or rear carbon sections and Type W for wire-wound panel sections.

BASE-ELEMENT STOCK VALUES

Resistance in ohms	Stock No.	Taper	Taps
750	*B17-105X	Spec	250
1K	B11-108	A	
1.5K	*B11-109	A	
2K	*B11-110	A	
2K	B17-110	Spec	
2K	*B17-110XX	Spec	250 & 500
2.5K	*B17-111	Spec	500
2.5K	*B17-111X	Spec	
3K	B11-112	Spec	
3K	*B17-112	A	
5K	B11-114	A	
5K	B17-114	Spec	
5K	*B17-114X	Spec	1K
7.5K	B11-115	A	
10K	B11-116	A	
10K	B17-116	Spec	
11.5K	*B17-117	Spec	
20K	B11-119	A	
25K	B11-120	A	
25K	*B13-120	C	
30K	B11-121	A	
35K	*B11-122	A	
50K	B11-123	A	
75K	*B11-125	A	
.1 meg	B11-128	A	
.1 meg	*B17-128	Spec	
.125 meg	*B11-228	A	
.25 meg	B11-130	A	
.25 meg	B13-130	C	
.25 meg	B13-130X	Spec	125K
.25 meg	B18-130X	H	60K
.3 meg	*B11-131	A	
.35 meg	B13-132	C	
.35 meg	B17-132X	Spec	35K
.35 meg	B18-132X	H	75K
.5 meg	B11-133	A	
.5 meg	B13-133	C	
.5 meg	B13-133X	H	125K
.5 meg	*B15-133X	Spec	75K
.5 meg	B18-133X	Spec	50K
.5 meg	B19-133X	Spec	250K
1.0 meg	B11-137	A	
1.0 meg	B13-137	C	
1.0 meg	B13-137X	H	250K
1.0 meg	B17-137	Spec	
1.0 meg	*B18-137X	Spec	100K
1.0 meg	B18-137XX	Spec	250K 500K
1.0 meg	B19-137X	Spec	500K
1.5 meg	B11-138	A	meg
2.0 meg	B11-139	A	
2.0 meg	B13-139	C	
2.0 meg	B13-139X	H	500K
2.0 meg	B17-139	Spec	
2.0 meg	B18-139X	Spec	1.0 meg
2.0 meg	B18-139XX	Spec	250K 500K
2.5 meg.	*B11-239	A	
3.0 meg	*B13-140	C	
3.0 meg	*B18-140X	Spec	1.5 meg
5.0 meg	B12-141	Spec	
300	*W11-102	A	
750	*W17-105	Spec	
750	*W17-105X	Spec	250
1K	*W11-108	A	
1.5K	*W17-109X	Spec	500
2K	*W11-110	A	
2.5K	*W11-111	A	
2.5K	*W17-111	Spec	
3K	*W11-112	A	
3K	*W17-112	Spec	
5K	*W11-114	A	
5K	*W17-114	Spec	
10K	*W11-116	A	

*New Base-Element

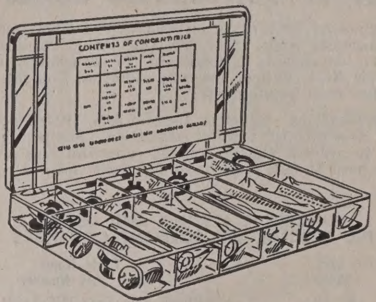
PRICES:

Plain Base-Element ....List $ .50
Tapped Base-Element ....List $1.10

SWITCHES FOR CONCENTRIKIT

Type 76-1 S.P.S.T. ....List $ .60
Type 76-2 D.P.S.T. ....List $ .60

NEW CONCENTRIPAKS COVER MAJOR TV SETS



IRC CONCENTRIPAKS are practical assortments of CONCENTRIKITS, Base Elements, Exact Duplicate Replacement Shafts, and Switches selected to meet concentric dual requirements of specific brands of TV sets. CONCENTRIPAKS afford wide coverage of replacement needs at a fraction of the cost of factory-assembled controls for the same coverage.

Contained in an extra heavy plastic stock box with 11 compartments and sturdy hinged top, each CONCENTRIPAK includes complete replacement data, showing manufacturer's part and stock numbers, IRC parts required for control assembly, pricing guide.

CONCENTRIPAK FOR PHILCO — KC-1

Replaces any one of 13 Philco concentric duals plus specific controls of 11 other widely sold makes. Contains both K-2 and K-3 CONCENTRIKITS, 9 selected Base Elements, 18 Exact Duplicate Shafts and Switch and replacement data. **List $17.00**

CONCENTRIPAK FOR RCA — KC-2

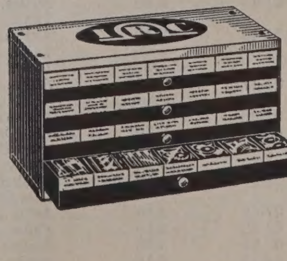
Replaces any one of 14 RCA concentric duals plus 36 part number listings among 15 other makes. Contains K-2 CONCENTRIKIT, 10 selected Base Elements, 8 Exact Duplicate Shafts and Switch and complete replacement data. **List $12.40**

CONCENTRIPAK FOR ADMIRAL — KC-3

Replaces any one of 14 Admiral concentric dual controls plus additional controls for Packard Bell, Sparton and Stromberg Carlson. Contains K-2 CONCENTRIKIT, 10 selected Base Elements, 8 Exact Duplicate Shafts and 2 Switches. Replacement data included. **List $13.00**

NEW DEALER CONCENTRIKIT STOCK CABINET — ASSORTMENT #14

Wide-coverage, low cost dealer stock of CONCENTRIKIT parts. Provides coverage of 240 concentric dual listings — equivalent to 149 different concentric duals. Contained in sturdy four-drawer, all metal stock cabinet with 28 prominently labeled compartments. Full replacement data on stock coverage is included. Contains 30 selected Base Elements, 34 Exact Duplicate Replacement Shafts, 4 K-2 CONCENTRIKITS and 3 Switches. **Coverage:** Supplies replacement coverage among 59 trade names, including RCA, Emerson, Admiral, Philco, Crosley, G.E. and many others. **List $44.60**



IRC

EXACT DUPLICATE CONTROLS

Preferred for Performance

295 FACTORY-ASSEMBLED EXACT DUPLICATES FOR WIDEST COVERAGE OF TV CONCENTRIC DUALS

Specially engineered for servicemen who want factory-assembled control for replacement work, these new IRC Exact Duplicate Controls provide broad, dependable coverage of TV concentric duals. Sets covered include RCA, Philco, Emerson, Admiral, Dumont and almost all of the other most popular sets.

Accurate Specifications. Made for specific sets, IRC Exact Duplicate Replacement Controls fit without alteration. Shafts are accurately dimensioned to prevent slip or wobble. Specifications are precise—so there's no need to cut, split or spread shaft ends.

NUMERICAL LISTING AND USAGE IRC SPECIAL REPLACEMENT CONTROLS

Stock No.	List Price	Trade Name and Part Number
QJ-4	$3.70	Silvertone, Tele Tone TVC-115D
QJ-5	3.70	Meck, Radio & Television, VC-12118; Stromberg-Carlson 145113
QJ-6	3.10	Automatic TRV-76
QJ-7	3.10	Firestone, Silvertone, Tele Tone TVC-101D
QJ-8	3.10	RCA P97011-1 (Stock No. 71971)
QJ-9	3.70	Garod, Majestic C8.230-1
QJ-10	4.30	Airline, Coronado, Truetone, Wells-Gardner 78X4, 78X4A
QJ-11	3.10	Tele King PD-6
QJ-12	3.70	Admiral 75B11-13; 75B11-15 (Table Models & Consoles Only)
QJ-13	3.70	Admiral 75B11-16 (Table Models & Consoles Only)
QJ-14	3.70	Arvin D22464-9; N22464-21
QJ-15	3.10	Bendix (Stock No. RVODO2), Interstate Stores CH-262036-1
QJ-16	4.30	Emerson 390071
QJ-17	3.70	Emerson 390167
QJ-18	3.70	Emerson 390169
QJ-19	3.70	Muntz VC-0033; VC-0033C; VC-0033D
QJ-20	3.70	Muntz VC-0040A
QJ-21	3.70	Tele Tone TVC-528D
QJ-22	3.70	Hallicrafters 25B888
QJ-23	4.30	Mitchell, Sonora N-8158
QJ-24	3.70	Hallicrafters 25B898
QJ-25	3.70	Hallicrafters 25B902
QJ-26	4.30	Coronado, Wells-Gardner 78X6
QJ-27	3.10	Arvin D22464-6
QJ-28	4.30	Airline, Belmont, Coronado, Raytheon, Transvue, A-10A-18441; Belmont, Raytheon, A-10A-18441-1
QJ-29	4.30	Wells-Gardner 78X4D
QJ-30	3.70	Emerson 390074-6
QJ-31	3.70	Emerson 390086
QJ-32	3.70	Emerson 390144
QJ-33	3.70	Emerson 390151
QJ-34	3.70	Olympic PT-2267
QJ-35	3.70	Packard Bell 25834A
QJ-36	3.70	Packard Bell 25835
QJ-37	4.30	Tele Tone TVC-538D
QJ-38	4.30	Coronado, Wells-Gardner 78X7
QJ-39	3.10	Philco 33-5563-2
QJ-40	4.30	Air King, Ansley, RCA (Stock No. 71446), Regal, Starrett, Trad P970111-7; Arvin D22464-1; Crosley W-139170; Fada 52.22; Hoffman T4801
QJ-41	$4.30	RCA (Stock No. 73910) P970913-9; (Stock No. 73157), P970111-30
QJ-42	4.30	Air King PA-2499; Pathe, , Sightmaster Silvertone A2499
QJ-43	4.30	Fada 52.67
QJ-44	3.70	Hoffman 4815
QJ-45	3.10	Airline, Coronado, Truetone, Wells-Gardner 78X3
QJ-46	3.10	Airline, Coronado, Truetone, Wells-Gardner 78X1, 78X1A, 78X1B; Fada 52.44; RCA (Stock No. 73193) P970111-31
QJ-47	3.10	S.M.A. TV PRA120; Wells-Gardner 78X1C, 78X1D, 78X1E
QJ-48	3.70	Brunswick, Emerson 390034
QJ-49	3.70	Air King, Pathe A24109; Air King PA24109A
QJ-50	3.10	Motorola 18A484072
QJ-51	3.70	Admiral 75B11-14 (Table Models and Consoles Only)
QJ-52	4.30	Arvin E22464-17
QJ-53	3.10	Philco 33-5563
QJ-54	3.70	Sentinel 28E64
QJ-55	3.70	Airline, Sentinel 28E64-2
QJ-56	$3.10	Emerson 390141
QJ-57	3.10	Emerson 390087
QJ-58	3.10	Stromberg-Carlson 145092
QJ-59	3.10	Airline, Hallicrafters, Truetone 25B787
QJ-60	3.10	Airline, Hallicrafters, Truetone 25B788
QJ-61	3.10	Hallicrafters 25B890
QJ-62	3.10	Hallicrafters 25B894
QJ-63	3.10	Philco 33-5563-20
QJ-64	3.10	Philco 33-5563-3
QJ-65	3.10	Hallicrafters, Truetone 25B874; Silvertone M25B874
QJ-66	3.10	Coronado, Hallicrafters, Truetone 25B861; Silvertone M25B861
QJ-67	3.10	Hallicrafters 25B897
QJ-68	3.10	Packard Bell 25822A
QJ-69	3.10	Stromberg-Carlson 145128
QJ-70	3.10	Artone, Coronado, Delco (Stock No. 1219250), Hallicrafters, Skyrider, Truetone 25B786; Capehart-Farnsworth 78160; Sparton PA-4439-1
QJ-71	3.10	Arvin E-22464-20
QJ-72	3.70	Delco (Stock No. 1219410), Hallicrafters 25B832
QJ-73	3.10	Philco 33-5563-6; 33-5563-23
QJ-74	4.30	Emerson 390068
QJ-75	3.10	Capehart-Farnsworth 78161
QJ-76	4.30	Dumont 01028200
QJ-77	4.30	Emerson 390098
QJ-78	3.10	Stromberg-Carlson 145078
QJ-79	3.10	Andrea GRV-831
QJ-80	3.10	Sparton PA-4430-1
QJ-81	3.10	RCA (Stock No. 75216) P970913-27
QJ-82	3.10	Philco 33-5563-26; 33-5563-39
QJ-83	3.10	Sparton PA4439
QJ-84	4.30	Dumont 01028210
QJ-85	3.70	Sonora N-7337
QJ-86	3.70	Mitchell, Sonora N-8053
QJ-87	3.10	Stromberg-Carlson 145110
QJ-88	3.10	Stromberg-Carlson 145086
QJ-89	3.10	Westinghouse V-6466
QJ-90	3.10	Hoffman 4816
QJ-91	3.10	Westinghouse V-9235-2
QJ-92	3.10	Philco 33-5563-24
QJ-93	3.10	RCA (Stock No. 74047) P970913-11
QJ-94	3.10	G.E. (Stock No. RRC-090) K68J87-1
QJ-95	3.10	Philco 33-5563-35
QJ-96	—	Superseded by QJ-82
QJ-97	3.10	G.E. (Stock No. RRC-146) K71J568-1
QJ-98	3.10	G.E. (Stock No. RRC-144) K71J606-1
QJ-99	3.10	G.E. (Stock No. RRC-098) K68J880-1
QJ-100	3.10	G.E. (Stock No. RRC-136) K71J397-1
QJ-101	3.10	G.E. (Stock No. RRC-134) K71J397-2
QJ-102	3.10	G.E. (Stock No. RRC-130) K71J69-1
QJ-103	3.70	G.E. (Stock No. RRC-099) K68J881-1
QJ-104	3.10	Admiral 75B11-2
QJ-105	3.10	Emerson 390075
QJ-106	3.10	Admiral 75B11-10
QJ-107	3.10	G.E. (Stock No. RRC-103) K68J880-2
QJ-108	3.10	G.E. (Stock No. RRC-135) K71J397-3
QJ-109	3.10	Air King PA24100; Sightmaster, Sivlertone A-24100
QJ-110	3.70	G.E. (Stock No. RRC-104) K68J881-2
QJ-111	3.70	G.E. (Stock No. RRC-113) K69J146-1
QJ-112	3.10	Crosley 145573
QJ-113	3.10	Dumont 01027000
QJ-114	3.10	Air King PA24100A
QJ-115	3.10	Emerson 390096
QJ-116	3.70	Airline, Garod, Majestic, Truetone C8.226-1
QJ-117	3.10	Crosley C-144343
QJ-118	3.10	G.E. (Stock No. RRC-125) K68J880-3
QJ-119	3.10	Dumont 01027020
QJ-120	3.10	Admiral 75B11-4
QJ-121	3.70	G.E. (Stock No. RRC-126) K68J881-3
QJ-122	3.10	Belmont B-10B-13529
QJ-123	3.10	Belmont B-10B-15356
QJ-124	3.10	Sparton PA 4422
QJ-125	3.10	Sparton PA 4422-1
QJ-126	3.10	Packard Bell 25821
QJ-127	3.10	Packard Bell 25831
QJ-128	3.10	Westinghouse V-6464-2
QJ-129	4.30	Wilcox-Gay 19-2223
QJ-130	4.30	G.E. (Stock No. RRC-122) K69J529-1
QJ-131	3.10	Olympic, Starrett PT-1478; RCA (Stock No. 71784) P970111-18
QJ-132	3.10	Regal, Starrett T-20-11
QJ-133	4.30	Emerson 390166
QJ-134	4.30	Emedson 390175
QJ-135	3.10	Automatic TRV-95
QJ-136	4.30	G.E. (Stock No. RRC-123) K69J529-2
QJ-137	3.10	Westinghouse V-6464-1

EXACT DUPLICATE CONTROLS

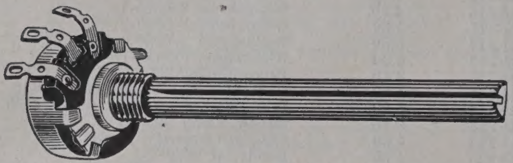
Preferred for Performance

Stock No.	List Price	Trade Name and Part Number
QJ-138	$3.10	Westinghouse V-9233; V-9377-1
QJ-139	3.10	G.E. (Stock No. RRC-080) M76J486-1
QJ-140	3.10	G.E. (Stock No. RRC-065) M73J799-2
QJ-141	3.10	G.E. (Stock No. RRC-023) M73J799-1; Stewart Warner 505563
QJ-142	3.10	G.E. (Stock No. RRC-089) K68J86-1
QJ-143	3.10	Dumont 01028700
QJ-144	3.10	G.E. (Stock No. RRC-097) K68J771-1
QJ-145	3.10	G.E. (Stock No. RRC-102) K68J771-2
QJ-146	4.30	RCA (Stock No. 74048) P970913-10
QJ-147	4.30	Westinghouse V-9686-1
QJ-148	4.30	Westinghouse V-6122
QJ-149	4.30	Westinghouse V-9877-1
QJ-150	3.10	Artone, Interstate Stores, Tele-King PD-5
QJ-151	4.30	Sparton PA 4450
QJ-152	3.10	Motorola 18A484073
QJ-153	3.10	National L-285-1
QJ-154	3.10	Admiral 75B11-1
QJ-155	3.10	Packard Bell 25820
QJ-156	3.10	Tele Tone TVC-512D
QJ-157	3.10	Emerson 390074-3
QJ-158	3.10	Wilcox-Gay 19-2222
QJ-159	3.70	Sparton PA-4420
QJ-160	3.10	Westinghouse V-5912
QJ-161	3.10	Air King, Ansley, RCA (Stock No. 72758), Regal, Starrett, Trad, Video Corp. P970111-8; Crosley W-139173; Fada 52.21; Hoffman T4804; Olympic, Starrett, PT-1479; Regal T-20-2
QJ-162	3.10	Airline, Garod, Majestic, Truetone C8.217-3; Brunswick, Emerson 390036
QJ-163	4.30	Garod C8.218-2
QJ-164	4.30	Emerson 390095
QJ-165	3.10	Dewald 3034A-1
QJ-166	3.10	Dewald 3034A-2
QJ-167	4.30	Sparton PA-4428-1
QJ-168	3.10	Fada 52.66; RCA (Stock No. 75215) P970913-26
QJ-169	3.10	Automatic TRV-77
QJ-170	3.10	Admiral 75B11-5
QJ-171	3.10	Mitchell, Sonoa N-7338
QJ-172	3.10	Tele Tone TVC-114D; Firestone, Tele Tone TVC-118D
QJ-173	3.10	Tele Tone TVC-102D
QJ-174	3.70	Sparton PA-4420-1
QJ-175	3.70	Emerson 390074
QJ-176	3.70	Crosley C146856
QJ-177	3.10	Airline, Coronado, Truetone, Wells-Gardner 78X2, 78X2A; RCA (Stock No. 72734) P970111-24
QJ-178	3.10	Airline, Coronado, Truetone, Wells-Gardner 78X2B, 78X2C; S.M.A. TV PRA 117
QJ-179	4.50	Garod C8.218-1
QJ-180	3.70	Sparton PA 4450-1
QJ-181	3.70	Crosley C148098; C148098A
QJ-182	3.70	Radio Craftsman 23S718
QJ-183	4.30	Crosley C149220
QJ-184	4.50	Motorola 18A484074
QJ-185	4.50	Motorola 18K489005
QJ-186	4.30	Stromberg Carlson 145071
QJ-187	3.70	Sylvania (Stock No. 154-0001) 70729
QJ-188	3.10	Silvertone, Tele Tone TVC-114DA
QJ-189	3.10	Silvertone, Tele Tone TVC-523D
QJ-190	3.70	Sylvania (Stock No. 154-0002) R73380
QJ-191	4.30	Sylvania (Stock No. 157-0012) R73426
QJ-192	4.30	Sylvania (Stock No. 157-0014) R73631
QJ-193	4.30	Admiral 75B11-12 (Use on Table and Console Models Only).
QJ-194	4.30	Admiral 75B11-3
QJ-195	4.30	Admiral 75B11-11
QJ-196	3.70	Admiral 75B11-7
QJ-197	3.10	Admiral 75B11-9
QJ-198	3.10	Westinghouse V-6304
QJ-199	3.10	Garod C8.217-2
QJ-200	4.30	G.E. (Stock No. RRC-131) K71J70-1
QJ-201	4.30	G.E. (Stock No. RRC-162) K71J70-2
QJ-202	3.70	G.E. (Stock No. RRC-147) K71J419-1
QJ-203	3.70	G.E. (Stock No. RRC-128) K71J71-2
QJ-204	3.10	Garod C8.217-1
QJ-205	3.40	Sylvania (Stock No. 157-0009) R73153
QJ-206	4.30	Sylvania (Stock No. 157-0011) R73331-1
QJ-207	4.30	Sylvania (Stock No. 157-0016) R73331-2
QJ-208	3.10	G.E. (Stock No. RRC-105) K69J401-1
QJ-209	3.10	G.E. (Stock No. RRC-109) K69J604-1
QJ-210	3.10	G.E. (Stock No. RRC-110) K69J604-2
QJ-211	3.10	G.E. (Stock No. RRC-124) K69J604-3
QJ-212	3.10	G.E. (Stock No. RRC-117) M77J101-1
QJ-213	$4.30	G.E. (Stock No. RRC-022) M73J800-1
QJ-214	4.30	G.E. (Stock No. RRC-079) M76J485-1
QJ-215	4.30	Westinghouse V-5914
QJ-216	4.30	Westinghouse V-6305-1
QJ-217	4.30	Westinghouse V-6305-2
QJ-218	4.30	Westinghouse V-9055
QJ-219	4.30	Westinghouse V-9385-1
QJ-220	3.70	Philco 33-5563-37
QJ-221	4.30	RCA (Stock No. 74359) P970913-12
QJ-222	4.30	RCA (Stock No. 75513) P970913-30
QJ-223	3.10	Stewart Warner 508893
QJ-224	4.30	Capehart-Farnsworth 78164
QJ-225	4.30	Bendix LH 262037-1
QJ-226	3.70	Bendix (Stock No. RV4D01) LH 262037-2
QJ-227	4.30	Philco 33-5563-21
QJ-228	4.30	Philco 33-5563-28
QJ-229	3.70	Zenith 63-1667
QJ-230	3.10	Firestone, Silvertone, Tele Tone TVC-516D
QJ-231	3.70	Air King, Pathe A24124; Firestone PA24124
QJ-232	4.30	Belmont A-10A-18703
QJ-223	3.10	Capehart-Farnsworth 450523A
QJ-234	3.10	Capehart-Farnsworth 450524A
QJ-235	4.30	Emerson 390153
QJ-236	3.70	Emerson 390168
QJ-237	4.30	Emerson 390187
QJ-238	3.10	G.E. (Stock No. RRC-101) K69J96-1
QJ-239	3.70	Hoffman 4833-2
QJ-240	3.10	Meck VC-12112B
QJ-241	3.10	Meck VC-12113B
QJ-242	3.10	Meck, Radio & Television VC-12117
QJ-243	3.10	Meck VC-12117E
QJ-244	3.70	Emerson 390074-1
QJ-245	3.70	Meck VC-12118D
QJ-246	4.30	Meck VC-12127; VC-12127B
QJ-247	3.10	Tele King PD-2
QJ-248	3.10	Tele King PD-3
QJ-249	3.70	Video Corp. S8428
QJ-250	4.30	Wells-Gardner 78X5, 78X5A
QJ-251	4.30	Wells-Gardner 78X7A
QJ-252	4.30	Airline, Wells-Gardner 78X4E, 78X8
QJ-253	4.30	Wells-Gardner 78X4B, 78X4C
QJ-254	3.10	Hoffman 4822
QJ-255	3.70	Hoffman 4824
QJ-256	3.10	Jackson 10B317-1
QJ-257	3.10	Jackson 10B317-2
QJ-258	3.70	Jackson 10B419, A-RVM100S
QJ-259	3.10	Stromberg-Carlson 145101
QJ-260	4.90	Motorola 18A790166
QJ-261	4.30	Motorola 18A791705
QJ-262	4.30	Motorola 18A792009
QJ-263	3.70	Air King PB-24109-C
QJ-264	3.70	Kaye-Halbert M116
QJ-265	3.70	Kaye-Halbert M124
QJ-266	3.10	Emerson 390101
QJ-267	3.70	Emerson 390165
QJ-268	3.70	Emerson 390074-5
QJ-269	4.30	Emerson 390111
QJ-270	4.30	Fada 52.64
QJ-271	4.30	Emerson 390131
QJ-272	3.70	Motorola 18B790843
QJ-273	3.10	Philco 33-5563-10
QJ-274	3.10	Philco 33-5563-12
QJ-275	3.70	Philco 33-5563-14
QJ-276	3.10	Philco 33-5563-19
QJ-277	3.10	Philco 33-5563-22
QJ-278	3.10	Philco 33-5563-25
QJ-279	3.10	Philco 33-5563-27
QJ-280	3.70	Philco 33-5563-29
QJ-281	3.10	Philco 33-5563-33
QJ-282	4.30	Regal T-20-12
QJ-283	3.10	Stewart-Warner 508201
QJ-284	4.30	Firestone, Stewart-Warner 508892
QJ-285	3.10	Firestone, Stewart-Warner 509076
QJ-286	4.30	Stewart-Warner 509314
QJ-287	3.10	Stromberg-Carlson 145111
QJ-288	3.10	Stromberg-Carlson 145129
QJ-289	3.10	Stromberg-Carlson 145140
QJ-290	3.10	Sylvania (Stock No. 155-0003) 70910
QJ-291	3.70	Traveler TVVC36
QJ-292	4.90	Regal T-20-9
QJ-293	3.10	Silvertone, Stewart-Warner 508457
QJ-294	4.30	Starrett PT-1002
QJ-295	3.10	Firestone, Silvertone, Tele Tone TVC-500D
QJ-296	3.10	Firestone, Silvertone, Tele Tone TVC-501D
QJ-297	3.10	Silvertone, Tele Tone TVC-519D
QJ-298	3.10	Silvertone, Tele Tone TVC-524D

VOLUME CONTROLS

Preferred for Performance

NEW TYPE Q



RADIO TECHNICIAN'S VOLUME CONTROL

A new volume control engineered to meet the needs of modern radio and TV replacement. Compact $\frac{15}{16}$" design is augmented with shorter bushing, only ¼" in length. This tiny control will meet all small set requirements, and yet is capable of handling large receiver replacements. "Cushioned turn" rotation and quiet element combine to provide a modern control of the highest quality.

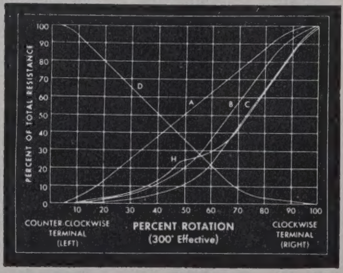
KNOB MASTER FIXED SHAFT. This is the standard Q shaft. It is a FIXED shaft, and handles most knob requirements. Knurled, flatted and slotted, it fits knurled and spring-type push-on knobs or set-screw knobs. 3" long with ample cross-section to prevent bending.

INTERCHANGEABLE FIXED SHAFTS. Quick replacement of standard fixed shaft to fit any of 13 Interchangeable Fixed Shafts provides ready conversion to "specials." This revolutionary feature is made easy by the new IRC Resilient Retainer Ring. These special FIXED Shafts offer all of the advantages of Tap-in Shafts with the added security of fixed shafts. Widest replacement coverage is made possible with a minimum stock. These special shafts are illustrated and explained on the following page.

5 STANDARD TAPERS

A—Used as potentiometer or rheostat in any circuit where uniform resistance change is required.

B—A semi-logarithmic curve used as tone control or audio circuit control.



C—A logarithmic curve. Used as audio circuit control or antenna shunt control.

D—Tapered at both ends to provide control of grid bias and antenna circuit. Used where control of grid bias is of prime importance in controlling volume.

H—A tapped logarithmic curve used as audio level control for automatic bass compensation.

NEW IRC TV CONTROL MANUAL

IRC's TV Control Manual includes comprehensive listing of both standard and concentric dual replacements for TV Controls. Also lists concentric dual replacements for home and auto radios. Manufacturer's Part Number Listing includes both the new IRC CONCENTRIKIT and IRC EXACT DUPLICATE CONTROL replacements. Form S086A. Available from your IRC Distributor. **Price $.50**

61 VALUES FOR COMPLETE COVERAGE

RESISTANCE OHMS	TAP	IRC STOCK No.	TAPER	USUAL USE
500	—	Q 11-103	A	4, 18—L
1K	—	Q 11-108	A	4—L
2K	—	Q 11-110	A	4, 16—L
2.5K	—	Q 13-111	C	O
3K	—	Q 11-112	A	L
5K	—	Q 11-114	A	1, 4, 8, 13, 16, 17—L
7.5K	—	Q 11-115	A	4—L
10K	—	Q 11-116*	A	4, 16—B, L
10K	—	Q 13-116	C	A
10K	—	Q 14-116*	D	D
20K	—	Q 11-119	A	8, 9—L
20K	—	Q 16-119*	Spec.	B
25K	—	Q 11-120	A	3, 4, 8, 9, 10, 11, 12—L
25K	—	Q 14-120*	D	K
30K	—	Q 11-121	A	4, 9, 10—L
50K	—	Q 11-123	A	3, 9—L
50K	—	Q 13-123	C	N
50K	—	Q 14-123*	D	B
0.1 meg	—	Q 11-128	A	2, 3, 15, 17—L
0.1 meg	—	Q 13-128	C	E, N
0.2 meg	—	Q 11-129	A	1, 15—L
0.25 meg	—	Q 11-130	A	3, 6, 9, 17—L
0.25 meg	—	Q 13-130	C	E, N
0.25 meg	0.125 meg	Q 13-130X	Spec.	F
0.25 meg	60K	Q 18-130X	H	G
0.25 meg	60K-0.12 meg	Q 18-130XX	Spec.	H
0.35 meg	—	Q 13-132	C	E, N
0.35 meg	35K	Q 17-132X	Spec.	G
0.35 meg	75K	Q 18-132X	H	G
0.5 meg	—	Q 11-133	A	3, 4, 9, 12, 15, 17—L
0.5 meg	—	Q 13-133	C	E, N
0.5 meg	0.125 meg	Q 13-133X	H	G
0.5 meg	—	Q 14-133	D	M
0.5 meg	25K	Q 17-133X	Spec.	G
0.5 meg	50K	Q 18-133X	Spec.	G
0.5 meg	0.25 meg	Q 19-133X	Spec.	G
0.5 meg	0.1 meg-0.2 meg	Q 18-133XX	Spec.	H
1.0 meg	—	Q 11-137	A	3, 12, 15, 16—L
1.0 meg	—	Q 13-137	C	E, N
1.0 meg	0.25 meg	Q 13-137X	H	H
1.0 meg	—	Q 14-137	D	N
1.0 meg	35K	Q 17-137X	Spec.	G
1.0 meg	50K-0.1 meg	Q 17-137XX	Spec.	H
1.0 meg	0.1 meg	Q 18-137X	Spec.	G
1.0 meg	0.25 meg-0.5 meg	Q 18-137XX	Spec.	H
1.0 meg	0.5 meg	Q 19-137X	Spec.	G
1.0 meg	0.5 meg	QVC-539X	Spec.	J
1.5 meg	—	Q 11-138	A	15
2.0 meg	—	Q 11-139	A	4, 5, 6, 7, 12, 14, 15, 17—L
2.0 meg	—	Q 13-139	C	E, N
2.0 meg	0.5 meg	Q 13-139X	H	G
2.0 meg	0.5 meg-1.0 meg	Q 13-139XX	Spec.	H
2.0 meg	0.15 meg	Q 17-139X	Spec.	G
2.0 meg	1.0 meg	Q 18-139X	Spec.	G
2.0 meg	0.25 meg-0.5 meg	Q 18-139XX	Spec.	H
2.0 meg	50K	Q 19-139X	Spec.	G
2.5 meg	—	Q 11-239	A	5, 6, 17—L
3.0 meg	—	Q 11-140	A	5, 7, 14—L
3.0 meg	—	Q 13-140	C	E
5.0 meg	—	Q 11-141	A	5, 7, 14, 15, 16, 17, 18—L
10.0 meg	—	Q 11-143	A	6, 16, 18—L

LIST — PLAIN CONTROL $1.25; TAPPED CONTROL $1.85

TELEVISION USES

1—A. G. C. Automatic Gain Control
2—A.F.C. Automatic Freq. Control
3—Brightners Control
4—Contrast Control
5—Focus Control
6—Height Control
7—Horizontal Centering Control
8—Horizontal Drive Control
9—Horizontal Hold Control (Sync.)
10—Horizontal Linearity Control
11—Horizontal Peaking Control
12—Horizontal Size Control
13—Sensitivity Control
14—Vertical Centering Control
15—Vertical Hold Control (Sync.)
16—Vertical Linearity Control
17—Vertical Size Control
18—Width Control

RADIO USES

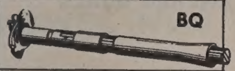
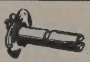
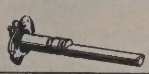
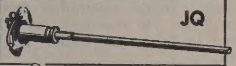
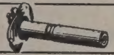
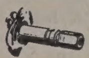
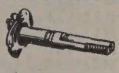
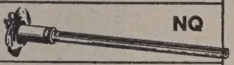
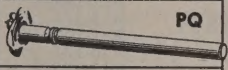
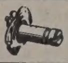
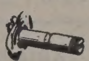
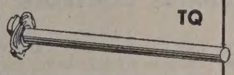
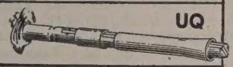
A—Antenna Control
B—Antenna Grid Bias Control
C—Antenna Grid Bias of 1 tube
D—Antenna Grid Bias of 2 tubes
E—Audio Volume Control
F—Audio Control with AVC Tap
G—Audio Control with Tone Tap
H—Audio Control with Two Tone Taps
J—Fader Control
K—Grid Bias Control
L—Potentiometer Voltage Divider
M—R. F. Plate Control
N—Tone Control
O—Panel Section for L & T Pads

*—These controls are supplied with 270 ohm BW-½ (½ watt) insulated wire wound resistor.

VOLUME CONTROLS

Preferred for Performance

13 INTERCHANGEABLE FIXED SHAFTS

	**BQ**	Slotted or tongued. For remote control cables. 3½″ long. ¼″ dia. LIST 45¢
	**GQ**	Slotted with hole in bottom. For Philco sets. 1 1/16″ long. ¼″ dia. LIST 30¢
	**HQ**	Flatted, with groove for dial plate. For Delco, RCA, Sears-Roebuck and Westinghouse. 3/32″ deep flat. 1/64″ deep groove. 1 11/16″ long. ¼″ dia. LIST 30¢
	**JQ**	⅛″ dia. with .105″ flat. For certain Zenith models. 4⅛″ long..LIST 45¢
	**KQ**	¼″ round with 2 concentric holes in end. For Motorola sets. 1⅜″ long. LIST 30¢
	**LQ**	For certain Belmont and Montgomery-Ward sets. 1/32″ deep flat. 1/32″ deep groove. 1″ long. ¼″ dia. LIST 35¢
	**MQ**	Double-flat, threaded for ⅜″ on end. For Belmont, Montgomery-Ward and Wells-Gardner sets. 2 concentric holes in end. 1½″ long....LIST 45¢
	**NQ**	3/16″ flatted and slotted. Slot milled length of shaft except for thin web. 4″ long..............................LIST 45¢
	**PQ**	¼″ full-round. 3″ long. For ¼″ or ⅜″ bushings. ⅜″ bushing incl. LIST 35¢
	**RQ**	Very short screw-driver slot shaft. Slot, 3/64″ x 1/16″. ½″ long. ¼″ dia. ⅜″ bushing included..........LIST 35¢
	**SQ**	Finger knurl and screw-driver slot. Knurled at end for ⅛″. Screw-driver slot in end, 3/64″ x 1/16″ deep. ¼″ dia. ¾″ long..........................LIST 30¢
	**TQ**	Insulated shaft for television. 3″ long. ¼″ dia. CANNOT BE USED WITH SWITCH.................LIST 60¢
	**UQ**	Identical to BQ with addition of friction-clutch-drive arm. For remote control auto radios...........LIST 60¢

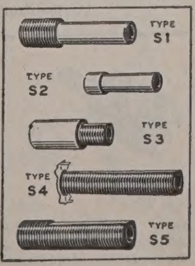
IRC Interchangeable Fixed Shafts are individually packaged with instructions and extra Resilient Retainer Ring.

EXTENSION SHAFTS

These attach to regular shafts, extending length to any needed size. Frequently make possible use of standard controls for "special" job.

TYPE	DIMENSION	LIST
441	4″ x ¼″ dia. x 1/32″ flat	40¢
442	4″ x ¼″ dia. x 3/32″ flat	40¢
443	4″ x 3/16″ dia. x 1/64″ flat	40¢
444	8″ x ¼″ dia. x 3/32″ flat for 4″ length	40¢

SLEEVE BUSHINGS



Type S1—For use with standard controls.

Type S2—To provide bearing for switching mechanism.

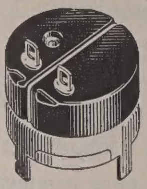
Type S3—For use with standard controls to set control back from chassis or mounting bracket. 1½″—½″ dia. for 1″ unthd.—⅜″ dia. for ½″, ⅜″—32 thd.—.344 flat.

Type S4—For use with standard controls to provide 7/16″ dia. bushing. 1⅝″—thd. 7/16″—28 full length—.375 dbl flat.

Type S5—For use with standard controls to provide ½″ dia. bushing. 2¼″—½″—28 thread full length—.437 flat.

Type	List	Type	List
S1	45¢	S3, S4, S5	60¢
S2	30¢		

NEW IRC® SWITCHES



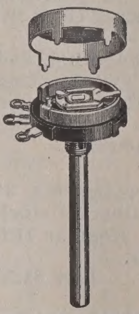
Designed and made by IRC, new Type 76 Switch is available in 2 types: 76-1 is Single Pole Single Throw, and 76-2 is Double Pole Single Throw. Quickly attached to Q Control.

TYPE		LIST
76-1	S.P.S.T.	60¢
76-2	D.P.S.T.	60¢

PLAIN AND INSULATED SHAFT COUPLERS

Type		List
C2	Insulated coupler for use with square type Motorola shaft	30¢
C3	Plain coupler for ¼″ shafts; insert allows coupling of ¼″ shaft to 3/16″ shaft	30¢

TYPES W & WK WIRE WOUND CONTROLS



TYPE W—A dependable wire wound control of uniform resistance change for power requirements up to 2 watts. Tight, uniform windings assure utmost accuracy. Diameter 1¼″; depth behind panel 9/16″; shaft length 3″ from control face; ¼″ full round shaft. Illustration shows cover removed, although covers are supplied on controls.

TYPE WK—Type WK Control is identical to Type W Control except that it is equipped with IRC Knob Master Shaft for fitting to both knurled and flatted knobs used in Television Sets. Type W Switches may be used on Type WK Controls. Bushing is ¼″ long. Shaft is 3″ long from mounting face.

Type W and WK Control—Plain..........**List $1.25**

IRC Control No.	Resistance Ohms	Max. Current (Amps.)	IRC Control No.	Resistance Ohms	Max. Current (Amps.)
W-2	2	1.000	W-400	400	.071
W-3	3	.815	W-500	500	.063
W-5	5	.630	W-750	750	.052
W-6	6	.560	W-1000	1000	.045
W-8	8	.500	WK-1000	1000	.045
W-10	10	.450	WK-1500	1500	.036
W-15	15	.370	W-2000	2000	.032
W-20	20	.320	WK-2000	2000	.032
W-25	25	.285	WK-2500	2500	.028
W-30	30	.260	W-3000	3000	.026
W-40	40	.225	WK-3000	3000	.026
W-50	50	.200	W-4000	4000	.022
W-60	60	.183	W-5000	5000	.020
W-75	75	.164	W-7500	7500	.016
W-100	100	.142	WK-7500	7500	.016
W-200	200	.100	W-10000	10000	.014
WK-250	250	.089	WK-10000	10000	.014
W-300	300	.083			

TELEVISION CENTERING CONTROLS

Type W Wire Wound controls with Center Tap are widely used as Television Centering Controls.

W10X5	10 ohms—center tapped at 5 ohms
W20X10	20 ohms—center tapped at 10 ohms
W30X15	30 ohms—center tapped at 15 ohms
W50X25	50 ohms—center tapped at 25 ohms

Type W Control Center Tapped for TV..........List $1.85

TYPE W SWITCHES

For Type W Controls

		LIST
No. 51	S.P.S.T.	$0.60
No. 52	D.P.S.T.	.75
No. 53	S.P.D.T.	.75
No. 54	Three Point	.75
No. 55	Four Point	.75
No. 56	S.P.D.T. at clockwise position	.75
No. 57	S.P.S.T., with dummy lug	.75

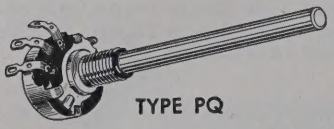
IRC

SPECIAL PURPOSE CONTROLS

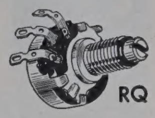
Preferred for Performance

TYPE PQ AND RQ

DISTRIBUTOR CONTROLS FOR INDUSTRY



TYPE PQ



RQ

IRC Distributor Controls for Industry offer commercial users a wide selection of resistance values and two industrial shaft types. Shafts are fixed. This combination of wide selection of values and speedy Distributor delivery holds many advantages for industrial purchasers. These Industrial Controls are adaptations of the new, compact $\frac{15}{16}$″ Q Control. Power rating is ½ watt, 500 volts maximum. Electrical rotation is the same with or without switch. ⅜″ bushing is brass and held to close tolerance for snug shaft fit.

Terminals are heavily tinned for easy soldering, and may be bent without becoming noisy. Two locating lugs are provided, either or both of which may be bent down if not needed. Molded base. Both Types PQ and RQ are supplied in standard tapers.

TYPE PQ. Full round ¼″ shaft, approximately 3″ from mounting face, with ⅜″ long bushing. 19 stock available in 33 stock values as shown. Regular IRC stock numbers are used with prefix PQ.

List $1.25

TYPE RQ. Very short screw-driver slot shaft, ¼″ diameter and approximately ½″ long from mounting face with ⅜″ long bushing. Available in 33 values as shown. Regular IRC stock numbers are used with prefix RQ.

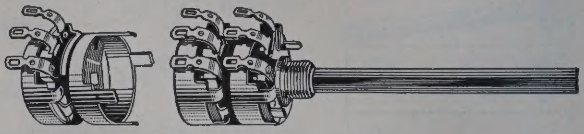
List $1.25

STANDARD VALUES

TYPE PQ	TYPE RQ	RESISTANCE IN OHMS	TAPER
PQ11-103	RQ11-103	500	A
PQ11-108	RQ11-108	1K	A
PQ11-110	RQ11-110	2K	A
PQ11-112	RQ11-112	3K	A
PQ11-114	RQ11-114	5K	A
PQ11-115	RQ11-115	7.5K	A
PQ11-116	RQ11-116	10K	A
PQ13-116	RQ13-116	10K	C
PQ14-116	RQ14-116	10K	D
PQ11-119	RQ11-119	20K	A
PQ11-120	RQ11-120	25K	A
PQ14-120	RQ14-120	25K	D
PQ11-121	RQ11-121	30K	A
PQ11-123	RQ11-123	50K	A
PQ13-123	RQ13-123	50K	C
PQ14-123	RQ14-123	50K	D
PQ11-128	RQ11-128	0.1 meg	A
PQ13-128	RQ13-128	0.1 meg	C
PQ11-129	RQ11-129	0.2 meg	A
PQ11-130	RQ11-130	0.25 meg	A
PQ13-130	RQ13-130	0.25 meg	C
PQ11-133	RQ11-133	0.5 meg	A
PQ13-133	RQ13-133	0.5 meg	C
PQ11-137	RQ11-137	1.0 meg	A
PQ13-137	RQ13-137	1.0 meg	C
PQ11-138	RQ11-138	1.5 meg	A
PQ11-139	RQ11-139	2.0 meg	A
PQ13-139	RQ11-139	2.0 meg	C
PQ11-239	RQ11-239	2.5 meg	A
PQ11-140	RQ11-140	3.0 meg	A
PQ13-140	RQ13-140	3.0 meg	C
PQ11-141	RQ11-141	5.0 meg	A
PQ11-143	RQ11-143	10.0 meg	A

Taper A is linear. Taper C is logarithmic.
Taper D is reverse curve for control of bias.

MULTISECTIONS FOR STANDARD DUALS

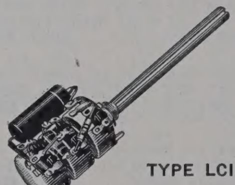


IRC MULTISECTIONS are complete control sections that can be added like a switch to any Q, PQ or RQ Control. With these units, the Radio Technician or Engineer is provided with an endless variety of dual, triple or even quadruple controls. Duals assembled from IRC MULTISECTIONS will accommodate Type 76 switches. Availtble in a selection of 20 values, as shown in following table. Each MULTISECTION adds $\frac{19}{32}$″ to basic control.

STOCK VALUES OF IRC MULTISECTIONS

RESISTANCE IN OHMS	TAPER	IRC STOCK NO.
500	A	M11-103
1K	A	M11-108
2K	A	M11-110
5K	A	M11-114
10K	A	M11-116
25K	A	M11-120
50K	A	M11-123
0.1 meg	A	M11-128
0.1 meg	C	M13-128
0.25 meg	A	M11-130
0.25 meg	C	M13-130
0.5 meg	A	M11-133
0.5 meg	C	M13-133
1.0 meg	A	M11-137
1.0 meg	C	M13-137
2.0 meg	A	M11-139
2.0 meg	C	M13-139
3.0 meg	C	M13-140
5.0 meg	A	M11-141
10.0 meg	A	M11-143

CONTINUOUSLY VARIABLE LOUDNESS CONTROLS



TYPE LCI

IRC Type LCI Continuously Variable Loudness Controls actualy bring high fidelity tone to commercial audio systems — even at whisper level! Only three connections are needed to install the new Type LCI Loudness Control. No special taps or complicated circuits are required. Type LCI's eliminate the need for tapped volume controls, stepped-type loudness controls, bass and treble boost circuits. Type LCI's do what these other devices have failed to do.

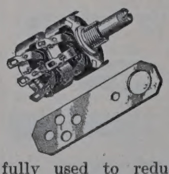
IRC Loudness Control also can be easily assembled with a standard IRC Type Q Volume Control and two Multisections. Simple assembly instructions are included with each Multisection. All parts, etc.

List $9.95 complete

IRC Parts for Assembling Loudness Control	List Price
Q11-133—Control (Panel section)	$1.25
M13-137—MULTISECTION (2nd section)	1.25
M13-128—MULTISECTION (Rear section)	1.25
BTS 0.1 megohm ½ watt Resistor	.17
BTS 10K ohm ½ watt Resistor	.17

(Capacitors not supplied septrately by IRC)

NEW IRC TV ATTENUATOR
Type QJ-3 — FOR ADJUSTMENT OF SIGNAL INPUT



Where excessive signal strength causes poor reception, IRC's Type QJ-3 TV Attenuator readily permits adjustment of signal input at the set. This new attenuator has been successfully used to reduce or correct such undesirable conditions as: Adjacent channel interference — Background pictures on weaker stations — Horizontal or vertical patterns in picture — Poor picture definition — Annoying hum or buzz — Picture and sound breakover. Type QJ-3 is easily installed in any TV set.

List $3.30

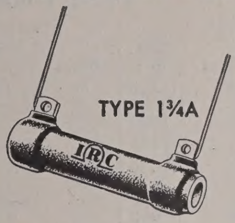
POWER RESISTORS

Preferred for Performance

IRC

IRC FIXED AND ADJUSTABLE POWER WIRE WOUND RESISTORS

TYPE 4½EA


TYPE 1¾A

IRC Power Wire Wounds are rugged resistors specially engineered for dependable heavy duty performance. They are full size, thus continuous operation at full rated power can be maintained. Derating at high resistance values is unnecessary. Special IRC cement coating is noted for its rapid heat dissipation, and protection against humidity. Operating temperatures are lower, thus assuring long life.

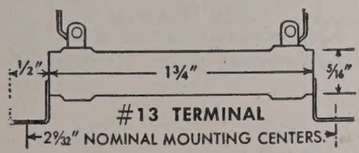
All terminals are hot tin dipped for easy soldering. 10 and 20 watt sizes use combination lead and lug terminal from which lugs may be cut for tight space applications. Clear, permanent markings show type, size, watts and resistance. Tolerances: Fixed Types—standard ± 5% for 50 ohms and over, ± 10% below 50 ohms. Adjustable Types—standard ± 10%.

FIXED TYPES

TYPE 1¾A—10 WATTS

formerly type AB

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	3160	100	316	1,000	100	7,500	36
1.5	2580	125	283	1,100	95	8,000	35
2	2235	150	258	1,200	91	8,500	34
3	1825	200	223	1,250	89	9,000	33
4	1580	225	211	1,450	83	10,000	31
5	1410	250	200	1,500	81	11,000	30
7.5	1150	300	182	1,750	75	12,000	28
10	1000	350	169	2,000	70	12,500	28
12	913	400	158	2,250	66	13,500	27
15	816	450	149	2,500	63	14,300	26
20	707	500	141	3,000	57	15,000	25
25	632	600	129	3,500	53	16,000	25
30	577	700	119	4,000	50	17,500	23
35	535	750	115	4,500	47	18,000	23
40	500	800	111	5,000	44	20,000	22
50	447	900	105	6,000	40	22,500	21
75	365			7,000	37	25,000	20



SLOTTED BRACKETS PERMIT ±⅛" VARIATION.

PRICES	LIST
1 to 1,000 ohms	$0.75
1,100 to 5,000 ohms	.80
6,000 to 10,000 ohms	.92
11,000 to 20,000 ohms	1.03
22,500 to 25,000 ohms	1.08
ZO Brackets (not included with resistor)	.12

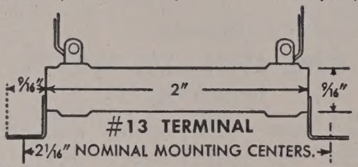
TYPE 2D—20 WATTS

formerly type DG

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	4470	100	447	500	200	1,200	129
5	2000	150	365	650	175	1,250	126
10	1415	200	316	700	169	1,500	115
25	894	250	282	750	163	1,750	107
50	633	300	258	800	158	1,850	104
75	517	350	238	850	153	2,000	100
		400	223	1,000	141		

TYPE 2D—20 WATTS (Cont'd)

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
2,250	94	4,500	66	9,000	47	20,000	31
2,400	91	5,000	63	10,000	44	25,000	28
2,500	89	6,000	57	11,000	42	30,000	25
2,750	85	7,000	53	12,000	40	35,000	23
3,000	81	7,500	51	12,500	40	40,000	22
3,500	75	8,000	50	15,000	36	45,000	21
4,000	70	8,500	48			50,000	20



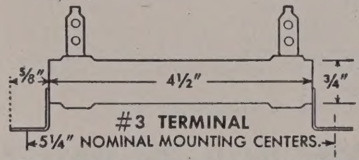
SLOTTED BRACKETS PERMIT ±⅛" VARIATION.

PRICES	LIST
1 to 1,000 ohms	$0.95
1,200 to 5,000 ohms	.97
6,000 to 10,000 ohms	1.12
11,000 to 20,000 ohms	1.20
25,000 to 40,000 ohms	1.37
45,000 to 50,000 ohms	1.58
Z1 Brackets (not included with resistor)	.12

TYPE 4½E—50 WATTS

formerly type EP

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	7070	100	707	3,000	129	12,500	63
2	5000	150	577	4,000	111	15,000	57
3	4080	200	500	5,000	100	20,000	50
4	3535	250	447	6,000	91	25,000	44
5	3160	500	316	7,000	84	30,000	40
10	2235	750	258	7,500	81	35,000	37
25	1415	800	250	8,000	79	40,000	35
50	1000	1,000	223	10,000	70	50,000	31
75	816	1,500	182	12,000	64	60,000	28
		2,000	158			75,000	25
		2,500	141			0.1 meg	22



SLOTTED BRACKETS PERMIT ±3⁄16" VARIATION.

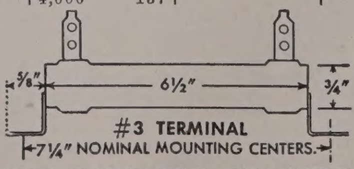
PRICES	LIST
1 to 4 ohms	$2.25
5 to 1,000 ohms	1.63
1,500 to 5,000 ohms	1.75
6,000 to 10,000 ohms	1.92
12,000 to 20,000 ohms	2.08
25,000 to 40,000 ohms	2.33
50,000 to 60,000 ohms	2.58
75,000 ohms	2.90
0.1 megohm	3.20

Z2 Brackets included with resistor.

TYPE 6½E—75 WATTS

formerly type ES

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
5	3870	500	387	5,000	122	25,000	54
10	2740	750	316	6,000	111	30,000	50
25	1730	1,000	274	7,500	100	40,000	43
50	1220	1,500	223	8,000	96	50,000	38
100	865	2,000	193	10,000	86	60,000	35
200	612	2,500	173	15,000	70	75,000	31
250	548	3,000	158	20,000	61	0.1 meg	27
		4,000	137				



SLOTTED BRACKETS PERMIT ±3⁄16" VARIATION.

IRC POWER RESISTORS

Preferred for Performance

TYPE 6½E—75 WATTS (Cont'd)

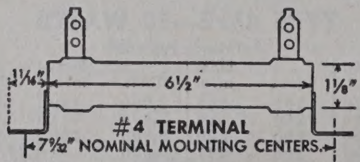
PRICES	LIST
5 to 1,000 ohms	$2.00
1,500 to 5,000 ohms	2.08
6,000 to 10,000 ohms	2.25
15,000 to 20,000 ohms	2.45
25,000 to 40,000 ohms	2.78
50,000 to 60,000 ohms	2.87
75,000 ohms	3.22
0.1 megohm	3.58

Z2 Brackets included with resistor.

TYPE 6½H—100 WATTS

formerly type HA

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	10,000	50	1,414	1,250	282	7,500	115
2	7,070	75	1,155	1,500	258	10,000	100
3	5,770	100	1,000	2,000	223	15,000	81
4	5,000	125	895	2,500	200	20,000	70
5	4,470	150	816	3,000	182	25,000	63
10	3,160	250	632	5,000	141	30,000	57
25	2,000	500	447			40,000	50
		750	365			50,000	44
		1,000	316			60,000	40
						75,000	36
						0.1 meg	31



SLOTTED BRACKETS PERMIT ±1/16" VARIATION.

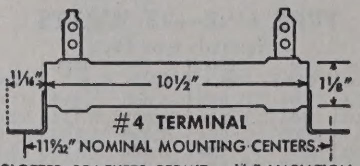
PRICES	LIST
1 to 4 ohms	$3.37
5 to 1,000 ohms	2.42
1,250 to 5,000 ohms	2.53
7,500 to 10,000 ohms	2.70
15,000 to 20,000 ohms	2.97
25,000 to 40,000 ohms	3.20
50,000 to 60,000 ohms	3.37
75,000 ohms	3.58
0.1 megohm	3.80

Z3 Brackets included with resistor.

TYPE 10½H—200 WATTS

formerly type HO

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	14,140	75	1,630	1,500	365	20,000	100
2	10,000	100	1,414	2,000	316	25,000	89
3	8,160	150	1,150	2,500	283	30,000	81
4	7,070	250	895	3,000	258	40,000	70
5	6,320	500	632	5,000	200	50,000	63
10	4,470	750	516	7,500	163	60,000	57
25	2,830	1,000	447	10,000	141	75,000	51
50	2,000			15,000	115	0.1 meg	44



SLOTTED BRACKETS PERMIT ±1/16" VARIATION.

PRICES	LIST
1 to 5 ohms	$4.53
10 to 1,000 ohms	3.22
1,500 to 5,000 ohms	3.30
7,500 to 10,000 ohms	3.53
15,000 to 20,000 ohms	3.77
25,000 to 40,000 ohms	3.90
50,000 to 60,000 ohms	4.03
75,000 ohms	4.25
0.1 megohm	4.53

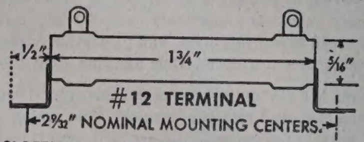
Z3 Brackets included with resistor.

ADJUSTABLE TYPES

TYPE 1¾AA—10 WATTS

formerly type ABA

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	3160	50	447	750	115	3,000	57
2	2235	75	365	800	111	3,500	53
3	1825	100	316	1,250	89	4,000	50
5	1410	150	258	1,000	100	4,500	47
7.5	1150	200	223	1,450	83	5,000	44
10	1000	250	200	1,500	81	6,000	40
15	816	300	182	2,000	70	7,000	37
20	707	350	169	2,250	66	7,500	36
25	632	400	158	2,500	63	8,000	35
		500	141			8,500	34
		600	129			9,000	33
						10,000	31



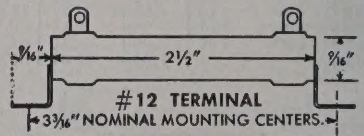
SLOTTED BRACKETS PERMIT ±1/8" VARIATION.

PRICES	LIST
1 to 1,000 ohms	$1.47
1,250 to 5,000 ohms	1.53
6,000 to 10,000 ohms	1.63
Z0 Brackets (not included with resistor)	.12

TYPE 2½DA—25 WATTS

formerly type DHA

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	5000	50	707	1,000	158	4,500	74
2	3530	75	577	1,250	141	5,000	70
3	2880	100	500	1,500	129	6,000	64
5	2230	150	408	2,000	111	7,000	59
7.5	1825	200	353	2,250	105	7,500	57
10	1580	250	316	2,500	100	8,000	55
15	1290	300	289	3,000	91	9,000	52
20	1117	400	250	3,500	84	10,000	50
25	1000	500	223	4,000	79	12,000	45
		750	182			15,000	40
		800	176			20,000	35
						25,000	31



SLOTTED BRACKETS PERMIT ±1/8" VARIATION.

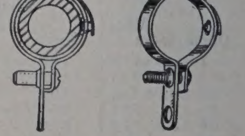
PRICES	LIST
1 to 1,000 ohms	$1.87
1,250 to 5,000 ohms	1.88
6,000 to 10,000 ohms	2.03
12,000 to 20,000 ohms	2.08
25,000 ohms	2.28

Z1 Brackets included with resistor.

TYPE X BANDS

Adjustable Bands designated as Type X feature stainless steel spring with silver contact button. Cannot corrode—constant pressure is assured. Type 1¾AA Resistor because of its small size is furnished with a special adjustable band.

Resistor	Band	List
1¾AA	special "A"	20¢
2½DA	X2	25¢
4½EA, 6½EA	X3	25¢
6½HA, 10½HA	X4	42¢



RESISTORS

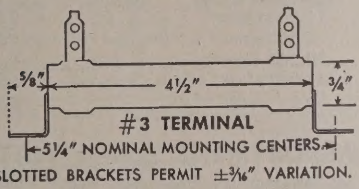
Preferred for Performance

IRC

TYPE 4½EA—50 WATTS

formerly type EPA

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	7070	150	577	2,500	141	9,000	74
2	5000	200	500	3,000	129	10,000	70
3	4080	250	447	3,500	119	12,000	64
4	3535	300	408	4,000	111	15,000	57
5	3160	400	353	4,500	105	20,000	50
10	2235	500	316	5,000	100	25,000	44
25	1415	750	258	6,000	91	30,000	40
50	1000	800	250	7,000	84	40,000	35
75	816	1,000	223	7,500	81	50,000	31
100	707	1,250	200	8,000	79	60,000	28
		1,500	182			75,000	25
		2,000	158			80,000	25
		2,250	149			0.1 meg	22


5/8"
4½"
¾"
#3 TERMINAL
5¼" NOMINAL MOUNTING CENTERS.
SLOTTED BRACKETS PERMIT ±3/16" VARIATION.

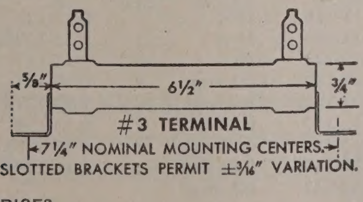
PRICES	LIST
1 to 4 ohms	$3.00
5 to 1,000 ohms	2.37
1,250 to 5,000 ohms	2.47
6,000 to 10,000 ohms	2.63
12,000 to 20,000 ohms	2.83
25,000 to 40,000 ohms	3.08
50,000 to 60,000 ohms	3.30
75,000 to 80,000 ohms	3.67
0.1 megohm	3.92

Z2 Brackets included with resistor.

TYPE 6½EA—75 WATTS

formerly type ESA

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	8650	300	500	3,500	146	15,000	70
2	6120	400	432	4,000	137	20,000	61
3	5000	500	387	4,500	129	25,000	54
4	4330	750	316	5,000	122	30,000	50
5	3870	800	305	6,000	111	35,000	46
10	2740	1,000	274	7,000	103	40,000	43
15	2230	1,250	245	7,500	100	45,000	40
25	1730	1,500	223	8,000	96	50,000	38
50	1220	2,000	193	9,000	91	60,000	35
100	865	2,250	182	10,000	86	80,000	30
200	612	2,500	173	12,000	79	0.1 meg	27
250	548	3,000	158				


5/8"
6½"
¾"
#3 TERMINAL
7¼" NOMINAL MOUNTING CENTERS.
SLOTTED BRACKETS PERMIT ±3/16" VARIATION.

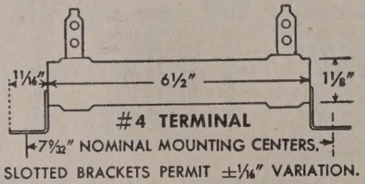
PRICES	LIST
1 to 4 ohms	$3.53
5 to 1,000 ohms	2.75
1,250 to 5,000 ohms	2.83
6,000 to 10,000 ohms	3.00
12,000 to 20,000 ohms	3.20
25,000 to 40,000 ohms	3.53
45,000 to 60,000 ohms	3.62
80,000 ohms	3.97
0.1 megohm	4.33

Z2 Brackets included with resistor.

TYPE 6½HA—100 WATTS

formerly type HAA

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	10,000	200	707	3,000	182	25,000	63
2	7,070	250	632	4,000	158	30,000	57
3	5,770	400	500	5,000	141	40,000	50
4	5,000	500	447	6,000	129	50,000	44
5	4,470	750	365	7,500	115	60,000	40
10	3,160	1,000	316	8,000	111	75,000	36
25	2,000	1,500	258	10,000	100	0.1 meg	31
50	1,414	2,000	223	15,000	81		
100	1,000	2,500	200	20,000	70		


11/16"
6½"
1⅛"
#4 TERMINAL
7 9/32" NOMINAL MOUNTING CENTERS.
SLOTTED BRACKETS PERMIT ±1/16" VARIATION.

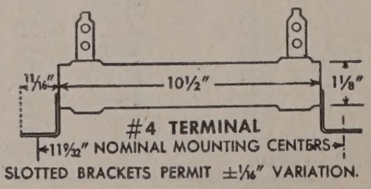
PRICES	LIST
1 to 4 ohms	$4.53
5 to 1,000 ohms	3.58
1,500 to 5,000 ohms	3.67
6,000 to 10,000 ohms	3.87
15,000 to 20,000 ohms	4.12
25,000 to 40,000 ohms	4.37
50,000 to 60,000 ohms	4.53
75,000 ohms	4.75
0.1 megohm	4.95

Z3 Brackets included with resistor.

TYPE 10½HA—200 WATTS

formerly type HOA

Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.	Ohms	Max. m.a.
1	14,140	25	2,830	2,000	316	20,000	100
2	10,000	50	2,000	2,500	283	25,000	89
3	8,160	100	1,414	3,000	258	30,000	81
4	7,070	250	895	5,000	200	40,000	70
5	6,320	500	632	10,000	141	50,000	63
10	4,470	1,000	447	15,000	115	60,000	57
		1,500	365			75,000	51
						0.1 meg	44


11/16"
10½"
1⅛"
#4 TERMINAL
11 9/32" NOMINAL MOUNTING CENTERS
SLOTTED BRACKETS PERMIT ±1/16" VARIATION.

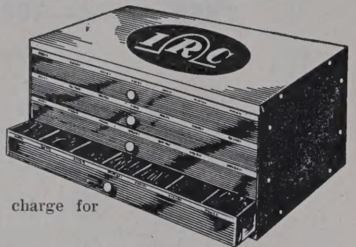
PRICES	LIST
1 to 5 ohms	$5.67
10 to 1,000 ohms	4.37
1,500 to 5,000 ohms	4.45
10,000 ohms	4.70
15,000 to 20,000 ohms	4.92
25,000 to 40,000 ohms	5.03
50,000 to 60,000 ohms	5.17
75,000 ohms	5.42
0.1 megohm	5.67

Z3 Brackets included with resistor.

KITS AND CABINETS

Preferred for Performance

ALL-METAL RESIST-O-CABINET



In large steel cabinets, 3 new IRC RESIST-O-CABINETS provide the perfect way to buy and stock resistors. Four drawer cabinets have 28 identified compartments. Blue, yellow and silver finish adds attractiveness to shop. Drawers are non-spill and cabinets can be stacked. Measure 5⅜" x 5 15/16" x 10⅞". No extra charge for cabinet.

ASSORTMENT #4—½ WATT

100 ½ watt BW and BTS Resistors including values most widely found in television. **List $17.00**

QUANTITY	RANGE	QUANTITY	RANGE	QUANTITY	RANGE
2	47 ohms	5	4,700 ohms*	5	0.22 meg*
3	100 ohms	5	10,000 ohms*	6	0.27 meg*
2	220 ohms	3	22,000 ohms*	3	0.33 meg*
2	270 ohms	3	27,000 ohms*	6	0.47 meg*
3	470 ohms*	3	33,000 ohms*	6	1.0 meg*
6	1,000 ohms*	6	47,000 ohms*	5	2.2 meg*
2	1,500 ohms	2	56,000 ohms*	2	3.3 meg
2	2,200 ohms*	2	68,000 ohms*	3	4.7 meg*
2	2,700 ohms*	6	0.1 meg*	2	10.0 meg
3	3,300 ohms*				

ASSORTMENT #5—1 WATT

83 1 watt BW and BTA Resistors including values most widely found in television. **List $20.75**

QUANTITY	RANGE	QUANTITY	RANGE	QUANTITY	RANGE
2	47 ohms	2	3,300 ohms*	5	0.1 meg*
2	100 ohms	3	4,700 ohms*	2	0.15 meg
2	150 ohms	5	10,000 ohms*	2	0.22 meg
2	220 ohms	2	15,000 ohms*	5	0.27 meg
2	270 ohms	3	22,000 ohms*	5	0.47 meg
2	470 ohms	5	27,000 ohms*	5	1.0 meg*
5	1,000 ohms*	2	33,000 ohms*	2	2.2 meg
2	1,500 ohms	2	39,000 ohms*	2	4.7 meg
3	2,200 ohms	5	47,000 ohms*		
2	2,700 ohms	2	68,000 ohms*		

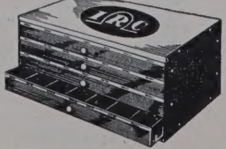
ASSORTMENT #6—COMBINATION

91 Insulated Resistors and Type DCF Close-Tolerance Precistors, including popular television ranges **List $25.04**

RANGE	½ WATT	1 WATT	2 WATT	DCF
47 ohms	1	1	1	—
100 ohms	1	1	1	—
150 ohms	1	1	—	—
220 ohms	1	1	—	—
270 ohms	1	1	—	—
470 ohms	1*	1	1	—
1,000 ohms	3*	2*	—	1
1,500 ohms	1	1	—	—
2,200 ohms	1*	1	—	—
2,700 ohms	1*	1	—	—
3,300 ohms	1*	1*	—	—
4,700 ohms	2*	1*	1	—
10,000 ohms	2*	2*	1*	1
15,000 ohms	1	1*	—	—
22,000 ohms	1*	1*	1*	—
27,000 ohms	1*	2*	—	—
33,000 ohms	1*	1*	—	—
39,000 ohms	1	1*	—	—
47,000 ohms	3*	2*	1*	—
68,000 ohms	1*	1*	—	—
0.1 meg	3*	2*	—	1
0.15 meg	1	1	—	—
0.22 meg	2*	1	—	—
0.27 meg	3*	1	—	—
0.47 meg	3*	2	—	—
1.0 meg	3*	2*	—	1
2.2 meg	2*	1	—	—
4.7 meg	1*	1	—	—
5.0 meg	—	—	—	1

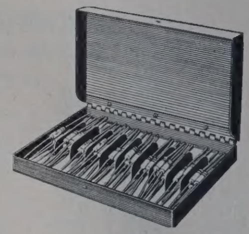
*—Popular television ranges.

IRC CHOKE CABINETS



Handy bench supply of Insulated Chokes in 4 drawer metal cabinet. Each value in an identified compartment. Contains 140 chokes in popular values and 2 sizes. No extra charge for cabinet. **List $49.00**

NEW RESIST-O-KITS



Flat, pocket-size metal kit of ½ or 1 watt BT Insulated Composition Resistors is ideal for service calls or small bench stocks. All-steel and attractively lithographed in blue and yellow. Measures 11/16" x 3⅞" x 6⅝". Ten compartments prevent ranges from mixing, and lid snaps securely shut. Ranges are clearly marked on each resistor in kit. This handy kit is furnished at no extra charge.

ASSORTMENT #7—½ WATT

45 BTS ½ watt Resistors including ranges widely found in television. **List $7.65**

Quantity	Resistance Range	Quantity	Resistance Range
4	1,000 ohms*	3	0.22 meg*
3	4,700 ohms*	5	0.27 meg*
4	10,000 ohms*	6	0.47 meg*
5	47,000 ohms*	5	1.0 meg*
6	0.1 meg*	4	2.2 meg*

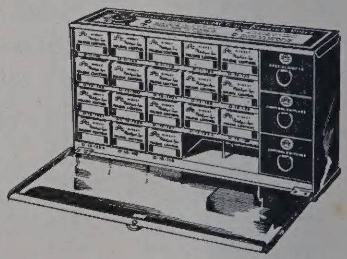
ASSORTMENT #8—1 WATT

30 BTA 1 watt Resistors including ranges widely found in television. **List $7.50**

Quantity	Resistance Range	Quantity	Resistance Range
4	1,000 ohms*	4	47,000 ohms*
2	2,200 ohms*	4	0.1 meg*
2	4,700 ohms*	2	0.27 meg
3	10,000 ohms*	4	0.47 meg
2	27,000 ohms*	3	1.0 meg

*—Popular television ranges.

VOLUME CONTROL CABINET



IRC Volume Control Cabinets are stocked with 18 new Type Q Controls, plus switches and special shafts. This stock handles over 90% of all AM, FM and TV control replacements. Beautiful blue, yellow and silver metal cabinet measures 4½" x 7⅜" x 14½" with identified compartments and 3 drawers for shafts, switches and spare parts. Hinged front cover. No extra charge is made for metal cabinet. **List $30.90**

Quantity	Q Control No.	Resistance Value	Quantity	Q Control No.	Resistance Value
1	Q 11-116	10 K	2	Q 13-133	0.5 meg
1	Q 11-123	50 K	1	Q 13-133X	0.5 meg
1	Q 13-123	50 K	1	Q 11-137	1.0 meg
1	Q 11-128	0.1 meg	1	Q 13-137	1.0 meg
1	Q 13-128	0.1 meg	1	Q 13-137X	1.0 meg
1	Q 11-130	0.25 meg	1	Q 13-139	2.0 meg
1	Q 13-130	0.25 meg	1	Q 13-139X	2.0 meg
1	Q 13-130X	0.25 meg	1	Q 18-139X	2.0 meg
1	Q 11-133	0.5 meg			

SWITCHES

6 76-1 SPST Quickly attached switch.

SPECIAL SHAFTS

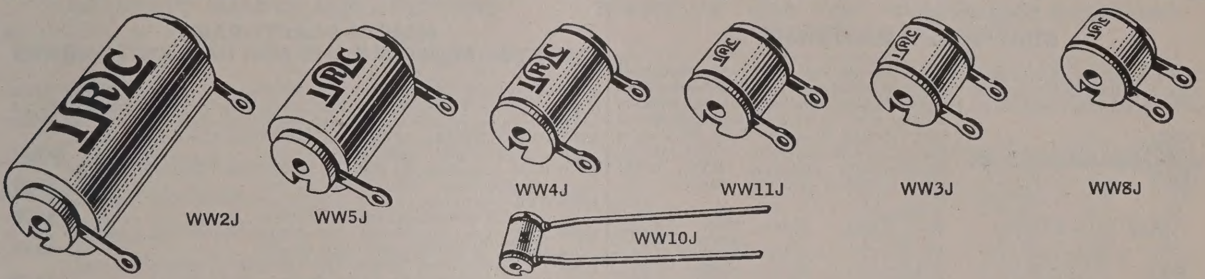
1 **BQ Shaft**—Universal slotted and tongued—3½" long.
1 **GQ Shaft**—Short slotted shaft—1½" long.
2 **HQ Shaft**—Flatted and grooved shaft—1 11/16" long.
1 **NQ Shaft**—Universal flatted and slotted shaft—3/16" diameter.

PRECISION RESISTORS

Preferred for Performance

IRC

NEW PRECISION WIRE WOUND RESISTORS



An all new line of precision wire wound resistors for both old and new applications. Completely interchangeable with the long established and familiar types WW-2, WW-3, WW-4, and WW-5 plus new sizes all surpassing JAN-R-93 characteristic B specification.

New Winding Technique developed by IRC engineers provides winding control that substantially eliminates the effect of the human element thus eliminating possibility of shorted turns or winding strains. All wire used in the construction of precision resistors is subjected to rigid insulation tests of the enamel coating. Particular attention is given to insure transfer of wire to winding form without strain or break in insulation. Many production tests insure high quality in the finished resistor.

New Concept of Insulation — The winding is multiple vacuum impregnated with a new compound developed by IRC chemists, which has the unique characteristic of remaining approximately the same consistency throughout the entire range of temperature to which the resistor may be subjected. It is neither glassy hard nor tacky soft under any condition so that wire strains are minimized. This is conducive to a higher degree of stability and freedom from noise. This impregnant also provides a very excellent humidity protection to, insure long life under all environmental conditions.

Tolerance — 1% is standard. For special tolerance on all types except WW-10J, add to prices shown as follows: Add 10% for ½% tolerance (2 ohms and over); add 15% for ¼% tolerance (5 ohms and over); add 25% for 1/10% tolerance (20 ohms and over). On Type WW-10J, add 10% for ½% tolerance (65 ohms and over); add 15% for ¼% tolerance (200 ohms and over); add 25% for 1/10% tolerance (1500 ohms and over).

Temperature Coefficient — Minimum temperature coefficient of .003% per degree C, from 0°C to 100°C, is standard on all IRC Wire Wound Precision Resistors.

SPECIFICATIONS

IRC TYPE	WW2J	WW3J	WW4J
JAN TYPE	RB14	RB11	RB12
MIL TYPE	RB19	RB16	RB17
DIMENSIONS	$2\frac{1}{8}$″ x $\frac{25}{32}$″	$\frac{9}{16}$″ x $\frac{19}{32}$″	$\frac{31}{32}$″ x $\frac{19}{32}$″
MIN. VALUE	0.1 ohm	0.1 ohm	0.1 ohm
MAX. VALUE	6.0 meg.	0.225 meg.	0.9 meg.
MAX. MIL OR JAN VALUE	4.0 meg.	0.185 meg.	0.3 meg.
TERMINALS	Lugs	Lugs	Lugs

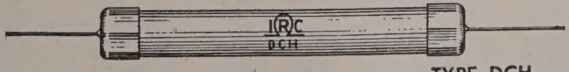
IRC TYPE	WW5J	WW8J	WW10J	WW11J
JAN TYPE	RB13	RB10		RB11
MIL TYPE	RB18	RB15		RB16
DIMENSIONS	$1\frac{1}{4}$″ x $\frac{25}{32}$″	$\frac{15}{32}$″ x $\frac{19}{32}$″	$\frac{13}{32}$″ x $\frac{9}{32}$″	$\frac{21}{32}$″ x $\frac{19}{32}$″
MIN. VALUE	0.1 ohm	0.1 ohm	10 ohm	0.1 ohm
MAX. VALUE	2.7 meg.	.225 meg.	.15 meg.	0.45 meg.
MAX. MIL OR JAN VALUE	0.75 meg.	0.185 meg.		0.3 meg.
TERMINALS	Lugs	Lugs	Leads	Lugs

STANDARD VALUES AND PRICES IRC PRECISION RESISTORS

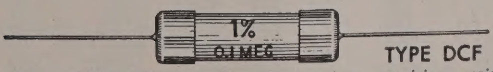
STANDARD VALUE		WW2J List Price	WW3J WW4J WW5J List Price	WW10J List Price
0.1	ohm		$2.10	
0.2	ohm		2.10	
1.0	ohm		2.10	
5	ohms		2.03	
10	ohms		2.03	$1.70
25	ohms		2.03	1.70
50	ohms		2.03	1.70
100	ohms		2.03	1.70
200	ohms		2.03	1.70
250	ohms		2.03	1.70
300	ohms		2.03	1.70
500	ohms		2.03	1.70
1,000	ohms		2.03	1.70
1,500	ohms		2.03	1.70
2,000	ohms		2.03	1.70
2,500	ohms		2.03	1.70
3,000	ohms		2.10	1.78
3,500	ohms		2.10	1.78
4,000	ohms		2.10	1.78
5,000	ohms		2.10	1.78
7,500	ohms		2.10	1.78
10,000	ohms		2.10	1.78
12,500	ohms		2.10	1.78
15,000	ohms		2.10	1.78
20,000	ohms		2.28	1.97
22,500	ohms		2.28	1.97
25,000	ohms		2.28	1.97
30,000	ohms		2.28	1.97
40,000	ohms		2.28	1.97
50,000	ohms		2.28	1.97
60,000	ohms		2.70	2.13
75,000	ohms		2.70	2.13
0.1	megohm		2.94	2.30
0.125	megohm		3.37	2.70
0.15	megohm		3.37	2.70
0.175	megohm		3.83	
0.2	megohm		3.83	
0.225	megohm		4.20*	
0.25	megohm		4.20	
0.3	megohm		4.57	
0.4	megohm		5.63	
0.5	megohm		6.00**	
0.6	megohm	$ 8.40	7.61†	
0.75	megohm	9.18	9.00	
0.9	megohm	10.80	10.38	
1.0	megohm	11.58	11.22	
1.5	megohm	18.42		
2.0	megohms	24.00		
2.5	megohms	29.03		

*Max. Stock Value—WW3J. **Max. Stock Value—WW4J. †Min. Stock Value—WW5J.

CLOSE TOLERANCE PRECISTORS



TYPE DCH



TYPE DCF

New IRC PRECISTORS are deposited carbon precision resistors offering a unique combination of close tolerance, stability and economy. Pure crystalline carbon is bonded to selected ceramic cores producing a resistor ideally suited to the requirements of instrumentation, advanced electronics and critical television circuits. Guaranteed accuracy ± 1%. DCF is rated at 1 watt. DCH is rated at 2 watts.

IRC PRECISTORS are specially packaged in plastic tubes for protection.

STANDARD VALUES

Range Ohms	List	Range Ohms	List	Range Megohms	List	Range Megohms	List
TYPE DCF		3,000	$1.25	0.10	$1.25	4.00	$1.25
200	1.25	4,000	1.25	0.15	1.25	5.00	1.50
250	1.25	5,000	1.25	0.20	1.25	**TYPE DCH**	
300	1.25	10,000	1.25	0.25	1.25	0.5	$1.50
400	1.25	15,000	1.25	0.30	1.25	1.0	1.50
500	1.25	20,000	1.25	0.40	1.25	1.5	1.50
1,000	1.25	25,000	1.25	0.50	1.25	2.0	1.50
1,500	1.25	30,000	1.25	1.00	1.25	3.0	1.50
2,000	1.25	40,000	1.25	1.50	1.25	4.0	1.50
2,500	1.25	50,000	1.25	2.00	1.25	5.0	2.00
				2.50	1.25	10.0	2.50
				3.00	1.25	15.0	2.50
						20.0	3.00

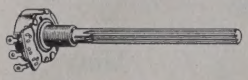
Centralab **CRL** **Centralab**

FIRST IN COMPONENTS RESEARCH **SAFEST FOR SERVICING**

CONTROLS

BLUE SHAFT RADIOHMS

The newest, most widely accepted line of 15/16" modern carbon type controls. Switch types are factory assembled and tested, for smoothest action and instant usefulness. Distinctive blue, anodized aluminum shafts, 3" long with universal fluted full length mill. Rating ½ watt. Type BSK units have 2⅛" brass split knurl shafts. Switches are universal DPST, easily wired for SPST or 3 wire usage.

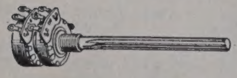


Cat. No. Plain	Cat. No. with Switch	Ohms Max. Resis.	Taper	List Price Plain	List Switch Type
B-4	B-4-S	500	C1	$1.25	$1.75
B-5	B-5-S	1000	C1	1.25	1.75
B-6	B-6-S	2000	C1	1.25	1.75
B-7	B-7-S	2500	C1	1.25	1.75
B-8	B-8-S	3000	C1	1.25	1.75
B-10	B-10-S	5000	C1	1.25	1.75
B-11	B-11-S	5000	C2	1.25	1.75
B-12	B-12-S	5000	C5	1.25	1.75
B-14	B-14-S	10000	C1	1.25	1.75
B-15	B-15-S	10000	C2	1.25	1.75
B-16	B-16-S	10000	C6	1.25	1.75
B-17	B-17-S	10000	C5	1.25	1.75
B-20	B-20-S	15000	C6	1.25	1.75
B-22	B-22-S	20000	C1	1.25	1.75
B-24	B-24-S	20000	C6	1.25	1.75
B-26	B-26-S	25000	C1	1.25	1.72
B-27	B-27-S	25000	C5	1.25	1.75
B-28	B-28-S	25000	C6	1.25	1.75
B-31	B-31-S	50000	C1	1.25	1.75
B-32	B-32-S	50000	C2	1.25	1.75
B-35	B-35-S	75000	C1	1.25	1.75
B-40	B-40-S	100000	C1	1.25	1.75
B-41	B-41-S	100000	C2	1.25	1.75
B-44	B-44-S	150000	C2	1.25	1.75
B-46	B-46-S	200000	C1	1.25	1.75
B-50	B-50-S	250000	C1	1.25	1.75
B-51	B-51-S	250000	C2	1.25	1.75
B-52	B-52-S	250000	C5	1.25	1.75
BT-53	BT-53-S	250K-T125K	C11	1.85	2.35
BT-55	BT-55-S	250K-T75K	C13	1.85	2.35
BT-57	BT-57-S	350K-T70K	C12	1.85	2.35
B-59	B-59-S	500000	C1	1.25	1.75
B-60	B-60-S	500000	C2	1.00	1.50
B-61	B-61-S	500000	C5	1.25	1.75
BT-65	BT-65-S	500K-7250K	C11	1.85	2.35
BT-66	BT-66-S	500K-T100K	C12	1.85	2.35
BT-67	BT-67-S	500K-T150K	C13	1.85	2.35
B-68	B-68-S	1 Meg.	C5	1.25	1.75
B-69	B-69-S	1 Meg.	C1	1.25	1.75
B-70	B-70-S	1 Meg.	C2	1.00	1.50
BT-71	BT-71-S	1 Meg.-T500K	C11	1.85	2.35
BT-72	BT-72-S	1 Meg.-T200K	C12	1.85	2.35
BT-73	BT-73-S	1 Meg.-T300K	C13	1.85	2.35
BT-74	BT-74-S	1 Meg.-T500K	C16	1.85	2.35
B-75	B-75-S	2 Megs.	C1	1.25	1.75
B-76	B-76-S	2 Megs.	C2	1.25	1.75
B-77	B-77-S	2 Megs.	C5	1.25	1.75
BT-78	BT-78-S	2 Megs.-T1 Meg.	C11	1.85	2.35
BT-79	BT-79-S	2 Megs.-T400K	C12	1.85	2.35
BT-80	BT-80-S	2 Megs.-T600K	C13	1.85	2.35
BT-81	BT-81-S	2 Megs.-T200K	C15	1.85	2.35
BT-82	BT-82-S	2 Megs.-T1 Meg.	C16	1.85	2.35
B-83	B-83-S	2.5 Megs.	C1	1.25	1.75
B-84	B-84-S	3 Megs.	C1	1.25	1.75
B-85	B-85-S	3 Megs.	C2	1.25	1.75
B-86	B-86-S	4 Megs.	C1	1.25	1.75
B-87	B-87-S	5 Megs.	C1	1.25	1.75
B-98	B-98-S	10 Megs.	C1	1.25	1.75

MODELS BSK—With 2⅛" Split Knurl Shafts

BSK-60	BSK-60-S	500000	C2	1.10	1.60
BSK-70	BSK-70-S	1 Meg.	C2	1.10	1.60
BTSK-66	BTSK-66-S	500K-T100K	C12	1.85	2.35
BTSK-72	BTSK-72-S	1 Meg.-T200K	C12	1.85	2.35

MODEL BB TWIN RADIOHMS



Two B Radiohms mounted in tandem on a single shaft which operates both units. No switch types available. Rating: ½ watt. 3" fluted shaft.

BB-100	10000	25000	C4	C3	$2.50
BB-101	10000	50000	C2	C1	2.50
BB-102	100000	100000	C2	C2	2.50
BB-103	250000	250000	C2	C2	2.50
BB-104	500000	500000	C2	C2	2.50
BB-105*	50000	500000	C3	C3	2.50

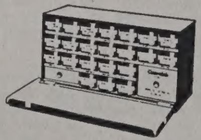
* Special Unit for the Gallagher audio oscillator—See June, 1951 "Radio & Television News" pg. 62.

HANDY PLASTI-PAKS
12 UNITS—MODELS B AND BSK IN PLASTIC BOXES

The widely used half megohm and one megohm "audio" taper controls made available in hinged lid plastic boxes. There is no additional charge for this convenient container, handy for many uses.

BP-1 PAK—Contains 12 Cat. No. B-60 Plain Controls, ½ meg., C2 or audio taper. List Price.............................. **$12.00**
BP-2 PAK—Contains 12 Cat. No. B-70 Plain Controls, 1 meg., C2 or audio taper. List Price.............................. **12.00**
BP-3 PAK—Contains 12 Cat. No. B-60-S Switch type Controls, ½ meg., C2 or audio taper. List Price........................ **18.00**
BP-4 PAK—Contains 12 Cat. No. B-70-S Switch type Controls, 1 meg., C2 or audio taper. List price........................ **18.00**
BP-5 PAK—Contains 12 Cat. No. BSK-60 Controls, ½ meg., C2 or audio taper, Split Knurl Shafts. List Price............ **13.20**
BP-6 PAK—Contains 12 Cat. No. BSK-70 Controls, 1 Meg., C2 or audio taper, Split Knurl Shafts. List Price............ **13.20**
BP-7 PAK—Contains 12 Cat. No. BSK-60S Switch type Controls, ½ meg., C2 taper, Split Knurl Shafts. List Price............ **19.20**
BP-8 PAK—Contains 12 Cat. No. BSK-70-S Switch type Controls, 1 meg., C2 taper, Split Knurl Shafts. List Price............ **19.20**

B-A AND B-B BLUE SHAFT RADIOHM KITS



Two kit assortments of 22 controls each, packaged in a neat sturdy metal cabinet. Designed primarily for the user who wants to have controls "on hand" when he needs them.

B-A KIT—22 Half and One Meg. Controls

An assortment of plain and switch type half and one meg. controls, as follows: 3 B-60 ½ meg.; 5 B-60-S ½ meg. switch type; 2 B-70 1 meg. plain; 3 B-70-S 1 meg. switch type; 2 BSK-60 ½ meg. plain Split Knurl Shaft; 3 BSK-60-S ½ meg. switch type; Split Knurl Shaft; 2 BSK-70, 1 meg., plain-Shaft Knurl Shaft; 2 BSK-70-S, 1 meg. switch tyep—Split Knurl Shaft; Metal Cabinet.
Cat. No. B-A. List Price.................................. **$29.40**

B-B KIT 22 Assorted Controls

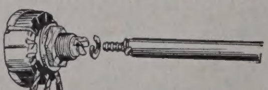
Ten different types, the fastest moving controls. 1 B-31; 1 B-31S; 1 B-40; 1 B-40-S; 1 B-51; 1 B-51-S; 1 B-59; 1 B-59-S; 1 B-60; 2 B-60-S; 1 BT-67; 1 BT-67-S; 1 B-70; 2 B-70-S; 1 BT-73; 1 BT-73-S; 1 B-76; 1 B-76-S; 1 BT-80; 1 BT-80-S; Metal Cabinet.
Cat. No. B-B. List Price.................................. **$35.60**

CUSTOM CONTROLS FOR TV-RADIO REPLACEMENT

Centralab listing of "Ready to Use" Customs now contain 250 units, plus 28 Custom Wire Wound Controls. There is NO assembly, NO time wasted building a unit. They are factory tested and inspected to original manufacturers specifications. Ask for your copies of CRL Special Control Bulletin and TV Control Guide (price 25 cents).

ADASHAFT RADIOHMS

BUY CONTROLS WITHOUT SHAFTS—ADD-A-SHAFT



The basic control unit is furnished without a shaft. Select the required shaft from the wide assortment available, offering both flexibility and economy. Shafts can be almost instantly locked into the control. Switches are listed on facing page.

BE SURE TO ORDER SHAFTS.

Cat. No.	Ohms Resis.	Taper	List Price
AN-5	1000	C1	$1.10
AN-6	2000	C1	1.10
AN-7	2500	C1	1.10
AN-10	5000	C1	1.10
AN-11	5000	C2	1.10
AN-12	5000	C5	1.10
AN-13	6500	C1	1.10
AN-14	10000	C1	1.10
AN-22	20000	C1	1.10
AN-23	20000	C5	1.10
AN-26	25000	C1	1.10
AN-27	25000	C5	1.10
AN-31	50000	C1	1.10
AN-32	50000	C2	1.10
AN-40	100000	C1	1.10
AN-41	100000	C2	1.10
AN-50	250000	C1	1.10
AN-51	250000	C2	1.10
AN-52	250000	C5	1.10

Cat. No.	Ohms. Resis.	Taper	List Price
AN-59	500000	C1	$1.10
AN-60	500000	C2	.95
AN-61	500000	C5	1.10
ANT-66	500K-T100K	C12	1.70
AN-68	1 Meg.	C5	1.10
AN-69	1 Meg.	C1	1.10
AN-70	1 Meg.	C2	.95
ANT-73	1 Meg-T300K	C13	1.70
AN-75	2 Megs.	C1	1.10
AN-76	2 Megs.	C2	1.10
AN-77	2 Megs.	C5	1.10
ANT-78	2 Meg-T1 Meg	C11	1.70
ANT-80	2 Meg-T600K	C13	1.70
AN-83	2.5 Megs.	C1	1.10
AN-84	3 Megs.	C1	1.10
AN-86	4 Megs.	C1	1.10
AN-87	5 Megs.	C1	1.10
AN-98	10 Megs.	C1	1.10

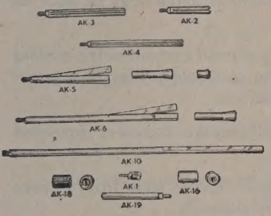
Centralab CRL Centralab

FIRST IN COMPONENTS RESEARCH — SAFEST FOR SERVICING

CONTROLS

ADASHAFT SHAFTS AND COUPLERS

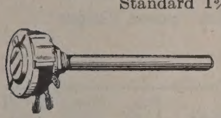
Order separately as required—fit easily, are solid and true.



AK-1 Fingertip Knurl with Screw-driver Slot, ⅜″ F.E.O.B.	$0.15
AK-2 1 9/16″ with .078″ slot	.20
AK-3 3″ Universal Fluted Mill	.15
AK-4 3⅞″ Split Knurl	.25
AK-5 3″ Auto Type with Funnel	.55
AK-6 6″ Auto Type with Funnel	.65
AK-10 10″ with Flat Mill	.30
AK-16 Coupler—¼″ to ¼″ or ¼″ to 3/16″	.40
AK-18 Insulated Coupler—slotted auto type	.30
SK-19 Insulating Nylon—2 1/16″ F.E.O.B. with slot	.55

MODEL "N" RADIOHMS

Standard 1 3/32″ Diameter Single Controls



Popular, medium size control, carbon type. Plain, no switch construction. Attachable switches listed beneath control listings. Rating; ½ watt. 3″ Shaft. Fluted Univeral mill.

Cat. No.	Ohms Resis.	Taper	List Price	Cat. No.	Ohms Resis.	Taper	List Price
N-158	1000	C1	$1.25	NT-120	500K-T150K	C13	$1.85
N-106	5000	C1	1.25	NT-149	500K-T250K	C11	1.85
N-107	10000	C1	1.25	N-104	1 Meg.	C2	1.00
N-112	20000	C6	1.25	NT-150	1 Meg-T200K	C12	1.85
N-113	25000	C1	1.25	NT-121	1 Meg-T300K	C13	1.85
N-114	50000	C1	1.25	N-155	2 Megs.	C2	1.25
N-115	50000	C2	1.25	NT-151	2 Megs-T200K	C15	1.85
N-116	100000	C1	1.25	NT-152	2 Megs-T400K	C12	1.85
N-117	100000	C2	1.25	NT-122	2 Megs-T600K	C13	1.85
N-102	250000	C2	1.25	NT-153	2 Megs-T 1 Meg	C11	1.85
N-118	500000	C1	1.25	N-177	5 Megs	C1	1.25
N-103	500000	C2	1.00	N-178	10 Megs	C1	1.25

MODEL "NK" SINGLE CONTROLS—SPLIT KNURL SHAFTS

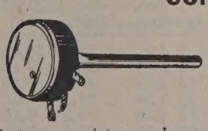
NK-140	500000	C2	1.10	NK-141	1 Meg.	C2	$1.10

SWITCHES FOR MODELS "N", "NK", AND "AN" CONTROLS

These switch units replace the back covers on controls, fit firmly and are positive in action. Rating: 3 amps., 125 V.A.C.; 1 amp., 250 V.A.C. Approved by Underwriters Laboratories.

Cat. No.	Switching	List Price	Cat. No.	Switching	List Price
K-155	SPST	$0.50	K-158	Four Point	$0.65
K-156	SPDT	.65	K-169	SPST & Lug	.65
K-157	DPST	·65			

MODEL "A" 1 WATT PATENTED NON-RUBBING CONTACT CONTROLS



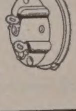
Wall type resistor element provides one third longer effective resistor length assuring low noise level, closer taper tolerance, double load carrying ability. Patented non-rubbing contact eliminates all friction between resistance element and contacting member assuring accuracy . . . the resistance strip CAN'T wear out.

Cat. No.	Ohms Resis.	Taper	List Price	Cat. No.	Ohms Resis.	Taper	List Price
A-100	500	1	$1.75	A-123	100000	6	$1.75
A-101	10000	1	1.75	A-127	250000	6	1.75
A-102	2000	1	1.75	A-128	500000	1	1.75
A-105	5000	1	1.75	A-130	500000	6	1.75
A-108	10000	1	1.75	A-132	1 Meg.	6	1.75
A-115	25000	1	1.75	A-133	2 Meg.	6	1.75
A-118	50000	1	1.75	A-134	3 Meg.	6	1.75
A-119	50000	6	1.75	A-149	5 Meg.	6	1.75
A-122	100000	1	1.75	A-150	10 Meg.	6	1.75

SWITCHES FOR MODEL "A" AND "V" CONTROLS

Attachable switch "covers" are rated 8 amps. at 12 V.D.C., 3 amps. 125 V.A.C., 1 amp. 250 V.A.C.

Cat. No.	Type	List Price
K-10	SPST	$0.60
K-11	SPDT	.75
K-12	DPST	.75



MODEL "V" AND "VK" WIREWOUND RADIOHMS 3 WATT LINEAR TAPER

Model "V" smooth action wirewound controls, are regularly furnished without switches. Attachable switches are available, as listed in Column 1. 1 7/16″ diameter, 9/16″ depth behind mounting surface. Shafts: "V"; 3″ fluted mill; "VK"; ⅜″ fingertip knurl and slot. "VK" series not adaptable to switch type.

Cat. No. "V"	Cat. No. "VK"	Ohms Resis.	List Price	Cat. No. "V"	Cat. No. "VK"	Ohms Resis.	List Price
V-100	......	2	$1.85	V-123	VK-123	200	$1.85
V-102	......	4	1.85	V-125	VK-125	300	1.85
V-104	......	6	1.85	V-126	VK-126	400	1.85
V-106	......	8	1.85	V-127	VK-127	500	1.85
V-108	......	10	1.85	V-128	......	750	1.85
V-109	......	15	1.85	V-129	VK-129	1000	1.85
V-110	VK-110	20	1.85	V-130	VK-130	1500	1.85
V-111	VK-111	25	1.85	V-131	VK-131	2000	1.85
V-112	VK-112	30	1.85	V-132	VK-132	2500	1.85
V-114	......	40	1.85	V-133	VK-133	3000	1.85
V-116	VK-116	50	1.85	V-134	VK-134	4000	1.85
V-117	VK-117	60	1.85	V-135	VK-135	5000	1.85
V-118	......	75	1.85	V-136	......	7500	1.85
V-121	VK-121	100	1.85	V-137	VK-137	10000	1.85

MODEL "SVT" CENTER TAPPED WIREWOUND RADIOHMS

Tapped at 50% rotation—otherwise similar electrically to Model "V" Wirewounds. Linear Taper. Furnished with ⅜″ fingertip knurl and screw-driver slot shaft. Units are not adaptable to switches.

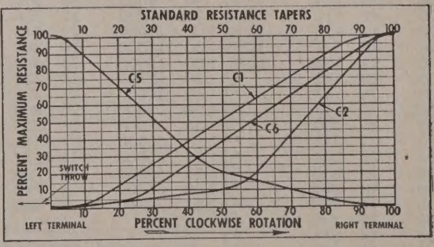
Cat. No.	Ohms Resis.	Tap Resis.	List Price
SVT-901	20	10	$2.45
SVT-902	30	15	2.45
SVT-903	40	20	2.45
SVT-904	50	25	2.45

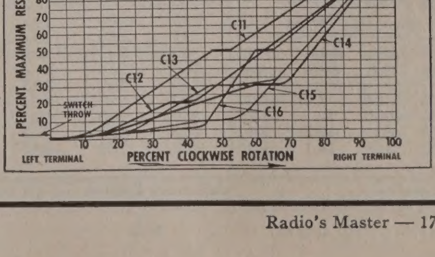
MODEL "SVP" FOUR WATT WIREWOUNDS LINEAR TAPER

Model "SVP" controls are rated at four watts max., and will handle the higher wattages called for in various focus and contrast TV applications. 1 25/32″ dia., 31/32″ deep. Furnished in 3 shaft styles in various resistances. Not available in switch types.

Column 1—SVP-982 to SVP-990—⅜″ Fingertip knurl and slot shaft
Column 2—SVP-991 to SVP-996—2⅛″ full length split knurl shaft
Column 3—SVP-997 to SVP-999—3″ full length mill shaft

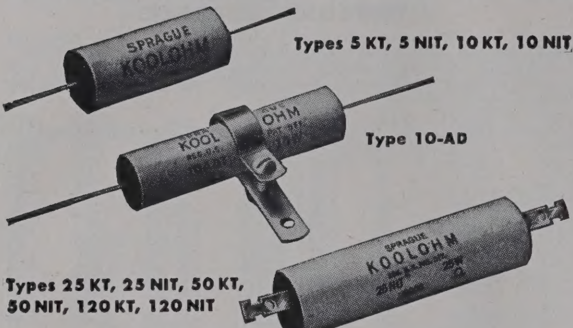
Ohms Resis.	Cat. No. ⅜″ Shaft	List Price	Cat. No. Sp. Knurl	List Price	Cat. No. 3″ Shaft	List Price
25	SVP-982	$2.25	....	....	....	....
100	SVP-983	2.25	....	....	....	....
200	SVP-984	2.25	....	....	SVP-997	2.25
400	....	....	SVP-991	2.35	....	....
500	SVP-985	2.25	....	....	....	....
600	....	....	SVP-992	2.35	....	....
750	SVP-986	2.25	....	....	....	....
1000	....	....	SVP-993	2.35	....	....
1500	....	....	SVP-994	2.35	....	....
2000	....	....	....	....	SVP-998	2.25
2200	SVP-987	2.25	....	....	....	....
2500	SVP-988	2.25	....	....	....	....
5000	SVP-989	2.25	....	....	SVP-999	2.25
7500	SVP-990	2.25	....	....	....	....
10000	....	....	SVP-995	2.35	....	....
20000	....	....	SVP-996	2.35	....	....





SPRAGUE RESISTORS

KOOLOHM® WIRE-WOUND RESISTORS



Types 5 KT, 5 NIT, 10 KT, 10 NIT

Type 10-AD

Types 25 KT, 25 NIT, 50 KT, 50 NIT, 120 KT, 120 NIT

- Wound with wire which is insulated **before winding** with a flexible ceramic coating. This coating is impervious to heat as high as 1000°C.
- Each resistor is "tropicalized" by a glazed ceramic outer coating and new type end seals which offer complete protection against moisture or any other climatic conditions
- May be mounted anywhere—even flat against chassis or grounded parts
- Extremely high insulation resistance—10,000 volts from surface of ceramic jacket to inner resistance elements
- Insulated wire permits winding higher values in layers, which means much smaller physical sizes for each wattage rating
- Insulated wire permits true "non-inductive" wound designs

NOTE: ALL NIT TYPES ARE NON-INDUCTIVE

5 WATTS

TYPES 5 KT & 5 NIT

15/32″ dia. x 17/32″ long

5 KT List	Ohms	Max. Ma.	Max. Volts	5 NIT List
$.65	5	1000	5.00	$1.00
.65	10	707	7.07	1.00
.65	15	587	8.67	1.00
.65	20	500	10	1.00
.65	25	446	11	1.00
.65	30	406	12	1.00
.65	40	354	14	1.00
.65	50	316	15	1.00
.65	75	258	19	1.00
.65	100	224	22	1.00
.65	150	183	27	1.00
.65	200	158	31	1.00
.65	250	141	35	1.00
.65	300	129	38	1.00
.65	400	112	44	1.00
.65	500	100	50	1.00
.65	600	91	54	1.00
.65	700	84	59	1.00
.65	800	79	63	1.00
.65	900	74	67	1.00
.65	1000	70	70	1.00
.70	1250	63	79	1.15
.70	1500	57	86	1.15
.70	1750	53	93	1.15
.70	2000	50	100	1.15
.70	2500	44	112	1.25
.70	3000	40	123	1.25
.70	4000	35	141	1.25
.70	5000	31	158	1.30
.80	6000	28	173	*
.80	7000	26	187	*
.80	7500	25	194	*
.80	8000	25	200	*
.80	9000	23	212	*
.80	10000	22	224	*
.90	12500	20	250	*
.90	14000	18	265	*
.95	15000	18	274	*
.95	20000	15	333	*
1.10	25000	14	354	*
1.20	30000	13	387	*
1.40	35000	12	418	*
1.50	40000	11	447	*

10 WATTS

TYPES 10 KT & 10 NIT

15/32″ dia. x 127/32″ long

10 KT List	Ohms	Max. Ma.	Max. Volts	10 NIT List
$.75	5	1414	7.07	$1.00
.75	10	1000	10	1.00
.75	15	830	12.3	1.00
.75	20	707	14.1	1.00
$.75	25	630	15.8	$1.00
.75	30	575	17.4	1.00
.75	40	500	20	1.00
.75	50	447	22.4	1.00
.75	75	365	27.4	1.00
.75	100	316	31.6	1.00
.75	150	259	38.7	1.00
.75	200	223	44.6	1.00
.75	250	200	50	1.00
.75	300	182	54.7	1.00
.75	400	158	63.3	1.00
.75	500	141	70.7	1.00
.75	600	129	77.6	1.00
.75	700	119	84	1.00
.75	750	115	86.9	1.00
.75	800	112	89.5	1.00
.75	900	105	95	1.00
.75	1000	100	100	1.00
.80	1250	89	112	1.15
.80	1500	81	123	1.15
.80	1750	75	133	1.15
.80	2000	70	143	1.15
.80	2500	63	158	1.25
.80	3000	57	174	1.25
.80	4000	50	200	1.25
.80	5000	44	227	1.30
.90	6000	41	245	1.30
.90	7500	36	275	1.45
.90	8000	35	283	1.45
.90	9000	33	300	1.45
.90	10000	32	316	1.90
1.00	12000	29	346	*
1.00	14000	26	384	*
1.00	15000	25	400	*
1.00	17500	24	419	*
1.10	20000	21	475	*
1.20	25000	20	500	*
1.30	30000	18	555	*
1.50	35000	17	591	*
1.65	40000	16	632	*
1.80	50000	14	700	*
2.00	60000	13	780	*
2.20	70000	12	840	*

10 WATTS ADJUSTABLE†

TYPE 10-AD

15/32″ dia. x 129/32″ long

Ohms	Max. Ma.	Max. Volts	List
10	1000	10	$1.45
25	630	15.8	1.45
50	447	22.4	1.45
100	316	31.6	1.45
150	259	38.7	1.45
200	223	44.6	1.45
250	200	50	1.45
300	182	54.7	1.45
400	158	63.3	1.45
500	141	70.7	$1.45
750	115	86.9	1.45
1000	100	100	1.45
1500	81	123	1.55
2000	70	143	1.55
2500	63	158	1.55
3000	57	174	1.55
4000	50	200	1.55
5000	44	227	1.55
7500	36	275	1.65
10000	32	316	1.65

Extra Bands, $ .10

25 WATTS

TYPES 25 KT & 25 NIT

23/32″ dia. x 27/8″ long

25 KT List	Ohms	Max. Amps.	Max. Volts	25 NIT List
$1.45	5	2.23	11	$ 1.85
1.30	10	1.58	15	1.85
1.30	25	1.0	25	1.85
1.30	50	.707	35	1.85
1.30	75	.577	43	1.85
1.30	100	.500	50	1.85
1.30	150	.408	61	1.85
1.30	200	.353	70	1.85
1.30	250	.316	79	1.85
1.30	500	.223	111	1.85
1.35	600	.204	122	1.85
1.35	750	.182	137	1.85
1.35	1000	.158	158	1.85
1.35	1500	.129	193	2.00
1.35	2000	.111	223	2.00
1.35	2500	.100	250	2.00
1.45	3000	.091	273	2.40
1.45	4000	.079	316	2.40
1.45	5000	.070	353	2.40
1.45	7500	.057	432	2.40
1.50	10000	.050	500	2.75
1.55	12000	.046	548	2.75
1.55	15000	.041	612	2.75
1.65	20000	.035	707	3.10
1.80	25000	.032	790	3.40
2.00	40000	.025	1000	*
2.20	50000	.022	1118	*
2.85	75000	.018	1370	*
3.55	100000	.016	1580	*

50 WATTS

TYPES 50 KT & 50 NIT

7/8″ dia. x 4″ long

50 KT List	Ohms	Max. Amps.	Max. Volts	50 NIT List
$1.95	5	3.16	15	$ 3.10
1.95	10	2.23	22	3.10
1.95	25	1.41	35	3.10
$1.95	50	1.000	50	$3.10
1.95	75	.816	61	3.10
1.95	100	.707	70	3.10
1.95	150	.577	86	3.10
1.95	200	.500	100	3.10
1.95	250	.477	111	3.10
1.95	500	.316	158	3.10
1.95	600	.289	173	3.10
1.95	750	.258	193	3.10
1.95	1000	.223	223	3.10
2.10	1500	.182	274	3.10
2.10	2000	.158	316	3.10
2.10	2500	.141	353	3.10
2.30	3000	.129	387	3.10
2.30	4000	.111	447	3.10
2.30	5000	.100	500	3.10
2.40	7500	.081	612	3.10
2.85	10000	.070	707	3.10
2.85	12000	.064	775	3.10
2.85	15000	.057	870	3.10
2.90	20000	.050	1000	3.30
2.90	25000	.044	1120	3.30
3.00	50000	.032	1580	5.75
3.10	75000	.026	1936	*
3.50	100000	.022	2238	*

120 WATTS

TYPES 120 KT & 120 NIT

1 1/16″ Dia. x 815/16″ long

120 KT List	Ohms	Max. Amps.	Max. Volts	120 NIT List
$7.75	5	4.9	24.5	$9.40
7.75	10	3.46	34.6	9.40
7.75	25	2.18	54.6	9.40
7.75	50	1.54	77.4	9.40
7.75	75	1.26	94.8	9.40
7.75	100	1.09	109.5	9.40
7.75	150	.884	134	9.40
7.75	200	.775	155	9.40
7.75	250	.692	173	9.40
7.75	500	.490	245	9.40
7.75	600	.446	268	9.40
7.75	750	.400	300	9.40
7.75	1000	.346	346	9.40
7.75	1500	.282	424	9.40
7.75	2000	.245	490	9.40
7.75	2500	.219	548	9.40
7.75	3000	.200	600	9.40
7.75	5000	.154	774	9.40
8.00	7500	.126	948	10.00
8.00	10000	.109	1095	10.00
8.00	15000	.089	1340	10.00
8.00	20000	.077	1550	10.00
8.00	25000	.069	1733	10.00
8.00	50000	.049	2450	10.00
8.00	75000	.040	3000	*
8.00	100000	.034	3460	*

*KT Types only

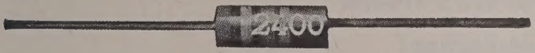
†Adjustable Resistors are not tropicalized

Composition and Wire Wound RESISTORS

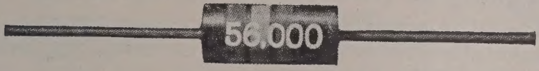
"CARBOMITE" M-TYPE

Composition Resistors

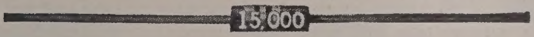
(Actual size as Illustrated)



M1-1 WATT



M2-2 WATT



M½-½ WATT

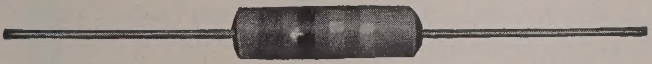
- Meet JAN-R-11 Specifications
- Low Noise Level
- Small Size
- Insulated

Continental's "Carbomite" type M resistors meet all the requirements for a fixed, stable and rugged resistor. The insulated bakelite shell has a 1000 volt breakdown test and will not short out when stacked together. Instant solderability with a touch of a soldering iron is another of the features of this resistor. They are packaged in boxes of 10 and 50 in the ½ watt and 1 watt sizes and 10 and 25 in the 2 watt size. Standard RTMA Color Coding is marked on each unit. Both 5% and 10% tolerance resistance values are carried in stock.

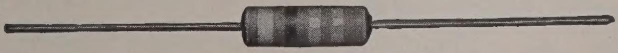
Type	Wattage	Size L D	Resistance Range	List Prices 5%	 10%
M½	½ Watt	3/8 x 9/64	10 Ohms to 22 Megohms	$0.33	$0.17
M1	1 Watt	9/16 x 7/32	2.7 Ohms to 22 Megohms	.50	.25
M2	2 Watt	15/16 x 5/16	10 Ohms to 22 Megohms	.66	.33

"WM" TYPE

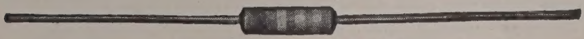
Wire Wound Resistors



WM1 • 1 WATT



WM½ • ½ WATT



WM⅓ • ⅓ WATT

- Resistance Wire Molded in Bakelite
- Axial Leads
- Soldered Connections
- RTMA Standard Color Coded

Continental's type WM resistors are wound evenly to prevent shorting of turns. A minimum of .0015 inch wire is used for the winding. The terminals are securely and permanently connected to the winding. They are resistance to moisture. The WM resistor is recommended for circuits requiring very low resistance which is not ordinarily available in the carbon style. Packaged in boxes of 10 or 50 each.

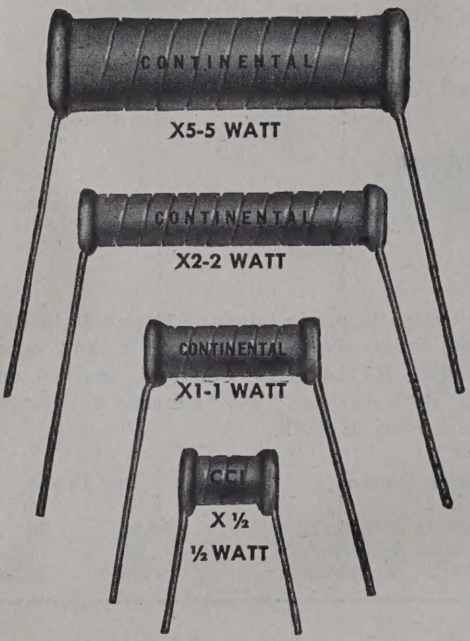
Type	Wattage	Size L D	Resistance Range	List Prices 5%	 10%
WM⅓	⅓ Watt	7/16 x 1/8	.47 Ohm to 12 Ohms	$0.33	$0.17
WM½	½ Watt	5/8 x 7/32	.47 Ohm to 12 Ohms	.33	.17
WM1	1 Watt	1 x 9/32	.47 Ohm to 12 Ohms	.50	.25

PRECISION RESISTORS

CONTINENTAL RADIO Certified COMPONENTS CARBON INC

"Nobleloy" X-Type Resistors

Trade Mark Reg.



- **Not Wire Wound**
- **Not carbon!**
- **Stability of Wire Wound and Equivalent**

After several years of research work CONTINENTAL engineers have developed a new resistor involving the metal film principle, having the accuracy of a wire wound unit. Absolutely no carbon whatever is used in the fabrication of these resistors. The metallic resistance film is formed on the surface of a low loss ceramic tube using a patented pyrochemic process.

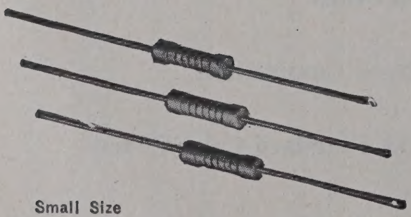
The metal film thus formed is hermetically sealed by a layer of vitreous enamel specially developed and patented by CONTINENTAL. The ceramic tube with its associated film is then spiralled to give a long resistance path and to accurately calibrate the unit to value.

Since the ceramic tubes are hollow they allow a larger surface for heat radiation, thus permitting the resistor to withstand overloads of 200% or better.

The copper-tinned lead terminals are soldered to extremely low resistance metal contact films which in turn are integral with the resistance film, thereby reducing contact resistance to a minimum. This type of construction produces a resistor unit having not only excellent resistance stability but also a negligible noise characteristic.

"NOBLELOY" TYPE NF METAL FILM RESISTORS

Trade Mark



Small Size

- **Accurate Fixed Non-Wire Wound**
- **Metal Film (Not Carbon)**
- **Axial Leads**
- **Stability of Wire Wound**

A miniature type precision resistor for use in applications calling for initial accuracy and good stability has been developed for the Components and Material branch of the Signal Corps Labs., Fort Monmouth, New Jersey, under contract. This resistor, designated as Continental type NF, employs a Nobleloy film resistance element deposited on a low loss ceramic carrier. The film is protected by a layer of vitreous enamel thus insuring protection against unusual atmospheric conditions. The axial type leads are securely fastened to the ends of the resistor thus assuring positive contact. The resistor is calibrated to value by means of spiralled grooves cut into the film to increase the resistance path. The NF resistor, having good stable characteristics, is particularly adaptable to circuits requiring close tolerance, and is recommended for uses where paired composition resistors are now used.

Type	Wattage	Size	Values	Recommended Voltage	Max. Voltage	List Prices 1%	List Prices 5%
X-½	½ Watt	9/32" x ⅝"	½ ohm to 5 meghom	500	700	$1.00	$ .85
X-1	1 Watt	9/32" x 1"	1 ohm to 10 meghom	700	1000	1.00	.85
X-2	2 Watt	9/32" x 1¾"	2 ohm to 20 meghom	1000	1500	1.20	1.05
X-5	5 Watt	½" x 2"	3 ohm to 30 meghom	1250	2000	1.40	1.25

No. 18 tinned copper leads 1½" long.

Type	Wattage	Dimensions A	Dimensions B	Dimensions C	Resistance Range Min.	Resistance Range Max.	Voltage Rec.	Voltage Max.	List Price 1%	List Price 5%
NF½	½ Watt	15/32"	.155"	.130"	1 Ohm	1 Megohm	200V	350V	$1.00	$ .85

No. 20 tinned copper leads 1½" long.

SUPPRESSORS

CONTINENTAL
RADIO
Certified
COMPONENTS
CARBON INC

SUPPRESSORS

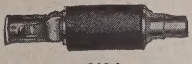
ALL SPARK PLUG SUPPRESSORS AND DISTRIBUTOR SUPPRESSORS EACH LIST PRICE $0.30

CONTINENTAL SUPPRESSORS have been subjected to years of laboratory development and actual road service. They effectively remove noise interference from spark discharge at the plugs and high-tension distributor—yet do not in any way affect the motor car ignition system.

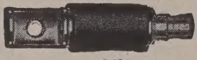
They have mechanical strength to stand the most severe service. The resistance value of 10,000 ohms has been scientifically determined. Sparking across the terminals is eliminated by careful shaping of the electrodes and cases.

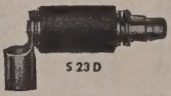
SPARK PLUG SUPPRESSORS

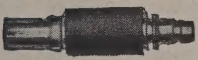
S 19

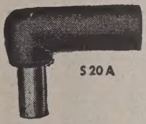

S 19 A

S 27


S 21

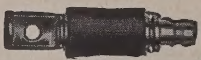

S 23 D

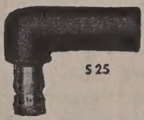

S 19 D


S 20 A

S 27 D

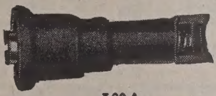
S 23

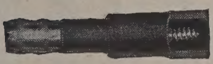

S 21 D

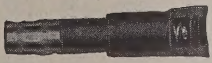

S 25

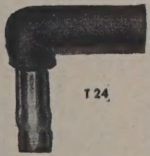
DISTRIBUTOR SUPPRESSORS

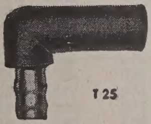
C 11


T 20 A

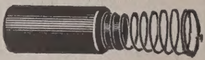

T 13


T 20


T 24


T 25

FORD DISTRIBUTOR SUPPRESSOR

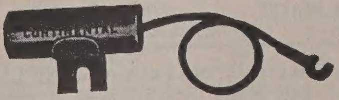

Brush

Sleeve

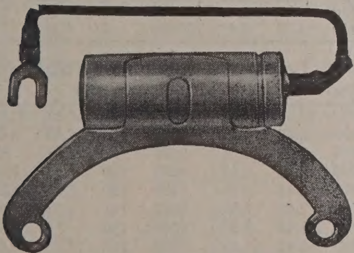
T-17: Brush and Sleeve Supplied Together Distributor Type Brush Suppressor of the right resistance to suppress interference from the spark at the rotor.
Universal Type: the brush can be inserted in the bakelite sleeve to fit models using the larger size brush.

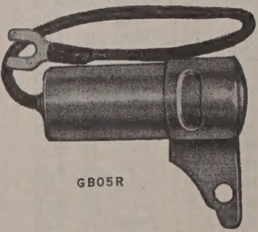
SUPPRESSORS

Type No.	List Price Each
S-19, S-19D,	$0.30
S-21, S-21D,	.30
S-23, S-23D,	.30
S-27, S-27D,	.30
S-25, S-19A,	.30
C-11, T-24,	.30
T-20, T-13,	.30
T-17, T-20A,	.30



GB05

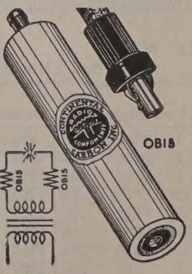

GB05F


GB05R

GENERATOR CONDENSERS

Type	Application	Capacity	Size	List Price
GB05	Generator and coil	.5 mfd.	2⅛″ x ¾″	$0.75
GB05F	Ford V-8 coil 1936 Models	.5 mfd.	2⅛″ x ¾″	1.00
GB05R	Ford Generator and coil Latest Models	.5 mfd.	2⅛″ x ¾″	1.00

OIL BURNER SUPPRESSOR



Filternoys Suppressor OB15, carbon element type, intended for use only with the high tension spark ignition of oil or gas burning heating systems. Must be connected in series with each line to the spark gap. Size of the suppressor 3½″ x ¾″ diameter. Universal connections at both ends for solderless contact.

OB15............List Price $1.80

VITROHM RESISTORS

Wire wound resistors, sturdy construction, using low temperature coefficient materials. Coated with Ward Leonard's own crazeless Green Enamel.

5 WATTS Size—1″ x 5⁄16″ TYPE 5F

Ohms	M.A.	List Price	Ohms	M.A.	List Price	Ohms	M.A.	List Price
1	2230	$0.67	100	223	$0.67	1250	63	$0.72
1.5	1820	.67	125	200	.67	1500	57	.72
2	1580	.67	150	182	.67	1750	53	.72
3	1290	.67	200	158	.67	2000	50	.72
4	1117	.67	250	141	.67	2250	47	.72
5	1000	.67	300	129	.67	2500	45	.72
7.5	811	.67	350	119	.67	3000	40	.72
10	707	.67	400	112	.67	3500	37	.72
12	644	.67	450	105	.67	4000	35	.72
15	577	.67	500	100	.67	4500	33	.72
20	500	.67	600	91	.67	5000	31	.72
25	450	.67	700	84	.67	6000	28	.78
30	408	.67	750	81	.67	7000	26	.78
35	378	.67	800	79	.67	7500	25	.78
40	353	.67	900	74	.67	8000	25	.78
50	316	.67	1000	70	.67	9000	23	.78
75	257	.67	1100	67	.72	10000	22	.78
			1200	64	.72			

10 WATTS Type 10F–*Fixed* Type 10A–*Adj.*

Size—1¾″ x 5⁄16″ Mtg. Centers—2⅛″

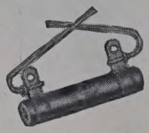
Ohms	M.A.	List Price		Ohms	M.A.	List Price	
		Fixed	Adj.			Fixed	Adj.
1	3160	$0.75	$1.47	1200	91	$0.80	*
1.5	2580	.75	*	1250	89	.80	$1.53
2	2235	.75	1.47	1500	81	.80	1.53
3	1825	.75	1.47	1750	75	.80	*
4	1580	.75	*	2000	70	.80	1.53
5	1415	.75	1.47	2250	66	.80	*
7.5	1155	.75	1.47	2500	63	.80	1.53
10	1000	.75	1.47	3000	58	.80	1.53
12	913	.75	*	3500	53	.80	1.53
15	815	.75	1.47	4000	50	.80	1.53
20	707	.75	1.47	4500	47	.80	1.53
25	630	.75	1.47	5000	45	.80	1.53
30	577	.75	*	6000	41	.92	1.63
35	534	.75	*	7000	38	.92	1.63
40	500	.75	*	7500	36	.92	1.63
50	450	.75	1.47	8000	35	.92	1.63
75	365	.75	1.47	8500	34	.92	1.63
100	316	.75	1.47	9000	33	.92	1.63
125	283	.75	*	10000	32	.92	1.63
150	258	.75	1.47	11000	30	1.03	*
200	224	.75	1.47	12000	29	1.03	*
225	211	.75	*	12500	28	1.03	*
250	200	.75	1.47	13500	27	1.03	*
300	182	.75	1.47	15000	25.5	1.03	*
350	169	.75	1.47	16000	25	1.03	*
400	158	.75	1.47	17500	24	1.03	*
450	149	.75	*	18000	23	1.03	*
500	142	.75	1.47	20000	22	1.03	*
600	129	.75	1.47	22500	21	1.08	*
700	120	.75	*	25000	20	1.08	*
750	115	.75	1.47	30000	18	1.22	*
800	112	.75	1.47	35000	17	1.22	*
900	105	.75	*	40000	16	1.22	*
1000	100	.75	1.47	45000	15	1.22	*
1100	95	.80	*	50000	14	1.22	*

20 WATTS TYPE 20F

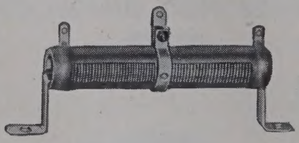
Size—2″ x 7⁄16″ Mtg. Centers 2⅝″

Ohms	M.A.	List Price	Ohms	M.A.	List Price	Ohms	M.A.	List Price
1	4480	$0.95	850	153	$0.95	8000	50	$1.12
3	2580	.95	1000	141	.95	10000	45	1.12
5	2000	.95	1200	130	.97	12500	40	1.20
10	1410	.95	1250	125	.97	15000	36	1.20
15	1150	.95	1500	115	.97	20000	32	1.20
25	900	.95	1750	107	.97	25000	28	1.37
50	630	.95	1850	104	.97	30000	26	1.37
75	517	.95	2000	100	.97	35000	24	1.37
100	450	.95	2250	94	.97	40000	22	1.37
150	365	.95	2400	91	.97	45000	21	1.58
175	340	.95	2500	90	.97	50000	20	1.58
200	320	.95	2750	85	.97	55000	18	1.58
250	285	.95	3000	81	.97	60000	16	1.58
300	258	.95	3500	76	.97	65000	15	1.83
350	240	.95	4000	70	.97	70000	14	1.83
400	224	.95	4500	67	.97	75000	13	1.83
500	200	.95	5000	63	.97	80000	12	1.83
650	175	.95	6000	57	1.12	85000	11.5	2.11
700	169	.95	7000	53	1.12	90000	11	2.11
750	163	.95	7500	51	1.12	95000	10.5	2.11
800	155	.95				100000	10	2.11

WARD LEONARD



Types 5F, 10F, and 20F. Furnished with wire terminal leads. Brackets supplied on request.



Type 10A, 25A, 50A, 80A, 100A, 160A, 200A. Furnished with mounting brackets and one adjustable band.

Order by Type Number and Resistance Value.

Asterisks (*) in Tables Indicate that Resistors are not Stock Items.

ADJUSTABLE BANDS

Screw Driver Type

Size of Resistor	Cat. No.	Price
10 Watts	507-685	$0.25
25 Watts	507-686	.25
50 Watts	507-688	.25
80 Watts	507-688	.25
100 Watts	507-690	.42
160 Watts	507-690	.42
200 Watts	507-690	.42

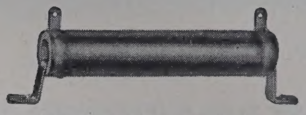
Bakelite Knob Type

25 Watts	507-691	$0.36
50 Watts	507-693	.36
80 Watts	507-693	.36
100 Watts	507-695	.47
160 Watts	507-695	.47
200 Watts	507-695	.47

80 WATTS TYPE 80A

Size—6½″ x ¾″ Mtg. Centers—7¼″

Ohms	M.A.	List Price	Ohms	M.A.	List Price
1	8660	$3.53	3000	158	$2.83
2	6120	3.53	3500	146	2.83
3	5000	2.72	4000	137	2.83
4	4330	2.72	4500	129	2.83
5	3870	2.72	5000	122	2.83
10	2740	2.72	6000	111	3.00
15	2235	2.72	7000	103	3.00
25	1730	2.72	7500	100	3.00
50	1220	2.72	8000	97	3.00
75	1000	2.72	9000	91	3.00
100	866	2.72	10000	87	3.00
200	612	2.72	15000	71	3.17
250	550	2.72	20000	61	3.17
300	500	2.72	25000	55	3.50
400	433	2.72	30000	50	3.50
500	387	2.72	35000	43	3.50
750	315	2.72	40000	37	3.50
800	305	2.72	45000	33	3.61
1000	274	2.72	50000	30	3.61
1250	245	2.72	60000	25	3.61
1500	224	2.83	70000	21	3.94
2000	195	2.83	80000	19	3.94
2250	183	2.83	100000	15	4.33
2500	173	2.83			



HEAVY DUTY RESISTORS

Types 25F, 50F, 100F, 160F, 200F

Furnished with lug terminals and mounting brackets.

25 WATTS Type 25F–*Fixed* Type 25A–*Adj.*

Size—2″ x ⅝″ Mtg. Centers—2⅝″

Ohms	M.A.	List Price		Ohms	M.A.	List Price	
		Fixed	Adj.			Fixed	Adj.
1	5000	$0.97	$1.86	2500	100	$1.03	$1.89
2	3535	.97	1.86	3000	90	1.03	1.89
3	2890	.97	1.86	3500	85	1.03	1.89
4	2500	.97	*	4000	80	1.03	1.89
5	2235	.97	1.86	4500	74	*	1.89
7.5	1825	*	1.86	5000	70	1.03	1.89
10	1580	.97	1.86	6000	65	1.14	2.03
15	1290	.97	1.86	7000	60	*	2.03
25	1000	.97	1.86	7500	58	1.14	2.03
50	710	.97	1.86	8000	56	*	2.03
75	580	.97	1.86	8500	54	1.14	2.03
100	500	.97	1.86	9000	52	*	2.03
150	410	.97	1.86	10000	50	1.14	2.03
200	354	.97	1.86	12000	46	1.19	2.11
250	315	.97	1.86	15000	41	1.19	2.11
300	289	.97	1.86	20000	34	1.19	2.11
400	250	.97	1.86	25000	32	1.36	2.28
500	224	.97	1.86	30000	29	1.36	*
750	182	.97	1.86	35000	27	1.36	*
800	177	.97	1.86	40000	25	1.36	*
850	170	.97	1.86	50000	20	1.56	*
1000	158	.97	1.86	60000	17	1.56	*
1250	140	1.03	1.89	70000	14	1.83	*
1500	129	1.03	1.89	75000	13	1.83	*
2000	112	1.03	1.89	80000	12	1.83	*
2250	105	*	1.89	100000	10	2.11	*

50 WATTS Type 50F–*Fixed* Type 50A–*Adj.*

Size—4½″ x ¾″ Mtg. Centers—5⅛″

1	7070	$2.25	$3.00	4500	105	*	$2.47
2	5000	1.63	2.37	5000	100	$1.75	2.47
3	4080	1.63	2.37	6000	91	1.92	2.63
4	3535	1.63	2.37	7500	82	1.92	2.63
5	3160	1.63	2.37	8000	79	1.92	2.63
10	2235	1.63	2.37	9000	75	*	2.63
25	1415	1.63	2.37	10000	71	1.92	2.63
50	1000	1.63	2.37	12000	65	2.08	2.83
75	815	1.63	2.37	12500	63	2.08	*
100	707	1.63	2.37	15000	58	2.08	2.83
150	575	1.63	2.37	20000	50	2.08	2.83
200	500	1.63	2.37	25000	45	2.33	3.08
250	445	1.63	2.37	30000	41	2.33	3.08
300	408	1.63	2.37	35000	38	2.33	*
400	353	1.63	2.37	40000	35	2.33	3.08
500	316	1.63	2.37	45000	33	2.58	*
750	258	1.63	2.37	50000	32	2.58	3.30
800	250	1.63	2.37	60000	29	*	3.30
1000	224	1.63	2.37	75000	23	2.92	3.67
1250	200	*	2.47	80000	21	*	3.67
1500	180	1.75	2.47	100000	17	3.20	3.92
2000	160	1.75	2.47	125000	14	3.36	*
2250	150	*	2.47	150000	12	3.50	*
2500	141	1.75	2.47	175000	10	3.64	*
3000	130	1.75	2.47	200000	9	3.78	*
3500	120	*	2.47	225000	8	4.22	*
4000	110	1.75	2.47	250000	7	4.22	*

100 WATTS Type 100F–*Fixed* Type 100A–*Adj.*

Size—6½″ x 1⅛″ Mtg. Centers—7¼″

1	10000	$3.37	$4.53	2500	200	$2.53	$3.67
2	7070	3.37	4.53	3000	180	2.53	3.67
3	5770	3.37	4.53	3500	170	2.53	*
4	5000	2.42	3.58	4000	158	2.53	3.67
5	4470	2.42	3.58	4500	150	2.53	3.67
10	3160	2.42	3.58	5000	141	2.53	3.67
25	2000	2.42	3.58	6000	130	*	3.87
50	1410	2.42	3.58	7500	115	2.70	3.87
75	1150	2.42	*	10000	100	2.70	3.87
100	1000	2.42	3.58	15000	80	2.97	4.12
125	895	2.42	*	20000	70	2.97	4.12
150	815	2.42	*	25000	63	3.20	4.37
200	707	*	3.58	30000	58	3.20	4.37
250	630	2.42	3.58	35000	54	3.20	*
400	500	*	3.58	40000	50	3.20	4.37
500	447	2.42	3.58	50000	45	3.37	4.53
750	365	2.42	3.58	60000	41	3.37	4.53
1000	316	2.42	3.58	70000	38	3.58	*
1250	285	2.53	*	75000	36	3.58	4.75
1500	260	2.53	3.67	100000	32	3.80	4.95
2000	225	2.53	3.67				

WARD LEONARD

VITROHM RESISTORS

Order by Type Number and Resistance Value

Asterisks (*) in Tables Indicate that Resistors are not Stock Items.

160 WATTS Type 160F–*Fixed* Type 160A–*Adj.*

Size—8½″ x 1⅛″ Mtg. Centers—9¼″

Ohms	M.A.	List Price		Ohms	M.A.	List Price	
		Fixed	Adj.			Fixed	Adj.
1	12650	$4.16	$5.33	2500	252	$3.04	$4.19
2	8940	4.16	5.33	3000	230	3.04	4.19
3	7300	4.16	5.33	3500	215	3.04	4.19
4	6320	4.16	5.33	4000	200	3.04	4.19
5	5650	4.16	5 33	4500	185	3.04	4.19
10	4000	2.98	4.14	5000	178	3.04	4.19
15	3265	2.98	4.14	7500	146	3.30	4.44
25	2525	2.98	4.14	10000	126	3.30	4.44
50	1785	2.98	4 14	15000	105	3.54	4.69
75	1460	2.98	*	20000	90	3.54	4.69
100	1265	2.98	4.14	25000	80	3.64	4.81
150	1035	2.98	*	30000	73	3.64	4.81
200	894	2.98	4.14	35000	68	3.64	*
250	800	2.98	4.14	40000	64	3.64	4.81
500	565	2.98	4.14	50000	57	3.76	4.94
750	460	2.98	*	60000	52	3.76	4.94
1000	400	2.98	4.14	75000	46	4.03	5.17
1500	326	3.04	4.19	80000	45	4.26	5.17
2000	280	3.04	4.19	100000	40	4.26	5.44

200 WATTS Type 200F–*Fixed* Type 200A–*Adj.*

Size—10½″ x 1⅛″ Mtg. Centers—11¼″

1	14140	$4.53	$5.67	3500	240	$3.30	$4.45
2	10000	4.53	5.67	4000	225	3.30	4.45
3	8162	4.53	5.67	4500	210	3.30	4.45
4	7070	4.53	5.67	5000	200	3.30	4.45
5	6320	4.53	5.67	7500	163	3.53	4.70
10	4470	3.22	4.37	10000	141	3.53	4.70
25	2825	3.22	4.37	15000	115	3.77	4.92
50	2000	3.22	4.37	20000	100	3.77	4.92
75	1630	3.22	*	25000	90	3.90	5.03
100	1414	3.22	4.37	30000	82	3.90	5.03
150	1150	3.22	*	35000	76	3.90	*
250	900	3.22	4.37	40000	71	3.90	5.03
500	632	3.22	4.37	50000	63	4.03	5.17
750	515	3.22	*	60000	58	4.03	5.17
1000	447	3.22	4.37	75000	52	4.25	5.42
1500	365	3.30	4.45	100000	45	4.53	5.67
2000	315	3.30	4.45	125000	40	*	5.67
2500	282	3.30	4.45	150000	35	*	5.67
3000	260	3.30	4.45				

AXIOHM RESISTORS

5 WATTS – TYPE 5X
10 WATTS – TYPE 10X

Vitreous enameled wire-wound resistors with 1½″ tinned copper leads for self-mounting.

The same fine materials used in the manufacture of Ward Leonard Vitrohm Resistors are used in making Axiohms.

Order by Type Number and Resistance Value.

◆

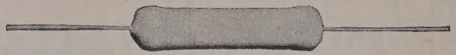
OTHER STOCK RESISTORS

Plaque Type — Available in three sizes, 25-watt, 50-watt, and 150-watt.

Disc Type — Available in 24-watt size.

Non-Inductive Type — Available in three sizes, 35-watt, 80 watt, and 160-watt.

For complete information on all our stock resistors ask for our Catalog D-130.



5 WATTS Size—1″ x 11/32″ TYPE 5X

Ohms	M.A.	List Price	Ohms	M.A.	List Price	Ohms	M.A.	List Price
1	2230	$0.80	125	200	$0.80	1200	64	$0.86
1.5	1820	.80	150	182	.80	1250	63	.86
2	1580	.80	200	158	.80	1500	57	.86
3	1290	.80	225	148	.80	1750	53	.86
4	1117	.80	250	141	.80	2000	50	.86
5	1000	.80	300	129	.80	2250	47	.86
7.5	811	.80	350	119	.80	2500	45	.86
10	707	.80	400	112	.80	3000	40	.86
12	644	.80	450	105	.80	3500	37	.86
15	577	.80	500	100	.80	4000	35	.86
20	500	.80	600	91	.80	4500	33	.86
25	450	.80	700	84	.80	5000	31	.86
30	408	.80	750	81	.80	6000	28	.94
35	378	.80	800	79	.80	7000	26	.94
40	353	.80	900	74	.80	7500	25	.94
50	316	.80	1000	70	.80	8000	25	.94
75	257	.80	1100	67	.86	9000	23	.94
100	223	.80				10000	22	.94

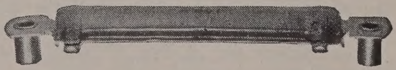
10 WATTS Size—1¾″ x 13/32″ TYPE 10X

1	3160	$0.90	300	182	$0.90	6000	41	$1.10
1.5	2580	.90	350	169	.90	7000	38	1.10
2	2235	.90	400	158	.90	7500	36	1.10
3	1825	.90	450	149	.90	8000	35	1.10
4	1580	.90	500	142	.90	8500	34	1.10
5	1415	.90	600	129	.90	9000	33	1.10
7.5	1155	.90	700	120	.90	10000	32	1.10
10	1000	.90	750	115	.90	11000	30	1.24
12	913	.90	800	112	.90	12000	29	1.24
15	815	.90	900	105	.90	12500	28	1.24
20	707	.90	1000	100	.90	13500	27	1.24
25	630	.90	1100	95	.96	15000	25.5	1.24
30	577	.90	1200	91	.96	16000	25	1.24
35	534	.90	1250	89	.96	17500	24	1.24
40	500	.90	1500	81	.96	18000	23	1.24
50	450	.90	1750	75	.96	20000	22	1.24
75	365	.90	2000	70	.96	22500	21	1.30
100	316	.90	2250	66	.96	25000	20	1.30
125	283	.90	2500	63	.96	30000	18	1.30
150	258	.90	3000	58	.96	35000	17	1.30
200	224	.90	3500	53	.96	40000	16	1.30
225	211	.90	4000	50	.96	45000	15	1.46
250	200	.90	4500	47	.96	50000	14	1.46
			5000	45	.96			

STRIPOHM RESISTORS —

30 WATTS • TYPE 30S
40 WATTS • TYPE 40S
55 WATTS • TYPE 55S
65 WATTS • TYPE 65S
75 WATTS • TYPE 75S

Vitreous enameled wire-wound resistors built on a strong refractory core, and provided with low mounting brackets. Particularly suited for applications where space is limited. Specially adapted to stacking for networks.



Order by Type Number and Resistance Value

30 WATTS • TYPE 30S

1¼″ long—Mtg. Centers 2″

Ohms	M.A.	List Price	Ohms	M.A.	List Price
1	5480	$1.84	500	244	$1.84
3	3160	1.84	750	200	1.84
5	2450	1.84	1000	173	1 84
10	1730	1.84	1250	154	1.84
15	1420	1.84	1500	142	1.84
25	1095	1.84	2000	122	1.84
50	774	1.84	2500	109	1.84
100	547	1.84	3000	100	1.98
150	447	1.84	3500	92	1.98
200	387	1.84	4000	86	1.98
250	346	1.84	5000	77	1.98
400	273	1.84			

40 WATTS • TYPE 40S

2″ long—Mtg. Centers 2¾″

1	6320	$1.93	750	230	$1.93
3	3650	1.93	1000	200	1.93
5	2830	1.93	1250	180	1.93
10	2000	1.93	1500	163	1.93
15	1630	1.93	2000	141	1.93
25	1270	1.93	2500	126	1.93
50	894	1.93	3000	114	2.06
100	632	1.93	3500	106	2.06
150	510	1.93	4000	100	2.06
200	447	1.93	5000	88	2.06
250	400	1.93	7500	73	2.32
400	315	1.93	10000	63	2.32
500	283	1.93	15000	51	2.42

55 WATTS • TYPE 55S

3½″ long—Mtg. Centers 4¼″

Ohms	M.A.	List Price	Ohms	M.A.	List Price
1	7420	$2.22	1250	209	$2.22
3	4280	2.22	1500	191	2.22
5	3320	2.22	2000	165	2.22
10	2350	2.22	2500	148	2.22
15	1910	2.22	3000	135	2.35
25	1480	2.22	3500	129	2.35
50	1050	2.22	4000	117	2.35
100	741	2.22	5000	104	2.35
150	604	2.22	7500	84	2.60
200	522	2.22	10000	74	2.60
250	469	2.22	15000	60	2.71
400	370	2.22	20000	52	2.82
500	331	2.22	25000	47	2.98
750	270	2.22	30000	42	3.11
1000	234	2.22			

65 WATTS • TYPE 65S

4¾″ long—Mtg. Centers 5½″

Ohms	M.A.	List Price	Ohms	M.A.	List Price
1	8060	$2.53	1500	208	$2.53
3	4650	2.53	2000	180	2.53
5	3610	2.53	2500	161	2.53
10	2550	2.53	3000	146	2.66
15	2080	2.53	3500	136	2.66
25	1610	2.53	4000	127	2.66
50	1140	2.53	5000	114	2.66
100	806	2.53	7500	92	2.90
150	658	2.53	10000	82	2.90
200	570	2.53	15000	65	3.02
250	509	2.53	20000	57	3.13
400	403	2.53	25000	51	3.29
500	360	2.53	30000	46	3.43
750	294	2.53	35000	43	3.43
1000	254	2.53	40000	40	3.58
1250	228	2.53	50000	36	3.58

75 WATTS • TYPE 75S

6″ long—Mtg. Centers 6¾″

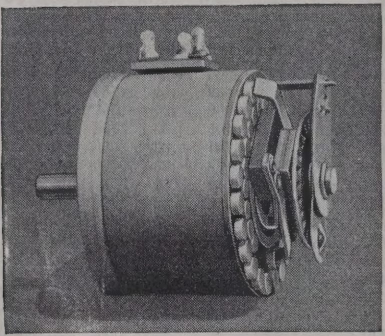
Ohms	M.A.	List Price	Ohms	M.A.	List Price
1	8660	$2.76	2000	193	$2.76
3	5000	2.76	2500	173	2.76
5	3870	2.76	3000	158	2.89
10	2740	2.76	3500	146	2.89
15	2235	2.76	4000	137	2.89
25	1730	2.76	5000	122	2.89
50	1220	2.76	7500	100	3.13
100	866	2.76	10000	87	3.13
150	707	2.76	15000	71	3.24
200	612	2.76	20000	61	3.36
250	550	2.76	25000	55	3.52
400	433	2.76	30000	50	3.65
500	387	2.76	35000	46	3.65
750	315	2.76	40000	43	3.78
1000	274	2.76	50000	37	3.96
1250	245	2.76	60000	35	3.96
1500	224	2.76	65000	33	3.96

ELECTRICAL INSTRUMENTS
•
RESISTORS
•
VARIABLE ATTENUATORS
•
SWITCHES

SHALLCROSS MANUFACTURING CO.

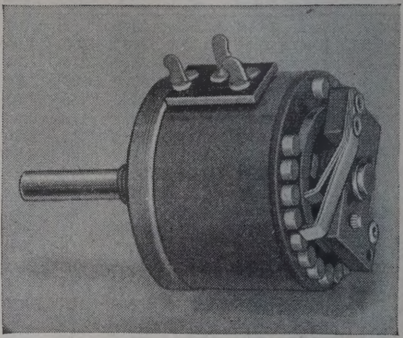
COLLINGDALE, PENNSYLVANIA

SHALLCROSS AUDIO ATTENUATORS



◄ SHALLCROSS ATTENUATOR NO. 420-2B2

SHALLCROSS ATTENUATOR NO. C720-2A3 ►



These Shallcross Features Mean

✓ BETTER PERFORMANCE
✓ BIGGER VALUE

- ✓ Off position attenuation well in excess of 100 db.
- ✓ 25% to 50% fewer soldered joints.
- ✓ Noise level ratings that are factual. (130 db or more below zero level).
- ✓ Non-inductive Shallcross precision resistors used throughout assure flat attenuation to and beyond 30 kc.
- ✓ Types and sizes engineered for all needs. Attenuation accuracies of 1%, resistor accuracies of 0.1%, on special order.

Shallcross Audio Attenuators are available in either variable or fixed units, the former often being referred to as a "control" and the latter, as a "pad".

Controls are available with as few as 5 steps or as many as 52 steps with an attenuation as small as 0.1 db per step. The total attenuation for a single control does not exceed about 125 db since such high attenuation approaches the noise level of the switching mechanism.

The complete story of Shallcross attenuators may be found in Shallcross Engineering Bulletin #4, copies of which are available on request. Specifications and prices are given below for a few of the most popular variable attenuators.

IMPEDANCE: 150, 500, 250/500, 600 ohms, except potentiometers, which are 100,000 and 250,000 ohms.

RESISTORS: All non-inductively wirewound, ±5% tolerance, except types preceded with "C", which are composition selected to ±5%.

ATTENUATION: Increases for counter-clockwise rotation of knob end of shaft.

FREQUENCY RESPONSE: Flat over entire audio range.

SWITCH MECHANISM: Multi-leaf wiper arms, collector rings and contacts available in tarnish resistant silver alloy or brass. Noise level −130 db.

DETENT: Indexing mechanism available on any unit for $0.75 list. Back of panel depth is then increased 5/16″.

DIALS: $1.50 list each additional.

KNOBS (VA-16906): $0.60 list each additional.

120-2A3 **$ 9.50 silver** **10.50 brass**	Ladder attenuator, 20 steps, 2 db per step, tapered on last 3 steps to off. MOUNTING: single hole, ⅜″-32 threaded bushing or two hole, 6-32 screws, 1⅜″ centers. DIMENSIONS: 1¾″ diameter, 1¾″ back of panel depth. CONTACT SPACING: 15°.
C720-2A3 **$ 9.50 silver** **10.50 brass**	Potentiometer, 20 steps, 2 db per step, tapered on last 3 steps to off. MOUNTING: single hole, ⅜″-32 threaded bushing or two hole, 6-32 screws, 1⅜″ centers. DIMENSIONS: 1¾″ diameter, 1¾″ back of panel depth. CONTACT SPACING: 15°.
132-1.5B3 **$16.50 silver** **18.00 brass**	Ladder attenuator, 32 steps, 1.5 db per step, tapered on last 3 steps to off. MOUNTING: two hole, 6-32 or 8-32 screws, 1¼″ or 1½″ centers. DIMENSIONS: 2⅛″ diameter, 1¾″ back of panel depth. CONTACT SPACING: 10°.
430-1C1 **$29.00 silver** **27.00 brass**	Bridged T attenuator, 30 steps, 1 db. per step, 30 db total. MOUNTING: two hole, 6-32 or 8-32 screws, 1¼″ or 1½″ centers. DIMENSIONS: 2½″ diameter, 1¾″ back of panel depth. CONTACT SPACING: 11¼°.
430-1.5C3 **$29.00 silver** **27.00 brass**	Bridged T attenuator, 30 steps, 1.5 db per step, tapered on last 5 steps to off. MOUNTING: two hole, 6-32 or 8-32 screws, 1¼″ or 1½″ centers. DIMENSIONS: 2½″ diameter, 1¾″ back of panel depth. CONTACT SPACING: 11¼°.
420-2B2 **$21.50 silver**	Bridged T attenuator, 20 steps, 2 db per step, attenuation linear with off on last step. MOUNTING: two hole, 8-32 or 6-32 screws, 1¼″ or 1½″ centers. DIMENSIONS: 2⅛″ diameter, 1¾″ back of panel depth. CONTACT SPACING: 15°.
C820-2B2 **$21.50 silver**	Dual potentiometer, each section 20 steps, 2 db per step, attenuation linear with off on last step. MOUNTING: two hole, 6-32 or 8-32 screws, 1¼″ or 1½″ centers. DIMENSIONS: 2⅛″ diameter, 1¾″ back of panel depth. CONTACT SPACING: 15°.

SHALLCROSS V.U. METER RANGE EXTENDING ATTENUATORS

IMPEDANCE: Available with input impedances of 3900-7100-7500 ohms. Output impedance is 3900 ohms to match Weston Type 30B or General Electric Type DO 61 V.U. meters.

TOLERANCE: ±1% except "C" types which are ±5%.

INSERTION LOSS: Zero.

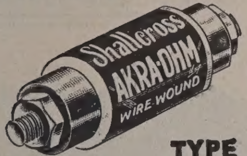
DETENT: All units supplied with indexing mechanism; back of panel depth includes detent.

C35-4A4 **$16.00 silver** **15.00 brass**	T attenuator, 0, +4 to +20 V.U., 5 steps, 4 V.U. per step. MOUNTING: single hole, ⅜″-32 threaded bushing. DIMENSIONS: 1¾″ diameter, 2-1/16″ back of panel depth. CONTACT SPACING: 30°.
C35-4A5 **$16.00 silver** **15.00 brass**	T attenuator, 0, +4 to +16 V.U., and OFF, 5 steps, 4 V.U. per step. MOUNTING: single hole, ⅜″-32 threaded bushing. DIMENSIONS: 1¾″ diameter, 2-1/16″ back of panel depth. CONTACT SPACING: 30°.
320-2C4 **$31.50 silver**	T attenuator, +4 to +44 V.U., 20 steps, 2 V.U. per step. MOUNTING: two hole, 8-32 screws, 1½″ centers. DIMENSIONS: 2½″ diameter, 2-1/16″ back of panel depth. CONTACT SPACING: 15°.
320-2C5 **$31.50 silver**	T attenuator, +4 to +42 V.U. and OFF, 20 steps, 2 V.U. per step. MOUNTING: two hole, 8-32 screws, 1½″ centers. DIMENSIONS: 2½″ diameter, 2-1/16″ back of panel depth. CONTACT SPACING: 15°.
412-2B4 **$22.50 silver**	Bridged T attenuator, +4 to +28 V.U., 12 steps, 2 V.U. per step. MOUNTING: two hole, 8-32 screws, 1½″ centers. DIMENSIONS: 2⅛″ diameter, 2-1/16″ back of panel depth. CONTACT SPACING: 12°.
412-2B5 **$22.50 silver**	Bridged T attenuator, +4 to +26 V.U. and OFF, 12 steps, 2 V.U. per step. MOUNTING: two hole, 8-32 screws, 1½″ centers. DIMENSIONS: 2⅛″ diameter, 2-1/16″ back of panel depth. CONTACT SPACING: 12°.

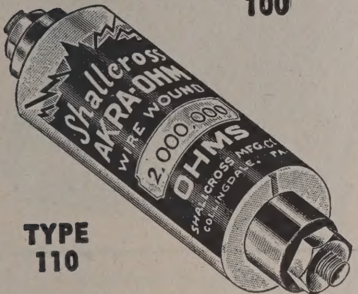
SHALLCROSS MANUFACTURING CO.
COLLINGDALE, PENNSYLVANIA

ELECTRICAL INSTRUMENTS
•
RESISTORS
•
VARIABLE ATTENUATORS
•
SWITCHES

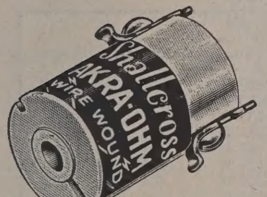
SHALLCROSS AKRA-OHM RESISTORS



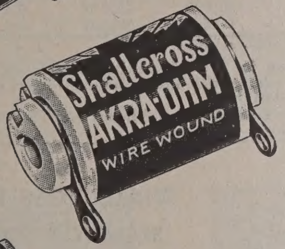
TYPE 100



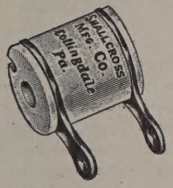
TYPE 110



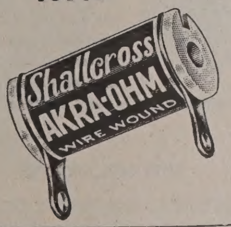
TYPES 140 160



TYPES 196 116



TYPE 183 A



TYPE 193

LIST PRICES—Standard BX Types, ±1% Tolerance

November 23, 1950 — RESISTOR PRICE SCHEDULE — PS-22

TOL. ± 1% Resistance to and Including OHMS	BX110, BX112, BX116, BX160 Wire Spec.			BX196, BX100 Wire Spec.			BX120, BX140, BX173, BX183A, BX193 Wire Spec.		
	N	J-E	L	N	J-E	L	N	J-E	L
.099	....	....	4.55	....	....	3.90	....	....	3.30
.499	....	....	3.60	....	....	3.00	....	....	2.45
1,000	....	....	3.00	....	....	2.40	....	....	2.00
5,000	3.30	3.45	4.35	2.50	2.70	3.40	2.10	2.20	3.05
10,000	3.45	3.65	4.90	2.60	2.85	3.80	2.15	2.25	3.45
15,000	3.60	3.70	5.50	2.75	3.05	4.30	2.20	2.30	3.95
30,000	3.70	4.00	6.90	2.85	3.20	5.40	2.25	2.55	4.95
50,000	3.90	4.35	8.70	3.00	3.40	6.80	2.40	2.60	6.10
75,000	4.20	4.90	10.50	3.30	3.75	8.25	2.70	3.10	6.80
100,000	4.60	5.15	12.30	3.60	4.30	9.70	3.00	3.45	7.55
125,000	4.80	5.60	13.20	3.95	4.65	10.40	3.30	3.95	8.10
150,000	5.10	6.10	14.10	4.30	5.15	11.15	3.45	4.35	8.60
200,000	5.50	6.60	15.00	4.90	5.70	11.85	3.95	4.80	9.70
250,000	6.00	7.05	16.80	5.40	6.40	13.30	4.30	5.30	10.80
300,000	6.15	7.15	16.95	6.00	7.00	13.45	4.45	5.55	11.35
400,000	7.00	8.15	19.55	6.60	7.70	15.50	5.05	6.15	13.45
500,000	7.85	9.00	22.10	7.45	8.50	17.55	5.85	6.90	14.80
600,000	8.50	9.65	24.70	8.05	9.20	19.65	6.30	7.55	16.20
700,000	8.95	10.05	27.30	8.60	9.85	21.70	6.75	8.25	17.55
750,000	9.45	10.35	28.55	9.20	10.35	22.75	7.35	8.70	18.25
900,000	10.10	11.20	30.75	9.75	10.90	24.45	8.05	9.30	21.70
1 megohm	11.20	12.35	31.60	10.35	11.50	25.15	8.60	9.75	22.40
1.5 "	13.50	16.95	45.40	12.35	13.50	36.20	10.90	12.65	....
2 "	19.55	21.25	59.20	15.80	17.25	47.25	13.20	15.50	....
Deduct if not BX	$0.50			$0.40			$0.40		

SPECIAL TOLERANCE

Resistors to closer tolerances can be supplied at higher prices. Add to list prices as follows:

±½%, add 5%	±2/10%, add 15%
±¼%, add 10%	±1/10%, add 25%

NOTES

1. BX impregnated resistors will be furnished unless order specifies "without BX".
2. Letters in separate price columns above indicate resistance wire alloy, as follows:
   - a. "L"—manganin.
   - b. "J"—iron-free nichrome.
   - c. "N"—iron-bearing nichrome.
   - d. "E"—high resistivity nichrome.

TYPES BX183A AND BX193—±1% IN COMMON VALUES—IN STOCK

In addition to the popular standard types listed here, Shallcross Akra-Ohm Resistors are made in a complete line of standard and special designs for precise electronic equipment demanding great stability and long life even under difficult conditions of temperature and humidity.

Shallcross achievements include the development of really practical hermetically-sealed units; BX processed resistors "tropicalized" against moisture and fungus; the use of spun glass insulated wire for applications where considerable power must be dissipated; bifilar wound resistors, 1000 ohms or less, for exacting instrument use; heavy-duty surge resistors; accurate heavy-duty power resistors, and various others. Write for Shallcross resistor bulletin R3-B for complete information.

ACCURATE FIXED WIRE-WOUND TYPES (JAN R93) PRICES ON REQUEST.

Shallcross Type	** JAN Style	Wattage	* Maximum Ohms	Std. Terminal	Mounting	Dimensions Length—Diam.
100	RB21B	1	750,000	#8 screw	5 amp. fuse clip	2 1/16″ x 9/16″
110	RB22B	2	2 Meg.	#8 screw	5 amp. fuse clip	2 7/8″ x 3/4″
116	RB14B	1	2 Meg.	Solder lugs	#6 screw	2 5/32″ x 3/4″
140	RB41B	0.5	350,000	Solder lugs	#6 screw	1 1/4″ x 11/16″
160	RB42B	1	500,000	Solder lugs	#6 screw	1 3/16″ x 11/16″
183A	RB11B	0.5	300,000	Solder lugs	#6 screw	5/8″ x 1/2″
193	RB12B	1	400,000	Solder lugs	#6 screw	1″ x 1/2″
196	RB13B	1	1 Meg.	Solder lugs	#6 screw	1 1/4″ x 3/4″
1101▲	RB12A	0.5	300,000	Solder lugs	#6 screw	7/8″ x 7/8″
1105▲	RB14A	1.5	400,000	Solder lugs	#6 screw	2″ x 7/8″
1180▲	RB11A	0.25	300,000	Solder lugs	#2 screw	19/32″ x 1/2″
1196▲	RB13A	1	1 Meg.	Solder lugs	#6 screw	1 1/4″ x 7/8″

* Based on use of .0014″ diameter nickel chromium wire. Smaller wire sizes will greatly increase maximum allowable resistance on any form.
** JAN style refers to Joint Army-Navy Specification R93. Price depends on wire size and specification.
△ Hermetically sealed. Other sizes available.

SEND FOR RESISTOR ENGINEERING CHART FOR COMPLETE DATA

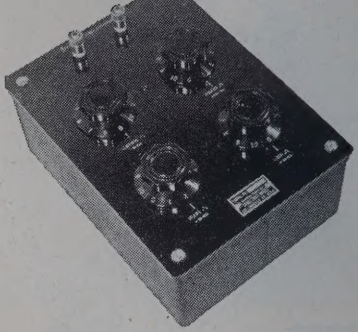
SHALLCROSS MANUFACTURING CO.

COLLINGDALE, PENNSYLVANIA

ELECTRICAL INSTRUMENTS
•
RESISTORS
•
VARIABLE ATTENUATORS
•
SWITCHES

SHALLCROSS DECADE RESISTANCE BOXES

The large assortment and wide range of resistance available makes the Shallcross line of Resistance Boxes unique in the instrument field. They are used extensively as laboratory standards, AC and DC Bridge and ratio arms, voltage dividers, etc.

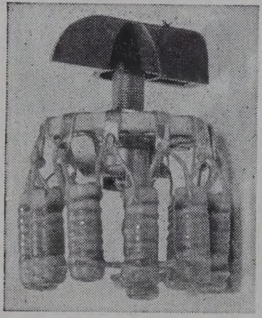


Accuracy adjustment of Resistors as follows:

0.1 ohm......	1%	1. ohm.....	0.25%	all others......	0.1%

No.	No. Dials	Ohm Steps	Ohms Total Resistance	Price	No.	No. Dials	Ohm Steps	Ohms Total Resistance	Price
543	1	0.1	1	$22.00	821	3	10	11,100	$60.00
544	1	1.0	10	22.00	822	3	100	111,000	63.00
545	1	10	100	22.00	823	3	1,000	1,110,000	77.00
546	1	100	1,000	22.00	824	3	10,000	11,100,000	120.00
547	1	1,000	10,000	24.00	825	4	1	11,110	77.00
548	1	10,000	100,000	26.00	826	4	10	111,100	79.00
549	1	100,000	1,000,000	36.00	827	4	100	1,111,000	92.00
550	1	1,000,000	10,000,000	66.00	828	4	1,000	11,110,000	139.00
817	3	.01	11.1	60.00	8285	5	0.1	11,111	94.00
817A	4	.01	111.1	75.00	829	5	1	111,110	101.00
817B	5	.01	1,111.1	94.00	830	5	10	1,111,100	113.00
818	3	0.1	111	51.00	831	5	100	11,111,000	155.00
819	4	0.1	1,111	71.00	832	6	1	1,111,110	121.00
820	3	1	1,110	56.00	833	6	10	11,111,100	169.00

UNMOUNTED DECADE RESISTANCES



In response to a demand from engineers, manufacturers and physicists who design and construct their own electrical measuring instruments, we have made the Shallcross Unmounted Decade Resistances available. They are of the same construction as those used in the popular Shallcross Resistance Decades described above and consist of ten Shallcross Resistors mounted on a ceramic instrument switch.

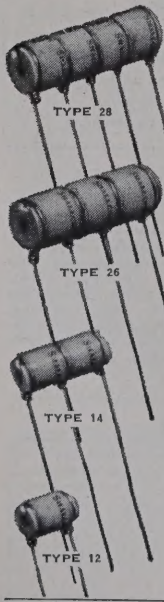
SPECIFICATIONS

Type No.	Total Resistance Ohms	Unit Resistance Ohms	Switch No.	Accuracy	*Price
435	1.0	.1	4485-S	1.0%	$12.00
436	10	1.0	4485-B	0.25%	13.25
437	100	10	4485-B	0.1	13.25
438	1,000	100	4485-B	0.1	15.00
439	10,000	1,000	4485-B	0.1	16.00
440	100,000	10,000	4485-B	0.1	18.50
441	1 Meg.	100,000	4485-B	0.1	32.50
442	10 Meg.	1 Meg.	4485-B	0.1	60.00

* Does not include knob or dial.

MOUNTING: Single 3/8" Hole Mounting—Panels up to 3/16" Thick. All of the above are available with aluminum dust cover, shield, and isolated shaft at $3.00 additional.

Knob #1916-1 (illustrated): $0.25 additional and aluminum dial 0-10 #1522-1 $0.70 additional.



SHALLCROSS AKRA-OHM PRECISION RESISTORS

for "Miniaturization" applications

UNUSUAL ACCURACY IN SMALL SPACE

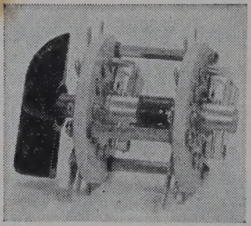
These new Shallcross Akra-Ohm Wire-Wound Precision Resistors have been designed to meet the needs of modern, miniature equipment. Standard tolerance is 1%. Closer tolerances can be furnished on special order.

The units offer unusually high and accurate resistance values in small space and are light enough to be suspended by their own tinned copper leads, or may be secured with mounting screw.

Type	Sections	Size	Watts Each Section	Maximum Resistance per Section Ohms	Minimum Resistance per Section Ohms
10	1	1/4" x 1/4"	0.1	70,000	1.
12	1	13/32" x 1/4"	0.15	150,000	1.
14	2	45/64" x 1/4"	0.15	150,000	1.
26	3	1 1/32" x 3/8"	0.25	550,000	1.
28	4	1 1/4" x 3/8"	0.25	375,000	1.

Prices on application.

SHALLCROSS ROTARY SELECTOR SWITCHES



Like other Shallcross instrument components, these Rotary Selector Switches are designed to cover a very wide field of application in both shorting and non-shorting types, and can be modified to control a variety of circuits. Details on any type for practically any application on request. Suffixes B and S denote Brass and Silver contacts and contact arms. Write for Specification Sheet SS-6.

SPECIFICATIONS

Poles	Positions	Contact Spacing	Contact Plate Material	Type Number		*List Price
				Shorting	Non-Shorting	
1	11	32.7°	Steatite	4605-B	4610-B	$ 4.25
2	11	32.7°	Steatite	4620-B	4615-B	9.50
1	11	32.7°	Steatite	4605-S	4610-S	4.50
2	11	32.7°	Steatite	4620-S	4615-S	10.00
1	12	30°	Bakelite	5550-B	5620-B	4.95
1	12	30°	Bakelite	5550-S	5620-S	5.25
1	15	24°	Steatite	5610-B	4225-B	5.55
2	15	24°	Steatite	5615-B	4980-B	12.50
1	15	24°	Steatite	5610-S	4225-S	6.00
2	15	24°	Steatite	5615-S	4980-S	13.50
1	18	20°	Steatite	5155-B	5625-B	6.50
1	18	20°	Steatite	5155-S	5625-S	7.00
1	24	15°	Bakelite	5630-B	5570-B	9.50
1	24	15°	Bakelite	5630-S	5570-S	10.00
1	36	10°	Bakelite	.....	10054-S	28.00
1	40	8.8°	Melamine	8140-S	.....	35.00
1	60	6°	Bakelite	.....	10061-S	30.00

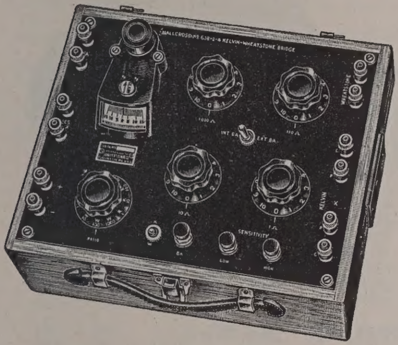
* Does not include knob or dial.

ELECTRICAL INSTRUMENTS
•
RESISTORS
•
VARIABLE ATTENUATORS
•
SWITCHES

SHALLCROSS MANUFACTURING CO.

COLLINGDALE, PENNSYLVANIA

SHALLCROSS D-C BRIDGES



No. 638-R

KELVIN WHEATSTONE BRIDGE

Resistance range 0.0001 ohm to 11.11 megohms

SPECIFICATIONS

ACCURACY—0.3% between 1.0 ohm and .1111 megohms. Below and above this range—2%.

GALVANOMETER—Built-in—sensitivity 1 micro-ampere per millimeter division.

RHEOSTAT ARM—Four decades—1.0 ohm steps in Wheatstone and 1.0 micro-ohm steps in Kelvin ranges.

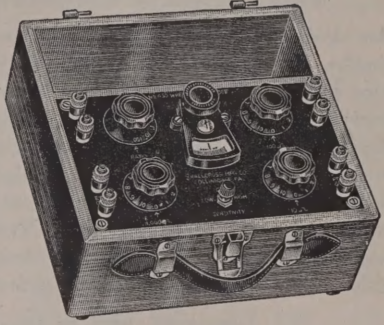
RESISTANCE BOX—Binding posts allow using rheostat as Resistance Box.

PUSH BUTTONS—Provided for battery and galvanometer circuits.

CASE—Carrying type with removable cover (not illustrated) and compartment for 4½ volt battery (not supplied) for Wheatstone range measurements.

DIMENSIONS—Length 12½″, width 10½″, height 6¾″.

WEIGHT—Approx. 9 lbs. Price $260.00.



No. 630

WHEATSTONE BRIDGE

Resistance range from 0.1 ohm to 11.1 megohms

SPECIFICATIONS

ACCURACY—1.0% between 10 ohms and 1.0 megohm—2% over 1 megohm.

COMPONENT RESISTORS—0.1% accurate except 1 ohm, which are 0.25%.

RHEOSTAT ARM—Three decades—variable in 10.0 ohm steps.

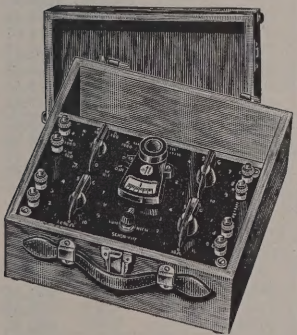
RESISTANCE BOX—Binding posts allow using rheostat as Resistance Box.

CAM SWITCHES—Provided for battery and galvanometer circuits.

CASE—Carrying type with removable cover and compartment for batteries and leads (not supplied).

DIMENSIONS—Length 10″, width 9¾″, height 6″.

WEIGHT—Approx. 6 lbs. Price $145.00.



No. 637

KELVIN WHEATSTONE BRIDGE

Resistance range 0.001 ohm to 11.1 megohms

SPECIFICATIONS—Same as No. 638-R except:

ACCURACY—1.0% between 1.0 ohm and 1.0 megohm; 2.0% above 1.0 megohm; and 3.0% below 0.1 ohm.

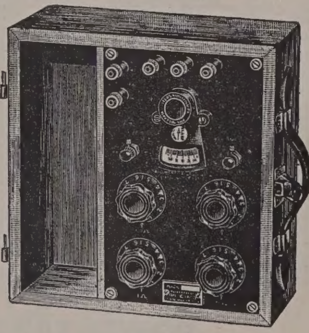
GALVANOMETER—Sensitivity 1.0 micro-ampere per millimeter division. Built-in.

RHEOSTAT ARM—Three decades—10 ohm steps in Wheatstone and 10 micro-ohm steps in Kelvin ranges.

CANNOT be used as Resistance Box.

DIMENSIONS—Length 10″, width 9¾″, height 5¼″.

WEIGHT—Approx. 7 lbs. Price $185.00.



No. 627

FAULT LOCATION BRIDGE

Resistance range 0.1 ohm to 11.11 megohms

SPECIFICATIONS

COMPONENT RESISTORS—0.1% accurate except 1.0 ohm, which are 0.25%.

GALVANOMETER—Built-in—sensitivity 1.0 micro-ampere per mm. division.

RHEOSTAT ARM—Four decades—1,111 ohms—variable in 0.1 ohm steps.

RATIO—Unity ratio makes rheostat setting indicate resistance directly. Operator then uses charts in lid to convert readings into fault distance.

CAM SWITCHES—Provided for battery and galvanometer circuits.

CASE—Carrying type with removable cover, concealed compartment for battery (not supplied).

ACCURACY—0.3% for 1 to 1,111 ohms—2% for 0.1 to 1 ohm.

DIMENSIONS—Length 10″, width 9¾″, height 5¾″.

WEIGHT—Approx. 6 lbs. Price $145.00.

VOLTAGE DIVIDERS (DECADE POTENTIOMETERS)

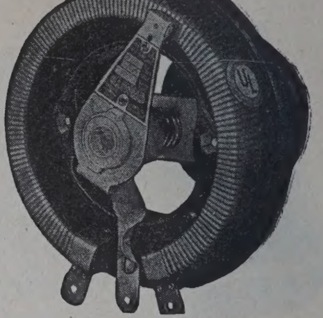
No.	Dials	Total Resistance	Price	No.	Dials	Total Resistance	Price
835	4	10,000 ohms	$132.00	845	3	1,000 ohms	$ 98.00
836	4	100,000 ohms	146.00	846	3	10,000 ohms	105.00
837	4	1,000 ohms	126.00	850	3	100,000 ohms	123.00

BE RIGHT WITH OHMITE ★ RHEOSTATS RESISTORS SWITCHES CHOKES

OHMITE RHEOSTATS

All-Porcelain — Vitreous-Enameled

The design and construction of these sturdy, compact Ohmite Rheostats insure permanently smooth, gradual, close control. The wire is wound over a porcelain core, bonded to porcelain base, and permanently locked in place by special Ohmite Vitreous Enamel. Nothing to smoke, char, shrink, or shift. Dissipates heat rapidly. Insulated shafts and bushings. Copper graphite contacts. Ratings are for "free air" use. Time-proved through long trouble-free service in countless installations the world over. Underwriters' Laboratories Listed.



MODEL "H" 25 Watt

Diameter 1 9/16". Depth behind panel 1⅜".

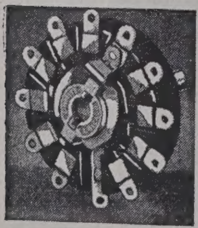
Stock No.	Ohms	Max. Mils.	List Price
0140	1	5,000	$7.03
0141	2	3,540	6.22
0142	3	2,880	6.22
0143	6	2,040	6.22
0144	8	1,770	6.22
0145	10	1,580	6.22
0146	15	1,290	6.22
0147	25	1,000	6.22
0148	35	845	6.22
0149	50	707	6.22
0150	75	575	6.22
0151	100	500	6.22
0152	125	445	$6.22
0153	175	375	6.22
0154	250	316	6.22
0155	350	267	6.22
0156	500	222	6.22
0157	750	182	6.22
0158	1,000	155	7.03
0159	1,500	129	7.03
0160	2,500	100	7.03
0161	3,500	84	7.39
0162	5,000	70	7.39

MODEL "J" 50 Watt

Diameter 2 5/16". Depth behind panel 1⅜".

Stock No.	Ohms	Max. Mils.	List Price
0308	0.5	10,000	$7.81
0309	1	7,070	7.81
0310	2	5,000	7.81
0311	4	3,530	7.03
0312	6	2,880	7.03
0313	8	2,500	7.03
0314	12	2,040	7.03
0315	16	1,760	7.03
0316	22	1,500	7.03
0317	35	1,190	7.03
0318	50	1,000	7.03
0319	80	790	7.03
0320	125	630	7.03
0321	150	575	$7.03
0322	225	470	7.03
0323	300	408	7.03
0324	500	316	7.03
0325	800	250	7.39
0326	1,000	224	7.39
0327	1,600	176	7.39
0328	2,500	141	7.39
0329	3,500	119	7.81
0330	5,000	100	7.81
0331	8,000	79	7.81
0332	10,000	70	7.81

NON-SHORTING TYPE ROTARY POWER TAP SWITCH



Single-pole, multi-position switch with all-ceramic insulation, silver-to-silver contacts and "slow-break" action designed especially for alternating current. Switch shaft is electrically "dead". A.C. rating 10 amps., 150 volts. Diameter 1¾"—Depth behind panel 1⅛"—Shaft diameter ¼" — Recommended knob, stock number 4500 (round type) or 4516 (bar type).

Number of Taps	Total Rotation	Stock Number	List Price Less Knob
11	300°	111-11	$4.67
10	270°	111-10	4.53
9	240°	111- 9	4.53
8	210°	111- 8	4.36
7	180°	111- 7	4.36
6	150°	111- 6	4.19
5	120°	111- 5	4.19
4	90°	111- 4	4.06
3	60°	111- 3	4.06
2	30°	111- 2	4.06

MODEL "K" 100 Watt

Diameter 3¼". Depth behind panel 1¾".

Stock No.	Ohms	Max. Mils.	List Price
0440	0.5	14,100	$11.70
0441	1	10,000	11.70
0442	2	7,070	11.70
0443	3	5,750	11.70
0444	5	4,470	11.70
0445	7.5	3,650	10.95
0446	10	3,160	10.95
0447	16	2,500	10.95
0448	25	2,000	10.95
0449	50	1,410	10.95
0450	75	1,150	10.95
0451	100	1,000	10.95
0452	200	707	$10.95
0453	300	575	10.95
0454	400	500	10.95
0455	500	447	10.95
0456	750	365	10.95
0457	1,000	316	11.70
0458	1,500	258	11.70
0459	2,000	224	11.70
0460	2,500	200	11.70
0461	5,000	141	12.47
0462	7,500	115	13.28
0463	10,000	100	14.03

MODEL "L" 150 Watt

Diameter 4". Depth behind panel 2".

Stock No.	Ohms	Max. Mils.	List Price
0524	0.5	17,300	$14.83
0525	1	12,300	14.83
0526	2	8,650	14.83
0527	3	7,070	14.83
0528	5	5,480	14.83
0529	7.5	4,470	14.83
0530	10	3,880	14.03
0531	15	3,163	14.03
0532	25	2,450	14.03
0533	35	2,070	14.03
0534	50	1,735	14.03
0535	75	1,415	14.03
0536	100	1,225	14.03
0537	150	1,000	$14.03
0538	200	865	14.03
0539	250	775	14.03
0540	350	655	14.03
0541	500	548	14.03
0542	750	447	14.83
0543	1,250	346	14.83
0544	1,800	288	15.61
0545	2,250	259	15.61
0546	3,000	224	15.61
0547	4,500	182	16.36
0548	7,500	141	17.17
0549	10,000	122	18.72

MODEL "N" 300 Watt

Diameter 6". Depth behind panel 2⅝".

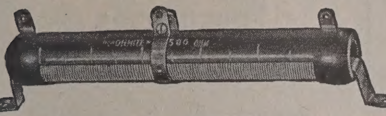
Stock No.	Ohms	Max. Mils.	List Price
0650	1	17,320	$21.06
0651	2	12,240	21.06
0652	3	10,000	21.06
0553	4	8,660	21.06
0654	5	7,750	21.06
0655	7.5	6,320	21.06
0656	10	5,480	21.06
0657	15	4,470	21.06
0658	25	3,460	21.06
0659	50	2,450	21.06
0660	75	2,000	21.06
0661	100	1,730	$21.06
0662	150	1,410	21.06
0663	200	1,220	21.06
0664	300	1,000	21.06
0665	400	866	21.06
0666	700	655	21.06
0667	900	578	21.06
0668	1,200	500	21.06
0669	1,500	447	21.06
0670	1,750	414	21.06
0671	2,500	346	21.06

OTHER OHMITE RHEOSTATS

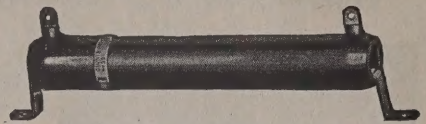
Ohmite Rheostats are also available in Model G, 75 Watt; Model P, 225 Watt; Model R, 500 Watt; Model T, 750 Watt; and Model U, 1,000 Watt units, in many resistance values. Special Rheostats with tapered windings, etc., can be supplied; also Special Rheostats for Model Train Control. Cages and other accessories also available.

For more complete information on OHMITE PRODUCTS, ask for Ohmite Stock Catalog.

OHMITE DIVIDOHM RESISTORS



OHMITE FIXED RESISTORS



All-Porcelain

Vitreous-Enameled

You can adjust the resistance or secure odd resistance values quickly with these Dividohms; easily put on more taps where needed. Ideal voltage dividers. With one adjustable lug and with mounting brackets.

Extra-sturdy, wire-wound, all-porcelain resistors with the permanent protection of Ohmite Vitreous Enamel. Widely used for heavy duty applications to assure continuous trouble-free service. With mounting brackets.

10 WATTS

Core Size 1¾" x 5/16" Mounting Centers 2¼"

Adjustable Res.			Adjustable Res.		
Res. Ohms	Max. Mils.	Stock No.	Res. Ohms	Max. Mils	Stock No.
1	3,150	1001	750	115	1021
2	2,235	1002	800	111	1022
3	1,825	1003	1,000	100	1023
5	1,415	1004	1,250	89	1024
7.5	1,155	1005	1,500	79	1025
10	1,000	1006	2,000	69	1026
15	816	1007	2,250	64	1027
20	707	1008	2,500	63	1028
25	632	1009	3,000	56	1029
50	447	1010	3,500	51	1030
75	365	1011	4,000	47	1031
100	316	1012	4,500	45	1032
150	258	1013	5,000	43	1033
200	223	1014	6,000	38	1034
250	200	1015	7,000	34	1035
300	182	1016	7,500	33	1036
350	169	1017	8,000	31	1037
400	158	1018	8,500	29	1038
500	141	1019	9,000	28	1039
600	129	1020	10,000	26	1040

List Price, 1 thru 1000 ohms..........$1.47
List Price, 1,250 thru 5,000 ohms...... 1.53
List Price, 6,000 thru 10,000 ohms..... 1.63

25 WATTS

Core Size 2"x 9/16" Mounting Centers 2¾"

		Fixed Resist.		Adj. Resist.	
Res. Ohms	Max. Mils.	Stock No.	List Price	Stock No.	List Price
1	5,000	0200J	$0.97	0360	$1.87
2	3,535	0200K	.97	0360B	1.87
3	2,885	0200L	.97	0361	1.87
5	2,235	0200A	.97	0362	1.87
7.5	1,825			0362B	1.87
10	1,580	0200B	.97	0363	1.87
15	1,290	0200R	.97	0364	1.87
20	1,117			0364B	1.87
25	1,000	0200C	.97	0365	1.87
50	707	0200D	.97	0366	1.87
75	577	0200E	.97	0367	1.87
100	500	0200F	.97	0368	1.87
150	408	0200G	.97	0369	1.87
200	353	0200H	.97	0370	1.87
250	316	0201	.97	0371	1.87
300	288			0371B	1.87
400	250			0371C	1.87
500	223	0202	.97	0372	1.87
750	182	0203	.97	0373	1.87
800	176	0204	.97	0374	1.87
1,000	158	0205	.97	0375	1.87
1,250	141			0375B	1.88
1,500	129	0206	1.03	0376	1.88
2,000	111	0207	1.03	0377	1.88
2,250	105			0377B	1.88
2,500	100	0208	1.03	0378	1.88
3,000	91	0209	1.03	0379	1.88
3,500	84	0210	1.03	0380	1.88
4,000	79	0211	1.03	0381	1.88
4,500	74			0381B	1.88
5,000	70	0212	1.03	0382	1.88
6,000	64	0213	1.14	0383	2.03
7,000	60			0383B	2.03
7,200	59			0383C	2.03
7,500	57	0214	1.14	0384	2.03
8,000	55			0384B	2.03
9,000	52			0384C	2.03
10,000	50	0215	1.14	0385	2.03
12,000	42	0216	1.19	0386	2.08
15,000	34	0217	1.19	0387	2.08
20,000	26	0218	1.19	0388	2.08
25,000	21	0219	1.36	0389	2.28
40,000	14	0222	1.36		
50,000	12	0224	1.56		
100.000	7	0229	2.11		

50 WATTS

Core Size 4"x 9/16" Mounting Centers 4¾"

		Fixed Resist.		Adj. Resist.	
Res. Ohms	Max. Mils.	Stock No.	List Price	Stock No.	List Price
5	3,160	0400A	$1.63	0560	$2.37
10	2,235	0400B	1.63	0561	2.37
25	1,414	0400C	1.63	0562	2.37
50	1,000	0400D	1.63	0563	2.37
75	816	0400E	1.63	0564	2.37
100	707	0400F	1.63	0565	2.37
150	577	0400G	1.63	0566	2.37
200	500	0400H	1.63	0567	2.37
250	447	0401	1.63	0568	2.37
300	408			0568B	2.37
400	353			0568C	2.37
500	316	0402	1.63	0569	2.37
750	258	0403	1.63	0570	2.37
1,000	223	0405	1.63	0572	2.37
1,250	200			0572B	2.47
1,500	182	0406	1.75	0573	2.47
2,000	158	0407	1.75	0574	2.47
2,500	141	0408	1.75	0575	2.47
3,000	129	0409	1.75	0576	2.47
3,500	119			0576B	2.47
4,000	111	0410	1.75	0577	2.47
4,500	105			0577B	2.47
5,000	100	0411	1.75	0578	2.47
6,000	91			0578B	2.63
7,000	84			0578C	2.63
7,500	81	0412	1.92	0579	2.63
8,000	79	0413	1.92	0580	2.63
9,000	74			0580B	2.63
10,000	70	0414	1.92	0581	2.63
12,000	64	0415	2.08	0582	2.83
15,000	57	0416	2.08	0583	2.83
20,000	48	0417	2.08	0584	2.83
25,000	41	0418	2.33	0585	3.08
30,000	36			0586	3.08
35,000	32	0419	2.33		
40,000	28			0587	3.08
50,000	23	0420	2.58	0588	3.30
60,000	19			0589	3.30
75,000	16	0421	2.92		
80,000	15			0590	3.67
100,000	12	0422	3.20	0591	3.92

75 WATTS

Core Size 6" x 9/16" Mounting Centers 6¾"

Adjustable Res.			Adjustable Res.		
Res. Ohms	Max. Mils.	Stock No.	Res. Ohms	Max. Mils	Stock No.
5	3,870	0769	5,000	122	0783
10	2,735	0770	6,000	111	0783B
15	2,236	0771	7,000	103	0783C
25	1,732	0772	7,500	100	0784
50	1,224	0773	8,000	96	0784B
100	866	0774	9,000	91	0784C
200	612	0774B	10,000	86	0785
250	547	0775	12,000	79	0785B
300	500	0775B	15,000	70	0786
400	433	0775C	20,000	61	0787
500	387	0776	25,000	49	0788
750	316	0777	30,000	42	0789
1,000	273	0778	35,000	36	0790
1,250	245	0778B	40,000	32	0791
1,500	223	0779	45,000	29	0792
2,000	193	0780	50,000	26	0793
2,500	173	0781	60,000	22	0794
3,000	158	0781B	80,000	17	0795
3,500	146	0782	100,000	13	0796
4,000	136	0782B			

List Price, 5 thru 1,000 ohms..........$2.75
List Price, 1,250 thru 5,000 ohms...... 2.83
List Price, 6,000 thru 10,000 ohms..... 3.00
List Price, 12,000 thru 20,000 ohms.... 3.20
List Price, 25,000 thru 40,000 ohms.... 3.53
List Price, 45,000 thru 60,000 ohms.... 3.62
List Price, 80,000 ohms............... 3.97
List Price, 100,000 ohms.............. 4.33

100 WATTS

Core Size 6½"x¾" Mounting Centers 7⅜"

		Fixed Resist.		Adj. Resist.	
Res. Ohms	Max. Mils.	Stock No.	List Price	Stock No.	List Price
5	4,470	0600A	$2.42	0956	$3.58
10	3,160	0600B	2.42	0957	3.58
25	2,000	0601	2.42	0958	3.58
50	1,414	0602	2.42	0959	3.58
75	1,153	0603	2.42		
100	1,000	0604	2.42	0960	3.58
150	816	0605	2.42		
250	632	0606	2.42	0960B	3.58
500	447	0607	2.42	0961	3.58
750	365	0608	2.42		
1,000	316	0609	2.42	0962	3.58
1,500	258	0610	2.53	0962B	3.67
2,000	223	0611	2.53		
2,500	200	0612	2.53	0963	3.67
3,000	182	0613	2.53		
5,000	141	0614	2.53	0964	3.67
7,500	115	0615	2.70		
10,000	100	0616	2.70	0965	3.87
15,000	81	0617	2.97	0966	4.12
20,000	70	0618	2.97	0967	4.12
25,000	53	0619	3.20	0968	4.37
30,000	47	0620	3.20	0969	4.37
40,000	36	0621	3.20	0970	4.37
50,000	29	0622	3.37	0971	4.53
60,000	24	0623	3.37		
75,000	19	0624	3.58	0972	4.75
100,000	15	0625	3.80	0973	4.95

160 Watt Resistors—Core Size 8½" x 1⅛". Mounting Centers 9⅜" available in same resistances as the 200 Watt Resistors.

Ohms	Fixed Res. List Price	Adj. Res. List Price
5	$4.16	$5.33
10 thru 1,000	2.98	4.14
1,500 thru 5,000	3.04	4.19
7,500 & 10,000	3.30	4.44
15,000 & 20,000	3.54	4.69
25,000 thru 40,000	3.64	4.81
50,000 & 60,000	3.76	4.94
75,000	4.03	5.17
100,000	4.26	5.44

200 WATTS

Core Size 10½"x1⅛" M'nt'ng Centers 11⅜"

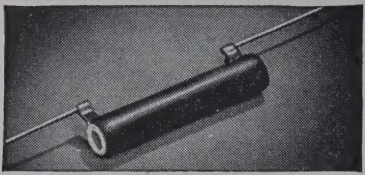
5	6,320	0900A	$4.53	1356	$5.67
10	4,470	0900B	3.22	1357	4.37
25	2,828	0901	3.22	1358	4.37
50	2,000	0902	3.22	1359	4.37
75	1,635	0903	3.22		
100	1,414	0904	3.22	1360	4.37
150	1,153	0905	3.22		
250	894	0906	3.22	1360B	4.37
500	632	0907	3.22	1361	4.37
750	516	0908	3.22		
1,000	447	0909	3.22	1362	4.37
1,500	365	0910	3.30	1362B	4.45
2,000	316	0911	3.30		
2,500	283	0912	3.30	1363	4.45
3,000	258	0913	3.30		
5,000	200	0914	3.30	1364	4.45
7,500	163	0915	3.53		
10,000	141	0916	3.53	1365	4.70
15,000	115	0917	3.77	1366	4.92
20,000	100	0918	3.77	1367	4.92
25,000	80	0919	3.90	1368	5.03
30,000	81	0920	3.90	1369	5.03
40,000	61	0921	3.90	1370	5.03
50,000	49	0922	4.03	1371	5.17
60,000	41	0923	4.03		
75,000	33	0924	4.25	1372	5.42
100,000	25	0925	4.53	1373	5.67

ADJUSTABLE LUGS

Bakelite Knob			Screw Driver Type		
Res. Dia.	Stock No.	List Price	Res. Dia.	Stock No.	List Price
9/16"	0359	$0.36	5/16"	1058	$0.25
¾"	1959	.47	9/16"	0358	.25
1⅛"	2159	.47	¾"	1958	.42
			1⅛"	2158	.42

For more complete information on OHMITE PRODUCTS, ask for Ohmite Stock Catalog.

Popular OHMITE "BROWN DEVIL" RESISTORS



High quality, small size, wire-wound resistors ideal for voltage dropping, bias units, bleeders, etc. They're extra-sturdy, all-ceramic, vitreous enameled. They give time-proved protection against shock, vibration, heat and humidity. Their long record of continuous trouble-free service—their wide use in all climates of the world—prove their complete reliability and economy. All units can be conveniently mounted by means of their 1½" tinned wire leads.

The all-welded construction of the 5 watt unit makes it possible to extend the resistance range to 10,000 ohms, an unusually high value for a vitreous enameled stock unit.

5 Watt—1" x 5/16" Core Size

Ohms	Mils.	Ohms	Mils.	Ohms	Mils.
1	2,236	125	200	1,250	63
1.5	1,820	150	182	1,500	57
2	1,580	200	158	1,750	53
3	1,290	225	149	2,000	49
4	1,120	250	141	2,250	46
5	1,000	300	129	2,500	44
7.5	818	350	120	3,000	39
10	707	400	112	3,500	36
12	645	450	105	4,000	33
15	575	500	100	4,500	31
20	500	600	91	5,000	29
25	447	700	84	6,000	26
30	408	750	81	7,000	24
35	378	800	79	7,500	22
40	353	900	74	8,000	21
50	316	1,000	70	9,000	19
75	258	1,100	67	10,000	18
100	224	1.200	64		

List Price, 1 thru 1,000 ohms..........$0.67
List Price, 1,100 thru 5,000 ohms...... .72
List Price, 6,000 thru 10,000 ohms..... .78

10 Watt—1¾" x 5/16" Core Size

Ohms	Mils,	Ohms	Mils.	Ohms	Mils.
1	3,160	350	169	6,000	38
2	2,235	400	158	7,000	34
3	1,825	450	149	7,500	32
4	1,580	500	141	8,000	31
5	1,414	600	129	8,500	29
7.5	1,155	700	119	10,000	26
10	1,000	750	115	11,000	24
12	910	800	111	12,000	23
15	816	900	105	12,500	22
20	707	1,000	100	13,500	21
25	632	1,100	95	14,300	20
30	575	1,200	91	15,000	19
35	535	1,250	89	16,000	18
40	500	1,500	79	17,500	17
50	447	1,750	74	18,000	17
75	365	2,000	69	20,000	16
100	316	2,250	64	22,500	15
125	283	2,500	63	25,000	14
150	258	3,000	56	30,000	12
200	223	3,500	51	35,000	10
225	217	4,000	47	40,000	9
250	200	4,500	45	45,000	8
300	182	5,000	43	50,000	7

List Price, 1 thru 1,000 ohms..........$0.75
List Price, 1,100 thru 5,000 ohms...... .80
List Price, 6,000 thru 10,000 ohms..... .92
List Price, 11,000 thru 20,000 ohms.... 1.03
List Price, 22,500 & 25,000 ohms....... 1.08
List Price, 30,000 thru 50,000 ohms.... 1.22

20 Watt—2" x 7/16" Core Size

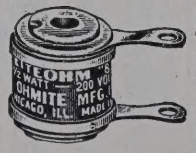
Ohms	Mils.	Ohms	Mils.	Ohms.	Mils.
5	2,000	1,250	126	15,000	30
10	1,414	1,500	115	20,000	24
25	894	1,750	107	25,000	20
50	632	1,850	104	30,000	17
75	516	2,000	100	35,000	15
100	447	2,250	94	40,000	14
150	365	2,400	91	45,000	13
200	316	2,500	89	50,000	12
250	283	2,750	85	55,000	10
300	258	3,000	81	60,000	9.0
350	239	3,500	75	65,000	8.0
400	223	4,000	70	70,000	7.0
500	200	4,500	66	75,000	7.0
650	175	5,000	63	80,000	7.0
700	169	6,000	57	85,000	6.0
750	163	7,000	53	90,000	6.0
800	158	7,500	51	95,000	6.0
850	153	8,000	50	100,000	6.0
1,000	141	10,000	43		
1,200	129	12,500	35		

List Price, 5 thru 1,000 ohms.........$0.95
List Price, 1,200 thru 5,000 ohms...... .97
List Price, 6,000 thru 10,000 ohms..... 1.12
List Price, 12,500 thru 20,000 ohms.... 1.20
List Price, 25,000 thru 40,000 ohms.... 1.37
List Price, 45,000 thru 60,000 ohms.... 1.58
List Price, 65,000 thru 80,000 ohms.... 1.83
List Price, 85,000 thru 100,000 ohms... 2.11

RITEOHM SERIES "84" PRECISION RESISTORS

Ohms	Max. Voltage	Ohms	Max. Voltage	Ohms	Max. Voltage
*0.1	.316	4,000	44.70	.125 Meg.	200
0.5	.500	5,000	50.00	.150 Meg.	200
1	.707	7,500	61.20	.175 Meg.	200
10	2.24	10,000	70.70	.200 Meg.	200
25	3.54	12,500	79.00	*.225 Meg.	400
50	5.00	15,000	86.60	*.250 Meg.	400
100	7.07	20,000	100	*.300 Meg.	400
200	10.00	22,500	106	*.400 Meg.	400
250	11.20	25,000	112	†.500 Meg.	400
300	12.20	30,000	122	†.600 Meg.	400
500	15.80	40,000	141	†.750 Meg.	400
1000	22.40	50,000	158	†.900 Meg.	400
1500	27.40	60,000	173	†1.0 Meg.	400
2000	31.60	75,000	194	†1.5 Meg.	400
2500	35.40	.1 Meg.	200		

*Type 844-A 4 Pie—1 Watt Size 9/16" x 7/8"
†Type 844-B 4 Pie—1 Watt Size 3/4" x 1 3/16"
All others Type 842-A 2 Pie—½ Watt Size 9/16" x 9/16"



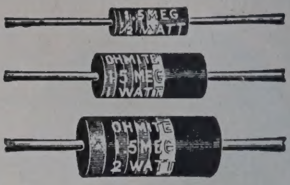
High quality, 1% tolerance, non-inductive, pie-wound units for meter multipliers, lab. equipment, etc. Prices are for stock values shown in table.

Ohms	List Price	Ohms	List Price
0.1 thru 500	$1.33	.225 & .25 Meg.	$4.06
1,000 thru 2,500	1.39	.3 megohm	4.44
4,000 thru 10,000	1.56	.4 megohm	4.67
12,500 & 15,000	1.69	.5 megohm	5.31
20,000 thru 50,000	2.11	.6 megohm	6.64
60,000 & 75,000	2.50	.75 megohm	7.03
.1 megohm	2.89	.9 megohm	7.39
.125 megohm	3.28	1.0 megohm	8.20
.15 thru .2 megohm	3.67	1.5 megohm	11.70

Complete Listings in Bulletin 126

OHMITE "LITTLE DEVIL" RESISTORS

Individually Marked



Ohmite "Little Devils" are full ½ Watt, 1 Watt and 2 Watt Insulated Composition Resistors and can be used at their full wattage ratings at 70° C. (158° F.) ambient temperature. They meet requirements of specification JAN-R-11. All units are color coded. Each resistor is marked with the resistance value, wattage rating and the Ohmite trademark. "LITTLE DEVILS" are available from stock in ½, 1 and 2 watt sizes with ±5% or ±10% tolerance. The standard RMA values, 10 ohms to 22 megohms can be furnished. In the 1 watt size, ±10% tolerance values as low as 2.7 ohms are available from stock.

Stocked in RMA Values ±5% or ±10% Tolerance

(Figures in bold type are ±10% RMA values. All values except (*) available in ±5% tolerance.)

Ohms	Ohms	Ohms	Ohms	Megs.
***2.7**	110	2,400	51,000	1.1
***3.3**	**120**	**2,700**	**56,000**	**1.2**
***3.9**	130	3,000	62,000	1.3
***4.7**	**150**	**3,300**	**68,000**	**1.5**
***5.6**	160	3,600	75,000	1.6
***6.8**	**180**	**3,900**	**82,000**	**1.8**
***8.2**	200	4,300	91,000	2.0
10	**220**	**4,700**	MEGS	**2.2**
11	240	5,100	**0.1**	2.4
12	**270**	**5,600**	0.11	**2.7**
13	300	6,200	**0.12**	3.0
15	**330**	**6,800**	0.13	**3.3**
16	360	7,500	**0.15**	3.6
18	**390**	**8,200**	0.16	**3.9**
20	430	9,100	**0.18**	4.3
22	**470**	**10,000**	0.20	**4.7**
24	510	11,000	**0.22**	5.1
27	**560**	**12,000**	0.24	**5.6**
30	620	13,000	**0.27**	6.2
33	**680**	**15,000**	0.30	**6.8**
36	750	16,000	**0.33**	7.5
39	**820**	**18,000**	0.36	**8.2**
43	910	20,000	**0.39**	9.1
47	**1,000**	**22,000**	0.43	**10.0**
51	1,100	24,000	**0.47**	11.0
56	**1,200**	**27,000**	0.51	**12.0**
62	1,300	30,000	**0.56**	13.0
68	**1,500**	**33,000**	0.62	**15.0**
75	1,600	36,000	**0.68**	16.0
82	**1,800**	**39,000**	0.75	**18.0**
91	2,000	43,000	**0.82**	20.0
100	**2,200**	**47,000**	0.91	**22.0**
			1.0	

*1 Watt Size Only. ±10% tolerance.

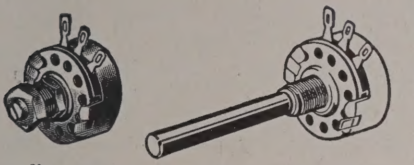
Type	Size Length	Size Diam.	Max. Volts	List Price ±10%	List Price ±5%
½ Watt	3/8"	9/64"	350	17c	**33c**
1 Watt	9/16"	7/32"	500	25c	**50c** 10 Ohms and up
2 Watt	11/16"	5/16"	1,000	**33c**	**66c**

For more complete information on OHMITE PRODUCTS, ask for Ohmite Stock Catalog.

BE RIGHT WITH

OHMITE ★ RHEOSTATS RESISTORS SWITCHES CHOKES

2 WATT MOLDED COMPOSITION POTENTIOMETER—TYPE AB



The Type AB Potentiometer is an exceptionally high quality unit designed especially for industrial, laboratory, radio service and other uses where reliability is particularly important. Because the resistor element is molded, the unit has an exceptionally large safety factor. The power rating of 2 watts is unusual for a unit of such small size. The unit has a very low noise level and low voltage coefficient. It will pass the Army-Navy 200 hour salt spray test, specification AN-QQ-S-91. The unit is 1-1/16″ diameter and extends 9/16″ behind the panel. The 2″ long round shaft (including the ⅜″ long mounting bushing) is available from stock on potentiometers with all three resistance tapers. The screwdriver shaft with locking-nut is available from stock on the linear taper units only. A SPST switch, to be attached to the back of the control, can be supplied extra.

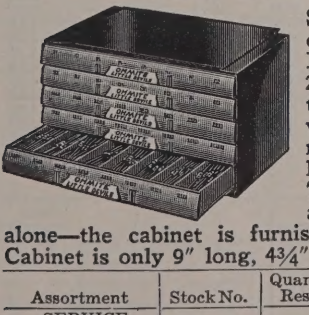
Total Resistance-±10% Except as Noted	Resistance Rotation Characteristics (Taper)			
	LINEAR		Type A Clockwise Log. Stock No.	Type B Counterclock. Log. Stock No.
	Type U 2″ Shaft Stock No.	Type LU Locking Shaft Stock No.		
50 Ohms	CU 5001	CLU 5001		
100 Ohms	CU 1011	CLU 1011		
250 Ohms	CU 2511	CLU 2511		
500 Ohms	CU 5011	CLU 5011		
1,000 Ohms	CU 1021	CLU 1021		
2,500 Ohms	CU 2521	CLU 2521		
5,000 Ohms	CU 5021	CLU 5021		
10,000 Ohms	CU 1031	CLU 1031		CB 1031
25,000 Ohms	CU 2531	CLU 2531		CB 2531
50,000 Ohms	CU 5031	CLU 5031		CB 5031
.10 Meg.	CU 1041	CLU 1041	CA 1041	
.25 Meg.	CU 2541	CLU 2541	CA 2541	
.5 Meg.	CU 5041	CLU 5041	CA 5041	
1.0 Meg. ±20%	CU 1052	CLU 1052	CA 1052	
2.5 Meg. ±20%	CU 2552	CLU 2552	CA 2552	
5.0 Meg. ±20%	CU 5052	CLU 5052		

Type AB Potentiometer with 2″ long shaft……**List Price $3.00**

Type AB Potentiometer with locking shaft illustrated above……**List Price 3.75**

Stock No. CS-1, Switch only for above unit (supplied unmounted)……**List Price .90**

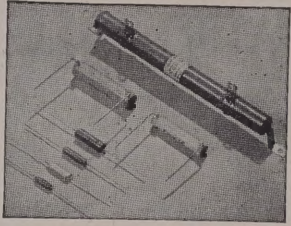
LITTLE DEVIL RESISTOR ASSORTMENTS FOR SERVICE USE



Serviceman's assortments of 125 Ohmite "Little Devil," ½-watt, 1-watt or 2-watt insulated composition resistors, in the 40 values (10 ohms to 10 megohms) most frequently used by servicemen. The assortment is offered at the price of the resistors alone—the cabinet is furnished without extra cost! Cabinet is only 9″ long, 4¾″ high, and 5¼″ deep.

Assortment	Stock No.	Quantity of Resistors	Wattages	Net Price
SERVICE ±10% tolerance (40 resistance values)	CAB-1	125	½ watt	12.50
	CAB-2	125	1 watt	18.75
	CAB-3	125	2 watt	25.00

OHMITE R.F. PLATE CHOKES

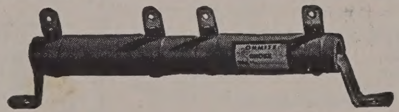


This series of seven Ohmite single layer wound solenoid radio frequency plate chokes covers the entire frequency range of 3 to 520 megacycles. The four highest frequency chokes are wound on low power factor plastic cores while the other three units are wound on steatite tubes. Windings are insulated and protected by a moisture-proof coating. The single layer winding is designed to avoid adverse harmonic effects within the recommended operating range and also prevents breakdown from high r.f. potentials.

Stock Number	Operating Range Megacycles	Micro-henries	Core Dimensions	List Price
Z-7	3 to 20 Mc.	84.0	6″ x 9/16″	$1.86
Z-14	7 to 35 Mc.	44.0	2″ x 7/16″	.81
Z-28	20 to 60 Mc.	21.0	1¾″ x 5/16″	.53
Z-50	35 to 110 Mc.	7.0	⅞″ x 9/32″	.39
Z-144	80 to 200 Mc.	1.8	¾″ x 3/16″	.39
Z-235	160 to 350 Mc.	0.84	¾″ x 3/16″	.39
Z-460	320 to 520 Mc.	0.20	½″ x 5/32″	.39

Non-magnetic Brackets Furnished with Z-7. The Z-14 and Z-28 are rated at 600 ma. All others 1000 ma.

OHMITE POWER LINE CHOKES

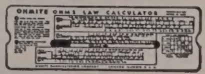


Prevents high-frequency currents of radio transmitters, diathermy and therapeutic equipment from going out over the power lines and interfering with nearby radio receiving sets. Used as a filter in connection with two grounding condensers of 0.1 microfarad capacity each. The Z-20 Choke is also used at radio receivers to keep out interference. All chokes consist of two single-layer windings on a single ceramic core—insulated and protected by moisture-proof coating. Recommended for use in suppressing radio (not audio) frequency interference.

Stock No.	Micro-henries	Current Rating	Total D.C. Resistance Ohms	Lgth.	Tube Dia.	List Price
Z-20	14	5 Amperes	0.15	4″	9/16″	$2.56
Z-21	15	10 Amperes	0.07	6½″	¾″	4.31
Z-22	18	20 Amperes	0.045	8½″	1⅛″	6.22

NEW OHM'S LAW CALCULATOR

Redesigned! This new, improved version of the famous Ohmite Ohm's Law Calculator—popular the world over with servicemen, engineers and students—now has scales for solving parallel resistance problems, AND a standard slide rule. More useful than ever! With one setting of the slide the calculator gives the answer to any Ohm's Law problem—reading directly in ohms, volts, amperes, and watts. Three of the new scales on the back provide a quick, one-setting means of solving parallel resistance problems. The slide rule scales will multiply, divide, find squares, and square roots.



Ohm's Law Calculator (Cardboard)……**NET Price $0.25**

Ohm's Law Calculator (Plastic)……**NET Price 1.50**

For more complete information on OHMITE PRODUCTS, ask for Ohmite Stock Catalog.

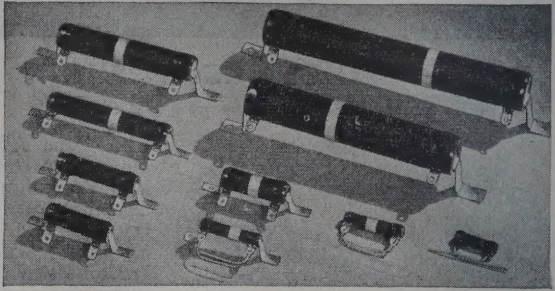
LECTROHM

INCORPORATED • CHICAGO 30, ILLINOIS

VITREOUS ENAMELED RESISTORS

Fixed Wire-Wound Types

LECTROHM Resistors are manufactured from the highest quality materials obtainable and are rated according to RTMA standards. They are rugged, dependable, accurate—quality components that will give long, trouble-free service. Mounting brackets available for 10, 20, 50, 80, 100, 160 and 200 watt units.



TYPE 1¼L—5-WATT

DIMENSIONS................¼″ $\frac{5}{32}$″ x 1¼″
TERMINALS..........................Pig Tail
MAXIMUM RESISTANCE.........10,000 ohms
No Mounting Brackets

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
1	2240	$0.52	300	129	$0.52
2	1580	.52	350	119	.52
3	1290	.52	400	111	.52
4	1110	.52	500	100	.52
5	1000	.52	600	91	.52
10	707	.52	700	84	.52
15	575	.52	750	81	.52
20	500	.52	800	79	.52
25	447	.52	900	74	.52
30	408	.52	1000	70	.52
35	374	.52	1100	64	.52
40	346	.52	1200	60	.52
50	316	.52	1250	59	.52
75	258	.52	1500	54	.52
100	222	.52	1750	50	.52
125	200	.52	2000	44	.52
150	182	.52	2500	40	.52
200	158	.52	3000	36	.52
225	149	.52	4000	31	.52
250	141	.52	5000	28	.52

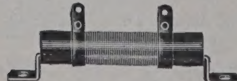
TYPE 1¾—10-WATT

DIMENSIONS...............$\frac{5}{16}$″ x $\frac{3}{16}$″ x 1¾″
TERMINALS..........................Pig Tail
MAXIMUM RESISTANCE.........40,000 ohms
No Mounting Brackets

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
1	3150	$0.59	1500	79	$0.59
2	2230	.59	1750	74	.59
3	1825	.59	2000	69	.59
5	1415	.59	2250	64	.59
7.5	1155	.59	2500	61	.59
10	1000	.59	3000	56	.59
15	815	.59	3500	51	.59
20	707	.59	4000	47	.59
25	630	.59	4500	44	.59
50	447	.59	5000	40	.59
75	365	.59	6000	36	.59
100	315	.59	7000	33	.59
150	258	.59	7500	32	.59
200	223	.59	8000	31	.59
250	200	.59	8500	30	.59
300	182	.59	10000	24	.59
350	169	.59	12000	20	.65
400	158	.59	12500	20	.65
500	141	.59	15000	18	.65
600	129	.59	17500	17	.65
700	119	.59	18000	16	.65
750	115	.59	20000	15	.65
800	111	.59	22500	15	.65
900	105	.59	25000	14	.65
1000	100	.59	30000	8	.65
1200	91	.59	40000	7	.65
1250	89	.59			

LECTROHM R. F. PLATE CHOKES

(1000 Milliamps.)



Type	RFC-1	RFC-2	RFC-3	RFC-4
Amateur Band Meters	5	10 & 20	20 & 40	20, 40 80 & 160
Microhenries	5.4	35	95	220
D. C. Ohms	0.85	2	5	9
Lgth. Overall	1¾″	3″	6″	6½″
Diameter	¼″	$\frac{9}{16}$″	$\frac{9}{16}$″	¾″
List Price	$0.33	$1.04	$1.56	$2.15

TYPE 2R—20-WATT

DIMENSIONS..................½″ x $\frac{5}{16}$″ x 2″
TERMINALS ....Solder Lug
MAXIMUM RESISTANCE.........100,000 ohms
MOUNTING BRACKET............Centers 2⅞″

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	2000	$0.91	1100	134	$0.91
10	1414	.91	1250	126	.91
15	1153	.91	1500	115	.91
20	1000	.91	2000	100	.91
25	894	.91	2500	89	.91
40	707	.91	3000	81	.91
50	633	.91	4000	70	.91
60	574	.91	5000	63	.91
75	517	.91	6000	57	.91
100	448	.91	7000	53	.91
125	400	.91	7500	51	.91
150	365	.91	8000	50	.91
200	316	.91	10000	43	.91
250	283	.91	12500	39	.91
300	258	.91	15000	30	.91
350	238	.91	20000	24	1.11
400	223	.91	25000	21	1.11
500	200	.91	30000	21	1.11
600	182	.91	35000	18	1.11
700	169	.91	40000	17	1.11
750	163	.91	45000	13	1.11
800	158	.91	50000	11	1.11
1000	141	.91			

TYPE 4½M—50-WATT

DIMENSIONS................¾″ x ½″ x 4½″
TERMINALS..........................Solder Lugs
MAXIMUM RESISTANCE.........100,000 ohms
MOUNTING BRACKET............Centers 5½″

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	3165	$1.56	6000	85	$1.82
10	2230	1.56	7000	78	1.82
25	1390	1.56	7500	77	1.82
50	1000	1.56	8000	75	1.82
100	700	1.56	10000	66	1.82
200	500	1.56	12000	63	1.82
250	440	1.56	12500	60	1.82
500	300	1.56	15000	56	1.82
750	250	1.56	20000	48	1.82
1000	215	1.56	25000	43	1.82
1500	175	1.56	30000	39	2.08
2000	155	1.56	40000	34	2.08
2500	135	1.56	50000	30	2.08
3000	120	1.56	60000	28	2.08
4000	105	1.56	75000	25	2.08
5000	95	1.56	100000	21	2.08

TYPE 6½M—80-WATT

DIMENSIONS...............¾″ x ½″ x 6½″
TERMINALS..........................Solder Lugs
MAXIMUM RESISTANCE........100,000 ohms
MOUNTING BRACKET............Centers 7½″

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	4000	$2.04	5000	122	$2.04
10	2730	2.04	6000	112	2.41
25	1730	2.04	7500	100	2.41
50	1220	2.04	8000	98	2.41
100	865	2.04	10000	86	2.41
200	612	2.04	15000	70	2.41
250	545	2.04	20000	61	2.41
500	387	2.04	25000	55	2.41
750	316	2.04	30000	50	2.72
1000	274	2.04	50000	43	2.72
1500	223	2.04	50000	39	2.72
2000	193	2.04	60000	35	3.09
2500	173	2.04	75000	31	3.09
3000	158	2.04	100000	27	3.40
4000	137	2.04			

TYPE 6½K—100-WATT

DIMENSIONS...............1⅛″ x ¾″ x 6½″
TERMINALS..........................Solder Lugs
MAXIMUM RESISTANCE.........100,000 ohms
MOUNTING BRACKET............Centers 7½″

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
25	2000	$2.15	3000	180	$2.15
50	1414	2.15	5000	140	2.15
75	1155	2.15	7500	115	2.54
100	1100	2.15	10000	100	2.54
150	815	2.15	15000	80	2.54
250	632	2.15	20000	70	2.54
500	447	2.15	25000	63	2.54
750	365	2.15	30000	58	2.86
1000	315	2.15	40000	50	2.86
1250	280	2.15	50000	44	2.86
1500	250	2.15	60000	41	3.25
2000	220	2.15	75000	36	3.25
2500	200	2.15	100,000	31	3.58

TYPE 8½K—160-WATT

DIMENSIONS...............1⅛″ x ¾″ x 8½″
TERMINALS..........................Solder Lugs
MAXIMUM RESISTANCE.........100,000 ohms
MOUNTING BRACKET...........Centers 9½″

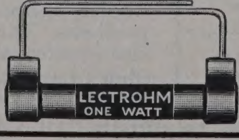
Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	5660	$2.86	4500	185	$2.86
10	4000	2.86	5000	180	2.86
25	2530	2.86	7500	145	2.86
50	1788	2.86	10000	125	2.86
75	1460	2.86	15000	105	3.45
100	1260	2.86	20000	90	3.45
200	900	2.86	25000	80	3.45
500	570	2.86	30000	67	3.45
1000	400	2.86	35000	57	3.45
1500	330	2.86	40000	50	3.45
2000	280	2.86	50000	40	3.45
2500	250	2.86	60000	33	3.90
3000	230	2.86	70000	28	3.90
3500	215	2.86	80000	25	3.90
4000	200	2.86	100000	20	3.90

TYPE 10½K—200-WATT

DIMENSIONS..............1⅛″ x ¾″ x 10½″
TERMINALS..........................Solder Lugs
MAXIMUM RESISTANCE.........100,000 ohms
MOUNTING BRACKET....... ...Centers 11½″

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	6310	$3.58	4500	210	$3.58
10	4470	3.58	5000	200	3.58
25	2830	3.58	7500	165	3.58
50	2000	3.58	10000	140	3.58
75	1635	3.58	15000	115	4.29
100	1400	3.58	20000	100	4.29
250	900	3.58	25000	90	4.29
500	630	3.58	30000	82	4.29
1000	450	3.58	35000	71	4.29
1500	365	3.58	40000	62	4.29
2000	315	3.58	50000	50	4.29
2500	280	3.58	60000	42	4.29
3000	260	3.58	75000	33	4.29
3500	240	3.58	100000	25	4.29
4000	225	3.58			

INSULATED WIRE-WOUND RESISTORS—1 WATT

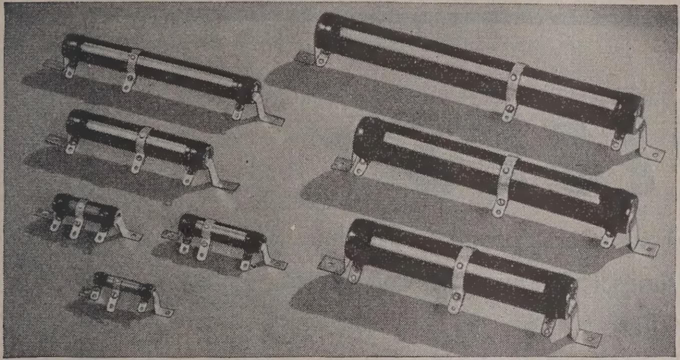


Ohms	Max. Current Mills.	Ohms	Max. Current Mills.	Ohms	Max. Current Mills.	Ohms	Max. Current Mills.
100	100	750	36	2,500	20	9,000	10
125	89	800	35	3,000	18	10,000	10
150	81	900	33	3,500	16	12,500	9
200	70	1,000	31	4,000	15	15,000	8
250	63	1,100	30	4,500	14	16,000	7
300	57	1,200	28	5,000	14	17,500	7
350	53	1,250	28	6,000	12	18,000	7
400	50	1,500	25	7,000	11	20,000	7
500	44	1,750	23	7,500	11	22,500	6
600	40	2,000	22	8,000	11	25,000	6
700	37	2,250	21				

LECTROHM

INCORPORATED • CHICAGO 30, ILLINOIS

VITREOUS ENAMELED RESISTORS



Adjustable Wire-Wound Types

The same high quality and construction are used for LECTROHM Adjustable Resistors as are incorporated in LECTROHM fixed units.

These resistors are used for replacing voltage dividers in radio receivers, for radio transmitter power supply, and for general experimental work.

TYPE 1¾EV—10-WATT

DIMENSIONS .... 5/16″ x 3/16″ x 1¾″
TERMINALS ....Lug Type
MAXIMUM RESISTANCE........10,000 ohms
MOUNTING BRACKET ....Centers 2¼″

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
1	3150	$0.98	750	115	$0.98
2	2230	.98	800	111	.98
3	1825	.98	1000	100	.98
5	1415	.98	1250	89	.98
7.5	1155	.98	1500	79	.98
10	1000	.98	2000	69	.98
15	815	.98	2250	64	.98
20	707	.98	2500	61	.98
25	630	.98	3000	56	.98
50	447	.98	3500	51	.98
75	365	.98	4000	47	.98
100	315	.98	4500	44	.98
150	258	.98	5000	40	.98
200	223	.98	6000	36	.98
250	200	.98	7000	33	.98
300	182	.98	7500	32	.98
350	169	.98	8000	31	.98
400	158	.98	8500	30	.98
500	141	.98	10000	24	.98
600	129	.98			

TYPE 2SV—25-WATT

DIMENSIONS ....9/16″ x 5/16″ x 2″
TERMINALS ....Solder Lug
MAXIMUM RESISTANCE..........25,000 ohms
MOUNTING BRACKET............Centers 2⅞″

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
1	5000	$1.24	1000	158	$1.24
3	2890	1.24	1250	141	1.24
5	2240	1.24	1500	129	1.24
10	1580	1.24	2000	112	1.24
15	1290	1.24	2500	100	1.24
25	1000	1.24	3000	91	1.24
50	707	1.24	3500	84	1.24
75	575	1.24	4000	79	1.24
100	500	1.24	5000	71	1.24
150	400	1.24	6000	64	1.43
200	353	1.24	7500	57	1.43
250	316	1.24	10000	50	1.43
300	288	1.24	12000	44	1.43
400	250	1.24	15000	26	1.43
500	224	1.24	20000	22	1.56
750	182	1.24	25000	20	1.56

TYPE 4½MV—50-WATT

DIMENSIONS....................¾″ x ½″ x 4½″
TERMINALS................................Solder Lugs
MAXIMUM RESISTANCE........100,000 ohms
MOUNTING BRACKET............Centers 5½″

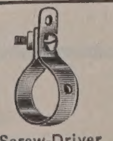
Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	3160	$1.95	3000	129	$1.95
10	2230	1.95	4000	112	1.95
25	1410	1.95	5000	100	1.95
50	1000	1.95	7500	81	2.15
75	816	1.95	10000	70	2.15
100	707	1.95	12000	64	2.15
150	577	1.95	15000	57	2.15
200	500	1.95	20000	50	2.15
250	447	1.95	25000	44	2.15
300	408	1.95	30000	41	2.47
400	354	1.95	40000	35	2.47
500	316	1.95	50000	20	2.47
750	258	1.95	60000	18	2.86
1000	224	1.95	75000	17	2.86
1500	182	1.95	80000	16	2.86
2000	158	1.95	100000	14	2.86
2500	141	1.95			

TYPE 6½MV—80-WATT

DIMENSIONS....................¾″ x ½″ x 6½″
TERMINALS................................Solder Lugs
MAXIMUM RESISTANCE........100,000 ohms
MOUNTING BRACKET............Centers 7½″

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
10	2830	$2.54	3500	152	$2.54
15	2310	2.54	5000	126	2.54
25	1790	2.54	7500	103	2.86
50	1265	2.54	10000	89	2.86
100	894	2.54	15000	73	2.86
250	566	2.54	20000	63	2.86
300	517	2.54	25000	57	2.86
400	495	2.54	30000	51	3.25
500	400	2.54	40000	44	3.25
750	327	2.54	50000	25	3.25
1000	283	2.54	60000	23	3.58
1500	231	2.54	75000	21	3.58
2000	200	2.54	80000	20	3.58
2500	179	2.54	100000	18	3.58

ADJUSTABLE LUGS



Screw-Driver Type

Diameter of Resistor	List Price
⅜″	$0.13
⅝″	.13
⅞″	.20
1¼″	.20

TYPE 6½KV—100-WATT

DIMENSIONS................1⅛″ x ¾″ x 6½″
TERMINALS................................Solder Lugs
MAXIMUM RESISTANCE.........100,000 ohms
MOUNTING BRACKET............Centers 7½″

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
50	1413	$2.86	15000	81	$3.25
100	1000	2.86	20000	70	3.25
500	447	2.86	25000	63	3.25
1000	316	2.86	30000	57	3.58
2000	223	2.86	35000	53	3.58
3000	182	2.86	40000	50	3.58
4000	158	2.86	50000	44	3.58
5000	141	2.86	75000	23	3.90
7500	115	3.25	100000	20	3.90
10000	100	3.25			

TYPE 8½KV—160-WATT

DIMENSIONS..................1⅛″ x ¾″ x 8½″
TERMINALS............................. Solder Lugs
MAXIMUM RESISTANCE.........100,000 ohms
MOUNTING BRACKET............Centers 9½″

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	5660	$3.58	10000	126	$3.58
10	4000	3.58	15000	103	4.16
25	2530	3.58	20000	89	4.16
50	1788	3.58	25000	80	4.16
100	1266	3.58	30000	73	4.16
500	566	3.58	40000	55	4.16
1000	400	3.58	50000	43	4.16
2500	253	3.58	75000	27	4.55
5000	179	3.58	100000	18	4.55

TYPE 10½KV—200-WATT

DIMENSIONS................1⅛″ x ¾″ x 10½″
TERMINALS................................Solder Lugs
MAXIMUM RESISTANCE........100,000 ohms
MOUNTING BRACKET..........Centers 11½″

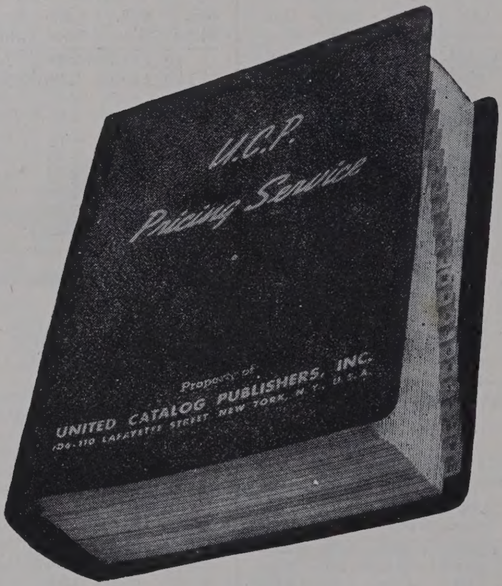
Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
50	2000	$4.29	10000	141	$4.29
100	1414	4.29	20000	100	5.00
500	632	4.29	25000	89	5.00
1000	447	4.29	30000	81	5.00
1500	361	4.29	50000	63	5.00
2000	316	4.29	75000	51	5.00
2500	283	4.29	100000	28	5.00
5000	200	4.29			

Mounting brackets and one band are furnished with all adjustable types.

PRICES

Prices of manufacturers and suppliers' products listed in **RADIO'S MASTER** are subject at all times to change without notice — they should not be considered final.

Get quick on-the-spot quotations from your distributor who subscribes to our perpetual up-to-the-minute **PRICING SERVICE.**


U.C.P.
Pricing Service
Property of
UNITED CATALOG PUBLISHERS, INC.
106-110 LAFAYETTE STREET NEW YORK, N.Y. U.S.A.

Official Pricing System of radio - electronic - television parts and equipment. Supported by the industry: distributors, manufacturers, and their sales representatives.

•

Loose-leaf, flexible binder. Contains over 1100 pages.

•

Published by
UNITED CATALOG PUBLISHERS, INC.
106-110 Lafayette Street
New York 13, N. Y.

DELIVERY

Delivery is often dependent on the availability of raw materials. So check with your distributor for delivery information.

SLIDEOHM WIRE-WOUND VITREOUS-ENAMELED ADJUSTABLE RESISTORS

Slideohm Resistors are for use in any application where it is necessary or desirable to have one or more intermediate resistance values; or in circuits that need to be changed from time to time to meet varying electrical conditions. Slideohm Resistors are built of the highest grade low temperature coefficient materials, and are coated with tough crazeless Vitreous Enamel.

Adjustable resistors combining adjustment to any resistance value within unit's range, with positive, permanent, non-fluctuating qualities of wire-wound resistor. Each Slideohm Resistor is provided with horizontal mounting brackets and one adjustable contact slider.

25 WATTS Type 952

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	5000	$1.85	1250	140	$1.90
2	3535	1.85	1500	129	1.90
3	2890	1.85	2000	112	1.90
5	2230	1.85	2250	105	1.90
7	1825	1.85	2500	100	1.90
10	1580	1.85	3000	90	1.90
15	1290	1.85	3500	85	1.90
20	1115	1.85	4000	80	1.90
25	1000	1.85	4500	74	1.90
50	710	1.85	5000	70	1.90
75	580	1.85	6000	65	2.05
100	500	1.85	7000	57	2.05
150	410	1.85	7200	56	2.05
200	354	1.85	7500	53	2.05
250	315	1.85	8000	50	2.05
300	289	1.85	8500	47	2.05
400	250	1.85	9000	44	2.05
500	224	1.85	10000	40	2.05
750	182	1.85	12000	33	2.10
800	177	1.85	15000	27	2.10
850	170	1.85	20000	20	2.10
1000	158	1.85	25000	16	2.30

80 WATTS Type 956

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	8660	$3.55	3000	158	$2.85
2	6120	3.55	3500	146	2.85
3	5000	3.55	4000	137	2.85
4	4330	3.55	4500	129	2.85
5	3870	3.55	5000	122	2.85
10	2740	3.55	6000	111	3.00
15	2235	3.55	7000	103	3.00
25	1730	3.55	7200	102	3.00
50	1220	3.55	7500	100	3.00
75	1000	3.55	8000	97	3.00
100	866	3.55	9000	91	3.00
200	612	3.55	10000	87	3.00
250	550	3.55	15000	71	3.15
300	500	3.55	20000	61	3.15
400	433	3.55	25000	55	3.50
500	387	3.55	30000	50	3.50
750	315	3.55	35000	43	3.50
800	305	3.55	40000	37	3.50
1000	274	3.55	45000	33	3.60
1250	245	2.85	50000	30	3.60
1500	224	2.85	60000	25	3.60
2000	195	2.85	70000	21	3.95
2250	183	2.85	80000	19	3.95
2500	173	2.85	100000	15	4.35

200 WATTS Type 958

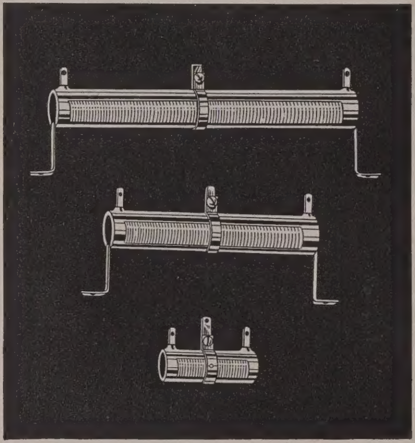
Ohms	Current m. a.	List Price		Current	List
7	6320	$5.65	4500	210	$4.45
10	4470	4.35	5000	200	4.45
25	2825	4.35	7500	163	4.45
75	2000	4.35	10000	141	4.70
100	1414	4.35	15000	115	4.90
250	900	4.35	20000	100	4.90
500	632	4.35	25000	90	5.05
1000	447	4.35	30000	82	5.05
1500	365	4.45	40000	62	5.05
2000	315	4.45	50000	50	5.15
2500	282	4.45	60000	42	5.15
3000	260	4.45	75000	33	5.40
3500	240	4.45	100000	25	5.65
4000	225	4.45			

50 WATTS Type 954

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	7070	$3.00	3000	130	$2.45
2	5000	3.00	3500	120	2.45
3	4080	3.00	4000	110	2.45
4	3535	3.00	4500	105	2.45
5	3160	3.00	5000	100	2.45
10	2235	3.00	6000	91	2.65
25	1415	3.00	7000	85	2.65
50	1000	3.00	7200	83	2.65
75	815	3.00	7500	82	2.65
100	707	3.00	8000	79	2.65
150	575	3.00	9000	75	2.65
200	500	3.00	10000	71	2.65
250	445	3.00	12000	64	2.85
300	408	3.00	15000	58	2.85
400	353	3.00	20000	48	2.85
500	316	3.00	25000	40	3.10
750	258	3.00	30000	33	3.10
800	250	3.00	40000	25	3.10
1000	224	3.00	50000	20	3.30
1250	200	2.45	60000	17	3.30
1500	180	2.45	75000	13	3.60
2000	160	2.45	80000	12	3.60
2250	150	2.45	100000	10	3.90
2500	141	2.45			

100 WATTS Type 957

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	10000	$4.55	2500	200	$3.65
2	7070	4.55	3000	180	3.65
3	5770	4.55	4000	160	3.65
4	5000	3.60	4500	150	3.65
5	4470	3.60	5000	141	3.65
10	3160	3.60	6000	130	3.85
25	2000	3.60	7500	115	3.85
50	1410	3.60	10000	100	3.85
100	1000	3.60	15000	80	4.10
200	707	3.60	20000	70	4.10
250	630	3.60	25000	60	4.35
400	500	3.60	30000	50	4.35
500	447	3.60	40000	37	4.35
750	365	3.60	50000	30	4.55
1000	316	3.60	60000	25	4.55
1500	260	3.65	75000	20	4.75
2000	225	3.65	100000	15	4.95



WATT RATINGS

Nominal Watt ratings for Slideohm Resistors apply when the entire resistor is in the circuit. For most practical purposes the watt rating for each part of the resistor is approximately proportional to the amount of the resistance that is in the circuit.

Mounting brackets are furnished with all Slideohm Resistors.

Price of resistor includes brackets and one adjustable band.

ADJUSTABLE BANDS

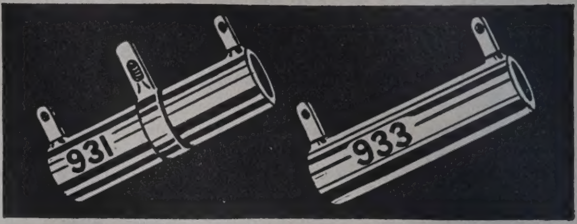
One screw-driver type adjustable band terminal is supplied with each "Slideohm" resistor. Order additional bands, screw-driver or knob type as illustrated by resistor type number for which band is to be used.

Resistor Rating	Size of Resistor	SCREW DRIVER TYPE Cat. No.	SCREW DRIVER TYPE List	BAKELITE KNOB TYPE Cat. No.	BAKELITE KNOB TYPE List
25 Watt	2" x ⅝"	RB 25	$.25	BB 25	$.35
50 Watt	4½" x ¾"	RB 80	.25	BB 50	.35
80 Watt	6½" x ¾"	RB 80	.25	BB 80	.35
100 Watt	6½" x 1⅛"	RB 100	.42	BB 100	.47
200 Watt	10½" x 1⅛"	RB 200	.42	BB 200	.47

WIRE-WOUND VITREOUS ENAMELED FIXED RESISTORS • TYPES 931-933

Compact genuine wire-wound, vitreous-enamel. Correctly designed, highest quality materials used throughout. Note these features:

1. Crack-proof refractory tubing for the support. Adequate heat dissipation.
2. Quality resistance wire precisely spaced, tension wound.
3. Copper terminal band clamped to tubing. Wire ends wrapped and brazed around raised ear.
4. Heavy vitreous-enamel coating for permanent seal against moisture, oxidation and mechanical damage.
5. Pig-tail of stiff wire 2 in. long soldered to terminal band for positive, non-breakable connection.



10 Watts Type 931

Ohms	Current m. a.	List Price
1	3160	$.75
1.5	2580	.75
2	2235	.75
3	1825	.75
4	1580	.75
5	1415	.75
7.5	1155	.75
10	1000	.75
12	913	.75
15	815	.75
20	707	.75
25	630	.75
30	577	.75
35	534	.75
40	500	.75
50	450	.75
75	365	.75
100	316	.75
125	283	.75
150	258	.75
200	224	.75
225	211	.75
250	200	.75
300	182	.75
350	169	.75
400	158	.75
450	149	.75
500	142	.75
600	129	.75
700	120	.75
750	115	.75
800	110	.75
900	105	.75
1000	100	.75
1100	95	.80
1200	91	.80
1250	89	$.80
1500	81	.80
1750	75	.80
2000	70	.80
2250	66	.80
2500	63	.80
3000	58	.80
3500	53	.80
4000	50	.80
4500	47	.80
5000	45	.80
6000	41	.90
7000	38	.90
7500	36	.90
8000	35	.90
8500	34	.90
9000	33	.90
10000	30	.90
11000	27	1.05
12000	25	1.05
12500	24	1.05
13500	22	1.05
14300	21	1.05
15000	20	1.05
16000	19	1.05
17500	17	1.05
18000	16	1.05
20000	15	1.05
22500	13	1.10
25000	12	1.10
30000	*13	1.20
35000	*12	1.20
40000	*11	1.20
45000	*10.5	1.20
50000	*10	1.20

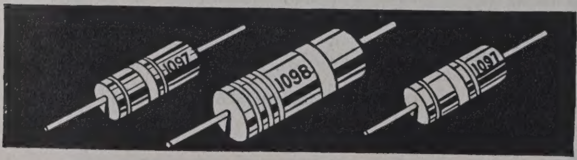
*Operated at low temp., rated at 5 watts.

20 Watts Type 933

Ohms	Current m. a.	List Price
1	4480	$.95
3	2580	.95
5	2000	.95
10	1410	.95
15	1150	.95
25	900	.95
50	630	.95
75	510	.95
100	450	.95
150	365	.95
175	340	.95
200	320	.95
250	285	.95
300	258	.95
350	240	.95
400	220	.95
500	200	.95
650	175	.95
700	169	.95
750	160	.95
800	155	.95
850	153	.95
1000	141	.95
1200	130	.95
1250	125	.95
1500	115	.95
1750	107	.95
1850	104	.95
2000	100	.95
2250	94	.95
2400	91	.95
2500	90	.95
2750	85	.95
3000	80	.95
3500	76	.95
4000	70	.95
4500	67	$.95
5000	63	.95
6000	55	1.10
7000	53	1.10
7500	51	1.10
8000	50	1.10
10000	40	1.10
12500	32	1.20
15000	27	1.20
20000	20	1.20
25000	16	1.35
30000	13	1.35
35000	11	1.35
40000	10	1.35
45000	9	1.60
50000	8	1.60
55000	7	1.60
60000	†10.8	1.60
65000	†10.5	1.85
70000	†10.0	1.85
75000	† 9.5	1.85
80000	† 9.3	1.85
85000	† 9.1	2.10
90000	† 8.8	2.10
95000	† 8.6	2.10
100000	† 8.4	2.10

†Operated at low temp., rated at 7 watts.

INSULATED MOLDED CARBON RESISTORS • TYPES 1097-1098



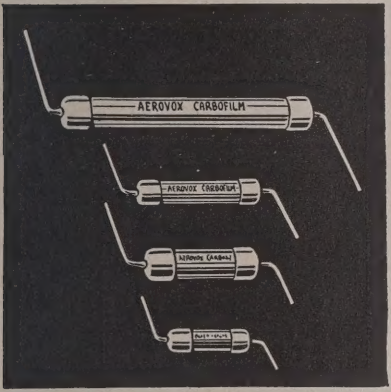
Small, noiseless, vibration-proof. Crack-proof molded casing around molded carbon resistance element. Tinned copper pig-tail leads 2 in. long. Resists humidity effects. Ideal for AVC circuits, high-gain amplifiers. RTMA color-coded; stamped with resistance value. Precision tested. Standard tolerance ±10%.

TYPE 1097—½ Watt-Size: 5/32″ x ⅜″ lg.........List $0.17
TYPE 1098—1 Watt-Size: ¼″ x ¾″ lg..........List $0.25

JOBBERS' STOCK IN PREFERRED RTMA RANGES

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Megs	Megs	Megs
0.47	3.0	**18**	110	**680**	4.300	**27,000**	**0.1**	0.62	**3.9**
0.51	**3.3**	20	**120**	750	**4,700**	30,000	0.11	**0.68**	4.3
0.56	3.6	**22**	130	**820**	5,100	**33,000**	**0.12**	0.75	**4.7**
0.62	**3.9**	24	**150**	910	**5,600**	36,000	0.13	**0.82**	5.1
0.68	4.3	**27**	160	**1,000**	6,200	**39,000**	**0.15**	0.91	**5.6**
0.75	**4.7**	30	**180**	1,100	**6,800**	43,000	0.16	**1.0**	6.2
0.82	5.1	**33**	200	**1,200**	7,500	**47,000**	**0.18**	1.1	**6.8**
0.91	**5.6**	36	**220**	1,300	**8,200**	51,000	0.20	**1.2**	7.5
1.0	6.2	**39**	240	**1,500**	9,100	**56,000**	**0.22**	1.3	**8.2**
1.1	**6.8**	43	**270**	1,600	**10,000**	62,000	0.24	**1.5**	9.1
1.2	7.5	**47**	300	**1,800**	11,000	**68,000**	**0.27**	1.6	**10.0**
1.3	**8.2**	51	**330**	2,000	**12,000**	75,000	0.30	**1.8**	11.0
1.5	9.1	**56**	360	**2,200**	13,000	**82,000**	**0.33**	2.0	**12.0**
1.6	**10**	62	**390**	2,400	**15,000**	91,000	0.36	**2.2**	13.0
1.8	11	**68**	430	**2,700**	16,000		**0.39**	2.4	**15.0**
2.0	**12**	75	**470**	3,000	**18,000**		0.43	**2.7**	16.0
2.2	13	**82**	510	**3,300**	20,000		**0.47**	3.0	**18.0**
2.4	**15**	91	**560**	3,600	**22,000**		0.51	**3.3**	20.0
2.7	16	**100**	620	**3,900**	24,000		**0.56**	3.6	**22.0**

AEROVOX *Carbofilm* RESISTORS

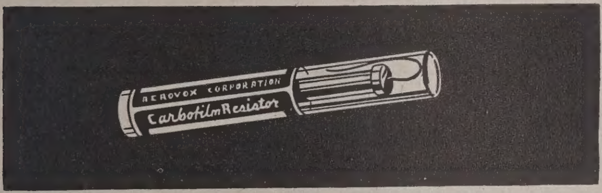


PRECISION RESISTORS MADE WITH MATCHLESS ACCURACY

Made under licensed agreement with Western Electric, these precision resistors are the result of years of intensive research in developing components with extreme accuracy and stability. Carbofilm resistors are intended for circuits calling for the accuracy and stability of wire-wound resistors with the marked economy of carbon resistors. They serve a real need in test equipment and laboratory instruments. All in all, Carbofilm resistors meet the requirements of accuracy, stability and economy.

The Carbofilm resistors are a carbon deposit type and are available in the following standard or jobber stock sizes with the resistance value shown in the listing.

Packed and sealed in plastic tubes for your protection.



SIZES

CP ½ watt 0.230D x 11/16L
CP 1 watt 0.293D x 7/8L
CPL ½ watt 0.230D x 15/16L
CP 2 watt 0.293D x 2"

TOLERANCE ± 1%

TOLERANCE ±1% Ohms	CP ½ ½ Watt ±1% List	CP 1 1 Watt ±1% List	CP 2 2 Watt ±1% List
100	$1.00	$1.25	$1.50
120	1.00	1.25	1.50
130	1.00	1.25	1.50
150	1.00	1.25	1.50
175	1.00	1.25	1.50
200	1.00	1.25	1.50
225	1.00	1.25	1.50
250	1.00	1.25	1.50
300	1.00	1.25	1.50
350	1.00	1.25	1.50
400	1.00	1.25	1.50
450	1.00	1.25	1.50
500	1.00	1.25	1.50
550	1.00	1.25	1.50
600	1.00	1.25	1.50
650	1.00	1.25	1.50
750	1.00	1.25	1.50
800	1.00	1.25	1.50
850	1.00	1.25	1.50
900	1.00	1.25	1.50
1000	1.00	1.25	1.50
1200	1.00	1.25	1.50
1250	1.00	1.25	1.50
*1450	1.00	1.25	1.50
1500	1.00	1.25	1.50
1750	1.00	1.25	1.50
2000	1.00	1.25	1.50
2250	1.00	1.25	1.50
2500	1.00	1.25	1.50
*2950	1.00	1.25	1.50
3000	1.00	1.25	1.50
3500	1.00	1.25	1.50
4000	1.00	1.25	1.50
*4450	1.00	1.25	1.50
4500	1.00	1.25	1.50
5000	1.00	1.25	1.50
5500	1.00	1.25	1.50
*5950	1.00	1.25	1.50
6000	1.00	1.25	1.50
6500	1.00	1.25	1.50
7000	1.00	1.25	1.50
*7450	1.00	1.25	1.50
7500	1.00	1.25	1.50

TOLERANCE ±1% Ohms	CP ½ ½ Watt ±1% List	CP 1 1 Watt ±1% List	CP 2 2 Watt ±1% List
8000	$1.00	$1.25	$1.50
8500	1.00	1.25	1.50
*8950	1.00	1.25	1.50
9000	1.00	1.25	1.50
*9950	1.00	1.25	1.50
10,000	1.00	1.25	1.50
12,000	1.00	1.25	1.50
12,500	1.00	1.25	1.50
*13,500	1.00	1.25	1.50
15,000	1.00	1.25	1.50
17,500	1.00	1.25	1.50
20,000	1.00	1.25	1.50
22,500	1.00	1.25	1.50
25,000	1.00	1.25	1.50
30,000	1.00	1.25	1.50
40,000	1.00	1.25	1.50
45,000	1.00	1.25	1.50
50,000	1.00	1.25	1.50
55,000	1.00	1.25	1.50
60,000	1.00	1.25	1.50
65,000	1.00	1.25	1.50
70,000	1.00	1.25	1.50
75,000	1.00	1.25	1.50
80,000	1.00	1.25	1.50
85,000	1.00	1.25	1.50
90,000	1.00	1.25	1.50
Megohms			
0.10	1.00	1.25	1.50
0.125	1.00	1.25	1.50
0.150	1.00	1.25	1.50
0.175	1.00	1.25	1.50
0.200	1.00	1.25	1.50
0.225	1.00	1.25	1.50
0.250	1.00	1.25	1.50
0.300	1.00	1.25	1.50
0.350	1.00	1.25	1.50
0.400	1.00	1.25	1.50
0.450	1.00	1.25	1.50
0.500	1.00	1.25	1.50
0.550	1.00	1.25	1.50
0.600	1.00	1.25	1.50
0.650	1.00	1.25	1.50

TOLERANCE ±1% Megohms	CP ½ ½ Watt ±1% List	CP 1 1 Watt ±1% List	CP 2 2 Watt ±1% List
0.700	$1.00	$1.25	$1.50
0.750	1.00	1.25	1.50
0.800	1.00	1.25	1.50
0.850	1.00	1.25	1.50
0.900	1.00	1.25	1.50
1.0	1.00	1.25	1.50
1.2	1.00	1.25	1.50
1.25	1.00	1.25	1.50
1.5	1.00	1.25	1.50
2.0	1.00	1.25	1.50
2.225	1.00	1.25	1.50
2.5	1.00	1.25	1.50
3.0	1.00	1.25	1.50
3.5	1.00	1.25	1.50
4.0	1.00	1.25	1.50
4.5	1.00	1.25	1.50
5.0	1.00	1.50	1.50

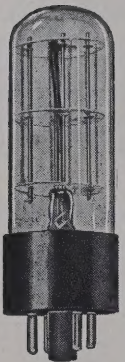
TOLERANCE ±1% Megohms	CPL ½ ½ Watt List	CP 1 1 Watt List	CP 2 2 Watt List
5.5	$1.00	$1.50	$1.50
6.0	1.00	1.50	1.50
6.5	1.00	1.50	1.50
7.0	1.00	1.50	1.50
7.5	1.00	1.50	1.50
8.0	1.00	1.50	1.50
8.5	1.00	1.50	1.50
9.0	1.00	1.50	1.50
10.0	1.00	1.50	1.50
12.5		1.50	1.50
15.		1.50	1.50
20.		1.50	1.50
25.		2.15	1.95
50.		3.50	2.30
100.			5.80
150.			12.00
200.			15.00

*Meter multiplyer resistance values — other odd values can be ordered as specials.

AUTOMATIC AMPERITE REGULATOR

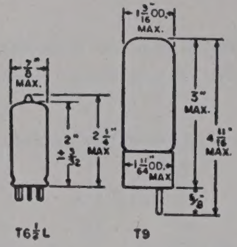
BALLAST TUBE FOR AUTOMATIC REGULATION OF CURRENT AND VOLTAGE

AUTOMATIC REGULATION



T9 BULB

AMPERITE is an automatic rheostat designed to keep the current in a circuit at a definite value, for example, 0.5 amps. ***Should the supply voltage increase, the Amperite will automatically increase in resistance enough to take up the increase in supply voltage—keeping the voltage on the load constant.***

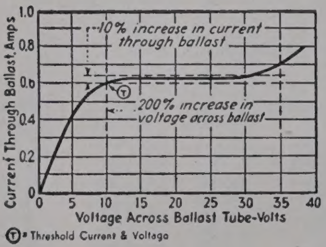


SIZES:

T-5½ L, Miniature. O.D. 11/16"; seated height, 2 3/16".

T-6½ L, Miniature. O.D. 13/16"; seated height, 2 3/16".

T-9, Octal base. O.D. 1 5/16"; seated height, 3".



CHARACTERISTIC CURVE

Characteristic curve of a typical Amperite. Approximate curve of any other Amperite can be obtained by multiplying or dividing the current or voltage scale by any number.

SPECIAL BALLAST TUBES

List $3.00—Dealer Cost $1.80

1H4
1H11
1H22
*1HT2
*1HT4
*1HT11
1TF10
1HTF10
2A12
2A16
2A20
2H4
2H20
*2HT2
*2HT4
3-2
3-4
3-7
3-11
3-12
3-14
3-14B
3-16
3-38A
3-50A
3A20
3H-1-7
3H-11
3H-25
*3T2
*3T4
*3T7
*3T11
3TFV4
3V4
4H3
4H4
4H11
4HTF4
5-4
5-11
5-16
5H3
5H4
5H11
*5T4
5TF4
6-2
6-3
6—4
6-7
6-8B
6-11
6-12
6-13
6A20
6H4
6H6
6H11
*6T2
*6T3
*6T4
7-4
7-11
7H4
7H11
7H12
7HTF3
7HTF4
*7T4
7H4B
8-3B
8-11
9-3
9-4
9-7
9-11
10-3
10-4A
10-4B
10-4D
10-4E
10-25
10A12
10T1
11-4
11-11
12-4
12-7
13-4
17-2
17-3
20-3
20-4
40-6E
41-7E
55-1
55-4
D5HM2
D6M2
D6-1E
D6-4
D6-11
*D6T4
*D6T11
D7H4
*D7HT4
*D7HT11
**D6TF10
**D6TF11
D6TF20
D6TF30
R1900

124A—**List $10.00.**

(*) T Type. T-5 ½ miniature bulb.

TV BALLAST TUBES

List $2.25

Dealer Cost $1.35

17A470303
17A485459
R1000R

A10 SERIES

List $3.00 **Dealer Cost $1.80**

Amperite Number	Voltage 12-30 Current—Amps.	Amperite Number	Voltage 12-30 Current—Amps.
**D6-TF10	0.060- .068	5H10	0.55 - .60
**1TF10	0.10 - .11	6A10	0.60 - .65
1H10	0.15 -1.65	6H10	0.65 - .73
**1HTF10	0.15 - .165	7A10	0.70 - .80
2A10	0.2 - .22	7H10	0.75 - .85
2H10	0.25 - .28	8A10	0.80 - .90
3A10	0.3 - .33	9A10	0.90 -1.0
3H10	0.35 - .39	10A10	1.0 -1.15
4A10	0.4 - .45	11A10	1.1 -1.25
4H10	0.45 - .50	12A10	1.2 -1.35
5A10	0.5 - .56	13A10	1.3 -1.5
		14A10	1.4 -1.6

** Type T6 ½ Miniature bulb—9 Pin min. base.

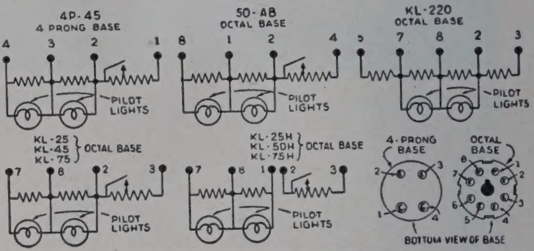
AC-DC REPLACEMENTS

Amperite No.	Amperites Shown Replace All A.C.-D.C. Ballasts		
	Starting With Letter	With Numbers From	Ending In
KL. 25# **KL. 45** **KL. 75**	K, L, M or BK BL or BM	10 to 36 36 " 67 67 " 105	A, B, C, or D
KL. 25H **KL. 50H** **KL. 75H**	K, L, M, or BK	11 to 26 36 " 67 67 " 105	F, G or H
KL. 50S1 **KL. 50S2** **KL. 50S3**	K or L " "	40 to 100 " "	S1 S2 S3
KL. 50E	"	36 " 67	E

REPLACEMENT AMPERITE—A.C.-D.C. SETS. List $1.25

Except K18B, use Amperite K18B—4 Prong Base.

BASE WIRING OF AMPERITES FOR A.C.-D.C. SETS



AC-DC REPLACEMENT—List $1.25—Dealer Cost $0.75.

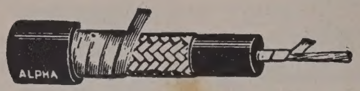
For	Use Amperite	For	Use Amperite	For	Use Amperite
2CR-241	KL-45	50W	4P45	185L44	4P45
2LR-212	50AB	50A2	4P45	185LB	4P45
2UR-215	KL-45	50A2MG	KL-50S2	185LC	4P45
2UR-224	KL-45	50B2	4P45	185M4	4P45
3-40	3-40	50B2MG	KL-50S1	185M8	4P45
6B	4P45	50X3	4P45	185R	4P45
6.125	KL-45J	50X3T	4P45	185R4	4P45
6.126	KL-45J	55A	KL-45	185R8	4P45
6-128	KL-45J	55H	KL-50H	185R44	4P45
6-129	KL-45J	55KB	KL-45	200R	200R
6-133	KL-45J	60-92A	KL-75	200R4	4P45
6-135	KL-45J	69-2027	3-40	200R8	4P45
7	7	69-2033	KL-45	5459 (list 2.25)	5459
8	4P45	66-2037	KL-45	81966	KL-45
9	4P45	75	KL-75	35000	35000
10-23A	KL-25	80	4P45	A (JFD)	KL-45
23-55A	KL-45	80R	80R	B (JFD)	KL-75
23-55F	KL-50H	92A	4P45	Bkv51dj	Bkv51dj
23-55B	KL-45	95K2	KL-45	D30	D-35
23-55C	KL-45	100.R8	4P45	D35	D35
23-55D	KL-45	100-37	KL-45J	D140	200R
32	KL-50H	100-38	KL-45J	D150	200R
33AG	KL-25	100-77	100-77	D200	200R
36A	KL-25	100-79	100-79	L26CC	KL-25
40	3-40	165KC	4P45	NUA	KL-45
40W	3-40	165LB	4P45	NUB	KL-45
40A2	4P45	165LC	4P45	P27287	KL-50E
40B2	4P45	165L4	4P45	R-1000	R-1000
4X300	4P45	165L8	4P45	R-3003A	R-3003A
42A	3-40	165L44	4P45	RR782	K26J218
42A1	50AB	165M4	4P45	TU-34	KL-45
42A2	50AB	165M8	4P45	TU-83	KL-45
42B2	50AB	165R	4P45	W-43357	KL-45
45W	4P45	165R4	4P45	W-45788	KL-45
46A1	46A1	165R8	4P45	W-46773	KL-45
46B1	46B1	165R44	4P45	W-46416	KL-45
49A	4P45	185A	4P45	W-46773	KL-45
49A1	50AB	185KB	4P45	X35-35	KL-45
49A2	50AB	185KC	4P45		
49B2	50AB	185L4	4P45	X55B	KL-25
50MG	KL-50S1	185L8	4P45	Y-TU-9	KL-45

ALPHA WIRE CORPORATION

CRYSTAL MICROPHONE CABLE

GENERAL PURPOSE: Low loss design for use with crystal, ribbon, dynamic and velocity microphones, photo-electric cells. Use No. 1248 FOR LAPEL MICROPHONES and phonograph pickups.

No.	Size	Strand	Capacity Per Ft.	O.D.	Put-up
1248	20	26/34	40 mmf.	.175"	100 Ft. Spool
1249	20	26/34	30 mmf.	.245"	100 Ft. Spool



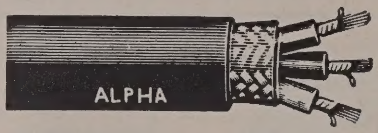
Construction: Single conductor, extra flexible stranded tinned copper, cotton serve, insulated with special low loss SIC rubber compound, braided tinned copper shield, cotton serve, tough black rubber jacket overall.

Alternate put-up use code:
D = 250 ft., E = 500 ft., F = 1000 ft.

SHIELDED MICROPHONE CABLE

GENERAL PURPOSE: Adaptable for all indoor and outdoor crystal, carbon and condenser microphones as well as public address systems.

No.	Conduc-tors	Size	Capacity Per Ft. Between		O.D.	Put-up
			Cond. & Shield	Conds.		
1250	2	20	70 mmf.	38 mmf.	.290"	100 Ft. Spool
1250/18	2	18	75 mmf.	40 mmf.	.300"	100 Ft. Spool
1251	3	20	65 mmf.	38 mmf.	.305"	100 Ft. Spool
1251/18	3	18	65 mmf.	38 mmf.	.355"	100 Ft. Spool
1252	4	20	65 mmf.	36 mmf.	.345"	100 Ft. Spool
1253	5	20	60 mmf.	32 mmf.	.350"	100 Ft. Spool
1254	6	20	60 mmf.	30 mmf.	.375"	100 Ft. Spool
1254/18	6	18	60 mmf.	30 mmf.	.430"	100 Ft. Spool
1255	7	20	60 mmf.	30 mmf.	.380"	100 Ft. Spool
1255/8	8	20	60 mmf.	30 mmf.	.400"	100 Ft. Spool



Construction: Each conductor extra flexible stranded tinned copper, cotton wrap, .020" "Hi-Tension" low capacity rubber, color coded, conductors twisted, cushioned with cotton fillers, braided tinned copper shield, cotton wrap, tough black rubber jacket overall.

Alternate put-up use code:
D = 250 ft., E = 500 ft., F = 1000 ft.

SHIELDED MULTIPLE CONDUCTOR CABLE

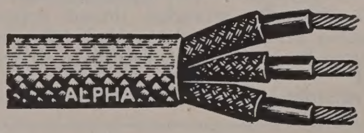
GENERAL PURPOSE: For indoor permanent or portable P.A. systems, photo electric cell circuits, sound recording and auto radios.

TINNED SHIELD OVERALL

No.	Conduc-tors	Capacity Per Ft. Between		O.D.	Put-up
		Cond. & Shield	Conds.		
1256	2	60.5 mmf.	32 mmf.	.215"	100 Ft. Spool
1256V	2	60.5 mmf.	32 mmf.	.170"	100 Ft. Spool
1257	3	54.0 mmf.	29 mmf.	.245"	100 Ft. Spool
1258	4	48.0 mmf.	26 mmf.	.270"	100 Ft. Spool

COTTON BRAID OVER SHIELD

1262	2	60.5 mmf.	32 mmf.	.225"	100 Ft. Spool
1262V	2	60.5 mmf.	32 mmf.	.190"	100 Ft. Spool
1263	3	54.0 mmf.	29 mmf.	.240"	100 Ft. Spool
1264	4	48.0 mmf.	26 mmf.	.275"	100 Ft. Spool



Construction:

Nos. 1256-7-8: Each conductor 20—10/30 stranded tinned copper, 1/64" rubber, waxed cotton braid, color coded, conductors twisted, tinned copper shield overall.

No. 1256V—Two conductors 20—10/30 stranded tinned copper, 1/64" plastic, color coded, conductors twisted, tinned copper shield overall.

Nos. 1262-3-4—Same as Nos. 1256-7-8 plus cotton braid over shield.

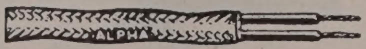
No. 1262V—Same as No. 1256V plus cotton braid over shield.

Alternate put-up use code:
D = 250 ft., E = 500 ft., F = 1000 ft.

SHIELDED TWISTED PAIR CABLE

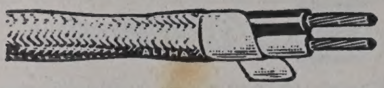
GENERAL PURPOSE: Where small diameter is required for sound recording, photo electric cell circuits, public address systems, etc.

No.	Conductors	Size	Strand	O.D.	Put-up
1261	2	24	16/36	.115"	1000 Ft. Spool



Construction: Two conductors 24-16/36 extra flexible tinned copper, 1/64" vinyl insulation, color coded, conductors twisted, very fine tinned copper shield overall.

NOTE: See Page S-13 for ALPHA Prices and Other Information.



Construction: Two conductors 18-16/30 stranded tinned copper, 1/32" "Hi-Tension" rubber, color coded, conductors twisted, paper wrap, close tinned copper shield overall.

No. 1266 same as No. 1265 except with waxed cotton braid over shield.

Alternate put-up use code: F = 1000 ft.

SHIELDED DUPLEX SPEAKER CABLE

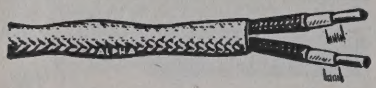
GENERAL PURPOSE: For P.A. systems, photo-electric cell circuits, master control sound systems, etc.

TINNED SHIELD OVERALL

		Capacity Per Ft. Between			
No.	Conductors	Cond. & Shield	Conds.	O.D.	Put-up
1265	2	65 mmf.	23 mmf.	.250"	500 Ft. Spool

WAXED COTTON BRAID OVER SHIELD

1266	2	65 mmf.	23 mmf.	.280"	500 Ft. Spool



Construction: Two conductors 20 AWG solid tinned enameled copper, insulated, color coded, conductors twisted, close copper shield overall.

No. 1268 same as No. 1267 except with waxed cotton braid over shield.

Alternate put-up use code: F = 1000 ft.

SHIELDED TRANSMISSION LINE

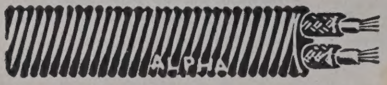
GENERAL PURPOSE: For inter-communication, short wave, P.A. systems, etc.

TINNED SHIELD OVERALL

No.	Conductors	Size	Capacity Per Ft.	O.D.	Put-up
1267	2	20 Solid	25 mmf.	.135"	500 Ft. Spool

WAXED COTTON BRAID OVER SHIELD

1268	2	20 Solid	25 mmf.	.165"	500 Ft. Spool



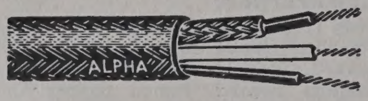
Construction: Two conductors parallel, 18-16/30 stranded tinned copper, rubber insulated, color coded, lacquered cotton braid, galvanized steel armor overall.

Alternate put-up use code: F = 1000 ft.

ARMORED DUPLEX SPEAKER CABLE

GENERAL PURPOSE: For P.A. systems, oil burner installations, automotive wiring, etc.

No.	Conductors	Size	Strand	O.D.	Put-up
1272	2	18	16/30	.132" x .182"	500 Ft. Spool



Construction: Three conductors 22-7/30 tinned copper, vinyl plastic insulation, color coded; tinned copper shield over one conductor, two conductors unshielded; cotton braid overall.

Alternate put-up use code: F = 1000 ft.

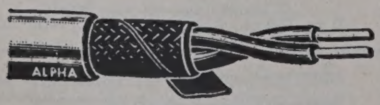
INTER-COMMUNICATION CABLE

3 CONDUCTORS

(1 SHIELDED — 2 UNSHIELDED)

GENERAL PURPOSE: This cable is ideal for general wiring from station to station where a shielded single conductor is essential to eliminate cross talk.

No.	Conductors	Size	Strand	O.D.	Put-up
1242	3	22	7/30	.155"	500 Ft. Spool



Construction: Two conductors 19 AWG solid tinned copper, 1/32" "Hi-Tension" rubber, color coded, conductors twisted, pure lead sheath overall.

LEAD SHEATHED CABLE

GENERAL PURPOSE: For P.A. systems, communications, traffic control, mines, railroads and many other uses where severe moisture conditions are encountered. For all outdoor use including underground and underwater.

No.	Conductors	Size	O.D.	Put-up
1271	2	19 Solid	.325"	1000 Ft. Reel

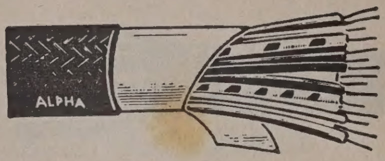
NOTE: See Page S-13 for ALPHA Prices and Other Information.

BRAIDED COMMUNICATION CABLE

(TWISTED PAIRS)

GENERAL PURPOSE: For interior use designed for connecting inter-communication systems, annunciators, telephones, etc.

No.	Pairs	Conductors	Size	O.D.	Put-up
1276/2	2	4	22 Solid	.185″	1,000 Ft. Reel
1276/3	3	6	22 Solid	.210″	1,000 Ft. Reel
1276	6	12	22 Solid	.240″	1,000 Ft. Reel
1277	10	20	22 Solid	.300″	1,000 Ft. Reel
1277/13	13	26	22 Solid	.360″	1,000 Ft. Reel
1277/15	16	32	22 Solid	.380″	1,000 Ft. Reel
1277/25	26	52	22 Solid	.445″	1,000 Ft. Reel



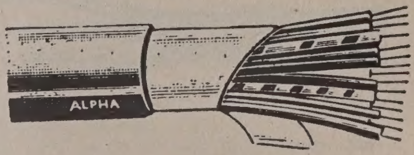
Construction: Each conductor 22 AWG solid tinned copper wire, two cotton reverse serves paraffined, color coded, conductors twisted into pairs, then covered with an impregnated double paper wrap, and overall a cotton braid saturated with a moisture-proof, flame retarding, rodent-proof compound.

LEAD-COVERED COMMUNICATION CABLE

(TWISTED PAIRS)

GENERAL PURPOSE: For use indoors, outdoors, underground and in pipes for connecting inter-communication systems, annunciators, telephones, etc.

No.	Pairs	Conductors	Size	O.D.	Put-up
1289	6	12	22 Solid	.375″	1,000 Ft. Reel
1291	10	20	22 Solid	.450″	1,000 Ft. Reel
1293	16	32	22 Solid	.510″	1,000 Ft. Reel
1295	26	52	22 Solid	.560″	1,000 Ft. Reel



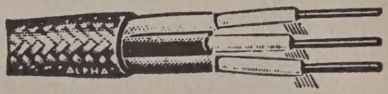
Construction: Similar to Braided Communication Cable above, but with lead antimony sheath instead of cotton braid over the twisted pairs.

INTER-COMMUNICATION CABLE

(BRAIDED)

GENERAL PURPOSE: Designed for interior use for connecting inter-communication systems, annunciators, thermostat controls of oil burners, air conditioners, etc.

No.	Conductors	Size	O.D.	Put-up
1274	2	18 Solid	.150″	500 Ft. Spool
1275	3	18 Solid	.165″	500 Ft. Spool
1275/4	4	18 Solid	.180″	500 Ft. Spool
1275/5	5	18 Solid	.200″	500 Ft. Spool
1275/6	6	18 Solid	.220″	500 Ft. Spool

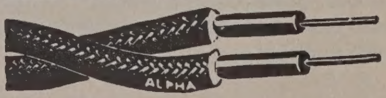


Construction: Each conductor 18 AWG solid bare copper wire, thermoplastic insulation, color coded, conductors twisted, waxed cotton braid overall.

OUTDOOR INTER-COMMUNICATION WIRE

GENERAL PURPOSE: For outdoor and indoor use or in any damp location, for connecting communication systems, telephones, etc.

No.	Conductors	Size	O.D.	Put-up
1279	2	19 Solid	.200″	500 Ft. Coil
1280	3	19 Solid	.300″	500 Ft. Coil

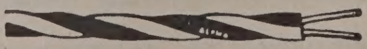


Construction: Each conductor 19 AWG solid tinned copper, 1/64″ telephone compound rubber, heavy cotton braid with specially treated compound to make it weather-proof for resistance against rain, snow, hail and cold.

INDOOR INTER-COMMUNICATION WIRE

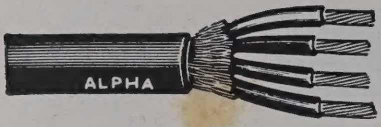
GENERAL PURPOSE: For connecting sound and communication systems, telephones, etc.

No.	Conductors	Size	O.D.	Put-up
1269	2	22 Solid	.125″	500 Ft Spool



Construction: Two conductors twisted, each 22 AWG solid copper, insulated, color coded.

NOTE: See Page S-13 for ALPHA Prices and Other Information.



Construction: Each conductor 20-26/34 extra flexible stranded tinned copper, cotton wrap, 1/32" "Hi-Tension" rubber, color coded, conductors twisted, cushioned with cotton fillers, cotton wrap, tough black rubber jacket overall.

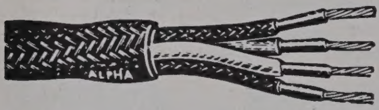
Alternate put-up use code:
D = 250 ft., E = 500 ft., F = 1000 ft.

MULTI-CONDUCTOR FLEXIBLE CABLE

(RUBBER JACKETED)

GENERAL PURPOSE: For indoor and outdoor speakers, permanent or portable P.A. systems, sound recording and auto radios.

No.	Conductors	Size	Strand	Capacity Per Ft. Between Conductors	O.D.	Put-up
1244	2	20	26/34	22 mmf.	.250"	100 Ft. Spool
1245	3	20	26/34	20 mmf.	.300"	100 Ft. Spool
1246	4	20	26/34	18 mmf.	.320"	100 Ft. Spool
1247	5	20	26/34	17 mmf.	.370"	100 Ft. Spool
1247/6	6	20	26/34	16 mmf.	.400"	100 Ft. Spool
1247/8	8	20	26/34	16 mmf.	.460"	100 Ft. Spool



Construction: Each conductor 20-10/30 stranded tinned copper, 1/64" thermoplastic insulation, color coded, conductors twisted, brown cotton braid overall.

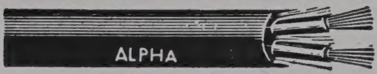
Alternate put-up use code:
D = 250 ft., E = 500 ft., F = 1000 ft.

MULTI-CONDUCTOR FLEXIBLE CABLE

(COTTON BRAID)

GENERAL PURPOSE: For connecting speakers, analyzers, remote control units, P.A. systems or wherever a multiple circuit hook-up is required.

No.	Conductors	Size	Strand	Capacity Per Ft. Between Conductors	O.D.	Put-up
1182	2	20	10/30	31.5 mmf.	.135"	100 Ft. Spool
1183	3	20	10/30	31.0 mmf.	.170"	100 Ft. Spool
1184	4	20	10/30	30.0 mmf.	.180"	100 Ft. Spool
1185	5	20	10/30	29.5 mmf.	.205"	100 Ft. Spool
1186	6	20	10/30	29.2 mmf.	.225"	100 Ft. Spool
1187	7	20	10/30	28.8 mmf.	.240"	100 Ft. Spool
1188	8	20	10/30	28.5 mmf.	.255"	100 Ft. Spool
1189	9	20	10/30	27.9 mmf.	.275"	100 Ft. Spool
1190	10	20	10/30	27.6 mmf.	.310"	100 Ft. Spool
1192	12	20	10/30	27.0 mmf.	.340"	100 Ft. Spool



Construction: Each conductor stranded bare copper, cotton separator, 1/32" rubber, color coded, conductors twisted, cushioned with jute fillers, 40% tough rubber jacket overall.

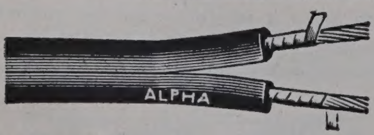
RUBBER SHEATHED SERVICE CORD

(UNDERWRITERS APPROVED)

GENERAL PURPOSE: For amplifiers, sound systems, speakers, vacuum cleaners, electric tools, washing machines, refrigerators, appliances, trouble lights, garage lamps or wherever a rough usage power line is required.

No.	Conductors	Size	Type	Current Carrying Capacity	Voltage Rating	O.D.	Put-up
1951	2	18	SV	5 amps	300	.250"	250 Ft. Spool
1952	2	18	SJ	5 amps	300	.310"	250 Ft. Spool
1953	2	16	SJ	7 amps	300	.340"	250 Ft. Spool
1954	2	18	S	5 amps	600	.390"	250 Ft. Coil
1955	2	16	S	7 amps	600	.410"	250 Ft. Coil
1956	2	14	S	15 amps	600	.540"	250 Ft. Coil
1957	2	12	S	20 amps	600	.605"	250 Ft. Coil
1958	2	10	S	25 amps	600	.640"	250 Ft. Coil

Available with Additional Conductors. Also other sizes.



Construction: Two conductors parallel, 18-41/34 extra flexible bare copper, color coded, cotton serve, 40% tough rubber jacket overall. Slit in jacket to permit "E-Z" separation.

E-Z STRIP LAMP CORD—TYPE POSJ

(UNDERWRITERS APPROVED)

GENERAL PURPOSE: For line cord on radios, lamps, electric clocks, food mixers and other small devices.

No.	Conductors	Size	Strand	O.D.	Put-up
1966	2	18	41/34	.235" x .130"	100 Ft. Spool
1967	2	18	41/34	.235" x .130"	250 Ft. Spool

Standard Colors: Brown, Black and Ivory

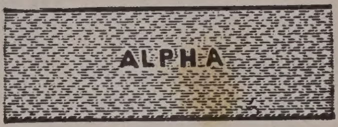
NOTE: See Page S-13 for ALPHA Prices and Other Information.

ALPHA WIRE CORPORATION

TINNED COPPER SHIELDING

GENERAL PURPOSE: For shielding speaker leads, lead-ins, amplifier wires, auto radio installations. Also for bonding.

No.	Size of Wires	I.D.	Put-up
1229	36 AWG	1/8″	50 Ft. Spool
1230	36 AWG	3/16″	50 Ft. Spool
1231	36 AWG	1/4″	50 Ft. Spool
1232	36 AWG	3/8″	50 Ft. Spool
1233	36 AWG	5/8″	50 Ft. Spool
1234	36 AWG	3/4″	50 Ft. Spool
1235	36 AWG	1″	50 Ft. Spool



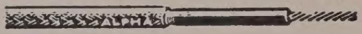
Construction: Composed of very fine soft annealed tinned copper wires braided and rolled flat.

Alternate put-up use code:
Q = 100 ft., D = 250 ft., E = 500 ft., F = 1000 ft.

SHIELDED PHONO AND GRID WIRE

GENERAL PURPOSE: Extreme flexibility and limpness make this an ideal wire for phonograph pick-up arm cable and grid wire.

No.	Conductors	Size	Strand	Insulation	O.D.	Put-up
1200	1	24	16/36	.010″	.080″	1000 Ft. Spool
1201	1	24	16/36	.010″	.095″	1000 Ft. Spool
1202	2	24	16/36	.010″	.115″	1000 Ft. Spool

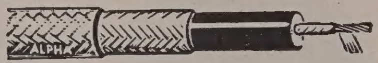


Construction:
No. 1200: Single conductor 24-16/36 extra flexible stranded tinned copper, vinyl plastic insulation, fine close tinned copper shield overall.
No. 1201 same as No. 1200 plus cotton braid over shield.
No. 1202 same as No. 1200 except two conductors with shield overall.

SHIELDED LOW LOSS CABLE

GENERAL PURPOSE: For auto radios, lead-ins, short wave receivers and for grid leads in the input stages of P.A. amplifiers.

No.	Size	Strand	O.D.	Put-up
1241	20	10/30	.225″	100 Ft. Spool



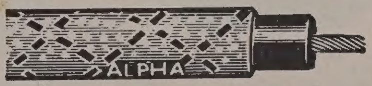
Construction: Single conductor 20-10/30 stranded tinned copper, heavy low loss insulation, white silk braid, tinned copper shield overall.

Alternate put-up use code:
D = 250 ft., E = 500 ft., F = 1000 ft.

7 MM LACQUERED CABLE

GENERAL PURPOSE: For high voltage leads in television receivers, cathode-ray tubes, oscilloscopes, etc.

No.	Size	Strand	Insulation	O.D.	Put-up
1981	16	19/29	3/32	.275″	100 Ft. Spool



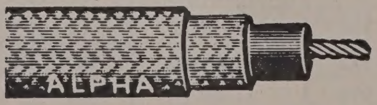
Construction: Single conductor 16-19/29 stranded tinned copper, rubber insulated, cotton braid highly lacquered.

Alternate put-up use code:
D = 250 ft., E = 500 ft., F = 1000 ft.

7 MM SHIELDED IGNITION CABLE

GENERAL PURPOSE: For automotive and aircraft ignition systems requiring grounding to overcome interference.

No.	Size	Strand	Insulation	O.D.	Put-up
1193	16	19/29	3/32	.300″	100 Ft. Spool



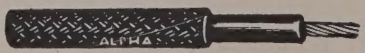
Construction: Single conductor 16-19/29 stranded tinned copper, rubber insulated, cotton braid highly lacquered, braided tinned copper shield overall.

Alternate put-up use code:
D = 250 ft., E = 500 ft., F = 1000 ft.

LACQUERED PRIMARY WIRE

GENERAL PURPOSE: For automobile head, tail, side, dashboard lamps, horn, spotlight, instrument leads and general high voltage and primary voltage applications.

No.	Size	Strand	Insulation	O.D.	Put-up
1989	18	16/30	1/64″	.110″	100 Ft. Spool
1991	18	16/30	1/32″	.125″	100 Ft. Spool
1995	16	26/30	1/32″	.140″	100 Ft. Spool
1997	14	41/30	1/32″	.170″	100 Ft. Spool
1999	12	19/25	1/32″	.190″	100 Ft. Spool
1983	10	19/23	1/32″	.208″	100 Ft. Spool



Construction: Single conductor stranded soft annealed tinned copper, insulated with rubber, highly lacquered braid. Oil, heat, and moisture resistant.

Alternate put-up use code:
D = 250 ft., E = 500 ft., F = 1000 ft.

NOTE: See Page S-13 for ALPHA Prices and Other Information.

ALPHA WIRE CORPORATION

JAN-C-76 HOOK-UP WIRE
TYPE SRIR (PLASTIC)

GENERAL PURPOSE:

Electronic Devices	Radio	Transmitters	Lighting and Power
Aircraft Instruments	Radar	Receivers	Rectifiers

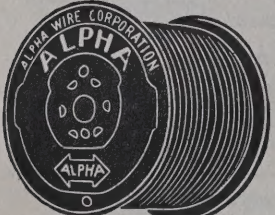
SAMPLE JAN TYPE DESIGNATION

3/5 (7) 22 924

Size (approx. cir. mils)
Minimum Strands
AWG Size
*Color Code: 1st Digit—Base 2nd & 3rd Digits—Tracer

***COLOR CODE**

0—Black
1—Brown
2—Red
3—Orange
4—Yellow
5—Green
6—Blue
7—Purple
8—Slate
9—White



CONSTRUCTION:

Single conductor, stranded and solid tinned copper with thermoplastic (Vinylite) insulation. FUNGUS PROOF.

CHARACTERISTICS:

High Dielectric Strength
Stability at High Temperatures
Flexibility at Low Temperatures
Resistant to: Acids, Alkalis, Oil, Flame, Moisture.

STRANDED

No.	JAN-C-76 Type Designation	Size	Strand	Insulation	Volt. Breakdown (60 cycles)	D.C. Insulation resistance/ft. (Megohms)	O.D.	Put-up
1550	2/5(7)-24	24	7/32	1/64″	8000	5000	.059″	1000 Ft. Spool
1551	3/5(7)-22	22	7/30	1/64″	8000	5000	.064″	1000 Ft. Spool
1552	3/5(7)-22	22	7/30	1/64″	8000	5000	.064″	100 Ft. Spool
1553	1(10)-20	20	10/30	1/64″	8000	5000	.073″	1000 Ft. Spool
1554	1(10)-20	20	10/30	1/64″	8000	5000	.073″	100 Ft. Spool
1555	1½(16)-18	18	16/30	1/64″	8000	5000	.084″	1000 Ft. Spool
1557	2½(26)-16	16	26/30	1/64″	8000	5000	.095″	1000 Ft. Spool
1559	4(41)-14	14	41/30	1/64″	12000	7500	.107″	1000 Ft. Spool
1560	6(65)-12	12	65/30	1/64″	12000	7500	.120″	1000 Ft. Spool
				SOLID				
1561	3/5(1)-22	22	1	1/64″	8000	5000	.060″	1000 Ft. Spool
1562	3/5(1)-22	22	1	1/64″	8000	5000	.060″	100 Ft. Spool
1563	1(1)-20	20	1	1/64″	8000	5000	.066″	1000 Ft. Spool
1564	1(1)-20	20	1	1/64″	8000	5000	.066″	100 Ft. Spool

STANDARD COLORS

Black
Red
Green
Yellow
Light Blue
Brown
White
Orange
Slate
Purple
Tan
Pink
Dark Blue

Also available in various tracer combinations

NOTE: See Page S-13 for ALPHA Prices and Other Information.

ALPHA WIRE CORPORATION

JAN-C-76 HOOK-UP WIRE
TYPE WL

GENERAL PURPOSE:

Electronic Devices	Radio	Transmitters	Lighting and Power
Aircraft Instruments	Radar	Receivers	Rectifiers

SAMPLE JAN TYPE DESIGNATION

3/5 (7) 22 924

Size (approx. cir. mils)
Minimum Strands
AWG Size
*Color Code:
1st Digit—Base
2nd & 3rd Digits—Tracer

***COLOR CODE**

0—Black	2—Red	4—Yellow	6—Blue	8—Slate
1—Brown	3—Orange	5—Green	7—Purple	9—White

CONSTRUCTION:

Single conductor stranded tinned copper with thermoplastic (Vinylite) insulation, cotton or glass braid, lacquered. FUNGUS PROOF.

CHARACTERISTICS:

Stability at High Temperatures • Flexibility at Low Temperatures
Resistant to: Flame, Moisture.

COTTON BRAID

No.	JAN-C-76 Type Designation	Size	Strand	Insulation	Volt. Breakdown (60 cycles)	D.C. Insulation resistance/ft. (Megohms)	O.D.	Put-up
1480	3/5(7)-22	22	7/30	1/64″	5000	1000	.090″	1000 Ft. Spool
1481	1(10)-20	20	10/30	1/64″	5000	1000	.100″	1000 Ft. Spool
1482	1½(16)-18	18	16/30	1/64″	5000	1000	.115″	1000 Ft. Spool
1483	2½(26)-16	16	26/30	1/64″	5000	1000	.130″	1000 Ft. Spool
1484	4(41)-14	14	41/30	1/64″	5000	1000	.150″	1000 Ft. Spool
1485	6(65)-12	12	65/30	1/64″	5000	1000	.170″	1000 Ft. Spool

STANDARD COLORS

Black	Green	Blue	White	Slate
Red	Yellow	Brown	Orange	Purple

Also available in various tracer combinations

GLASS BRAID

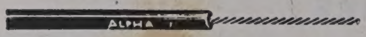
No.	JAN-C-76 Type Designation	Size	Strand	Insulation	Volt. Breakdown (60 cycles)	D.C. Insulation resistance/ft. (Megohms)	O.D.	Put-up
1490	3/5(7)-22	22	7/30	1/64″	5000	1000	.085″	1000 Ft. Spool
1491	1(10)-20	20	10/30	1/64″	5000	1000	.095″	1000 Ft. Spool
1492	1½(16)-18	18	16/30	1/64″	5000	1000	.110″	1000 Ft. Spool
1493	2½(26)-16	16	26/30	1/64″	5000	1000	.125″	1000 Ft. Spool
1494	4(41)-14	14	41/30	1/64″	5000	1000	.145″	1000 Ft. Spool
1495	6(65)-12	12	65/30	1/64″	5000	1000	.165″	1000 Ft. Spool

STANDARD COLORS

White	White/Red	White/Yellow	White/Brown	White/Slate
White/Black	White/Green	White/Blue	White/Orange	White/Purple

Available in additional colors and other tracer combinations

NOTE: See Page S-13 for ALPHA Prices and Other Information.



"CL" PUSHBACK WIRE

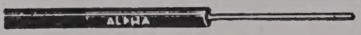
GENERAL PURPOSE: Pushback hook-up wire in various bright colors for circuit identification; radio, radar, electronics, electrical toys, etc.

Construction: Single conductor stranded and solid tinned copper, heavy wrap of cellulose acetate, cotton braid with flame-retarding lacquer.

STANDARD COLORS:

Sizes 22-20-18—Stranded and Solid: Black, Red, Green, Yellow, Blue, Brown, White, Orange.

Sizes 16-14—Stranded and Solid: Black, Red.



Available in additional colors and tracer combinations.

STRANDED

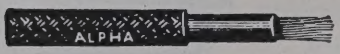
No.	Size	Strand	Volt. Break-down (60 cycles)	D.C. Insulation Resistance per ft. (Megohms)	O.D.	Put-up
1460	22	7/30	1000	200	.065″	1000 Ft. Spool
1461	20	10/30	1000	200	.070″	1000 Ft. Spool
1462	18	16/30	1000	200	.082″	1000 Ft. Spool
1463	16	26/30	1000	200	.093″	1000 Ft. Spool
1464	14	41/30	1000	200	.105″	1000 Ft. Spool
SOLID						
1465	22	Solid	1000	200	.060″	1000 Ft. Spool
1466	20	Solid	1000	200	.065″	1000 Ft. Spool
1467	18	Solid	1000	200	.075″	1000 Ft. Spool
1468	16	Solid	1000	200	.085″	1000 Ft. Spool
1469	14	Solid	1000	200	.095″	1000 Ft. Spool

Alternate put-up use code: Q = 100 Ft. Spool

LACQUERED HOOK-UP AND LEAD-IN WIRE

(HIGH GLOSS LACQUERED BRAID)

GENERAL PURPOSE: For point to point soldering connections on transformers, amplifiers, panel hook-up, etc., where a low loss dielectric is required. It is not a pushback wire but will strip easily.



Construction: Single conductor stranded tinned copper, free stripping insulation, single braid highly lacquered.

STANDARD COLORS:

Sizes 20-18—Black, Red, Green, Yellow Blue, Brown, White.

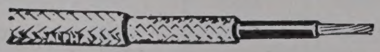
Sizes 16-14-12-10—Black, Red.

Available in additional colors and tracer combinations.

No.	Size	Strand	Insulation	Volt. Break-down (60 cycles)	D.C. Insulation Resistance per ft. (Megohms)	O.D.	Put-up
1513	20	10/30	1/64″	7000	290	.090″	100 Ft. Spool
1515	20	10/30	1/64″	7000	290	.090″	500 Ft. Spool
1523	18	16/30	1/64″	7000	300	.110″	100 Ft. Spool
1525	18	16/30	1/64″	7000	300	.110″	500 Ft. Spool
1533	18	16/30	1/32″	8500	460	.125″	100 Ft. Spool
1535	18	16/30	1/32″	8500	460	.125″	500 Ft. Spool
1543	16	26/30	1/32″	8500	460	.140″	100 Ft. Spool
1545	16	26/30	1/32″	8500	460	.140″	500 Ft. Spool
1546	14	41/30	1/32″	8500	460	.170″	500 Ft. Spool
1547	12	19/25	1/32″	8500	460	.190″	500 Ft. Spool
1548	10	19/23	1/32″	8500	460	.208″	500 Ft. Spool

SHIELDED HOOK-UP AND LEAD-IN WIRE

GENERAL PURPOSE: To reduce interference caused by motors, high tension wires, x-ray machines or other apparatus that radiates electrical impulses. Ideal for grid-lead use.



Construction: Single conductor stranded tinned copper, low loss insulation, highly lacquered braid, close tinned copper shield overall.

No.	Size	Strand	O.D.	Put-up
1194/22	22	7/30	.105″	1000 Ft. Spool
1194	20	10/30	.110″	1000 Ft. Spool
1196	18	16/30	.145″	1000 Ft. Spool
1197	16	26/30	.160″	1000 Ft. Spool
1198	14	41/30	.180″	1000 Ft. Spool
1199	12	19/25	.210″	1000 Ft. Spool
1199/10	10	19/23	.220″	1000 Ft. Spool

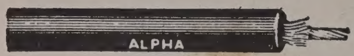
NOTE: See Page S-13 for ALPHA Prices and Other Information.

ALPHA WIRE CORPORATION

KINKLESS TEST LEAD WIRE

GENERAL PURPOSE: As test leads in analyzers, oscillators and all other types of testing apparatus or wherever an EXTRA FLEXIBLE insulated wire is required.

No.	Size	Strand	Insulation	Voltage Breakdown (60 Cycles)	O.D.	Put-up
1633	20	41/36	3/64"	10,000	.140"	100 Ft. Spool
1635	20	41/36	3/64"	10,000	.140"	500 Ft. Spool
1636	18	65/36	3/64"	12,000	.150"	500 Ft. Spool



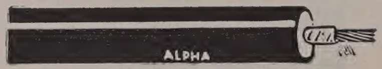
Construction: Single conductor extra flexible tinned soft annealed copper, concentric strand, cotton wrap, 3/64" "Super Hi-Tension" rubber, satin finish.

STANDARD COLORS:
Red, Black.

HEAVY DUTY TYPE

GENERAL PURPOSE: For television, therapeutic equipment, analyzers, oscillators, etc., or wherever a heavy duty EXTRA FLEXIBLE high voltage line is required.

No.	Size	Strand	Insulation	Voltage Breakdown (60 Cycles)	O.D.	Put-up
1637	18	65/36	7/64"	22,000	.245"	100 Ft. Spool
1638	18	65/36	7/64"	22,000	.245"	500 Ft. Spool



Construction: Single conductor 18-65/36 extra flexible tinned soft annealed copper, concentric strand, cotton wrap, 7/64" "Super Hi-Tension" rubber, satin finish.

STANDARD COLORS:
Red, Black.

TINNED COPPER BUS-BAR WIRE

GENERAL PURPOSE: Winding of coils, antennas, point to point, bus bar, etc.

No.	Size	Circular Mils	O.D.	Put-up
292	10 AWG	10380	.103"	1000 Ft. Spool
289	12 AWG	6530	.082"	1000 Ft. Spool
286	14 AWG	4107	.065"	1000 Ft. Spool
295	16 AWG	2583	.051"	1000 Ft. Spool
296	18 AWG	1624	.040"	1000 Ft. Spool
297	20 AWG	1022	.033"	1000 Ft. Spool
298	22 AWG	642.4	.025"	1000 Ft. Spool
299	24 AWG	404.0	.020"	1000 Ft. Spool
299/1	26 AWG	254.1	.016"	1000 Ft. Spool
299/2	28 AWG	159.8	.013"	1000 Ft. Spool

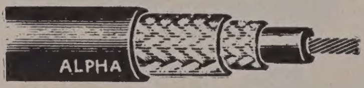
ALPHA WIRE CORPORATION
ALPHA
ALPHA

Construction: Pure electrolytic copper properly annealed and tinned for quick soldering.

DIATHERMY CABLE

GENERAL PURPOSE: Its extreme flexibility and tough rubber jacket give it long life. This cable is used as a lead on therapy apparatus, charging cable, battery lead, underground cable, etc.

No.	Size	Strand	Insulation	O.D.	Put-up
1623	14	104/34	3/64"	.300"	100 Ft. Spool
1625	14	104/34	3/64"	.300"	1000 Ft. Reel



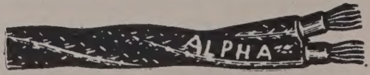
Construction: Single conductor 14-104/34 copper, paper serve, 3/64" ASTM performance grade rubber, double cotton braid, .040" oil resistant neoprene rubber jacket.

TWISTED PAIR TRANSMISSION LINE

(WEATHERPROOF BRAID)

GENERAL PURPOSE: For inter-com. hook-up. Also suitable for low loss coupling between antenna and receiver as doublet style twisted lead-in.

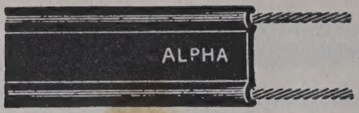
No.	Conductors	Size	Strand	O.D.	Put-up
1146	2	22	7/30	.175"	500 Ft. Spool
1135	2	18	16/30	.190"	500 Ft. Spool



Construction: Two conductors stranded tinned copper, 1/32" "Hi-Tension" rubber, color coded, conductors twisted, cotton braid overall, saturated weatherproof finish.

NOTE: See Page S-13 for ALPHA Prices and Other Information.

ALPHA WIRE CORPORATION

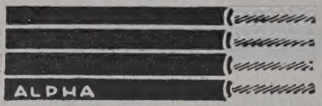


TELEVISION AND FM TWIN-LEAD CABLE

GENERAL PURPOSE: For use especially in television and FM as the lead-in from the antenna to the receiver.

No.	Impedance (Ohms)	Capacity Per Ft.	O.D.	Put-up
1150	300	4.5 mmf.	.070" x .395"	1000 Ft. Spool
1151	150	9.5 mmf.	.060" x .190"	1000 Ft. Spool
1152	75	20.0 mmf.	.070" x .120"	1000 Ft. Spool

Construction: Two conductors parallel, each conductor 7/28 bare copper flexible stranding, low loss polyethylene plastic insulation, smooth satin finish. Standard color: brown.

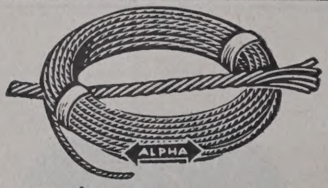


ROTARY TV-FM CABLE

GENERAL PURPOSE: Designed for use with TV or FM antenna rotators.

No.	Conductors	O.D.	Put-up
1150/3	3	.085" x .265"	1000 Ft. Spool
1150/4	4	.085" x .345"	1000 Ft. Spool
1150/5	5	.085" x .425"	1000 Ft. Spool

Construction: Conductors flat parallel, each conductor 7/30 stranded copper with one conductor bare and other conductors tinned. Durable rubber insulation. Very flexible.

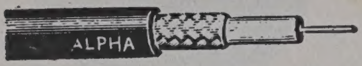


GUY WIRE

GENERAL PURPOSE: To prevent sway of FM, TV and radio receiver masts, poles or towers.

No.	Strand	Breaking Strength	O.D.	Put-up
1168	6/18	650 Lbs.	.156"	1000 Ft. Spool
1169	6/20	470 Lbs.	.105"	1000 Ft. Spool
1170	6/20	470 Lbs.	.105"	100 Ft. Coil

Construction: Stranded galvanized steel wires with great tensile strength.

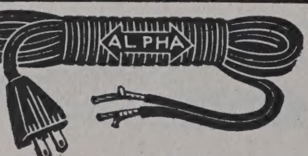


CO-AXIAL CABLE (RG-59U)

GENERAL PURPOSE: Co-axial cable is ideal for television, FM and facsimile reception. Is suitable for very high frequency and ultra high frequency ranges.

No.	Nom. Imp. (Ohms)	Nom. Cap.	Max. Oper. Volts RMS	O.D.	Put-up
1157	73	21 mmf./Ft.	2300	.242"	1000 Ft. Reel

Construction: Single conductor No. 22 solid copperweld, polyethylene insulation, bare copper shield, black vinyl plastic jacket overall.



ALPHA E-Z STRIP LINE CORD

UNDERWRITERS APPROVED

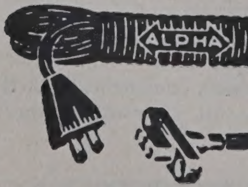
GENERAL PURPOSE: This is the modern and ideal power supply cord for replacement on radios, lamps, fans, etc.

No.	Conductors	Size	Strand	O.D.	Length
2106	2	18	41/34	.235" x .130"	6 Ft.
2109	2	18	41/34	.235" x .130"	9 Ft.
2112	2	18	41/34	.235" x .130"	12 Ft.

Construction: E-Z strip rubber parallel cord (Type POSJ) with small unbreakable soft rubber attachment plug. Free end stripped and tinned ready to attach. Also available in other lengths.

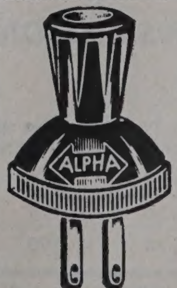
TELEVISION POWER CONNECTOR CORD

(UNDERWRITERS APPROVED)



Construction: E-Z Strip cord (Type POSJ), molded rubber plug attached to one end, TV molded rubber connector attached to other end. For replacement of worn out or damaged TV cords.

No.	Length
2126	6 Ft.



UNBREAKABLE SOFT RUBBER PLUG

Made of sturdy live soft rubber. Brass blades. Unbreakable, easy to attach.

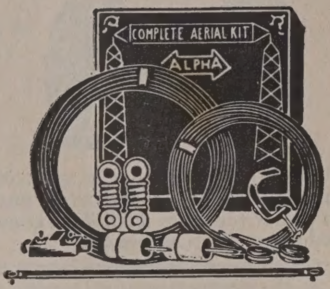
No.	Per Carton
1964	100

NOTE: See Page S-13 for ALPHA Prices and Other Information.

ALPHA WIRE CORPORATION

AERIAL KITS

Alpha Aerial Kits are designed to meet the requirements of the various types of radio installations. Each kit is complete and boxed attractively. 20 Per Carton.



No. 301

50 Ft. 7 Strand Copper Aerial
25 Ft. Lead-in Wire
2 No. 2022 Insulators
2 No. 2031 Nail Knobs
1 No. 2012 Ground Clamp
1 No. 2002 Lead-in Strip

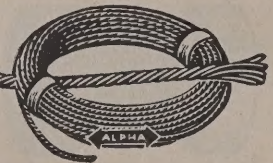
No. 304

75 Ft. 7/24 Copper Aerial Wire
25 Ft. Lead-in Wire
1 No. 2001 Lightning Arrester
1 No. 2002 Lead-in-Strip
2 No. 2031 Nail Knobs
1 No. 2012 Ground Clamp
2 No. 2022 Insulators

PHOSPHOR BRONZE AERIAL WIRE

GENERAL PURPOSE: Recommended especially for ship, short wave and transmitting aerials where high tensile strength is required.

No.	Size	Strand	Breaking Strength	O.D.	Put-up
1160	14	7/22	420 Lbs.	.075″	500 Ft. Spool
1161	12	7/20	650 Lbs.	.100″	500 Ft. Spool
1163	10	7/18	1000 Lbs.	.122″	500 Ft. Spool
1164	8	7/16	1600 Lbs.	.150″	500 Ft. Spool
1165	6	7/14	2140 Lbs.	.190″	500 Ft. Spool
1166	4	7/12	3670 Lbs.	.240″	500 Ft. Spool

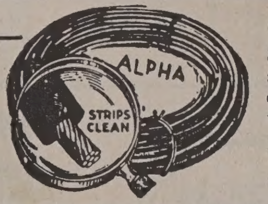


Construction: 7 strands Phosphor Bronze.

LEAD-IN AND GROUND WIRE

GENERAL PURPOSE: Lead-in, ground, hook-up, all purpose wire.

No.	Size	Strand	Insulation	O.D.	Put-up
1114	20	10/30	1/32″	.105″	1000 Ft. Spool
1114E	20	10/30	1/32″	.105″	500 Ft. Spool
1131	18	16/30	1/32″	.125″	500 Ft. Spool



Construction: Single conductor stranded tinned copper, insulated with live free stripping rubber, jet black waxed finish overall.

COPPER AERIAL WIRE

STRANDED—BARE

No.		Put-up
101	7/20	100 Ft. Coil
104	7/20	75 Ft. Coil
105	7/20	50 Ft. Coil
106	7/20	1000 Ft. Spool
107	7/22	100 Ft. Coil
110	7/22	75 Ft. Coil
111	7/22	50 Ft. Coil
112	7/22	1000 Ft. Spool
131	7/24	100 Ft. Coil
134	7/24	75 Ft. Coil
135	7/24	50 Ft. Coil
136	7/24	1000 Ft. Spool

STRANDED—TINNED

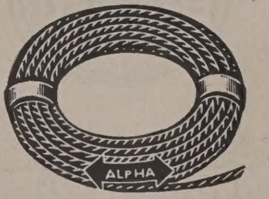
No.		Put-up
161	7/22	100 Ft. Coil
164	7/22	75 Ft. Coil
165	7/22	50 Ft. Coil
166	7/22	1000 Ft. Spool

SOLID—ENAMEL

No.		Put-up
269	14	100 Ft. Coil
274	14	1000 Ft. Spool
275	12	100 Ft. Coil
280	12	1000 Ft. Spool
281	10	100 Ft. Coil
283	10	1000 Ft. Spool

SOLID—TINNED

No.		Put-up
284	14	100 Ft. Coil
286	14	1000 Ft. Spool
287	12	100 Ft. Coil
289	12	1000 Ft. Spool
290	10	100 Ft. Coil
292	10	1000 Ft. Spool

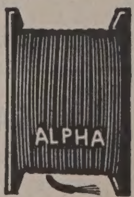


All Alpha Aerial Wire is pure electrolytic copper properly annealed to assure required flexibility and tensile strength.

AC-DC ANTENNA WIRE

GENERAL PURPOSE: Ideal replacement wire for universal midgets, indoor aerials and loop antennas.

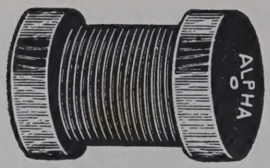
No.	Type	Size	Strand	O.D.	Put-up
1281	Cotton	24	16/36	.050″	25 Ft. Disc.
1281V	Plastic	24	16/36	.047″	25 Ft. Disc.
1284	Cotton	24	16/36	.050″	1000 Ft. Spool
1284V	Plastic	24	16/36	.047″	1000 Ft. Spool



Construction: Single conductor 24-16/36 extra flexible bare copper, covered with dark brown cotton braid or plastic insulation.

NOTE: See Page S-13 for ALPHA Prices and Other Information.

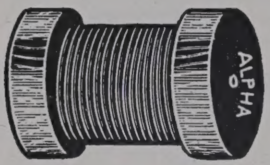
ALPHA WIRE CORPORATION



PHOSPHOR BRONZE DIAL CABLE

No.	Tensile Strength	O.D.	Put-up
1691	50 lbs.	.036"	100 Ft. Spool
1692	50 lbs.	.036"	500 Ft. Spool

Construction: 42 strands (6 x 7 x .004) genuine phosphor bronze wire with a linen center for extra flexibility. Is guaranteed not to warp or stretch.



BRAIDED LINEN DIAL CABLE

HEAVY

No.	Tensile Strength	O.D.	Put-up
1695	40 lbs.	.057"	100 Ft. Spool
1696	40 lbs.	.057"	500 Ft. Spool

LIGHT

No.	Tensile Strength	O.D.	Put-up
1698	22.5 lbs.	.036"	100 Ft. Spool
1699	22.5 lbs.	.036"	500 Ft. Spool

EXTRA-THIN

No.	Tensile Strength	O.D.	Put-up
1700	18 lbs.	.027"	25 Ft. Spool

Construction: Made of the finest linen obtainable. Composed of a very strong linen center over which is a smooth black braid.

FLEXIBLE VARNISHED TUBING AND SLEEVING

ALPHA
SPAGHETTI

RADIO VARNISHED TUBING — (Spaghetti). A sleeving with a heavy coat of varnish, in high gloss vivid colors. Average dielectric strength: 7,000 volts.

SATURATED SLEEVING — A fibre yarn sleeving saturated with high grade insulating varnish. Cuts clean and has a smooth interior wall. Average dielectric strength: 2,000 volts.

MAGNETO VARNISHED TUBING—The production of this type of tubing is under rigid control so as to insure a maximum in quality. It is thoroughly impregnated with a varnish of maximum insulating value. It is resistant to heat, oil, gas and acids. Colors are bright and vivid. Average dielectric strength: 7,000 volts.

No.	Approx. I.D.	No.	Approx. I.D.	No.	Approx. I.D.	No.	Approx. I.D.	No.	Approx. I.D.
20	.034"	15	.059"	10	.106"	5	.186"	0	.330"
19	.038"	14	.066"	9	.118"	4	.208"	3/8"	.375"
18	.042"	13	.076"	8	.133"	3	.234"	7/16"	.438"
17	.047"	12	.085"	7	.148"	2	.263"	1/2"	.500"
16	.053"	11	.095"	6	.166"	1	.294"	5/8"	.625"

Tolerances: Sizes:
0 to 2—plus or minus .005"
3 to 13—plus or minus .004"
14 to 20—plus or minus .002"

Standard Color: Black. Other colors to order.

Sizes follow the B & S System of gauging wires. For instance, a No. 10 tubing will fit over a No. 10 bare wire or any wire with an insulation of which the O.D. is equivalent to No. 10 B & S gauge. If in doubt, it is best to submit a sample of the wire or product to be covered.

LENGTHS—STANDARD 36" **LONGER LENGTHS AVAILABLE**

SPAGHETTI TUBING

A superior varnished tubing for radio work. It will retain its dielectric and flexibility indefinitely. Takes up to No. 14 wire.

Colors: Black, Red, Yellow, Green and Brown

No. 2091 — 36" Lengths

NOTE: See Page S-13 for ALPHA Prices and Other Information.

ALPHA WIRE CORPORATION

NOTE: USEFUL INFORMATION FOR ORDERING

- All tests on specifications are approximate and subject to normal manufacturing tolerances.
- Lengths other than those regularly listed can be furnished.
- Other wires and cables made to specifications.
- Use the following symbols alongside catalog number for other than standard put-ups.

COILS	COILS	COILS	SPOOLS	SPOOLS	SPOOLS
25 Ft.........H	100 Ft.........K	500 Ft.........B	25 Ft.........N	100 Ft.........Q	250 Ft.........D
50 Ft.........Z	150 Ft.........L	1000 Ft.........C	50 Ft.........T	150 Ft.........R	500 Ft.........E
75 Ft.........J	200 Ft.........M	250 Ft.........A	75 Ft.........P	200 Ft.........S	1000 Ft. ......F

G — LONGER LENGTHS ON SPOOLS OR REELS

The constant development of new and improved designs and manufacturing processes results in continually changing specifications. In every case where Alpha wires shipped are different in specifications from those shown in this catalog, an improvement will be noted.

Cat. No.	List Price
101	$ 2.78
104	2.13
105	1.45
106	27.00
107	1.55
110	1.20
111	.80
112	14.75
131	1.10
134	.88
135	.60
136	10.25
161	1.93
164	1.48
165	1.00
166	18.38
269	2.00
274	19.20
275	3.03
280	29.50
281	4.33
283	42.50
284	1.95
286	18.75
287	2.93
289	28.50
290	4.28
292	41.88
295	13.75
296	11.75
297	7.38
298	4.88
299	6.00
299/1	5.50
299/2	5.00
301	1.45
304	2.63
1114	9.35
1114E	5.00
1131	7.50
1135	32.50
1146	24.38
1150/3	50.00
1150/4	62.50
1150/5	77.50
1150	40.00
1151	37.50
1152	35.00
1157	187.50
1160	25.00
1161	42.50
1163	47.50
1164	65.00
1165	100.00
1166	155.00
1168	25.00
1169	16.25
1170	1.75
1182	5.00
1183	7.50
1184	9.50
1185	11.75
1186	13.75
1187	15.50
1188	17.25
1189	20.00
1190	22.50
1192	27.50
1193	15.00
1194/22	56.25

Cat. No.	List Price
1194	$60.00
1196	67.50
1197	80.00
1198	100.00
1199	181.25
1199/10	237.50
1200	45.00
1201	55.00
1202	67.50
1229	2.75
1230	3.50
1231	3.75
1232	6.00
1233	9.75
1234	13.00
1235	16.25
1241	12.50
1242	52.50
1244	11.25
1245	13.25
1246	17.25
1247	20.00
1247/6	25.50
1247/8	33.25
1248	10.00
1249	12.25
1250	14.75
1250/18	18.75
1251	17.50
1251/18	24.50
1252	20.50
1253	25.75
1254	30.00
1254/18	42.50
1255	33.75
1255/8	37.50
1256	10.00
1256V	10.00
1257	12.50
1258	15.00
1261	67.50
1262	11.25
1262V	11.25
1263	15.00
1264	18.75
1265	57.50
1266	67.50
1267	29.38
1268	34.38
1269	17.50
1271	155.00
1272	50.00
1274	23.75
1275	30.00
1275/4	41.25
1275/5	52.50
1275/6	70.00
1276/2	100.00
1276/3	122.50
1276	215.00
1277	295.00
1277/13	375.00
1277/15	425.00
1277/25	662.50
1279	30.00
1280	45.00
1281	.30
1281V	.30
1284	8.75
1284V	8.75

Cat. No.	List Price
1289	$462.50
1291	600.00
1293	762.50
1295	1025.00
1460	18.13
1460-Q	2.45
1461	21.25
1461-Q	2.75
1462	26.25
1462-Q	3.25
1463	35.00
1463-Q	4.13
1464	47.50
1464-Q	5.38
1465	15.50
1465-Q	2.18
1466	18.13
1466-Q	2.45
1467	23.13
1467-Q	2.95
1468	28.75
1468-Q	3.50
1469	38.75
1469-Q	4.50
1480	27.50
1481	32.00
1482	39.38
1483	50.00
1484	69.00
1485	105.50
1490	30.00
1491	35.00
1492	43.50
1493	53.75
1494	70.63
1495	115.00
1513	3.13
1515	13.75
1523	3.63
1525	16.25
1533	3.88
1535	17.50
1543	5.25
1545	23.75
1546	31.25
1547	36.25
1548	53.25
1550	13.75
1551	14.50
1552	2.08
1553	17.50
1554	2.38
1555	23.75
1557	35.00
1559	49.38
1560	123.75
1561	12.50
1562	1.88
1563	15.00
1564	2.13
1565	20.63
1567	26.25
1569	35.00
1571	26.25
1573	30.00
1575	38.13
1577	50.50
1579	67.75
1581	24.00
1583	28.75

Cat. No.	List Price
1585	$36.25
1587	48.00
1589	61.88
1623	20.00
1625	187.50
1633	3.75
1635	16.88
1636	21.25
1637	7.50
1638	35.00
1691	4.13
1692	18.75
1695	3.88
1696	18.00
1698	3.50
1699	16.88
1700	.68
1951	25.00
1952	28.75
1953	37.50
1954	42.50
1955	52.50
1956	90.00
1957	125.00
1958	165.00
1964	.15
1966	5.88
1967	13.75
1981	11.25
1983	10.63
1989	3.63
1991	3.88
1995	5.25
1997	6.25
1999	7.25
2091	21.55
2106	.60 ea.
2109	.75 ea.
2112	.95 ea.
2126	.80 ea.

RADIO VARNISHED TUBING

Cat. No.	Per C ft. List Price
24	$ 6.13
20	6.13
19	6.25
18	6.50
17	6.63
16	7.00
15	7.25
14	7.50
13	7.88
12	8.25
11	9.18
10	9.75
9	10.50
8	11.00
7	11.75
6	12.63
5	13.75
4	15.38
3	16.88
2	18.38
1	20.63

Cat. No.	List Price
0	$24.75
3/8	31.00
7/16	35.13
1/2	41.25
5/8	47.50

MAGNETO VARNISHED TUBING

Cat. No.	Per C ft. List Price
24	$ 6.65
20	6.65
18	6.65
19	6.65
17	6.65
16	7.15
15	7.50
14	7.90
13	8.15
12	8.25
11	9.65
10	10.40
9	11.25
8	11.90
7	13.00
6	14.25
5	15.40
4	16.75
3	18.00
2	19.40
1	20.65
0	24.75
3/8	31.00
7/16	35.15
1/2	41.25
5/8	47.50

SATURATED SLEEVING

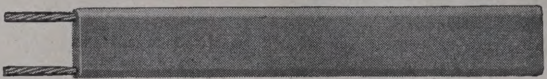
Cat. No.	Per C ft. List Price
24	$ 4.00
20	4.00
19	4.40
18	4.40
17	4.40
16	4.50
15	4.75
14	5.15
13	5.25
12	5.65
11	6.00
10	6.65
9	7.15
8	7.40
7	7.50
6	7.75
5	8.15
4	8.65
3	9.75
2	10.90
1	12.00
0	13.90
3/8	18.25
7/16	22.00
1/2	24.65
5/8	28.15

ALL PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

Intelin* TV Lead-in Cables by Federal

Transmission Lines for Every Television Application by America's Leading Manufacturer of Solid Dielectric HF Cables

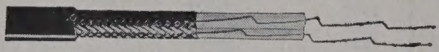
FTR TV-1182 "Silver" Heavy-Duty TV Line—300 ohms



Insulated with Federal "Silver" polyethylene—the revolutionary development that provides greater resistance to weather, heat and sunlight. Unchanging electrical and physical characteristics assure long, trouble-free service. Installations are more attractive—silver insulation blends with any color scheme in home decoration.

Federal Code No.	Nominal impedance ohms	Nominal Attenuation DB per 100 feet			Suggested Retail Price per ft.
		50 Mc	100 Mc	200 Mc	
TV-1182	300	.84	1.2	1.8	$ .055

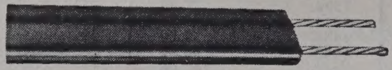
Type K-111 Shielded 300-Ohm TV Lead-In



Shielded and balanced 300-ohm TV lead-in that minimizes "snow," "ghosts" and electrical noise due to lead-in pick-up. For use in high signal strength, high noise level areas.

Federal Code No.	Nominal Impedance Ohms	Attenuation DB/100 ft.	Sugg'd Retail Price, per ft.
K-111	300	2.4 at 50 Mc. 3.4 at 100 Mc 4.6 at 200 Mc.	$.24

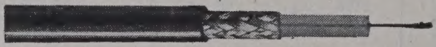
Type K-200 Ultra Low-Loss 200-Ohm TV Lead-In



A 200-ohm TV lead-in that is the answer to satisfactory reception in extreme fringe areas where weak signal strength demands a lead-in with absolute minimum losses.

Federal Code No.	Nominal Impedance Ohms	Attenuation DB/100 ft.	Sugg'd Retail Price, per ft.
K-200	200	.45 at 50 Mc. .56 at 100 Mc. .66 at 200 Mc.	$.26

Type RG-59/U Coaxial 72-Ohm TV Lead-In Cable



72-ohm (U. S. Government approved) coaxial cable. For use with unbalanced input TV receivers where top quality installation is essential.

Federal Code No.	Nominal Impedance Ohms	Attenuation DB/100 ft.	Sugg'd Retail Price, per ft.
RG-59/U	72	2.7 at 50 Mc. 3.8 at 100 Mc. 6.0 at 200 Mc.	$.12

Type RG-11/U
Coaxial 75-Ohm Low-Loss TV Lead-In Cable

75-ohm low-loss (U. S. Government approved) coaxial cable. For use with unbalanced input TV receivers in low signal strength areas.

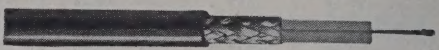
Federal Code No.	Nominal Impedance Ohms	Attenuation DB/100 ft.	Sugg'd Retail Price, per ft.
RG-11/U	75	1.35 at 50 Mc. 2.1 at 100 Mc. 3.1 at 200 Mc.	$.22

Type K-14 Ultra Low Loss 72-Ohm Cable

72-ohm shielded cable for use as main transmission line in community TV and other distribution systems.

Federal Code No.	Nominal Impedance Ohms	Attenuation DB/100 ft.	Sugg'd Retail Price, per ft.
K-14	72	.4 at 50 Mc. .7 at 100 Mc. 1.15 at 200 Mc.	$1.13

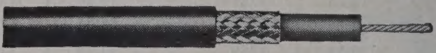
Type TV-59 Coaxial 72-Ohm TV Lead-In Cable



An economical, high-quality 72-ohm coaxial cable for use as lead-in with unbalanced input TV receivers.

Federal Code No.	Nominal Impedance Ohms	Attenuation DB/100 ft.	Sugg'd Retail Price, per ft.
TV-59	72	3.8 at 100 Mc.	$.094

Type RG-8/U Coaxial 52-Ohm TV Lead-In Cable



52-ohm low-loss (U. S. Government approved) coaxial cable. Characteristics and quality proved in every installation where this type cable is indicated. For special applications and experimental work.

Federal Code No.	Nominal Impedance Ohms	Attenuation DB/100 ft.	Sugg'd Retail Price, per ft.
RG-8/U	52	1.25 at 50 Mc. 2.0 at 100 Mc. 3.2 at 200 Mc.	$.24

Intelin High Frequency Cables, Manufactured by Federal Telephone and Radio Corporation, Are Available in a Complete Line for All Electronic Requirements.

Consult your local Federal Distributor or write to Federal direct—

FEDERAL TELEPHONE & RADIO FTR

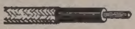
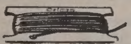
AN IT&T ASSOCIATE

*Trade Mark

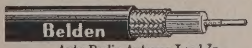
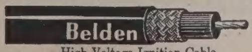
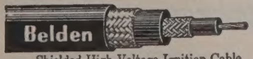
Belden

RADIO • TELEVISION WIRE

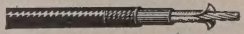
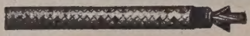
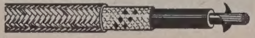
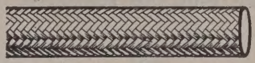
accessories

Trade Number	Lengths & †Package	A.W.G.	Description	Stranding	Insulation Thickness (inches)	Nom. Diam (inches)
			litz wire			
8817	100'S		For rewinding antenna primaries and for hand-wound r-f coils. 5x44 Celenamel with a wrap of Nylon.	5x44		.008
			lead-in wire 			
8206	250'S	18	Tinned copper, flexible stranding; rubber insulation; tinned copper braid shield	7x27	.040"	.155
			voice coil lead wire 			
8127	***10'	25	Bare copper wire braided	32x40		.024
	***Packaged 10 ft on card, 5 cards in carton.					
			indoor aerial wire — EXTRA FLEXIBLE 			
8014	**25' 500'SK	25	Tinned copper, flexible stranding; chrome vinyl plastic insulation	13x36	.010"	.044
	**Packaged 25 ft on card, 5 cards in carton.					
			aerial wire			
8000	50'C 75'C 100'C 1000'S	7x22	STRANDED BARE COPPER			
8002	50'C 75'C 100'C 1000'S	7x24				
			SOLID BELDENAMEL 			
8008	100'CK 200'S 500'S	12				
8009	100'CK 500'S	14				
			SOLID TINNED COPPER (BUS BAR WIRE)			
8011	100'CK	12				
8012	100'CK	14				
8013	100'CK	16				

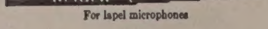
auto and aircraft radio wires and shielding

Trade Number	Lengths & †Package & Color	A.W.G.	Description	Stranding	Nom. Diam (inches)
			 Auto Radio Antenna Lead-In		
8664	100'S Black	26	Tinned copper, solid; polyethylene insulation; tinned copper braid shield; black vinyl plastic jacket; NOMINAL CAPACITANCE Per Ft 15.0 MMF	solid	.245
			 High-Voltage Ignition Cable		
8667	100'S Black	16	Tinned copper, flexible stranding; rubber insulation; cotton braid; lacquer coating	19x29	.280
			 Shielded High-Voltage Ignition Cable		
8665	100'S Black	19	Stainless steel alloy, flexible stranding; rubber insulation; glass yarn web braid; neoprene jacket; tinned copper braid shield; neoprene jacket; NOMINAL CAPACITANCE Per Ft 33.0 MMF	6x.013" + 1x.011" steel alloy	.365

auto and aircraft radio wires and shielding (cont'd)

Trade Number	Lengths & †Package & Color	A.W.G.	Description	Stranding	Nom. Diam (inches)
			 Heavy-Duty Hook-Up Wire		
8833	100'S 1000'S Black Blue Green Red Yellow	18	Tinned copper, flexible stranding; paper wrap; rubber insulation; cellulose acetate yarn braid; lacquer coating	16x30	.136
			 Heavy-Duty Hook-Up Wire		
8652	100'S Black with one White Tracer	16	Tinned copper, flexible stranding; cellophane wrap; rubber insulation; cotton braid; lacquer coating	19x29	.140
8651	100'S Green with two White Tracers	14		19x27	.170
8650	100'S Red with three White Tracers	12		19x25	.200
			 Shielded Heavy-Duty Hook-Up Wire		
8656	100'S	16	Tinned copper, flexible stranding; cellophane wrap; rubber insulation; cotton braid; blue lacquer coating; tinned copper braid shield	19x29	.170
			 Shielding and Bonding Braid		
8660	50'SK 250'S		Tinned copper braid in form of tubing	96x34	13/64 ID
8668	50'SK 250'S			120x34	1/8 ID
8661	50'SK 250'S			192x34	3/8 ID
8669	50'S 250'S			336x34	1/2 ID
8662	50'S 250'S			576x34	25/32 ID

microphone cables

Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Nom. Diam (inches)	Nominal Capacitance Per Ft (mmf)
			plastic microphone cable  For lapel microphones			
8411	25'CK 100'S 500'S Chrome	25-1	Tinned copper and tinned steel, flexible stranding; cellulose yarn braid; polyethylene insulation; tinned copper braid shield; chrome vinyl plastic jacket	3x33 copper plus 4x33 steel	.144	37

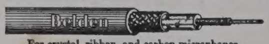
• Also for TV grounding CK—Coiled in carton K—Carton CR—Crate reel S—Spool C—Coil SK—Spooled in carton

See Page S-21 for BELDEN Prices

BELDEN RADIO • TELEVISION WIRE

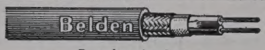
microphone cables (cont'd)

plastic microphone cable (Cont'd)



For crystal, ribbon, and carbon microphones

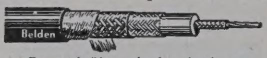
Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Nom. Diam (inches)	Nominal Capacitance Per Ft (mmf)
8401	25'CK 50'CK 100'S 500'S Chrome	25-1		3x33 copper plus 4x33 steel	.200	25



For carbon microphones

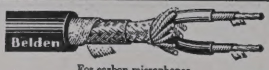
Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Nom. Diam (inches)	Nominal Capacitance Per Ft (mmf)
8422	25'CK 50'CK 100'S 500'S Chrome	22-2	Tinned copper, flexible stranding; polyethylene insulation, color coded; conductors cabled with fillers; rayon braid; tinned copper braid shield; chrome vinyl plastic jacket	16x34	.225	**32

rubber microphone cable



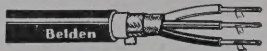
For crystal, ribbon, and carbon microphones

Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Nom. Diam (inches)	Nominal Capacitance Per Ft (mmf)
8410	25'CK 50'CK 100'S 500'S Black	25-1	Tinned copper and tinned steel, flexible stranding; cellulose yarn braid; rubber insulation; rayon braid; tinned copper braid shield; rayon wrap; black rubber jacket	3x33 copper plus 4x33 steel	.245	38



For carbon microphones

Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Nom. Diam (inches)	Nominal Capacitance Per Ft (mmf)
8412	25'CK 50'CK 100'S 500'S Black	20-2	Tinned copper, flexible stranding; cotton wrap; rubber insulation, color coded; conductors cabled with fillers; rayon braid; tinned copper braid shield; cotton wrap; black rubber jacket	26x34	.280	**68

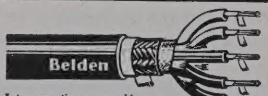


For carbon microphones

Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Nom. Diam (inches)	Nominal Capacitance Per Ft (mmf)
8423	50'CK 250'S Black	20-3		26x34	.280	**54

** Between one conductor and remaining conductors connected to shield.

shielded multiple conductor cables



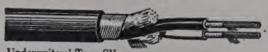
Interconnecting power cable for all electronic uses

Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Nom. Insulation Thick. (inches)	Nom. Jacket Thick. (inches)	Nom. Diam (inches)
*8424	50'CK 250'S Black	20-4	Tinned copper, flexible stranding; cotton wrap; rubber insulation, color coded; conductors cabled; rayon braid; tinned copper braid shield; cotton wrap; black rubber jacket	26x34	.020	.040	.305
8425	50'CK 250'S Black	20-5		26x34	.020	.040	.335
8426	100'S Black	20-6		26x34	.020	.040	.355
8427	100'S Black	20-7		26x34	.020	.040	.370

* Also used as microphone cable.

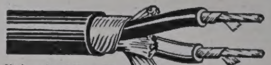
multiple conductor cables

rubber-jacketed portable cord



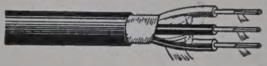
Underwriters' Type SV

Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Insulation Thick. (inches)	Jacket Thick. (inches)	Nom. Diam (inches)
8452	100'S 500'S Black	18-2	Bare copper, flexible stranding; cotton wrap; rubber insulation, color coded; conductors cabled with fillers; cotton wrap; black rubber jacket	41x34	1/64	1/32	.245

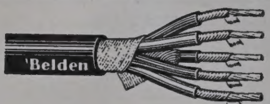


Underwriters' Type SJ

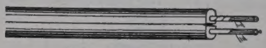
Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Insulation Thick. (inches)	Jacket Thick. (inches)	Nom. Diam (inches)
8472	250'S Black	16-2		65x34	1/32	1/32	.325



Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Insulation Thick. (inches)	Jacket Thick. (inches)	Nom. Diam (inches)
8453	100'S 500'S Black	18-3		41x34	1/64	1/32	.265
8454	100'S 500'S Black	18-4		41x34	1/64	1/32	.265

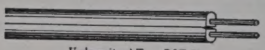


Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Insulation Thick. (inches)	Jacket Thick. (inches)	Nom. Diam (inches)
8455	100'S 250'S Black	22-3 18-2		16x34 41x34	1/64	1/32	.280



Underwriters' Type POSJ-64

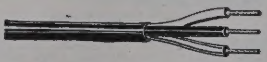
Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Insulation Thick. (inches)	Jacket Thick. (inches)	Nom. Diam (inches)
8462	100'S 250'S Brown	18-2	Bare copper, flexible stranding; cotton wrap, color coded; parallel conductors with rubber insulation and jacket integral	41x34	1/32		.123x .223



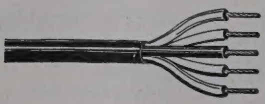
Underwriters' Type POT-64

Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Insulation Thick. (inches)	Jacket Thick. (inches)	Nom. Diam (inches)
8888	250'S Black	18-2	One bare and one tinned copper conductor, flexible stranding; parallel conductors with vinyl plastic insulation and jacket integral	41x34	1/32		.114x .231

plastic-insulated cable



Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Insulation Thick. (inches)	Jacket Thick. (inches)	Nom. Diam (inches)
8443	100'S 500'S Brown	22-3	Tinned copper, flexible stranding; vinyl plastic insulation, color coded; conductors cabled; over-all tubed brown vinyl plastic jacket	7x30	.010		.140
8444	100'S 500'S Brown	22-4		7x30	.010		.158



Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Insulation Thick. (inches)	Jacket Thick. (inches)	Nom. Diam (inches)
8445	100'S 500'S Brown	22-5		7x30	.010		.170

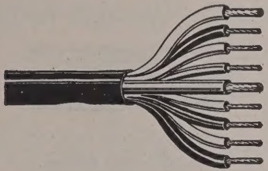
† CK—Coiled in carton K—Carton CR—Crate reel S—Spool C—Coil SK—Spooled in carton

See Page S-21 for BELDEN Prices

BELDEN RADIO·TELEVISION WIRE

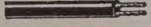
multiple conductor cables (cont'd)

plastic-insulated cable (Cont'd)

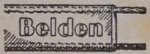
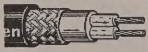
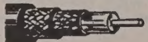
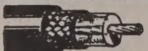
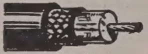
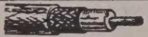
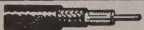
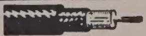
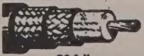
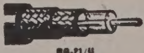
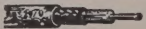
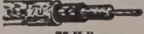


Trade Number	Lengths & †Package & Color	A.W.G. and No. Condrs.	General Construction	Stranding	Insulation Thick. (inches)	Jacket Thick. (inches)	Nom. Diam (inches)
8446	100'S Brown	22-4 18-2		7x30 16x30	.010 .018		.212
8447	100'S Brown	22-5 18-2		7x30 16x30	.010 .018		.236
8448	100'S Brown	22-6 18-2		7x30 16x30	.010 .018		.240
8449	100'S Brown	22-7 18-2		7x30 16x30	.010 .018		.262

transmission line cables

				NOMINAL ELECTRICAL PROPERTIES				
Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8204	500'S White	18 7x26	 Tinned copper, flexible stranding; cotton wrap; low-loss rubber insulation, color coded; two conductors cabled; white cotton braid treated with weather-resistant compound. **For extension speakers.**	.190					
8209	500'S White	18 7x26	 Tinned copper, flexible stranding; cotton wrap; low-loss rubber insulation, color coded; two conductors cabled; paper wrap; tinned copper braid shield; white cotton braid, treated with weather-resistant compound. **For long runs in extension speaker installations.**	.235					
8205	500'S Black	22 7x30	 Tinned copper, flexible stranding; rubber insulation, color coded; two conductors cabled; black cotton braid, treated with weather-resistant compound. **For extension speaker and control circuits.**	.165					
8222	100'SK 500'S Brown	20 7x28	 Bare copper, flexible stranding; conductors parallel; polyethylene plastic insulation. **For use with receiving antenna at high frequencies.**	.075 x.128	100. 200. 300. 400.	7.7 11.0 13.6 15.9	72	69	20.3
8223	100'SK 500'S Brown	20 7x28	 Same as 8222. **For use with receiving antenna, matching transformer, connecting link between electronic units, and experimental applications at high frequencies.**	.075 x.143	100. 200. 300. 400.	5.1 7.2 8.9 10.3	100	72	14.4
8224	100'S 500'S Brown	20 7x28	 Same as 8222. **For use with receiving antenna, matching transformer, and experimental applications at high frequencies.**	.075 x.182	100. 200. 300. 400.	2.8 4.2 5.4 6.4	150	76	9.0

transmission line cables (cont'd)

				NOMINAL ELECTRICAL PROPERTIES					
Trade Number	Lengths & †Package & Color	A.W.G. & Stranding	General Construction and Application	Nom. Diam (in.)	Frequency (mc)	Attenuation Per 100 Ft (Decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)
8225	100'S 500'S 1000'S Brown	20 7x28	 Same as 8222. **For use with television and FM receiving antenna. Exceptionally low losses at high frequencies.**	.072 x.400	100. 200. 300. 400.	1.1 1.7 2.2 2.7	300	85	4.6
8227	100'S 250'S Black	20 7x28	 One bare and one tinned copper conductor, flexible stranding; polyethylene plastic insulation; two conductors cabled; polyethlene plastic jacket; tinned copper braid shield; black vinyl plastic jacket. **For use with television and FM antenna in extremely noisy locations.**	.325	100. 200. 300. 400.	4.1 6.4 8.4 10.2	100	62	16.6*
8236	100'S 500'S Black	16 solid	 RG-5/U Bare copper, solid; polyethylene plastic insulation; bare copper double braid shield; black vinyl plastic jacket. **A small diameter microwave cable.**	.332	100. 200. 300. 400.	2.65 3.85 4.80 5.60	52.5	66	28.5
8237	100'S 500'CR Black	13 7x21	 RG-8/U Bare copper, flexible stranding; polyethylene plastic insulation; bare copper braid shield; black vinyl plastic jacket. **Medium sized 50 ohm video & communication cable.**	.405	100. 200. 300. 400.	2.10 3.30 4.10 4.50	52	66	29.5
8238	100'S 500'CR Black	18 7x26	 RG-11/U Tinned copper, flexible stranding; polyethylene plastic insulation; bare copper braid shield; black vinyl plastic jacket. **Medium sized 75 ohm video & communication cable.**	.405	100. 200. 300. 400.	1.90 2.85 3.60 4.35	75	66	20.5
8239	100'S 500'S Clear	18 7x.0152	 RG-54A/U Bare copper, flexible stranding; polyethylene plastic insulation; tinned copper braid shield; polyethylene plastic jacket. **Small diameter general purpose cable.**	.250	100. 200. 300. 400.	3.10 4.40 5.70 6.70	58	66	26.5
8240	100'S 500'S Black	20 solid	 RG-58/U Bare copper, solid; polyethylene plastic insulation; tinned copper braid shield; black vinyl plastic jacket. **A cable designed for radio frequency transmission, video, test equipment, and pulse transmission.**	.195	100. 200. 300. 400.	4.10 6.20 8.00 9.50	53.5	66	28.5
8241	100'S 500'S Black	22 solid	 RG-59/U Bare "Copperweld" solid; polyethylene plastic insulation; bare copper braid shield; black vinyl plastic jacket. **A television antenna cable.**	.242	100. 200. 300. 400.	3.75 5.60 7.10 8.30	73	66	21.0
8242	100'S 500'CR Gray	13 7x21	 RG-9/U Silver coated copper wire flexible stranding; polyethylene plastic insulation; silver coated copper braid shield; bare copper braid; shielded gray plastic jacket. **Medium size 75 ohm video & communications cable.**	.420	100. 200. 300. 400.	2.10 3.30 4.00 4.50	51	66	30.0
8243	100'S 500'S Gray	16 solid	 RG-21/U Tophet A resistance wire solid; polyethylene plastic; silver coated copper wire; double shield; gray plastic jacket. **Special high attenuation cable with small temperature coefficient of attenuation.**	.332	100. 200. 300. 400.	14.5 20.5 25.0 29.0	53	66	29.0
8244	100'S 500'S Clear	20 solid	 RG-29/U Bare copper solid; polyethylene plastic; tinned copper braid; shield; polyethylene plastic jacket. **Small diameter general purpose cable.**	.184	100. 200. 300. 400.	4.10 6.20 7.90 9.50	53.5	66	28.5
8245	100'S 500'S Clear	20 solid	 RG-55/U Bare copper solid; polyethylene plastic; tinned copper braid double shield; polyethylene plastic jacket. **Small diameter general purpose cable.**	.206	100. 200. 300. 400.	4.10 6.20 7.90 9.50	53.5	66	28.5

*Capacitance between conductors †CK—Coiled in carton K—Carton CR—Crate reel S—Spool C—Coil SK—Spooled in carton

BELDEN RADIO·TELEVISION WIRE

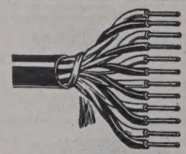
magnet wire

Size	Turns Per Linear Inch	Turns Per Square Inch	Approx. Length in Feet		
			¼-Lb Spool	½-Lb Spool	1-Lb Spool
			BELDENAMEL		
14	15.2	231	...	40	...
16	19.1	365	...	62	...
18	23.9	571	...	100	...
20	29.9	894	...	160	...
22	37.4	1399	...	250	...
24	46.9	2200	...	400	...
26	59.0	3481	...	638	...
28	73.8	5446	505	1010	...
30	92.2	8501	805	1610	...
32	114.0	12996	1270	2540	...
34	144.0	20736	2015	4030	...
36	180.0	32400	3200	6400	...
38	225.0	50625	5070	...	...
40	290.0	84100	8050	...	...
			HNC NYLCLAD		
14	...	...	...	...	79
16	...	...	...	...	125
18	...	...	...	...	199
20	...	...	...	...	316
22	...	...	...	...	503
24	...	...	...	...	809
26	...	...	...	...	1264
28	...	...	...	...	2001
30	...	...	...	...	3167
32	...	...	...	...	5023
34	...	...	...	...	7962
36	...	...	...	...	12618
38	...	...	...	...	20004
40	...	...	...	...	31686
			SINGLE COTENAMEL		
14	14.1	199	...	39	78
16	17.4	303	...	61	123
17	...	...	...	...	155
18	21.4	458	...	97	195
19	...	...	...	...	245
20	26.1	681	...	154	307
22	31.9	1018	...	241	481
24	38.6	1490	...	376	752
25	...	...	...	...	942
26	46.4	2153	295	590	1178
28	55.1	3036	458	916	1832
30	64.7	4186	710	1420	2843
32	74.6	5565	1090	2180	...
34	86.6	7500	1606	...	...
36	97.6	9526	2425	...	...

intercommunicating and sound system cables

For Station-to-Station and Extension Wiring
(Unshielded)

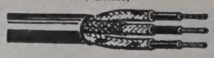
Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8740	100'S 500'S	22- 2	1	Bare copper, solid; baked enamel film; cotton braid; waxed; color coded; conductors cabled in pairs; over-all tubed brown vinyl plastic jacket	None	solid		.146
8741	100'S 500'S	22- 4	2		None	solid		.205
8742	100'S 500'S	22- 6	3		None	solid		.230



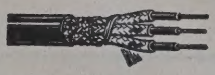
Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8743	100'S 500'S	22-12	6	Tinned copper, solid; vinyl plastic insulated; color coded; conductors cabled in pairs; over-all tubed brown vinyl plastic jacket	None	solid	.010	.265
8744	100'S 500'S	22-18	9		None	solid	.010	.320
8745	100'S 500'CR	22-30	15		None	solid	.010	.380
8746	100'S 500'CR	22-54	27		None	solid	.010	.510

intercommunicating and sound system cables (cont'd)

For Station-to-Station and Extension Wiring
(Shielded)

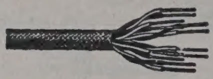


Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8734	100'S 500'S	22- 3	Not paired	Tinned copper, flexible stranding; vinyl plastic insulation; cotton braid; waxed; color coded; **three conductors** cabled; one conductor tinned copper braid shield; and two conductors unshielded; over-all tubed brown vinyl plastic jacket	Over 1 conductor	7x30	.012	.210



Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8735	100'S 500'S	22- 3	Not paired	Tinned copper, flexible stranding; vinyl plastic insulation; cotton braid; waxed; color coded; **three conductors** cabled; tinned copper braid shield; over-all tubed brown vinyl plastic jacket	Over 3 conductors	7x30	.012	.228
8737	100'S 500'S	22- 2	1	Tinned copper, flexible stranding; vinyl plastic insulation; cotton braid; waxed; color coded; conductors cabled; tinned copper braid shield; over-all tubed brown vinyl plastic jacket	Over 2 conductors	7x30	.012	.220

For Station-to-Terminal Wiring
(Unshielded)



Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8747	100'S	22-12	6	Tinned copper, flexible stranding; vinyl plastic insulation; color coded; conductors cabled in pairs; over-all brown cotton braid; lacquer coating	None	7x30	.010	.275
8748	100'S	22-18	9		None	7x30	.010	.335
8749	100'S	22-30	15		None	7x30	.010	.435
8750	100'S	22-54	27		None	7x30	.010	.585

broadcast audio cables

Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8738	100'S 500'S	22- 2	1	Bare copper, solid; baked enamel film; cotton braid; waxed; color coded; conductors cabled; tinned copper braid shield	Over-all	solid		.135

Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8739	100'S 500'S	22- 2	1	Same as 8738 plus over-all tubed brown vinyl plastic jacket	Over 2 conductors	solid		.175

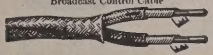
†CK—Coiled in carton K—Carton CR—Crate reel S—Spool C—Coil SK—Spooled in carton

BELDEN RADIO · TELEVISION WIRE

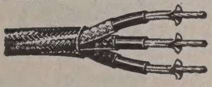
intercommunicating and sound system cables (Cont'd)

broadcast audio cables (cont'd)

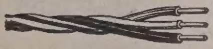
P.A. Cable Amplifier-to-Speaker
Broadcast Control Cable



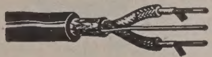
Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8799	100'S 500'S	18-2	1	Bare copper, solid; baked enamel film; cotton wrap; cotton braid; waxed; color coded; conductors cabled; tinned copper braid shield	Over-all	solid		.166



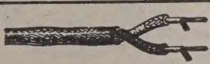
Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8432	100'S 500'S	20-2	1	Tinned copper, flexible stranding; paper wrap; rubber insulation; cotton braid; lacquer coating; color coded; conductors cabled; tinned copper braid shield	Over-all	10x30	.015	.215
8433	100'S 500'S	20-3	Not paired		Over-all	10x30	.015	.230



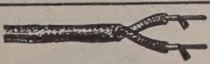
Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8482	S-1000	19-2	1	Bare copper, solid; vinyl plastic insulation, color coded; conductors cabled	None	solid	.012	.106
8483	S-1000	19-3	Not paired		None	solid	.012	.120



Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8437	100'S 500'S	22-2	1	Tinned copper, solid; baked enamel film; heavy cellulose acetate yarn wrap; cotton braid; waxed; color coded; conductors cabled; tinned copper braid shield; 22 A.W.G. tinned solid copper wire parallel to twisted pair under shield; tubed black vinyl plastic jacket	Over 2 conductors	solid		.210



Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8438	100'S 500'S	20-2	1	Tinned copper, solid; baked enamel film; cotton wrap; cotton braid, waxed; color coded; conductors cabled; tinned copper braid shield	Over-all	solid		.160



Trade Number	Lengths & †Package	A.W.G. and No. Condrs.	No. Pairs	General Construction	Tinned Copper Shielding	Stranding	Insulation Thick. (inches)	Nom. Diam (inches)
8439	100'S 500'S	20-2	1	Tinned copper, solid; heavy cellulose acetate yarn wrap, cellulose acetate yarn braid; lacquer coating; color coded, conductors cabled; tinned copper braid shield	Over-all	solid		.160

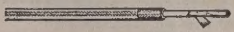
hook-up and lead wires

cellulose braid lacquered

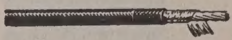
Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8941	25'CK 100'SK 1000'S	20	Tinned copper, solid; heavy cellulose acetate yarn wrap; cellulose acetate yarn braid; fungus-resistant lacquer coating. Colors: **Black, Blue, Brown, Green, Orange, Red, White, Yellow**	solid		.072	200	1000
8945	25'CK 100'SK 1000'S	18	Colors: **Black, Blue, Green, Red, White, Yellow**	solid		.080	200	1000

hook-up and lead wires (cont'd)

cellulose braid lacquered (Cont'd)



Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8943	25'CK 100'SK 1000'S	20	Tinned copper, flexible stranding; heavy cellulose acetate yarn wrap; cellulose acetate yarn braid; fungus-resistant lacquer coating. Colors: **Black, Blue, Brown, Green, Orange, Red, White, Yellow**	10x30		.076	200	1000
8947	25'CK 100'SK 1000'S	18	Colors: **Black, Blue, Green, Red, White, Yellow**	16x30		.087	200	1000



Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8942	100'SK 1000'S	16	Colors: **Black, Green, Red**	26x30		.099	200	1000
8938	100'SK 500'S	14	Colors: **Black, Red**	41x30		.115	200	1000

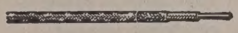
plastic insulated

Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8901	100'SK 1000'S	20	Tinned copper, solid; vinyl plastic insulation. Colors: **Black, Blue, Green, Red, Yellow**	solid	.015	.068	5000	8000

Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8905	100'SK 1000'S	20	Tinned copper, flexible stranding; vinyl plastic insulation. Colors: **Black, Blue, Green, Red, Yellow**	10x30	.015	.073	5000	8000

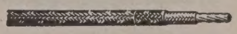
Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8913	100'SK 1000'S	20	Colors: **Black, Blue, Green, Red, Yellow**	10x30	.025	.091	5000	12000
8918	250'S 1000'S	18	Colors: **Black, Green, Red, Yellow**	16x30	.031	.112	5000	12000

R-F push-back wire CELLULOSE ACETATE BRAID WAXED



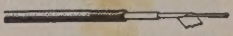
Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8841	100'SK 1000'S	20	Tinned copper, solid; two cellulose acetate yarn braids; waxed. Colors: **Black, Blue, Green, Red,** all with White Tracer	solid		.067	1000	1000

Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8839	100'SK 1000'S	20	Tinned copper, flexible stranding; two cellulose acetate yarn braids; waxed. Colors: **Black, Blue, Green, Red,** all with White Tracer	10x30		.072	1000	1000

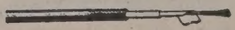


Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8844	100'SK 1000'S	18		16x30		.092	1000	1000

rubber-insulated push-back



Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8837	100'SK 1000'S	20	Tinned copper, solid; cotton wrap; unvulcanized rubber insulation; cellulose acetate yarn braid; fungus-resistant lacquer coating. Colors: **Black, Blue, Green, Red, Yellow**	solid	.010	.075	2000	2000



Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8838	100'SK 1000'S	20	Tinned copper, flexible stranding; cotton wrap; unvulcanized rubber insulation; cellulose acetate yarn braid; fungus-resistant lacquer coating. Colors: **Black, Blue, Green, Red, Yellow**	10x30	.010	.081	2000	2000

Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8833	100'S 1000'S	18	Tinned copper, flexible stranding; paper wrap; rubber-insulation; cellulose acetate yarn braid; fungus-resistant lacquer coating. Colors: **Black, Blue, Green, Red, Yellow**	16x30	.031	.135	10000	8000

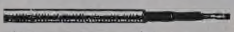
† CK—Coiled in carton K—Carton CR—Crate reel S—Spool C—Coil SK—Spooled in carton

See Page S-21 for BELDEN Prices

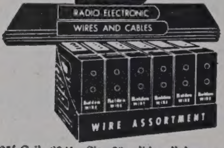
BELDEN RADIO · TELEVISION WIRE

hook-up and lead wires (cont'd)

shielded hook-up wire

Trade Number	Lengths & †Package	A.W.G.	General Construction and Colors	Stranding	Insulation Thick. (in.)	Nom. Diam (in.)	Nominal *D-C Ins. Res. Per Ft (megohms)	Nominal **Breakdown Voltage (volts)
8885	25'CK 100'SK 500'S	20	 Tinned copper, flexible stranding; rubber insulation; cellulose acetate yarn braid; fungus-resistant lacquer coating; tinned copper braid shield	10x30	.015	.117	5000	4000

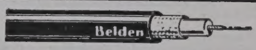
display Belden assortments



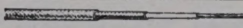
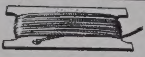
Trade Number	Contents
8864	Contents: 6—25' Coils 8941. Size 20 solid; cellulose acetate wrap and braid lacquered. One each **Black, Blue, Green, Red, White,** and **Yellow.**
8865	Contents: 6—25' Coils 8943. Size 20 flexible; cellulose acetate wrap and braid lacquered. One each **Black, Blue, Green, Red, White,** and **Yellow.**

instrument and lead wires

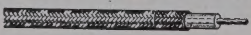
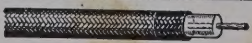
photoelectric cell cable (sound projectors)

Trade Number	Lengths & †Package & Color	A.W.G.	General Construction	Stranding	Nom. Diam (inches)	Nominal Capacitance Per Ft (mmf)
8221	100'S Black	25	 Tinned copper and tinned steel, flexible stranding; cellulose yarn braid; polyethylene insulation; tinned copper braid shield; black vinyl plastic jacket	3x33 copper plus 4x33 steel	.240	20

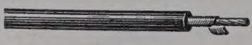
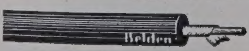
phonograph pickup arm cable

Trade Number	Lengths & †Package & Color	A.W.G.	General Construction	Stranding	Insulation Thick. (inches)	Nominal Diam (inches)
8431	*15' 100'S Brown	24	 Tinned copper, flexible stranding; rubber insulation; tinned copper braid shield; fine brown cotton braid	16x36	.015	.095
8014	*25' 500'SK Chrome	25	 Tinned copper, flexible stranding; chrome vinyl plastic insulation *Packaged on card, 5 cards in carton	13x36	.010	.044

high-voltage and cathode-ray tube lead cable

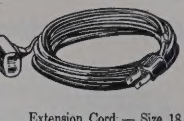
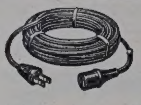
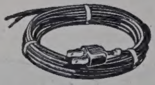
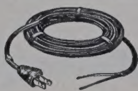
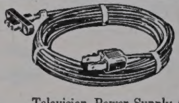
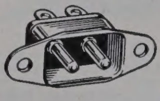
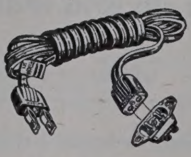
Trade Number	Lengths & †Package & Color	A.W.G.	General Construction	Stranding	Insulation Thick. (inches)	Nominal Diam (inches)
8869	100'S Red with Two White Tracers	20	 Tinned copper, flexible stranding; flame retardant polyethylene plastic insulation, red cellulose acetate yarn braid with 2 white tracers; lacquer coating. Suggested Voltage Rating (volts) 10000	7x28	.035	.136
8868	100'S Red	20	 Same as 8869 except heavier insulation and solid red braid. Suggested Voltage Rating (volts) 20000	7x28	.065	.198

test prod wire

Trade Number	Lengths & †Package & Color	A.W.G.	General Construction	Stranding	Insulation Thick. (inches)	Nominal Diam (inches)
8899	†† 14'CK 100'S 1000'S Black Red	18	 Tinned copper, extra flexible stranding; cotton wrap; rubber insulation. Suggested Voltage Rating (volts) 5000	65x36	.043	.140
8898	100'S 500'S Black Red	18	 Suggested Voltage Rating (volts) 10000 ††7' **Black** and 7' **Red**	65x36	.088	.230

† CK—Coiled in carton K—Carton CR—Crate reel

replacement and extension cords

Trade Number	†Package	Lengths & Color	
1701	1 K	10 Ft Brown	 Extension Cord — Size 18. Type POSJ-64. Extra-flexible all-rubber parallel lamp cord. Both ends unbreakable rubber. Does not mar floors or furniture. Safe for use on table tops. Underwriters' Flag Type Blue Cord Set Label.
1702	1 K	15 Ft Brown	
1705	1 K	6 Ft Brown	
1751	1 K	20 Ft Black	 Extension Cord — Size 18, Type SV. All-rubber portable cord with Belden molded-on all-rubber connector and Belden unbreakable soft rubber plug. Underwriters' Flag Type Blue Cord Set Label.
1725	1 K	7 Ft 6 In. Brown	 Replacement Cord — Size 18, Type POSJ-64. Extra-flexible all-rubber parallel lamp cord with Belden unbreakable soft rubber plug; opposite end stripped and tinned — ready for easy attachment. Underwriters' Flag Type Green Power Supply Cord Label. For lamps, radios, small appliances.
1749	1 K	6 Ft 3 In. Black	 Replacement Cord — Size 18, Type SV. All-rubber portable cord with Belden unbreakable soft rubber plug; opposite end stripped and tinned — ready for easy attachment. Underwriters' Flag Type Green Power Supply Cord Label. For amplifiers, test equipment, and small appliances.
8874	1 K	6 Ft Brown	 Television Power Supply Connector Cord. Original equipment on most television sets. Size 18, Type POSJ-64. Extra-flexible all-rubber parallel lamp cord with Belden molded-on all-rubber connector and Belden unbreakable soft rubber plug. Underwriters' Flag Type Blue Cord Set Label.
8125	10 K		 Male Connector — Flush mounting for use with 8874 and 1777 cord connector sets.
1777	1 K	6 Ft Brown	 Connect-A-Cord. 6 Ft. Size 18, Type POSJ-64. All-rubber parallel lamp cord with Belden unbreakable soft rubber plug; opposite end, Belden rubber connector and flush mounting receptacle. Underwriters' Flag Type Blue Cord Set Label.

S—Spool C—Coil SK—Spooled in carton

Belden Manufacturing Company • Chicago, Illinois

BELDEN • Price List

Belden Trade Number	Unit Package & Length**	Suggested List Price Each
1701	Brown	$1.30
1702	Brown	1.45
1705	Brown	1.20
1706	Brown	2.40
1709	Brown	2.75
1712	Brown	3.00
1715	Brown	3.25
1725	Brown	.55
1749	Black	.70
1751	Black	2.15
*1777		.90
8000	50′	.70
8000	75′	1.00
8000	100′	1.25
8000	1000′	11.40
8002	50′	.53
8002	75′	.70
8002	100′	.90
8002	1000′	7.75
8008	100′	1.95
8008	200′	3.75
8008	500′	9.00
8009	100′	1.35
8009	500′	6.00
8011	100′	1.95
8012	100′	1.40
8013	100′	1.05
8014	25′	.30
8014	500′	.015′
8125		.20
8126		.15
8127	10′	.23
8200	100′	.015′
8200	500′	.015′
8200	1000′	.015′
8204	500′	.04′
8205	500′	.03′
8206	250′	.02′
8209	500′	.08′
8210	100′	.07′
8210	500′	.07′
8221	100′	.09′
8222	100′	.02′
8222	500′	.02′
8223	100′	.02′
8223	500′	.02′
8224	100′	.03′
8224	500′	.03′
8225	100′	.04′
8225	500′	.04′
8225	1000′	.04′
8226	100′	.09′
8226	500′	.09′
8227	100′	.14′
8227	250′	.14′
8228	100′	.07′
8228	500′	.07′
8229	100′	.08′
8229	500′	.08′
8235	100′	.08′
8235	500′	.08′
8309		2.30
8320		7.50
8321		4.25
8322		12.65
8401	25′	1.90
8401	50′	3.75
8401	100′	.08′
8401	500′	.08′
8410	25′	2.50
8410	50′	5.00
8410	100′	.10′
8410	500′	.10′
8411	25′	1.55
8411	100′	.06′
8412	25′	2.40
8412	50′	4.75
8412	100′	.10′
8412	500′	.10′
8422	25′	2.25
8422	50′	$4.50
8422	100′	$ .09′
8422	500′	.09′
8423	50′	5.00
8423	250′	.11′
8424	50′	6.25
8424	250′	.14′
8425	50′	7.25
8425	250′	.16′
8426	100′	.20′
8427	100′	.21′
8431	100′	.04′
8432	100′	.07′
8432	500′	.07′
8433	100′	.09′
8433	500′	.09′
8443	100′	.045′
8443	500′	.045′
8444	100′	.06′
8444	500′	.06′
8445	100′	.07′
8445	500′	.07′
8446	100′	.10′
8447	100′	.11′
8448	100′	.12′
8449	100′	.12′
8452	100′	.05′
8452	500′	.05′
8453	100′	.07′
8453	500′	.07′
8454	100′	.08′
8454	500′	.08′
8455	100′	.10′
8455	250′	.10′
8462	100′	.03′
8462	250′	.03′
*8472		.08′
*8482		.015′
*8483		.025′
8484	500′	.045′
8484	1000′	.045′
8650	100′	.08′
8651	100′	.06′
8652	100′	.05′
8654	100′	.10′
8656	100′	.07′
8660	50′	.035′
8660	250′	.035′
8661	50′	.05′
8661	250′	.05′
8662	50′	.19′
8662	250′	.19′
8664	100′	.09′
8665	100′	.21′
8667	100′	.09′
8668	50′	.05′
8668	250′	.05′
8669	50′	.15′
8669	250′	.15′
8734	100′	.09′
8734	500′	.09′
8735	100′	.09′
8735	500′	.09′
8737	100′	.07′
8737	500′	.07′
8738	100′	.04′
8738	500′	.04′
8739	100′	.06′
8739	500′	.06′
8740	100′	.03′
8740	500′	.03′
8741	100′	.06′
8741	500′	.06′
8742	100′	.07′
8742	500′	.07′
8743	100′	.09′
8743	500′	.09′
8744	100′	.13′
8744	500′	.13′
8745	100′	.21′
8745	500′	$ .21′
8746	100′	.34′
8746	500′	.34′
8747	100′	.13′
8748	100′	.18′
8749	100′	.28′
8750	100′	.48′
8751	100′	.40′
8752	100′	.65′
8799	100′	.05′
8799	500′	.05′
8817	100′	$ .40
8833†	100′	.03′
8833†	1000′	.03′
8837†	25′	.50
8837†	100′	1.95
8837†	1000′	.02′
8838†	25′	.55
8838†	100′	2.00
8838†	1000′	.02′
8839†	25′	.55
8839†	100′	2.00
8839†	1000′	.02′
8841†	25′	.50
8841†	100′	1.85
8841†	1000′	.02′
8844†	25′	.60
8844†	100′	2.25
8844†	1000′	.025′
8864		2.70
8865		3.00
8868	25′	1.55
8868	100′	.055′
8869	25′	1.00
8869	100′	.03′
8872		1.25
8873		1.15
8874		.70
8885	25′	1.00
8885	100′	.04′
8885	500′	.04′
8888	250′	.05′
8890		.30
8895		1.10
8896		.55
8898†	100′	.04′
8898†	500′	.04′
8899†	14′	.50
8899†	100′	.025′
8899†	1000′	.025′
8901†	100′	1.00
8901†	1000′	.015′
8905†	25′	$ .40
8905†	100′	1.25
8905†	1000′	.015′
8913†	25′	$ .45
8913†	100′	1.55
8913†	1000′	.015′
*8918	250′	.025′
*8918	1000′	.025′
8920		1.25
8921		1.25
8922		1.25
8923		1.25
8924		1.25
8925		1.25
8929		1.25
8938†	100′	2.90
8938†	500′	.015′
8941†	25′	.45
8941†	100′	1.65
8941†	1000′	.015′
8942†	100′	2.40
8942†	1000′	.025′
8943†	25′	.50
8943†	100′	1.80
8943†	1000′	.02′
8945†	25′	.50
8945†	100′	1.90
8945†	1000′	.02′
8947†	25′	.55
8947†	100′	2.10
8947†	1000′	.025′
8976		1.25
8977		1.25
8989	25c pkg.	.25
8989	100	.75
8989	1000	5.00
8989	25c pkg.	.25
8992	100	.75
8992	1000	5.00
8993	25c pkg.	.25
8993	100	.65
8993	1000	3.75
8994		.65
8995	25c pkg.	.25
8995	100	.65
8995	1000	3.75
8996	25c pkg.	.25
8996	100	.65
8996	1000	3.75
8997	25c pkg.	.25
8997	100	.65
8997	1000	3.75
8998	25c pkg.	.25
8998	100	.50
8998	1000	2.50
8999	25c pkg.	.25
8999	100	.50
8999	1000	3.10

*New Item. †Specify Color. All prices subject to change without notice.

**Please indicate length desired, immediately following trade number, when more than one length is listed under the same trade number.

BELDENAMEL MAGNET WIRE

Size	Suggested List Price ¼ lb. Spools	Suggested List Price ½ lb. Spools
14	—	$.70
16	—	.70
18	—	.70
20	—	.70
22	—	.70
24	—	.70
26	—	.75
28	$.50	.80
30	.50	.95
32	.55	.95
34	.60	1.05
36	.75	1.30
38	.95	—
40	1.35	—

SINGLE COTENAMEL MAGNET WIRE

Size	Suggested List Price ¼ lb. Spools	Suggested List Price ½ lb. Spools	Suggested List Price 1 lb. Spools
14	—	$.75	$1.95
16	—	.80	2.08
17	—	—	2.13
18	—	.85	2.20
19	—	—	2.35
20	—	.90	2.43
22	—	.95	2.58
24	—	1.05	2.90
25	—	—	3.13
26	$.65	1.15	3.15
28	.70	1.30	3.58
30	.85	1.60	4.08
32	1.00	1.85	—
34	1.35	—	—
36	1.60	—	—

HNC NYLCLAD

Size	Suggested List Price 1 lb. Spool
14	$1.83
16	1.88
18	1.90
20	2.03
22	2.08
24	2.30
26	2.45
28	2.65
30	2.85
32	3.18
34	3.18
36	3.63
38	4.40
40	5.93

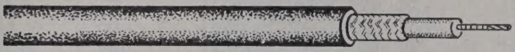
CORNISH RADIO AND TELEVISION WIRE PRODUCTS

P-A WIRES and CABLES

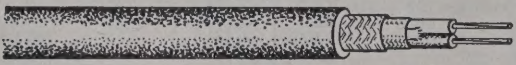
HOLLYWOOD MICROPHONE CABLES (Shielded-Jacketed)

Substantially made to withstand rough usage. Special low capacity color coded conductors. Braided with tinned copper shield. Tough weatherproof polished jacket overall.

Single Conductor — unusually low capacity. Can be used up to 100 ft. with high impedance ribbon microphones and up to 50 ft. with crystal microphones.



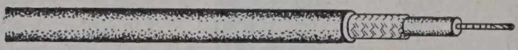
Cat. No.	Conductors	Approx. Feet on Spool	Approx. Outside Diam.	List Price M ft.
1105	1	100	.260″	$85.00
2104	1	500	.260″	82.00
2101	1	1000	.260″	80.00



Two Conductor, for low impedance microphones and transmission lines.

1152	2	100	.280″	$105.00
1153	2	250	.280″	102.00
2152	2	500	.280″	100.00
1154	3	100	.280″	130.00
1155	3	250	.280″	127.00
2153	3	500	.280″	125.00
1156	4	100	.305″	160.00
1157	4	250	.305″	157.00
2154	4	500	.305″	155.00

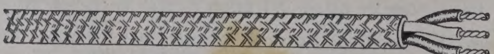
LAPEL MICROPHONE CABLE



Similar to No. 2101 except smaller in diameter.

1160	1	100	.175″	$75.00
1161	1	500	.175″	72.00
2160	1	1000	.175″	70.00

SHIELDED CABLES



These cables are recommended for sound recording equipment and P.A. systems where a flexible shielded cable is necessary. Each conductor consists of multi-strand copper wire cotton served, rubber covered and braided with color-coded cotton. Conductors No. 20 gauge unless otherwise specified.

Cat. No.	Put-Up	List Price per M ft.
1114	100′ Spool 2 Conductor	$ 78.00
1115	250′ Spool 2 Conductor	75.00
1116	100′ Spool 3 Conductor	108.00
1117	250′ Spool 3 Conductor	105.00
1118	100′ Spool 4 Conductor	135.00
1119	250′ Spool 4 Conductor	132.00
1120	100′ Spool 5 Conductor	161.00
1121	250′ Spool 5 Conductor	158.00
1122	100′ Spool 6 Conductor	183.00
1123	250′ Spool 6 Conductor	180.00

SHIELDED CABLES—COTTON BRAID OVERALL

Cat. No.	Put-Up	List Price per M ft.
1125	250′ Spool 2 Conductor	$ 95.00
1127	250′ Spool 3 Conductor	132.00
1129	250′ Spool 4 Conductor	160.00
1131	250′ Spool 5 Conductor	190.00
1133	250′ Spool 6 Conductor	220.00

RADIO BATTERY CABLE AND DYNAMIC SPEAKER EXTENSION CABLE

Multi-conductor cables having flexible conductors with overall heavy cotton braid. Individual conductor consists of stranded copper, rubber covered with color-coded cotton braid. Suitable to all types of P.A. Systems. Conductors No. 20 gauge.

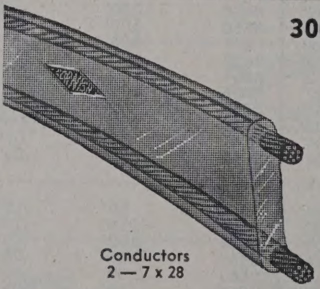
Cat. No.	Put up in spool	List Price per M ft.	Cat. No.	Put up in spool	List Price per M ft.
228	3 Wire-100 Ft.	$ 70.00	241	7 Wire-100 Ft.	$137.00
219	4 Wire-100 Ft.	85.00	222	8 Wire-100 Ft.	153.00
221	5 Wire-100 Ft.	100.00	223	9 Wire-100 Ft.	170.00
231	6 Wire-100 Ft.	120.00	224	10 Wire-100 Ft.	188.00

SHIELDED LEAD-IN AND GROUND WIRE

These products are made of flexible stranded copper conductors insulated with a substantial wall of high grade rubber with an overall of close tinned copper shield. They are most frequently used as a shielded down lead to ground out interference noises.

No. 20 1/32" R.C.	List Price Price	No. 18 1/32" R.C.	List Price Price
1143— 50 Ft. Coil.....	$ 1.80	1146— 50 Ft. Coil.....	$ 2.10
1144— 250 Ft. Spool....	8.00	1147— 250 Ft. Spool....	9.25
1145—1000 Ft. Spool....	30.00	1148—1000 Ft. Spool....	35.00

300-OHM TELEVISION DOWN-LEAD



Furnished in three web thicknesses shown below, in order to meet all weather and operating conditions.

Supplied in brown and clear.

Cat. No.	Web Thickness	List Price per M Ft. 250′ Spool	1000′ Spool	*Mill Reel	Approx. Wt. per M Ft.
500	.045″	$28.25	$27.50	$26.75	17 lbs.
501	.065″	30.75	30.00	29.25	20 lbs.
502	.100″	40.75	40.00	39.25	28 lbs.

TELEVISION ANTENNA ROTATOR CABLE

Consists of 4 conductors, each 7 x 28 (3 bare and 1 tinned), poly-ethylene insulated, ribbed to permit easy stripping.

Cat. No.	List Price per M Ft. 250′ Spool	1000′ Spool	*Mill Reel	Approx. Wt. per M Ft.
510	$40.75	$40.00	$39.25	30 lbs.

BRAIDED TINNED COPPER TUBULAR SHIELDING

Recommended for wires up to $\frac{3}{16}$″ O.D.

Cat. No.	Put-Up	Width	List Price Each
1109	100 Ft. Spool	¼″	$ 6.25
1110	250 Ft. Spool	¼″	14.00

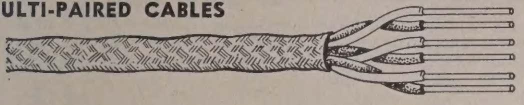
*About 2500 Feet.

CORNISH

RADIO AND TELEVISION WIRE PRODUCTS

INTERCOMMUNICATION CABLES

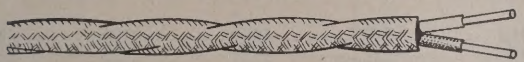
MULTI-PAIRED CABLES



Conductors are No. 22 solid tinned copper insulated with either vinyl plastic or double cotton impregnated braid—cabled in color-coded twisted pairs—with overall cotton braid.

Cat. No.	Put-Up	Width	List Price per M ft.
1225	2 Pair	(O.D. approx. $\frac{3}{16}$″)	$ 54.00
1226	6 Pair	(O.D. approx. $\frac{5}{16}$″)	153.00
1227	13 Pair	(O.D. approx. $\frac{7}{16}$″)	325.00
1228	26 Pair	(O.D. approx. $\frac{5}{8}$″)	640.00

TWO CONDUCTOR SHIELDED CABLE



Consists of two No. 20 stranded tinned copper plastic insulated conductors, color-coded and twisted with overall close tinned copper shield.

No. 1230 .... $45.00

THREE CONDUCTOR CABLE

3 Conductors are No. 20 solid tinned copper, plastic insulated, color-coded, twisted, with overall treated cotton braid.

No. 1231 .... $42.00

THREE CONDUCTOR (One Shielded)

Consists of a twisted pair of No. 20 solid tinned copper plastic insulated wires, and a single No. 20 solid tinned copper plastic insulated and shielded, all twisted, with over-all dry cotton braid.

No. 1232 .... $75.00
No. 1233—Same as No. 1232 except conductors are No. 22 solid $63.00

FLEXIBLE CORDS (Fixture Wires — Lamp Cords)

Fixture wires often used as all-purpose radio and lead-in wire. Lamp cords used for power supply and extension cords. Colors: Brown, Black, Ivory.

Cat. No.		Put-Up	List Price per M ft.
3050	—No. 18 Single, Type F, Cotton	1000 ft.	$17.50
*3020	—No. 18 Parallel, Type PO, Rayon	250 ft.	40.00
*3000	—No. 18 Parallel, Type POSJ, All Rubber	250 ft.	32.50
*3300	—No. 18 All Rubber Service Cord, Type SJ	250 ft.	60.00
*3500	—Replacement Cord Set—6 ft. 18/2, POSJ, 1/64 with Molded Rubber Plug		.40 ea.

*Has Underwriter's Labels.

AERIAL WIRE

STRANDED BARE WIRE — Copper

No.	Ft.	Size	List Price
40A	75-ft. coil	7/22	$ 1.07
40	100-ft. coil	7/22	1.40
40B	1000-ft. spool	7/22	14.00
42A	75-ft. coil	7/24	.75
42	100-ft. coil	7/24	.95
42B	1000-ft. spool	7/24	9.50

LEAD-IN WIRE

STRANDED—Rubber Covered

No.	Ft.	Size	List Price	No.	Ft.	Size	List Price
300	50′ coil	18-$\frac{1}{32}$″	$ .60	302	500′ spool	18-$\frac{1}{32}$″	$5.50
301	100′ spool	18-$\frac{1}{32}$″	1.10	303	1000′ spool	18-$\frac{1}{32}$″	10.50

LEAD-IN WIRE

SOLID—Rubber Covered

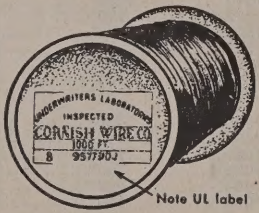
No.	Ft.	Size	List Price	No.	Ft.	Size	List Price
320	25′ coil	18-$\frac{3}{64}$″	$ .32	330	25′ coil	20-$\frac{3}{64}$″	$ .28
321	50′ coil	18-$\frac{3}{64}$″	.57	331	50′ coil	20-$\frac{3}{64}$″	.51
322	500′ spool	18-$\frac{3}{64}$″	5.25	332	500′ spool	20-$\frac{3}{64}$″	4.75
323	1000′ spool	18-$\frac{3}{64}$″	10.00	333	1000′ spool	20-$\frac{3}{64}$″	9.00

TWISTED PAIR DOWNLEAD

Two conductors, each No. 22 stranded copper, 1/32″ rubber-covered (one black, one red), twisted and covered with overall black weatherproof braid.

No. 122—List Mft. $30.00

"NOFLAME-COR"— *The Television Hook Up Wire*



For the first time a hook-up wire for the trade with Underwriters' Label attached. The famous "NoFlame-Cor" wire is approved for 90°C—600 volt usage.

SOLID				STRANDED			
Cat. No.	Size	Put-up	List Each	Cat. No.	Size	Put-up	List Each
470	22	100′ spool	$2.25	473	22	100′ spool	$2.45
471	20	"	2.55	474	20	"	2.80
472	18	"	3.15	475	18	"	3.40

RADIO HOOK-UP WIRE

"CORLAC" HOOK-UP WIRE

Special under-insulation makes this hook-up wire moisture-proof and gives voltage break-down of 3100 volts (as per certified report of Electrical Testing Laboratory, N. Y. C.). Excellent push-back in waxed finish. Tinned copper conductors.

WAXED			LACQUERED		
Cat. No.	Put-Up	List Each	Cat. No.	Put-Up	List Each
		No. 22 SOLID			
434—	25 Ft. Cartons	$ .40	452—	25 Ft. Cartons	$ .46
436—	1000 Ft. Spools	10.60	454—	1000 Ft. Spools	12.50
		No. 20 SOLID			
437—	25 Ft. Cartons	.48	455—	25 Ft. Cartons	.56
439—	1000 Ft. Spools	13.00	457—	1000 Ft. Spools	16.00
		No. 22 STRANDED			
443—	25 Ft. Cartons	.44	461—	25 Ft. Cartons	.50
445—	1000 Ft. Spools	12.00	463—	1000 Ft. Spools	14.00
		No. 20 STRANDED			
446—	25 Ft. Cartons	.52	464—	25 Ft. Cartons	.58
448—	1000 Ft. Spools	14.50	466—	1000 Ft. Spools	17.00
		No. 18 STRANDED			
449—	25 Ft. Cartons	.64	467—	25 Ft. Cartons	.72
451—	1000 Ft. Spools	19.00	469—	1000 Ft. Spools	22.50

AC-DC ANTENNA WIRE

Flexible Bare copper conductor with brown cotton braid.

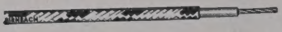
661	1000 Ft. Spools	$10.00
661A	25 Ft. on Fibre	.33

TEST LEAD WIRE

A super flexible conductor covered with heavy live rubber. Will not wear, kink or crack. Made in Black and Red. Mention color when ordering. O.D.—.140″.

1140	100 Ft. Spools	$ 3.00
1141	500 Ft. Spools	13.00
1142	1000 Ft. Spools	25.00

Birnbach GOV'T. SPECIFICATION HOOKUP WIRE JAN-C-76 SRIR — SRIR SHIELDED — SRHV 105° C. UL APPROVED



TYPE SRIR — 1000-VOLT (Fungus Proof)

The following items meet all requirements of Army-Navy joint specifications JAN-C-76 Type SRIR for thermoplastic plain resin construction where highest resistance to fungus growth is required. Has high dielectric strength, high temperature stability, low temperature flexibility, low moisture absorption, high flame resistance; resists all common solvents.

STRANDED

SPEC. JAN-C-76

Cat. No.	Spool	Size AWG	JAN-C-76 Type Designation*	Conductor Construction	Nom. Wall	Nom. DC Ins. Res/Ft - Megs	Nom. Break-down Voltage 60 Cycles	O.D.
7024	1000'	24	2/5(16)-24	16 Wires .005''	.015''	5000	8000	.054''
7024-1	100'	24	2/5(16)-24	16 Wires .005''	.015''	5000	8000	.054''
7001	1000'	22	3/5(7)-22	7 Wires .010''	.017''	5000	8000	.069''
7001-1	100'	22	3/5(7)-22	7 Wires .010''	.017''	5000	8000	.069''
7003	1000'	20	1 (10)-20	10 Wires .010''	.017''	5000	8000	.077''
7003-1	100'	20	1 (10)-20	10 Wires .010''	.017''	5000	8000	.077''
7005	1000'	18	1-½(16)-18	16 Wires .010''	.017''	5000	8000	.086''
7005-1	100'	18	1-½(16)-18	16 Wires .010''	.017''	5000	8000	.086''
7007	1000'	16	2-½(26)-16	26 Wires .010''	.017''	5000	8000	.098''
7007-1	100'	16	2-½(26)-16	26 Wires .010''	.017''	5000	8000	.098''
7009	1000'	14	4 (41)-14	41 Wires .010''	.033''	7500	12000	.148''
7009-1	100'	14	4 (41)-14	41 Wires .010''	.033''	7500	12000	.148''
7011	1000'	12	6 (65)-12	65 Wires .010''	.033''	7500	12000	.171''
7011-1	100'	12	6 (65)-12	65 Wires .010''	.033''	7500	12000	.171''

SOLID

Cat. No.	Spool	Size AWG	JAN-C-76 Type Designation*	Conductor Construction	Nom. Wall	Nom. DC Ins. Res/Ft - Megs	Nom. Break-down Voltage 60 Cycles	O.D.
7000	1000'	22	3/5(1)-22	.0253 Solid	.017''	5000	8000	.064''
7000-1	100'	22	3/5(1)-22	.0253 Solid	.017''	5000	8000	.064''
7002	1000'	20	1(1)-20	.032 Solid	.017''	5000	8000	.071''
7002-1	100'	20	1(1)-20	.032 Solid	.017''	5000	8000	.071''
7004	1000'	18	1-½(1)-18	.0403 Solid	.017''	5000	8000	.079''
7004-1	100'	18	1-½(1)-18	.0403 Solid	.017''	5000	8000	.079''

COLORS:
Black
Brown
Red
Orange
Yellow
Green
Blue
Violet (Purple)
Gray (Slate)
White
Dark Blue
Pink
Tan

In addition to the standard colors we can furnish #7001† and #7003† in the following spiral Tracer Colors (Add "S" to Catalog Number):

Wh/Black	Wh/red	Wh/yellow	Wh/blue	Wh/gray
Wh/brown	Wh/orange	Wh/green	Wh/purple	

†Add $3.00 to List Price for Single Spiral Tracer Wire.

TYPE SRIR — SHIELDED — Spec. JAN-C-76

HOOK-UP WIRE SHIELDED (TINNED COPPER)

Cat. No.	Spool	Size AWG	JAN-C-76 Type Designation*	Stranding	Nom. Wall	Diam.
7074	1000'	24	2/5(16)-24	16/.005	.015''	.076''
7072	1000'	22	3/5(7)-22	7/.010	.017''	.089''
7070	1000'	20	1(10)-20	10/.010	.017''	.097''
7068	1000'	18	1-½(16)-18	16/.010	.017''	.106''

TYPE SRHV (THERMOPLASTIC) HOOK-UP WIRE

STRANDED

SPEC. JAN-C-76

Cat. No.	Spool	Size AWG	JAN-C-76 Type Designation*	Stranding	Nom. Wall	Nom. DC Ins. Res. Meg/Ft	Nom. Breakdown Volt. 60 Cycles	Max. Diam. (Inches)
7322	1000'	22	3/5(7)-22	7/.010	.033	7500	12000	.105
7322-1	100'	22	3/5(7)-22	7/.010	.033	7500	12000	.105
7320	1000'	20	1(10)-20	10/.010	.033	7500	12000	.113
7320-1	100'	20	1(10)-20	10/.010	.033	7500	12000	.113
7318	1000'	18	1-½(16)-18	16/.010	.033	7500	12000	.122
7318-1	100'	18	1-½(16)-18	16/.010	.033	7500	12000	.122
7316	1000'	16	2-½(26)-16	26/.010	.033	7500	12000	.134
7316-1	100'	16	2-½(26)-16	26/.010	.033	7500	12000	.134
7314	1000'	14	4(41)-14	41/.010	.033	7500	12000	.152
7314-1	100'	14	4(41)-14	41/.010	.033	7500	12000	.152
7312	1000'	12	6(65)-12	65/.010	.033	7500	12000	.172
7312-1	100'	12	6(65)-12	65/.010	.033	7500	12000	.172

COLORS: BLACK, BROWN, RED, ORANGE, YELLOW, GREEN, BLUE, PURPLE, GRAY, WHITE

BIRNBACH THERMOPLASTIC INSULATED HOOK-UP WIRE

105°C. — 600-VOLT RATING UL APPROVED

Especially designed for the chassis, sub chassis wiring of radio and television receivers and transmitters inside or outside the chassis. UL approved for 105°C. (221°F.) operating temperature. Has high electrical characteristics. All wires are annealed tinned copper.

Cat. No.	Spool	AWG	Stranding	Nom. Wall	Volt. Breakdown	DC Ins. Res. Megs/Ft	Max. O.D. Inches
7201	1000'	22	7/.010	.032	18000	5000	.100
7201-1	100'	22	7/.010	.032	18000	5000	.100
7203	1000'	20	10/.010	.032	18000	5000	.104
7203-1	100'	20	10/.010	.032	18000	5000	.104
7205	1000'	18	16/.010	.032	18000	5000	.112
7205-1	100'	18	16/.010	.032	18000	5000	.112
7207	1000'	16	26/.010	.032	18000	5000	.129
7207-1	100'	16	26/.010	.032	18000	5000	.129
7202	1000'	22	Solid	.032	18000	5000	.095
7202-1	100'	22	Solid	.032	18000	5000	.095
7204	1000'	20	Solid	.032	18000	5000	.102
7204-1	100'	20	Solid	.032	18000	5000	.102

COLORS: Black Red Green Yellow Blue Brown White Orange Gray Purple

ALL PRICES SUBJECT TO CHANGE WITH THE COPPER MARKET

See Pages S-41 to S-43 for Birnbach Prices

Birnbach GOV'T. SPECIFICATION HOOKUP WIRE JAN-C-76 WL NYLON JACKET GLASS BRAID HIGH VOLTAGE CRT LEAD WIRE

JAN TYPE of DESIGNATION

*SAMPLE

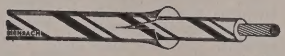
(For all Govt. Specification HOOKUP WIRES on this page and preceding page.)

3/5	(7)	22	90
SIZE (Approx. Cir. Mils)	MINIMUM STRANDS	AWG SIZE	COLOR CODE 1st Digit Represents Body 2nd Digit Represents Tracer

0. BLACK
1. BROWN
2. RED
3. ORANGE
4. YELLOW
5. GREEN
6. BLUE
7. VIOLET (purple)
8. GRAY (slate)
9. WHITE

Hookup Wire with no outer covering shall be designated by the letter "U".
Hookup Wire with an outer covering, either braid or jacket, shall be designated by the letter "C".

TYPE WL — EXTRUDED NYLON JACKET HOOK-UP WIRE (Fungus Proof)



SPEC. JAN-C-76

Extensively used in electronic devices, aircraft instruments, lighting and power transmitters, radar, etc. Constructed of one conductor, copper tinned high heat vinyl insulation with an extruded Nylon jacket overall. This wire will not fray, crack or rot; it is non-combustible with extreme high chemical and abrasion resistance; extreme low moisture absorption and low dielectric leakage; extremely flexible over a wide temperature range it remains soft and pliable at reduced temperatures; it will absorb hard usage, frequent bending and twisting.

Cat. No.	Spool	Size AWG	JAN-C-76 Type Designation*	Stranding	Nom. Wall	Nom. DC Ins. Res. Meg/Ft	Nom. Breakdown Volt. 60 Cycles	Max. Diam. (Inches)
7224	1000'	24	2/5(16)-24	16/.005	.012	1000	5000	.067
7224-1	100'	24	2/5(16)-24	16/.005	.012	1000	5000	.067
7222	1000'	22	3/5(7)-22	7/.010	.012	1000	5000	.073
7222-1	100'	22	3/5(7)-22	7/.010	.012	1000	5000	.073
7220	1000'	20	1(7)-20	7/.0126	.012	1000	5000	.081
7220-1	100'	20	1(7)-20	7/.0126	.012	1000	5000	.081
7218	1000'	18	1½(7)-18	7/.0159	.013	1000	5000	.092
7218-1	100'	18	1½(7)-18	7/.0159	.013	1000	5000	.092
7216	1000'	16	2½(19)-16	19/.0113	.015	1000	5000	.108
7216-1	100'	16	2½(19)-16	19/.0113	.015	1000	5000	.108
7214	1000'	14	4(19)-14	19/.0142	.018	1000	5000	.132
7214-1	100'	14	4(19)-14	19/.0142	.018	1000	5000	.132
7212	1000'	12	6(19)-12	19/.0179	.018	1000	5000	.152
7212-1	100'	12	6(19)-12	19/.0179	.018	1000	5000	.152
7210	1000'	10	9(37)-10	37/.0285	.020	1000	5000	.179
7210-1	100'	10	9(37)-10	37/.0285	.020	1000	5000	.179

COLORS:	White	Yellow	Wh/Black	Wh/Yellow	Wh/Gray	Wm/Blk/Green
	Black	Green	Wh/Brown	Wh/Green	Wh/Blk/Red	Wh/Blk/Orange
	Brown	Blue	Wh/Red	Wh/Blue	Wh/Blk/Yellow	Wh/Blk/Brown
	Red	Purple	Wh/Orange	Wh/Purple	Wh/Blk/Blue	Wh/Blk/Gray
	Orange					

IN ADDITION Sizes 7218, 7220, 7222 can be furnished in red/black and black/white.

TYPE WL GLASS BRAID — 600-VOLT (Fungus Proof)

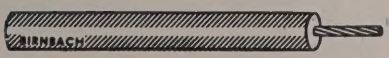
SPEC. JAN-C-76

Extensively used on electronic devices, aircraft instruments, lighting and power, transmitters, radar, etc. Constructed of one conductor, stranded copper tinned, high heat vinyl insulation, glass braid with a heavily lacquered coating which is fungus proof and flame resistant.

Cat. No.	Spool	Size AWG	JAN-C-76 Type Designation*	Stranding	Nom. Wall	Nom. DC Ins. Res/Ft - Megs	Nom. Breakdown Voltage 60 Cycles	O.D.
7022	1000'	22	3/5(7)-22	7 Wires .010"	.012"	1000	5000	.077"
7022-1	100'	22	3/5(7)-22	7 Wires .010"	.012"	1000	5000	.077"
7020	1000'	20	1(10)-20	10 Wires .010"	.012"	1000	5000	.085"
7020-1	100'	20	1(10)-20	10 Wires .010"	.012"	1000	5000	.085"
7018	1000'	18	1-½(16)-18	16 Wires .010"	.013"	1000	5000	.096"
7018-1	100'	18	1-½(16)-18	16 Wires .010"	.013"	1000	5000	.096"
7016	1000'	16	2-½(26)-16	26 Wires .010"	.015"	1000	5000	.112"
7016-1	100'	16	2-½(26)-16	26 Wires .010"	.015"	1000	5000	.112"

COLORS:	White	Yellow	White/Black	White/Green	White/Black/Blue
	Black	Green	White/Brown	White/Blue	White/Black/Green
	Brown	Blue	White/Red	White/Purple	White/Black/Orange
	Red	Purple	White/Orange	White/Black/Red	White/Black/Brown
	Orange		White/Yellow	White/Black/Yellow	White/Black/Gray

HIGH VOLTAGE & CATHODE-RAY TUBE LEAD CABLE



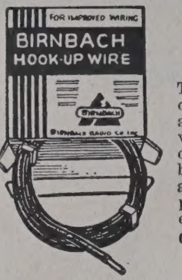
This High Voltage and Cathode Ray Tube Lead Wire is approved for 10,000, 20,000, and 40,000 volt applications. It is made of RULAN (flame retarding type Polyethylene) which is high heat resistant and moisture resistant. Approved by A.S.T.M. It has a dielectric constant of 2.7 and a power factor of .002.

Cat. No.	Spool	Size	Stranding	Max. DC Voltage	Approx. O.D.
7402	1000'	20	10/30	10,000	.125
7402-1	100'	20	10/30	10,000	.125
7412	1000'	20	10/30	20,000	.169
7412-1	100'	20	10/30	20,000	.169
7418	1000'	18	16/30	10,000	.135
7418-1	100'	18	16/30	10,000	.135
7428	1000'	18	16/30	20,000	.179
7428-1	100'	18	16/30	20,000	.179
7448	1000'	18	16/30	40,000	.231
7448-1	100'	18	16/30	40,000	.231

ALL PRICES SUBJECT TO CHANGE WITH THE COPPER MARKET

See Pages S-41 to S-43 for Birnbach Prices

Birnbach Hookup Wire • Test Lead • Lacquered Coaxial • Filament Wire



BIRNBACH BIRNTEX SLIPBACK WIRE

This wire is constructed of quality materials and carefully insulated with a cotton wrap over which a cotton braid is closely woven, and then saturated with paraffin. Pushes back easily.

COLORS: Black, Red, Blue, Yellow, Green, White, Brown, Yellow.

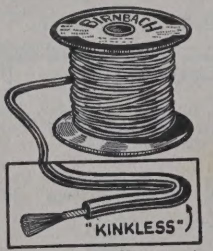
SOLID

Cat. No.	Put-up Ft.	Size	Strands	Puncture V. 60 Cy. AC	O.D.
70	25 Coil	22	Solid	1500	.060
72	100 Spool	22	Solid	1500	.060
74	500 Spool	22	Solid	1500	.060
76	1000 Spool	22	Solid	1500	.060
80	25 Coil	20	Solid	1500	.065
84	100 Spool	20	Solid	1500	.065
88	500 Spool	20	Solid	1500	.065
92	1000 Spool	20	Solid	1500	.065
82	25 Coil	18	Solid	1500	.075
86	100 Spool	18	Solid	1500	.075
90	500 Spool	18	Solid	1500	.075
94	1000 Spool	18	Solid	1500	.075

STRANDED

Cat. No.	Put-up Ft.	Size	Strands	Puncture V. 60 Cy. AC	O.D.
71	25 Coil	22	7/30	1500	.065
73	100 Spool	22	7/30	1500	.065
75	500 Spool	22	7/30	1500	.065
77	1000 Spool	22	7/30	1500	.065
81	25 Coil	20	10/30	1500	.070
85	100 Spool	20	10/30	1500	.070
89	500 Spool	20	10/30	1500	.070
93	1000 Spool	20	10/30	1500	.070
83	25 Coil	18	16/30	1500	.080
87	100 Spool	18	16/30	1500	.080
91	500 Spool	18	16/30	1500	.080
95	1000 Spool	18	16/30	1500	.080

BIRNBACH KINKLESS TEST LEAD WIRE



An extremely flexible wire with a wall of abrasion resisting live rubber that will not kink or break down in service under rough usage and repeated bendings. Has found wide use in laboratory test equipment, analyzers, oscillators, etc.

Cat. No.	Spool Ft.	Size	Stranding	Insul.	Volt. Breakdown 60 Cycles	O.D.
61	100	20	41/36	3/64	12,000	.140
62	500	20	41/36	3/64	12,000	.140
66	100	18	66/36	3/64	12,000	.150
67	500	18	66/36	3/64	12,000	.150
High Voltage Kinkless Test Lead Wire						
68	100	18	66/36	5/64	16,500	.210
69	500	18	66/36	5/64	16,500	.210

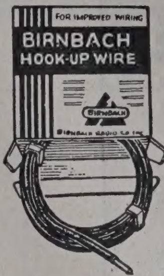
COLORS: Red and Black

VARNISHED CAMBRIC WIRE

Widely used in automotive wiring because of oil and waterproof construction. Consists of tinned stranded conductor with two layers of varnished cambric over which a lacquered cotton braid is woven.

Cat. No.	Spool Ft.	Size	Stranding	Puncture V.	O.D.
3420	100	20	10/30	1000	.094
3418	100	18	16/30	1000	.097
3416	100	16	26/30	1000	.108

BIRNBACH RADEX SLIPBACK HOOKUP WIRE



It has a covering of .010 rubber over a cotton wrap and is then covered with a bright color cotton braid and dipped into paraffin. This construction will not cause the cotton insulation to fray or bunch up when pushed back. It has a high dielectric strength and will withstand all climatic changes without breakdown.

SOLID

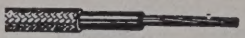
Cat. No.	Put-up Ft.	Size	Strands	Puncture V. 60 Cy. AC	O.D.
280	25 Coil	20	Solid	2000	.090
380	100 Spool	20	Solid	2000	.090
480	500 Spool	20	Solid	2000	.090
580	1000 Spool	20	Solid	2000	.090
282	25 Coil	18	Solid	2100	.098
382	100 Spool	18	Solid	2100	.098
482	500 Spool	18	Solid	2100	.098
582	1000 Spool	18	Solid	2100	.098
284	25 Coil	16	Solid	2100	.108
384	100 Spool	16	Solid	2100	.108
484	500 Spool	16	Solid	2100	.108
584	1000 Spool	16	Solid	2100	.108
286	25 Coil	14	Solid	2100	.122
386	100 Spool	14	Solid	2100	.122
486	500 Spool	14	Solid	2100	.122
586	1000 Spool	14	Solid	2100	.122
288	25 Coil	12	Solid	2200	.135
388	100 Spool	12	Solid	2200	.135
488	500 Spool	12	Solid	2200	.135
588	1000 Spool	12	Solid	2200	.135

STRANDED

Cat. No.	Put-up Ft.	Size	Strands	Puncture V. 60 Cy. AC	O.D.
281	25 Coil	20	10/30	2100	.093
381	100 Spool	20	10/30	2100	.093
481	500 Spool	20	10/30	2100	.093
581	1000 Spool	20	10/30	2100	.093
283	25 Coil	18	16/30	2200	.103
383	100 Spool	18	16/30	2200	.103
483	500 Spool	18	16/30	2200	.103
583	1000 Spool	18	16/30	2200	.103
285	25 Coil	16	26/30	2200	.118
385	100 Spool	16	26/30	2200	.118
485	500 Spool	16	26/30	2200	.118
585	1000 Spool	16	26/30	2200	.118
287	25 Coil	14	41/30	2200	.135
387	100 Spool	14	41/30	2200	.135
487	500 Spool	14	41/30	2200	.135
587	1000 Spool	14	41/30	2200	.135
289	25 Coil	12	65/30	2300	.155
389	100 Spool	12	65/30	2300	.155
489	500 Spool	12	65/30	2300	.155
589	1000 Spool	12	65/30	2300	.155

COLORS: Black, Red, Blue, Yellow, Green, White, Brown, Orange.

RAYON BRAID LACQUERED WIRE

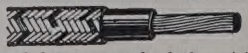


Constructed of stranded tinned copper with heavy wall of live rubber over which is woven a rayon braid and a high gloss lacquered finish over braid. Easy to solder and strip.

COLORS: Black, Red, Green, Yellow, Brown, Blue and White.

Cat. No.	Ft.	Size	Strand	Insul.	Punc. Volts	DC Ins. Res./Ft. Meg.	O.D.
3425	25	18	16/30	1/32	9000	460	.125
3450	50	18	16/30	1/32	9000	460	.125
3460	100	18	16/30	1/32	9000	460	.125
3600	500	18	16/30	1/32	9000	460	.125

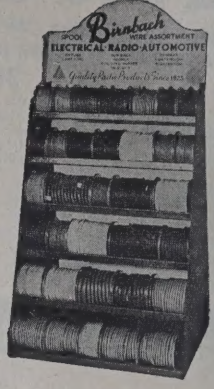
BIRNBACH HI VOLTAGE LACQUERED PRIMARY WIRE



Recommended for use as leads for wiring high voltage devices, auto head, tail, dashboard, lamps, horns, spotlight, instrument leads and for all primary voltage applications. Constructed of soft drawn, tinned copper, with a wall of rubber and covered with a highly lacquered cotton braid, making it oil, heat and moisture resistant.

Cat. No.	Spool Ft.	Size	Stranding	Insul.	Puncture V.	O.D.
2818	100	18	16/30	1/32	9500	.125
2816	100	16	26/30	1/32	9500	.140
2814	100	14	41/30	1/32	9500	.170
2812	100	12	19/25	1/32	9500	.190
2810	100	10	19/23	1/32	9500	.208

BIRNBACH SPECIAL SPOOL ASSORTMENT

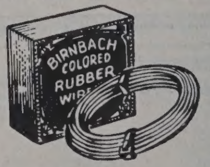

Birnbach
SPOOL WIRE ASSORTMENT
ELECTRICAL RADIO AUTOMOTIVE
Quality Radio Products Since 1925

FREE DISPLAY

One Display is given with each initial order for 100 spools. Each Display made of strong, reinforced steel, mahogany crackle finish with attractive 3 color Display at top. Space provided to indicate YOUR resale price. Extra Display Racks available.

Cat. No.	Ft.	Size	Type
3000	65	22	Solid Pushback
3001	55	20	Solid Pushback
3002	45	18	Solid Pushback
3003	35	16	Solid Pushback
3004	30	14	Solid Pushback
3005	55	22	Stranded Pushback
3006	45	20	Stranded Pushback
3007	40	18	Stranded Pushback
3008	30	16	Stranded Pushback
3009	20	14	Stranded Pushback
3010	50	18	Colored Rubber
3011	35	16	Colored Rubber
3012	30	14	Stranded Leadin
3013	60	18	Solid Leadin
3014	65	18	Stranded Leadin
3015	35	18	Stranded Lacquered
3016	75		Brown & White AC-DC Wire
3017	30		Kinkless Wire
3018	20	18	Twisted Lamp Cord
3019	35	18	Single Fix. Wire
3020	20	18	Parallel Silk
3021	15	18	Blk, Wht, Brn Zip Cord
3022	100	18	Solid Tinned
3023	75	18	Bell Wire
3024	15	20	Phono Pickup Wire

STRANDED COLORED RUBBER WIRE



Annealed stranded tinned copper conductors with a cotton wrap, and insulated with a special grade of non-cracking live colored rubber compound. It strips readily.

Cat. No.	Ft.	Size	Wire Stranding	Current Carrying Capacity Amps.	Punct. Volt. 60 Cy. AC	O.D.
1225	1000	18-1/64	16-30	3	5500	.087
440	50	16-1/32	26-30	6	8000	.135
1440	100	16-1/32	26-30	6	8000	.135
2440	500	16-1/32	26-30	6	8000	.135

COLORS: Red, Black, White, Brown, Green

FILAMENT WIRE (High Amperage)

782	25	14-1/32	26-28	15	8500	.145
786	500	14-1/32	26-28	15	8500	.145
784	25	12-3/64	41-28	20	12,000	.190
787	500	12-3/64	41-28	20	12,000	.190

COLORS: Red and Black

RG59/U—72 OHM COAXIAL CABLE

Low impedance assures efficient transfer of energy with negligible interference from local noise, auto ignition and other electrical disturbances.

Attenuation—D.B. per 100 ft.

10MC	30MC	100MC	300MC	400MC	3000MC
1.0	2.0	3.8	7.0	8.9	29

Nominal Impedance 72

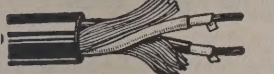
Nominal Capacitance MMF/Ft. 21

Cat. No.		St. Pkge.
907	100 ft. spool	10
908	250 ft. spool	4
909	500 ft. spool	4
910	1000 ft. reel	1

See Pages S-41 to S-43 for Birnbach Prices

Multiple Conductor Cables • Mike Cable Speaker Cable • Diathermy Cable

BIRNBACH RUBBER MULTIPLE CONDUCTOR CABLES*



(Not Shielded)

Used for permanent or portable PA systems, sound recording, indoor and outdoor speakers where it will stand up under all weather conditions and rough usage. Consists of No. 20 Stranded 26/34 flexible tinned copper cotton wrap, .022 low capacity rubber color coded, twisted, cotton filler, cotton wrap with a tough rubber jacket overall.

MULTIPLE CABLE COLOR CODING CHART

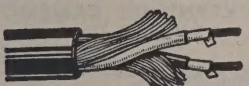
1—Black; 2—White; 3—Red; 4—Green;
5—Yellow; 6—Blue; 7—Brown; 8—Orange

Cat. No.	Spool Ft.	Conds.	Size No.	Stranding	Cap. Bet. Conds. mmf	O.D.
788	100	2	20	26/34	22	.275
789	250	2	20	26/34	22	.275
790	100	3	20	26/34	20	.285
791	250	3	20	26/34	20	.285
792	100	4	20	26/34	18	.305
793	250	4	20	26/34	18	.305
794	100	5	20	26/34	16	.335
795	250	5	20	26/34	16	.335
796	100	6	20	26/34	15	.355
797	250	6	20	26/34	15	.355
798	100	7	20	26/34	15	.370
749	100	8	20	26/34	14	.395

LONGER LENGTHS AVAILABLE

***MEETS SIGNAL CORPS SPEC. 714945**

BIRNBACH RUBBER SERVICE CORD



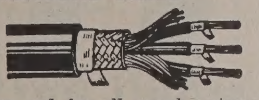
Heavy Duty U.L. Approved

For power line requirement where rough usage is indicated as for amplifiers, speakers, vacuum cleaners, tools, refrigerators, washing machines,, trouble lights, etc. All color coded. Underwriters approved.

Cat. No.	Spool Ft.	Cds	Size No.	Type		Amp. Rating	Volt Rating	O.D.
701	250	2	18	SV	41/34	7	300	.250
574	250	2	18	SJ	41/34	7	300	.300
578	250	2	16	SJ	65/34	10	300	.325
702	250	2	18	S	41/34	7	600	.390
703	250	2	16	S	65/34	10	600	.410
704	100	2	14	S	41/30	15	600	.540
705	100	2	12	S	65/30	20	600	.590

Longer lengths and additional conductors also available.

BIRNBACH RUBBER SHIELDED MICROPHONE CABLE*



Used for indoor and outdoor crystal, carbon and condenser mikes and for all sound systems. Consists of extra flexible tinned copper conductors, each insulated with a wall of .022 low capacity rubber, color coded, twisted, cotton fillers, braided tinned copper shielding, cotton wrap with a tough weatherproof black rubber jacket overall which will withstand hard and rough usage.

Microphone Cable Color Coding Chart

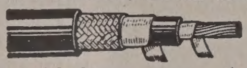
1—Black; 2—White; 3—Red; 4—Green;
5—Yellow; 6—Blue; 7—Brown; 8—Orange

Cat. No.	Spool Ft.	Conds.	Size No.	Stranding	Cap. Bet. Shield and Cond. mmf	Cap. Bet. Cond. mmf	O.D.
772	100	2	20	26/34	50	40	.280
1772	250	2	20	26/34	50	40	.280
772/18	100	2	18	41/34	55	45	.300
773	100	3	20	26/34	55	38	.290
1773	250	3	20	26/34	55	38	.290
774	100	4	20	26/34	60	35	.300
1774	250	4	20	26/34	60	35	.300
775	100	5	20	26/34	60	31	.330
1775	250	5	20	26/34	60	31	.330
776	100	6	20	26/34	60	30	.350
1776	250	6	20	26/34	60	30	.350
777	100	7	20	26/34	60	30	.365
1777	250	7	20	26/34	60	30	.365
778	100	8	20	26/34	60	30	.390

Longer Lengths Available

***MEETS SIGNAL CORPS SPEC. 714945**

CRYSTAL MICROPHONE CABLE*



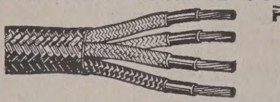
Used with crystal, dynamic, velocity, ribon microphones, and photoelectric cells. Birnbach No. 870 used widely for lapel microphones and phono pickups. Constructed of extra flexible, stranded, tinned copper, cotton serve—insulated with new low loss rubber compound, braided tinned copper shield cotton serve and covered with tough black rubber jacket.

Cat. No.	Spool Ft.	Cond.	Size No.	Stranding	Cap/ft.	O.D.
870	100	1	20	26/34	40 mmf	.175″
1870	250	1	20	26/34	40 mmf	.175″
872	100	1	20	26/34	30 mmf	.245″
1872	250	1	20	26/34	30 mmf	.245″

Longer Lengths Available

***MEETS SIGNAL CORPS SPEC. 714945**

BIRNBACH MULTIPLE CONDUCTOR FLEXIBLE CABLE



(Cotton Braid Overall)

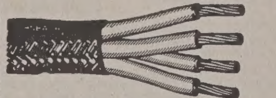
Constructed of individual 1/64 rubber wall No. 20 stranded, tinned cotton braid; color coded; conductors twisted and with a closely woven brown cotton braid overall. Used widely for P.A. systems, analyzers, remote control units, etc.

COLOR CODING CHART

1—Black, 2—White, 3—Red, 4—Green,
5—Orange, 6—Blue, 7—Brown,
8—Yellow, 9—White/Black Tracer
10—Red/Black Tracer,
11—Green/Black Tracer
12—Orange/Black Tracer

Cat. No.	Spool Ft.	Conds.	Size	Stranding	Rubber Insul.	O.D.
172	100	2	20	10/30	1/64	.205
173	100	3	20	10/30	1/64	.245
174	100	4	20	10/30	1/64	.265
175	100	5	20	10/30	1/64	.290
176	100	6	20	10/30	1/64	.310
177	100	7	20	10/30	1/64	.325
178	100	8	20	10/30	1/64	.360
179	100	9	20	10/30	1/64	.395
180	100	10	20	10/30	1/64	.425
182	100	12	20	10/30	1/64	.440

MULTIPLE CONDUCTOR THERMO-PLASTIC CABLE



(Cotton Braid Overall)

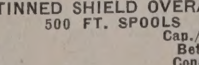
Constructed of individual No. 22 stranded tinned copper, 1/64 thermoplastic insulation, color coded; conductors twisted with brown cotton braid overall. Used widely for P.A. systems, remote control units, multiple circuit hookups and whenever a small diameter cable is indicated.

COLOR CODING CHART

1—Black, 2—White, 3—Red, 4—Green,
5—Orange, 6—Blue, 7—Brown,
8—Yellow, 9—Purple, 10—Pink,
11—Gray, 12—Dk. Blue.

Cat. No.	Spool Ft.	No. of Conds.	Size No.	Stranding	Thermoplastic Insul.	O.D.
263	100	3	22	7/30	1/64	.165
264	100	4	22	7/30	1/64	.175
265	100	5	22	7/30	1/64	.200
266	100	6	22	7/30	1/64	.215
267	100	7	22	7/30	1/64	.235
268	100	8	22	7/30	1/64	.250
269	100	9	22	7/30	1/64	.265
270	100	10	22	7/30	1/64	.300
272	100	12	22	7/30	1/64	.330

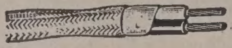
BIRNBACH SHIELDED MULTI-CONDUCTOR CABLE



THERMOPLASTIC INSULATION
TINNED SHIELD OVERALL
500 FT. SPOOLS

Cat. No.	No. of Conds.	Size	Stranding	Ins.	Cap./Ft. Bet. Cond. and Shield	Cap./Ft. Bet. Cond.	O.D.
972S	2	20	10/30	1/64	50	28	.170
973S	3	20	10/30	1/64	48	21	.192
WAXED COTTON BRAID OVER SHIELD							
972B	2	20	10/30	1/64	50	28	.180

BIRNBACH SHIELDED TWO WIRE SPEAKER CABLE



Used widely for master control sound systems, photo electric circuits, public address systems, etc. The No. 972A consists of 2 conductors twisted No. 18—16/30 tinned copper with a 1/32″ wall of color coded low capacity rubber with paper wrap covering the two conductors and a closely woven tinned copper shield overall. The No. 1972A has same construction as the 972A with a waxed cotton braid over the shield.

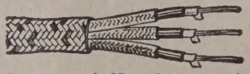
COLOR CODING CHART

1—Black; 2—Red

TINNED SHIELD OVERALL
500 FT. SPOOLS

Cat. No.	No. of Conds.	Size	Stranding	Ins.	Cap./Ft. Bet. Cond. and Shield	Cap./Ft. Bet. Cond.	O.D.
972A	2	18	16/30	1/32	65	23	.250
Tinned Shield with Cotton Braid Overall							
1972A	2	18	16/30	1/32	65	23	.275

BIRNBACH SHIELDED MULTI-CONDUCTOR CABLE



(Tinned Braid Overall)

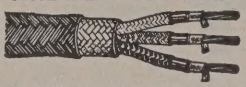
Consists of No. 20, 10/30 flexible tinned copper with 1/64″ rubber wall, color coded cotton braid, twisted, with tinned copper shield woven over cable. Generally used indoors to prevent interference pickup on P.A. systems, recording equipment, photo electric circuits, etc. 100 Ft. Spools.

Cat. No.	No. of Conds.	Size	Stranding	Ins.	Cap./Ft. Bet. Cond. and Shield	Cap./Ft. Bet. Cond.	O.D.
972	2	20	10/30	1/64	60	32	.215
973	3	20	10/30	1/64	55	30	.220
974	4	20	10/30	1/64	48	26	.250
975	5	20	10/30	1/64	45	23	.280
976	6	20	10/30	1/64	40	23	.290
977	7	20	10/30	1/64	40	20	.315
978	8	20	10/30	1/64	35	20	.350

COLOR CODING CHART

1—Black, 2—Red, 3—White, 4—Green,
5—Brown, 6—Yellow, 7—Blue, 8—Orange

SHIELDED MULTIPLE CONDUCTOR CABLE



(Cotton Braid Overall)

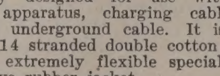
Constructed of individual tinned stranded copper with a 1/64″ wall of rubber covered with a colored cotton braid. A tinned copper shield follows and a brown cotton braid covers this cable. 100 Ft. Spools.

Cat. No.	No. of Conds.	Size	Stranding	Ins.	Cap./Ft. Bet. Cond. and Shield	Cap./Ft. Bet. Cond.	O.D.
1972	2	20	10/30	1/64	60	32	.225
1973	3	20	10/30	1/64	55	30	.230
1974	4	20	10/30	1/64	48	36	.260
1975	5	20	10/30	1/64	45	23	.290
1976	6	20	10/30	1/64	40	23	.300

COLOR CODING CHART

1—Black, 2—Red, 3—White, 4—Green,
5—Brown, 6—Yellow, 7—Blue, 8—Orange

BIRNBACH DIATHERMY CABLE



Especially designed for use with electrotherapy apparatus, charging cable battery lead and underground cable. It is made of size No. 14 stranded double cotton braid and with an extremely flexible special grade of tough, live rubber jacket.

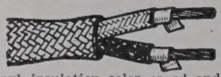
Cat. No.	Spool Ft.	No. Conds.	Size	Stranding	O.D.
756	100	1	14	104/34	.300
757	1000	1	14	104/34	.300

See Pages S-41 to S-43 for Birnbach Prices

Birnbach

Shielded Braid • Phono Pickup • Grid • Lead-in
Twisted Pair • Cambric Shielded Line Cords
Lamp Cord • Rotor Cables

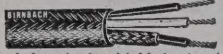
SHIELDED TWISTED PAIR CABLE



Consists of two conductors #24, 16/36 tinned copper, twisted with .015 vinyl insulation color coded and with tinned copper shield overall. For public address systems, phono pickups, sound recording and various electronic circuits. **COLOR CODE:** Red and Black.

Cat. No.	Spool Ft.	Conds.	Size	Stranding	Insul.	O.D.
826	1000	2	24	16/36	.015	.115

INTER-COM CABLE 3 CONDUCTORS

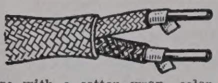


1 Shielded
2 Unshielded

Used for single shielded wire in station to station wiring in order to eliminate cross talk. Consists of 3 conductors #22 stranded tinned copper wire with vinyl insulation, color coded and twisted—one conductor with tinned copper shield, the other two unshielded; with cotton braid overall.

Cat. No.	Spool Ft.	Conds.	Size	Stranding	O.D.
923	500	3	22	7/30	.155

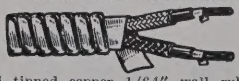
SHIELDED TWISTED PAIR



Cat. No. 822 and 824 are constructed of solid enameled wire with a cotton wrap, color coded cotton braid, twisted pair waxed and bare copper braid woven overall. Cat. No. 825 is composed of two conductors twisted #20 solid tinned copper enamel baked, cotton wrap waxed; color coded and twisted with a bare copper braid shield overall.

Cat. No.	Spool	Conds.	O.D.
822	500 Ft.	2 - 22 Solid	.125
824	500 Ft.	2 - 19 Solid	.145
825	500 Ft.	2 - 20 Solid	.135

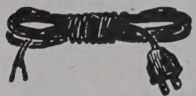
ARMORED SPEAKER CABLE



Constructed of 2 conductor parallel #18—16/30 stranded tinned copper 1/64″ wall rubber, color coded cotton braid lacquered, and spiral steel armor overall.

Cat. No.	Spool Ft.	Size	Stranding	O.D.
1111	250	18	16/30	.155 x .240
1112	500	18	16/30	.155 x .240
1113	1000	18	16/30	.155 x .240

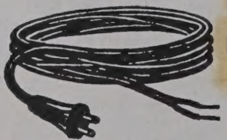
BIRNBACH SERVICE LINE CORD



Underwriters Approved

Constructed of all rubber parallel UL approved wire with rubber plug on one end and with the other end stripped, tinned and hanked ready for use. Available in black and brown.

Cat. No.	Ft.
816	6
817	7½
819	10



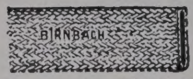
BIRNBACH HEAVY DUTY SERVICE CORD

UL APPROVED

A heavy rubber jacketed cable, Underwriters Approved for replacement in refrigerators, washing machines and electrical appliances. Cat. Nos. 309 and 312 consist of 2 No. 18 S.V. Stranded Conductors with a soft rubber plug at one end; the other end is stripped and tinned ready for use. Cat. No. 248 consists of 8 ft. 2 Cond. No. 16 S.J. all rubber hanked, stripped and tinned with all rubber plug.

Cat. No.	Conds.	Ft.	Type	Stranding	O.D.
348	2	8	SJ	65/34	.325
309	2	9	SV	41/34	.250
312	2	12	SV	41/34	.250

TINNED COPPER SHIELDING

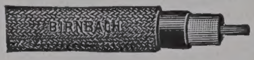


Very flexible, slides over wires and cables. For bonding, shielding, in aircraft, auto radio, etc.

Cat. No.	Inside Diam. Flattened	Spool
TINNED		
855	1/16″	50 ft.
858	1/8″	50 ft.
859	3/16″	50 ft.
863	1/4″	50 ft.
864	3/8″	50 ft.
868	1/2″	50 ft.
865	5/8″	50 ft.
857	25/32″	50 ft.
856	1″	50 ft.
BARE		
860	1/4″	50 ft.

Longer Lengths Available

7MM HIGH TENSION CABLE



UNSHIELDED

Useful in reducing interference from auto secondary circuits. Also used as photoelectric cell leads, high voltage leads in television receivers, cathode-ray tubes, etc. Single conductor #16 stranded rubber insulation with cotton braid and heavy coats of lacquer.

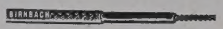
Cat. No.	Spool	Size	Stranding	O.D.
1600	100 Ft.	16	19/29	.275

7MM SHIELDED SECONDARY WIRE

Used for auto and aircraft ignition systems where grounding is necessary for effective elimination of interference. Same construction as #1600 with a shielded, tinned copper braid overall.

Cat. No.	Spool	Size	Stranding	O.D.
781	100 Ft.	16	19/29	.295

BIRNBACH PHONO PICKUP WIRE



EXTRA FLEXIBLE

Where small diameter, limpness and extreme flexibility is necessary as for use on phono pickup arms and grid wire. Constructed of #24 gauge flexible stranded copper wire with rubber insulation and a close tinned copper braid shield overall. No. 1825 and 1825M have same construction with fine brown cotton braid over shield.

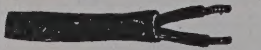
Cat. No.	Spool Ft.	Size	Stranding	Insul.	O.D.
1824	500	24	16/36	.015	.080
1824M	1000	24	16/36	.015	.080
1825	500	24	16/36	.015	.095
1825M	1000	24	16/36	.015	.095

PHONO PICKUP WIRE

Used on phono pickup arms and grid leads where extreme flexibility is not of paramount importance. Constructed of #22—7/30 tinned copper wire with 1/64 wall of vinyl plastic insulation and a closely woven tinned copper shield overall.

Cat. No.	Spool Ft.	Size	Stranding	Insul.	O.D.
1822	100	22	7/30	1/64	.090
1822B	500	22	7/30	1/64	.090
1822C	1000	22	7/30	1/64	.090

COMMERCIAL TYPE TWISTED PAIR



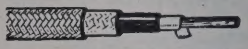
(Transmission Line)

Used for low loss transmission line between receiver and antenna as doublet lead-in wire and for intercom setup. Consists of two wires with 1/32″ wall rubber color coded with a cotton braided weather-proof finish overall.

Cat. No.	Spool Ft.	No. of Conds.	Gauge	Stranding	Insul.
951	100	2	22	7/30	1/32
952	500	2	22	7/30	1/32
919	500	2	18	16/30	1/32
920	1000	2	18	16/30	1/32

Cat. No.	Cap. Bet. Conds.	Freq. KC	O.D.
951	21.8 mmf	3.75	.200
952	21.8 mmf	3.75	.200
919	21.8 mmf	3.75	.225
920	21.8 mmf	3.75	.225

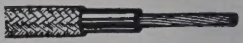
SHIELDED GRID LEAD WIRE



High insulation of this wire will reduce loss in shielded grid circuits. Tinned copper stranded wire with rubber insulation, lacquered cotton braid with closely woven tinned copper shield overall.

Cat. No.	Spool Ft.	Size	Stranding	Ins. Under-shield	Cap/Ft. mmfd.	O.D.
820	100	20	10/30	.085	70	.140
818	100	18	16/30	.085	75	.150

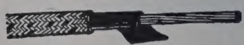
SHIELDED HOOK-UP AND LEAD-IN WIRE



Used to prevent and reduce interference caused by motors, high tension wires, X-ray machines and man-made static. Consists of stranded tinned copper, a wall of low loss live rubber over which is woven a tinned copper shield.

Cat. No.	Spool Ft.	Size	Stranding	Insul.	Cap/Ft. mmfd	O.D.
810	500	20	10/30	1/64	105	.095
809	100	18	16/30	1/64	125	.125
803	250	18	16/30	1/64	125	.125
851	100	16	26/30	1/32	90	.145
802	250	16	26/30	1/32	90	.145
806	100	14	19/27	3/64	95	.185
801	250	14	19/27	3/64	95	.185

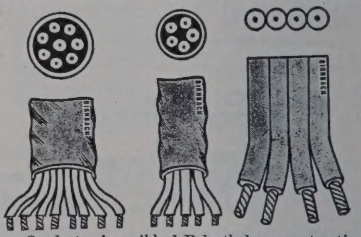
SHIELDED VARNISHED CAMBRIC WIRE



Used where an oil and water resistant wire with a shielded covering is required. Constructed of tinned stranded conductor with 2 layers of varnished cambric and a lacquered cotton braid with a tinned copper shield overall.

Cat. No.	Spool Ft.	Size	Stranding	Cap/Ft. mmfd	O.D.
1820	100	20	10/30	100	.125
1818	100	18	16/30	102	.131
1800	100	16	26/30	142	.145

ANTENNA CONTROL ROTOR CABLE



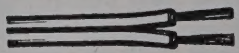
Four Conductor has ribbed Polyethylene construction to facilitate making of connections in compact housings and control boxes. Separates like zip wire. Cable has one tinned conductor for coding identity. 4 conductors No. 7/28 stranded.

Five conductor is color coded and twisted with round plastic jacket overall. 5 cond. No. 20 - 7/28 stranded.

Eight Conductor is color coded and twisted with round plastic jacket overall as used widely for Radiart. 8 cond. No. 22 - 7/30 stranded.

Cat. No.
1874A— 500 ft. spool 4 cond. Flat Rotor Cable
1874 —1000 ft. spool 4 cond. Flat Rotor Cable
1875A— 500 ft. spool 5 cond. Round Rotor Cable
1875 —1000 ft. spool 5 cond. Round Rotor Cable
1878A— 500 ft. spool 8 cond. Round Rotor Cable
1878 —1000 ft. spool 8 cond. Round Rotor Cable

POSJ ALL RUBBER LAMP CORD



(Underwriters Approved)

An all purpose approved, very flexible rubber covered parallel cord which is easily separated by slit in jacket; has color coded cotton serve.

Cat. No.	Spool Ft.	Conds.	Size No.	Stranding	O.D.
570	100	2	18	41/34	.135 x .235
572	250	2	18	41/34	.135 x .235
573	500	2	18	41/34	.135 x .235

COLORS: Brown, Black, Ivory

See Pages S-41 to S-43 for Birnbach Prices

Birnbach

Solid Tinned • Bare • Enamel • Bus • Magnet Wire
Bronze • Stranded Bare and Tinned Copper Wire

BIRNBACH

BARE, TINNED and ENAMELED COPPER WIRE

Stranded Bare Copper Wire

Cat. No.		
7/20		
493	100 ft.	coil
7/22 (14 B&S)		
1640	75 ft.	coil
1670	100 ft.	coil
1639	1000 ft.	spool
7/23 (15 B&S)		
1643	75 ft.	coil
1673	100 ft.	coil
1634	1000 ft.	spool
7/24 (16 B&S)		
1646	75 ft.	coil
1680	100 ft.	coil
1647	1000 ft.	spool
7/26		
647	75 ft.	coil
681	100 ft.	coil
1648	1000 ft.	spool
7/27		
740	75 ft.	coil
700	100 ft.	coil
1741	1000 ft.	spool

Stranded Tinned Copper Wire

Cat. No.		
7/20		
495	100 ft.	coil
7/22 (14 B&S)		
1641	75 ft.	coil
1671	100 ft.	coil
1638	1000 ft.	spool
7/23 (15 B&S)		
1644	75 ft.	coil
1674	100 ft.	coil
1633	1000 ft.	spool
7/24 (16 B&S)		
1697	75 ft.	coil
1696	100 ft.	coil
1628	1000 ft.	spool

Cat. No.		Ft. Spool
1622	7/30 (22 B&S)	1000
1620	10/30 (20 B&S)	1000
1618	16/30 (18 B&S)	1000

Solid Tinned Copper Wire

SOFT DAWN

Cat. No.		
No. 8		
1433	100 ft.	coil
No. 10		
1401	50 ft.	coil
1402	100 ft.	coil
1403	1000 ft.	spool
No. 12		
1405	50 ft.	coil
1406	100 ft.	coil
1407	1000 ft.	spool
No. 14		
1409	50 ft.	coil
1410	100 ft.	coil
1411	1000 ft.	spool
No. 16		
1413	50 ft.	coil
1414	100 ft.	coil
1415	1000 ft.	spool
No. 18		
1417	50 ft.	coil
1418	100 ft.	coil
1419	1000 ft.	spool
No. 20		
1421	50 ft.	coil
1422	100 ft.	coil
1423	1000 ft.	spool
No. 22		
1434	1000 ft.	spool

Phosphor Bronze

Twice the strength of copper. Used extensively on Master Antenna Systems, airports, ships, where strength and resistance to the elements are important.

Cat. No.	Ft.	Size
527	100	7/16
499	100	7/18
524	100	7/20
526	100	7/22

Longer Lengths Available

Stranded Enamel Copper Wire

Cat. No.		
7/22 (14 B&S)		
1642	75 ft.	coil
1672	100 ft.	coil
1637	1000 ft.	spool
7/23 (15 B&S)		
1645	75 ft.	coil
1675	100 ft.	coil
1631	1000 ft.	spool
7/24 (16 B&S)		
1683	75 ft.	coil
1682	100 ft.	coil
1627	1000 ft.	spool

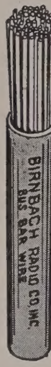
Solid Bare Copper Wire

SOFT DRAWN

Cat. No.		
No. 10		
1561	50 ft.	coil
1562	100 ft.	coil
1563	1000 ft.	spool
No. 12		
1565	50 ft.	coil
1566	100 ft.	coil
1567	1000 ft.	spool
No. 14		
1569	50 ft.	coil
1570	100 ft.	coil
1571	1000 ft.	spool
No. 16		
1573	50 ft.	coil
1574	100 ft.	coil
1575	1000 ft.	spool

Solid Enamel Copper Wire

Cat. No.		
No. 10		
697	50 ft.	coil
497	100 ft.	coil
1497	1000 ft.	spool
No. 12		
292	50 ft.	coil
492	100 ft.	coil
492-A	150 ft.	coil
492-B	200 ft.	coil
1492	1000 ft.	spool
No. 14		
290	50 ft.	coil
490	100 ft.	coil
490-A	150 ft.	coil
490-B	200 ft.	coil
1490	1000 ft.	spool



Birnbach Tinned Bus Bar Wire

For hooking up all types of transmitters, especially ultra short wave equipment. All Bus Wire is made of hard drawn copper, tinned, straightened, and cut 2 ft. lengths.

(100 to Std. Pkg.)

Cat. No.	
2010	10 Round
2012	12 Square
2013	12 Round
2014	14 Square
2015	14 Round
2016	16 Round

Birnbach MAGNET WIRE

BIRNBACH RADIO CO. INC.

PLAIN ENAMEL

Size B&S	¼ lb. Spool Ft.	½ lb. Spool Ft.	1 lb. Spool Ft.
10	8	16	32
12	12	25	50
14	20	40	80
16	32	63	126
18	50	100	201
20	80	160	320
22	127	254	508
24	201	403	806
26	320	640	1280
28	507	1015	2030
30	805	1610	3220
32	1282	2564	5128
34	2037	4075	8150
36	3221	6443	12887
38	5132	10246	20492
40	8143	16286	32573

DOUBLE COTTON

Size B&S	¼ lb. Spool Ft.	½ lb. Spool Ft.	1 lb. Spool Ft.
12	12	24	49
14	19	62	123
18	49	97	194
20	78	157	304
22	119	238	477
24	184	369	739
26	284	568	1136
28	435	871	1742
30	641	1284	2569
32	976	1953	3906
34	1365	2735	5470
36	1827	3654	7309
38	2738	5476	10952
40	3405	6811	13623

DOUBLE SILK

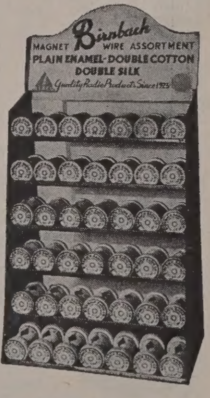
Size B&S	¼ lb. Spool Ft.	½ lb. Spool Ft.	1 lb. Spool Ft.
12	12	24	49
14	19	39	78
16	31	62	125
18	49	99	198
20	78	157	314
22	123	247	495
24	195	390	781
26	303	606	1212
28	478	956	1912
30	739	1479	2958
32	1136	2272	4545
34	1712	3424	6849
36	2551	5102	10204
38	3770	7541	15082
40	5040	10080	20161

SOLID TINNED
(Soft Drawn)

Size B&S	¼ lb. Spool Ft.	½ lb. Spool Ft.	1 lb. Spool Ft.
10	8	16	32
12	12	25	50
14	20	40	80
16	32	63	126
18	50	100	201
20	80	160	320
22	127	254	508
24	201	403	806
26	320	640	1280
28	507	1015	2030
30	805	1610	3220
32	1282	2564	5128
34	2037	4075	8150
36	3221	6443	12887
38	5132	10246	20492
40	8143	16286	32573

BIRNBACH MAGNET and TINNED WIRE
SPECIAL SPOOLS

Attractive Spools, even sizes from 10 to 40 inclusive in Double Cotton, Plain Enamel, Double Silk and Solid Tinned. This display on the counter is a Silent Salesman bringing you real profits the year around.


Birnbach
MAGNET WIRE ASSORTMENT
PLAIN ENAMEL · DOUBLE COTTON
DOUBLE SILK
Quality Radio Products Since 1925

FREE DISPLAY

One Display Given with each initial order of 100 spools. Display made of strong, reinforced steel. Mahogany crackle finish. 3-color display at top. Space for YOUR resale price. Extra Display Racks available.

Length of Wire of Special Spools

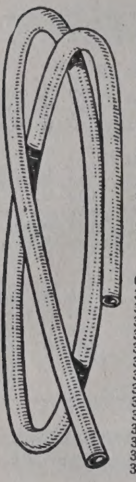
Size B&S	Plain Enamel Ft.	Double Cotton Ft.	Double Silk Ft.	Solid Tinned Ft.
10	11	—	—	11
12	15	9	—	15
14	26	20	11	26
16	34	34	19	34
18	56	44	23	56
20	86	56	29	86
22	112	75	37	112
24	184	97	56	184
26	244	116	71	244
28	401	131	90	401
30	525	158	112	525
32	675	180	124	675
34	900	195	131	900
36	1275	206	142	1275
38	1725	240	116	1725
40	1950	265	125	1950

See Pages S-41 to S-43 for Birnbach Prices

Birnbach Biraco Extruded • Varnished Tubing • Dial Cord Copperweld Enamel • Guy • Aluminum Wire

BIRNBACH BIRACO TUBING

(Extruded Vinyl)



Synthetic plastic tubing especially designed for electronic and electrical insulation work. Extremely flexible and high resistance to abrasion. Has high dielectric strength, average 10,000 volts and high tensile strength. Will not support combustion, soften up to 257°F. or crack at —75°F. Its dielectric strength: 1100 volts per mil at room temperature when dry and 1000 volts per mil when wet. Impervious to water, oil, alkalies, alcohol, solvents, etc. Meets all ASTM specs.

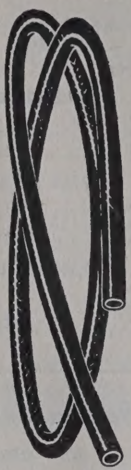
(36" Lengths)

Cat. No.	B&S Gauge Size No.	Approx. I.D.
313	20	.034
314	18	.042
315	16	.053
316	14	.066
317	12	.085
325	10	.106
318	8	.135
326	6	.166
319	4	.208
320	2	.263
321	5/16	.3125
322	3/8	.375
323	1/2	.500
324	5/8	.625

COLORS: Black, Red, Green, White, Yellow, Blue, Brown, Orange and Clear.

BIRNBACH VARNISHED TUBING

(Radio & Electronic Grade)



Constructed of high quality rayon braid with heavy coatings of varnish applied. The inside is also coated for easy insertion of stranded wires. It is impervious to oil, acid and water. Extremely flexible; it will not crack after aging. Average dielectric strength 5000 volts. Meets all ASTM and VTA No. B-1 Specifications.

(30" Lengths)

Cat. No.	B&S Gauge Size No.	Approx. I.D.
291	20	.034
293	18	.042
294	16	.053
295	14	.066
300	12	.085
307	10	.106
301	8	.133
302	6	.166
297	3/16	.208
298	1/4	.263
303	5/16	.3125
304	3/8	.375
299	1/2	.500
296	5/8	.625

COLORS: Black, Red, Green, Yellow, Blue, Brown, Orange.

TUBING IN HANDY SPOOLS

Both the Biraco Extruded Vinyl Tubing and Varnished Tubing are now available on convenient spools, in special length spools and 100-ft. spools in a variety of assorted colors. It is a perfect item for servicemen, laboratories and for manufacturing purposes.

BIRNBACH BIRACO TUBING

(Extruded Vinyl)

Cat. No.	B&S Gauge Size No.	Approx. I.D.	Length Spool
313B	20	.034	25 Ft.
314B	18	.042	25 Ft.
315B	16	.053	25 Ft.
316B	14	.066	25 Ft.
317B	12	.085	25 Ft.
325B	10	.106	15 Ft.
318B	8	.135	15 Ft.
326B	6	.166	15 Ft.
319B	4	.208	10 Ft.
320B	2	.263	10 Ft.
313BC	20	.034	100 Ft.
314BC	18	.042	100 Ft.
315BC	16	.053	100 Ft.
316BC	14	.066	100 Ft.
317BC	12	.085	100 Ft.
325BC	10	.106	100 Ft.
318BC	8	.135	100 Ft.
326BC	6	.166	100 Ft.
319BC	4	.208	100 Ft.
320BC	2	.263	100 Ft.
321BC	5/16	.3125	100 Ft.
322BC	3/8	.375	100 Ft.
323BC	1/2	.500	100 Ft.
324BC	5/8	.625	100 Ft.

COLORS: Red, Black, Green, White, Yellow, Blue, Brown, Clear and Orange.

BIRNBACH VARNISHED TUBING

Radio and Electronic Grade

Cat. No.	B&S Gauge Size No.	Approx. I.D	Length Spool
291V	20	.034	25 Ft.
293V	18	.042	25 Ft.
294V	16	.053	25 Ft.
295V	14	.066	25 Ft.
300V	12	.085	25 Ft.
307V	10	.106	20 Ft.
301V	8	.135	15 Ft.
302V	6	.166	10 Ft.
305V	4	.208	10 Ft.
306V	2	.263	10 Ft.
291VC	20	.034	100 Ft.
293VC	18	.042	100 Ft.
294VC	16	.053	100 Ft.
295VC	14	.066	100 Ft.
300VC	12	.085	100 Ft.
307VC	10	.106	100 Ft.
301VC	8	.135	100 Ft.
302VC	6	.166	100 Ft.
305VC	4	.208	100 Ft.
306VC	2	.263	100 Ft.
303VC	5/16	.3125	100 Ft.
304VC	3/8	.375	100 Ft.
299VC	1/2	.500	100 Ft.
296VC	5/8	.625	100 Ft.

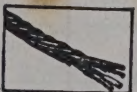
COLORS: Black, Red, Green, White, Yellow, Blue, Brown, and Orange.

GUY WIRE

Galvanized steel stranded twisted wire. Made of 6 strands No. 20. Fully weather-proofed. 450 lbs. tensile strength.

Cat. No.	
19	25 ft. coil
20	50 ft. coil
221	100 ft. coil
220	500 ft. spool
1220	1000 ft. spool

ECONOMY BRAND GUY WIRE



4 strands of No. 20 high tensile twisted steel galvanized wire. Fully weather-proofed. 225 lbs. tensile strength.

Cat. No.		Cat. No.	
20A	50 ft.	220A	500 ft.
221A	100 ft.	1220A	1000 ft.

BIRNBACH DIAL CABLE 42-STRAND PHOSPHOR BRONZE

BIRNBACH
DIAL CABLE

Finest phosphor bronze wire over a linen thread center. Due to its high tensile strength, it will not stretch.

(.040 Diameter)

Cat. No.	
1025	25 ft. Spool
1050	50 ft. Spool
1051	100 ft. Spool
1052	1000 ft. Spool

BRAIDED PHOSPHOR BRONZE DIAL CABLE

(Light — .025 Diameter)

Cat. No.	
1053	25 ft. Spool
1054	50 ft. Spool
1055	100 ft. Spool
1056	1000 ft. Spool

All of the quality cables are constructed of the finest Nylon Braid, over a fibreglass core. They are pre-stretched and chemically treated to prevent stretching and slipping. Has maximum resistance to abrasion.

EXTRA THIN NYLON DIAL CABLE

(.025 Diameter)

Cat. No.	
4025	25 ft. Spool
4050	50 ft. Spool
4051	100 ft. Spool
4052	1000 ft. Spool

Used on Motorola, RCA, GE, etc. Is extra thin!

REGULAR THIN NYLON CORD

(.028 Diameter)

The most popular of all dial cords.

Cat. No.	
2025	25 ft. Spool
2050	50 ft. Spool
2051	100 ft. Spool
2052	1000 ft. Spool

LIGHT NYLON DIAL CORD

(.040 Diameter)

Used extensively in RCA, Philco, Majestic, Wells Gardner, etc.

Cat. No.	
3025	25 ft. Spool
3050	50 ft. Spool
3051	100 ft. Spool
3052	1000 ft. Spool

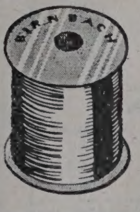
HEAVY DUTY NYLON DIAL CORD

(.062 Diameter)

Cat. No.	
1057	25 ft. Spool
1058	50 ft. Spool
1059	100 ft. Spool
1060	1000 ft. Spool

As used on models of Philco, Majestic, Brunswick, etc.

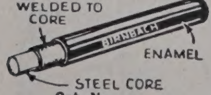
ALUMINUM GROUND WIRE



Approved method for grounding. (Soft drawn). Size No. 8 (⅛" O.D.) Recommended for use by National Electric Code. For grounding mast to ventpipes, gutters, ground rods, etc. against lightning and electrical disturbances.

Cat. No.	
7061	50 ft. coil
7062	100 ft. coil
7063	500 ft. spool
7064	1000 ft. spool

BIRNBACH COPPERWELD ENAMEL ANTENNA WIRE



Steel core covered with copper and heavily enameled. Will not elongate because of its high tensile strength . . . which is several times that of enameled copper wire. It has low R.F. resistance and is ideal for transmitting doublet and directional antenna systems as it will maintain the frequency characteristics of the antenna because of its stretchless qualities.

Cat. No.	Size B&S
710	10
712	12
714	14

Available in Following Footages:
100 ft. coils; 250 ft., 500 ft., 1000 ft., 2500 ft. spools
Specify Length Desired Next to Cat. No.

Size B&S	Ft. per Lb.	Tensile Strength
10	34½	1130 lbs.
12	54	720 lbs.
14	85	400 lbs.

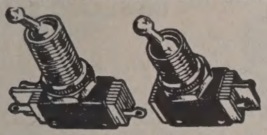
See Pages S-41 to S-43 for Birnbach Prices

Birnbach

Toggle • Push Button • Rotary • Knife • Power Slide Switches • Phono Plugs • Jacks

BIRNBACH

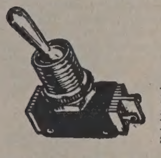
BIRNBACH TOGGLE SWITCHES



A very small, high grade UL approved switch. Well adapted for use on small motors, radio and electronic devices. Rated at 3 amps. at 125 volts. Mfd. by H. & H. for Birnbach. Switches nickel plated and supplied with ring and mounting nut. Laminated type.

Cat. No.	Description	Shank Length	Std. Pkge.
6200	SPST	15/32"	25
6201	SPST	3/4"	25
6202	SPDT	15/32"	25
6203	SPDT	3/4"	25
6204	DPST	15/32"	25
6205	DPST	3/4"	25
6206	DPDT	15/32"	25
6207	DPDT	3/4"	25
6208	ON-OFF Toggle Switch Plates Only		10

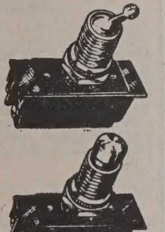
BIRNBACH BAT HANDLE TOGGLE SWITCHES



Available in nickel-plated finish and supplied with ring and mounting nut. Made by H. & H. for Birnbach. UL approved.

Cat. No.	Description	Shank Length	Std. Pkge.
6220	SPST	15/32"	25
6221	SPDT	15/32"	25
6222	DPST	15/32"	25
6223	DPDT	15/32"	25

BIRNBACH POWER SWITCH



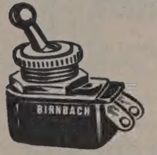
DPST switch rated at 12 amps at 125 volts per pole. When a single pole switch is required, the rating can be doubled. The push button power switch has the same rating. Primarily intended as a safety switch to be used as an interlock connection on doors of dangerous high voltage devices. Mfd. by H. & H. for Birnbach. UL approved.

Std. Pkge.

6225—Toggle Switch 25

6226—Push Button Switch 25

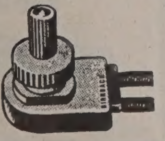
SMALL APPLIANCE SWITCH



Rated high—3 amps. at 250 volts; 6 amps. at 125 volts. Small molded compact switch 15/32" shank; brass nickel plated with solder lugs and complete with hex nut and ring. One hole mounting. UL approved.

Cat. No.	Descrip.	Std. Pkge.
6244	SPST	25

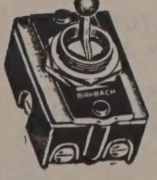
CANOPY SWITCH



Has a 3 amp., 125 volts; 1 amp., 250 volts rating. 6" leads. CSA approved.

Cat. No.	Std. Pkge.
6249—Canopy Switch	50

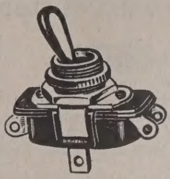
HEAVY DUTY POWER SWITCH



Recommended for use in transmitters, amplifiers, movie equipment and motors where heavy currents are carried. Made by H. & H. for Birnbach. Nickel plated and rated 10 amps., 125 volts. Neutral off in center position. 2" L., 1" H., 1¼" W. Mounting sleeve diam. ¾". UL approved.

Cat. No.	Description	Std. Pkge.
6227	DPDT	25
6228	3PDT	25
6229	4PDT	10

BIRNBACH DPDT CENTER OFF SWITCH

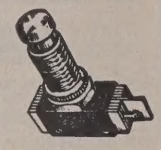


Rated at 1 amp., 125 volts. Has lug terminal with bat handle. 15/32" diam. shaft, nickel plated.

6243........St. Pkg. 25

BIRNBACH PUSH BUTTON SWITCH

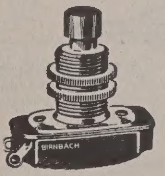
Momentary Contact



Made by H. & H. for Birnbach. Slow make and quick break. Laminated type with solder lugs. No. 6224 is a two circuit slow make and quick break momentary contact switch. One circuit is normally ON and the other is OFF. Pushing the button reverses the circuits in use. Used on many testers and analyzers. Cat. No. 6230 and 6231 are slow make and break switches with circuit normally OFF and push to make. Has 9/16" slotted sleeve, 15/32" diam. Complete with 1 hex nut and one knurled nut. Rated 1 amp., 125 volts. UL approved. Nickel plated.

Cat. No.	Description	Std. Pkge.
6224	DPST	25
6230	SPST	25
6231	DPST	25
6232	Button Only—Red or Black	20

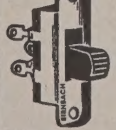
MOMENTARY PUSH BUTTON SWITCH



Molded momentary push button switch with solder lugs. Rated at 1 amp. ,125 volts. With 15/32" shank. Normally OFF—push to make. Nickel plated.

Cat. No.	Description	Std. Pkge.
6233	SPST	25
6234	SPDT	25
6235	DPST	25
6236	DPDT	25

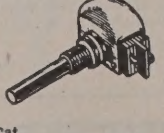
BIRNBACH SLIDE LEVER SWITCH



Popular for phonographs, tone controls, auto lights, test instruments. Rated at 1½ amps., 110 volts; ½" wide by 1⅜" long. Mounting centers 1⅛".

Cat. No.	Description	St. Pkge.
6245	SPST	25
6246	SPDT	25
6247	DPST	25
6248	DPDT	25

BIRNBACH ROTARY SWITCHES



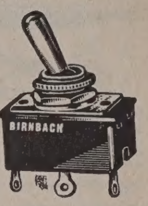
Made by H. & H. for Birnbach. Rated at 1 amp., 250 volts; 3 amps., 125 volts. Nickel plated and supplied with mounting nut. UL approved.

Cat. No.	Description	Shank Length	Overall Length of Shaft Incl. Shank	Std. Pkg.
6210	SPST	⅜"	1½"	25
6211	SPST	1"	2½"	25
6212	SPDT	⅜"	1½"	25
6213	SPDT	1"	2½"	25
6214	DPST	⅜"	1½"	25
6215	DPST	1"	2½"	25
6216	DPDT	⅜"	1½"	25
6217	DPDT	1"	2½"	25

BIRNBACH MOLDED BAT HANDLE TOGGLE SWITCHES

Meets Joint Army and Navy Specifications

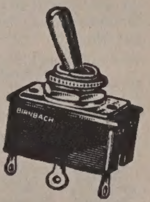
JAN-S-23



Made by H & H for Birnbach, they meet all Joint Army and Navy Specifications JAN-S-23. Molded with 15/32" Shank length they have back connected lugs and have a bat handle. Maintained contact.

Cat. No.	A.W.S. No.	Description	Shank Length	Std. Pkg.
6250	ST-12-A	SPST	15/32"	25
6251	ST-12-D	SPDT	15/32"	25
6252	ST-22-K	DPST	15/32"	25
6253	ST-22-N	DPDT	15/32"	25

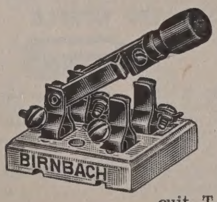
BAKELITE MOLDED MOMENTARY CONTACT SWITCH



Made by H. & H. for Birnbach. Rated at 3 amps., 250 volts; 6 amps, 125 volts. Molded ith 15/32" diam., Molded with 15/32" diam., Has momentary contact bat handle. Circuit normally OFF. Used on intercoms. UL approved.

Cat. No.	Description	Shank Length	Std. Pkge.
6241	SPST	15/32"	25
6242	DPDT	15/32"	25

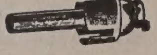
BIRNBACH KNIFE SWITCHES



Made of special nickel-plated spring brass on a rugged base. Screw terminals located conveniently for easy connections in circuit. Two mounting holes.

Cat. No.	Description	St. Pkge.
6100	S.P. S.T.	10
6102	S.P. D.T.	10
6103	D.P. S.T.	10
6104	D.P. D.T.	10
6105	T.P. D.T.	10

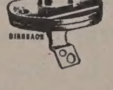
PHONO ATTACHMENT PLUG



To be used with recording and reproducing equipment, record players, etc. Large hole in cap for coaxial cable and extra long pin for new type jacks.

Cat. No.	St. Pkge.
248—Phono Plug (Long Pin)..........	100
248S—Phono Plug (Short Pin)........	100

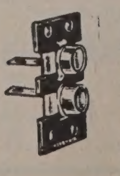
PHONO JACK



Designed to fit No. 248 Plug. Positive grip, single prong. Mounted on 1/16" bakelite. 11/16" mounting centers.

Cat. No.	St. Pkge.
249—Phono Jack	100

DUAL PHONO JACK



Used on phono players and recording units, etc., where dual application is needed.

Mounted on 1/16" bakelite. Double mounting holes are spaced ½" x 1 3/16". 3/16" center to center of jacks.

Cat. No.	St. Pkge.
T250—Dual Phono Jack.....	100

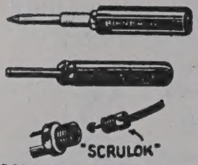
See Pages S-41 to S-43 for Birnbach Prices

Birnbach Insulated Phone Tips • Plugs Jacks • Alligator Clips

BIRNBACH

BIRNBACH INSULATED PHONE TIP

(SCRULOK)

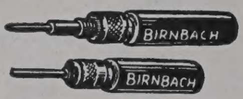


1" long, 5/16" dia. Connection is made by threading wire through the Scrulok threaded bushing (see drawing).

COLORS: Red, Black, Green, Blue and Yellow.

Cat. No.	Std. Pkge.
412—Scrulok Pin Tip, 1-9/16" Long	50
419—Scrulok Pin Tip, 1-15/16" Long	50

INSULATED Solderless PHONE TIPS

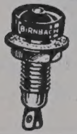


They have insulated handles ⅜" dia. by 1" long fitted to solderless phone tips. The wire can be easily attached by threading through the hole in the handle and tightening the knurled nut.

COLORS: Red, Black, Green, Blue and Yellow.

Cat. No.	Std. Pkge.
409—Insulated Sr. Solderless Tip 2¼" Long	50
415—Insulated Jr. Solderless Tip 1-13/16" Long	50

No. 407 INSULATED TIP JACK

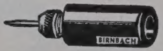


7/16" insulated top; mounts in a 5/16" dia. hole. The specially designed bronze springs hold the phone tip tight and straight.

COLORS: Red, Black, Yellow, Green.

Cat. No.	Std. Pkge.
407—Insulated Phone Tip Jack	100

No. 330 INSULATED NEEDLE POINT PLUG

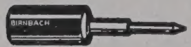


The insulated sleeve is ¾" long. Positive contact is assured with the sharp needle point phone tip. Body of plug accommodates all standard banana type plugs; easily pierces insulation.

Available in Black or Red.

Cat. No.	Std. Pkge.
330—Insulated Needlepoint Plug	50

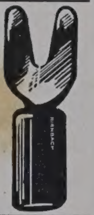
No. 331 INSULATED PHONE TIP PLUG



Plugs into all standard phone tip jacks. The ¾" long insulated sleeve is designed to accommodate all standard banana type plugs. Overall length 1½". Available in Black, Red, Yellow and Green.

Cat. No.	Std. Pkge.
331—Insulated Phone Tip Plug	50
331A—Tip Only	50

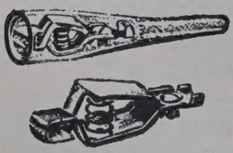
No. 332 INSULATED SPADE LUG



Sleeve measures ¾" long by ⅜" diameter. Barrel accommodates all standard banana type plugs. Available in Red or Black.

Cat. No.	Std. Pkge.
332—Insulated Spade Lug	50
332A—Spade Only	50

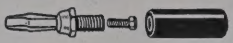
TEST CLIPS



The No. 27-C is a solid copper clip with a brass screw designed for high frequency work.

Cat. No.	Length	Jaw Spread	Std. Pkg.
27—Pee Wee	1½"	⅜"	50
28—Midget	2"	9/16"	50
29—Medium	2⅞"	1"	50
30—Large	4"	1¼"	50
27C—Pee Wee Copper	1½"	⅜"	50
27R—Rubber Sleeve—Red or Black			50

No. 404 INSULATED BANANA PLUG

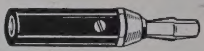


It has the Scrulok solderless connection and the non-collapsible special alloy springs assembled on a pin preventing collapse of the plug spring. The handle is made of phenolic resin and is ⅜" wide by 1" long.

COLORS: Red, Black, Yellow, Blue and Green.

Cat. No. 404 .... Std. Pkg. 50

No. 404B SPRING BANANA PLUG

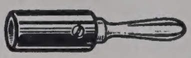


Same construction as No. 404 above except with small side screw for wire connection.

COLORS: Red, Black, Yellow, Blue and Green.

Cat. No. 404B .... Std. Pkg. 50

No. 604 BANANA PLUG

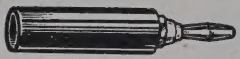


Solid brass nickel-plated, with the end slotted. Cast phenolic handle is 1" long by ⅜" dia. and is held on by the screw that secures wire to plug.

COLORS: Red, Black, Yellow, Green and Blue.

Cat. No. 604 .... Std. Pkg. 50

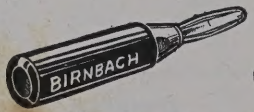
No. 341 INSULATED BANANA PLUG



This plug consists of our No. 404A plug with a larger handle 1⅞" long by ½" dia. Used on therapeutic apparatus and test equipment. Overall length 2⅝". **COLORS:** Red or Black.

Cat. No. 341 .... Std. Pkg. 50

No. 392 INSULATED GIANT PLUG



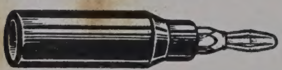
No projecting edges are exposed.

Connection is made by soldering into the hole at the end of the threaded shank of the plug. Handle is 1⅞" long by ⅝" dia.; length overall 3".

COLORS: Red or Black.

Cat. No. 392 .... Std. Pkg. 50

No. 342 HARD RUBBER INSULATED GIANT PLUG

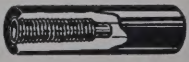


Designed for use with diathermy cables. It has a ⅝" dia. hole in the handle to take the largest cable. Polished black hard rubber. The handle is 3" long by ⅞" dia. Overall length is 4$\frac{1}{32}$".

COLORS: Red or Black

Cat. No. 342 .... Std. Pkg. 50

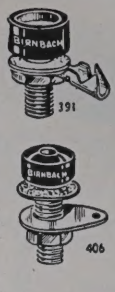
No. 605 HANDLE JACK



Consists of a banana jack inside an insulated sleeve. Connection is made by soldering to the end of the jack. Handle is made of cast phenolic resin ⅜" dia. by 1¼" long. **COLORS:** Red, Black, Yellow and Green.

Cat. No. 605 .... Std. Pkg. 50

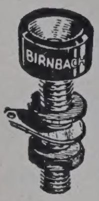
Nos. 391 and 406 INSULATED BANANA JACKS



½" dia. insulated head admits all of the exposed metal part of the metal plug when inserted. Mounts in a 5/16" dia. hole on a panel up to ⅜" thick. No. 406 Jack has a 7/16" dia. insulated top. It fits into 5/16" dia. hole and takes up to a ⅜" panel. Both with insulating shoulder washer, nut and lug.

Cat. No.	Std. Pkg.
391—Insulated Jack—Red, Black, Yellow, Green	50
406—Insulated Jack—Red, Black, Yellow, Blue, Green	50

No. 393 INSULATED GIANT JACK

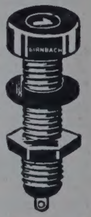


Designed to leave no metal part exposed on the panel. The ⅜-24 brass nickel plated sleeve has a 10-32 threaded hole at the end permitting a connection at the end of the jack or to the lug under the head. Either assembly available complete with nut, insulating shoulder washer, lock-washer and lug. Length overall 1⅜".

COLORS: Red or Black.

Cat. No.	Std. Pkg.
393—Insulated Giant Jack lug under head	50
393A—Insulated Giant Jack lug at end	50

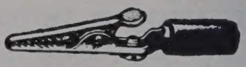
No. 333 INSULATED COMBINATION JACK



Accommodates all standard plugs of the phone tip or banana type construction. ¼" hole mounting in panels up to ½" thick. Overall length 1¾". Supplied complete with insulating shoulder, washer and nut. Insulated head comes in following colors: Black, Red, Green or Yellow.

Cat. No. 333 .... Std. Pkg. 50

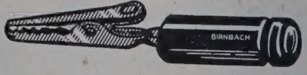
No. 310 INSULATED ALLIGATOR CLIP



Steel nickel plated. The insulated handle is ⅜" dia. and ¾" long and 2¼" overall and comes in Red or Black.

Cat. No. 310 .... Std. Pkg. 50

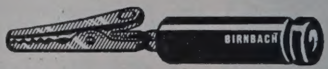
No. 334 ALLIGATOR CLIP WITH PHONE TIP JACK



1" long insulated handle houses a tip jack that accommodates all standard phone tip plugs. Overall length 2⅝". **COLORS:** Red or Black.

Cat. No. 334 .... Std. Pkg. 50

No. 335 ALLIGATOR CLIP COMBINATION JACK



Insulated alligator clip is composed of a combination jack in rear for both standard phone tip plugs and banana plugs. 1-9/16" length of handle. Overall length 3". Available in Red or Black.

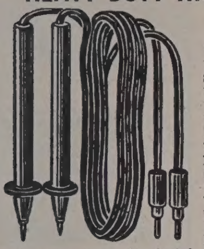
Cat. No. 335 .... Std. Pkg. 50

See Pages S-41 to S-43 for Birnbach Prices

Birnbach

Hi-Voltage Test Leads • Prods • Phone Tips
Jacks • Plugs • Alligator Clips

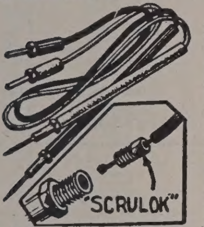
HEAVY DUTY HIGH VOLTAGE TEST LEADS



Safely tests up to 15,000 volts. High dielectric strength and lo leakage resistance. Has low voltage drop. Prods and tip handles are made of black and red bakelite with special tip for application. Cable constructed of No. 18 - 66/36 tinned copper with heavy duty rubber wall. Prods are 6" long and ½" dia. and have a protective rugged guard ring near the metal tip. The other end has 1¼"x½" dia. bakelite prods. All prods and cable color coded. The leads are 60" long.

Cat. No. **Std. Pkg.**
562—Heavy Duty High Voltage Test Leads....10

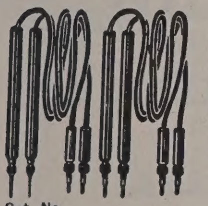
BAKELITE PENCIL TYPE TEST LEADS
(SCRULOK)



Red and black bakelite handles, 6" long and 5/16" in dia., and red and black bakelite insulated phone tips. Heavy kinkless wire is used together with the Birnbach Scrulok system of solderless wire connection. The Universal needle and phone tip prod have the same dimensions as the standard phone tip and are useful for piercing insulation without damage. Length overall 60".

Cat. No. **Std. Pkg.**
408—Bakelite Pencil Type Test Lead........10
439—Needlepoint Prod Tip for Replacement...10

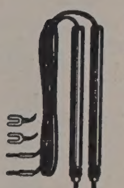
DELUXE TEST LEADS



Constructed with 5" long cast phenolic red and black handles with removable needlepoint chucks or solderless tips. Black and red heavy kinkless instrument 48" long is used to connect the prods with the insulated red and black cast phenolic solderless tips.

Cat. No. **Std. Pkg.**
560—Solderless 25
561—Needlepoint 25

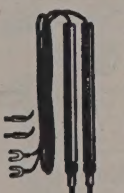
NEEDLEPOINT TEST LEADS



These test leads have 4" red and black insulated handles. A needlepoint chuck is fitted to the handle. Needles can be replaced when broken simply by loosening the knurled collar. Length overall 50".

Cat. No. **Std. Pkg.**
420—Needlepoint Phone Tip Test Leads 25
421—Needlepoint Spade Lug Test Leads 25

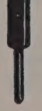
STANDARD TEST LEADS



A Sr. solderless phone tip is fitted to a red and black insulated handle 4" long. This permits replacement of wire when broken. The wire is secured by tightening the knurled nut. Length overall 50".

Cat. No. **Std. Pkg.**
422—Soldeless Phone Tip Test Leads 25
423—Solderless Spade Lug Test Leads 25

PHONE TIPS

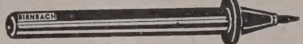


The 402 is 1" in overall length and fits all standard phone tip jacks. Hole is drilled for 7/64"; length of barrel is ½". Brass, nickel plated.

The 402A has a large drilled hole 5/32" I.D.; 7/16" barrel length; 1" overall. Made of brass with nickel plated finish.

Cat. No. **Std. Pkg.**
402 —Phone Tips 100
402A—Larger Diameter 100

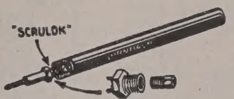
HEAVY DUTY HIGH VOLTAGE BAKELITE TEST PROD HANDLES



Same as used on No. 562. 6" long and ½" dia. with finger guard control. The rear of the prod can accommodate IN-34 crystal and condenser for use as an RF probe. Tips are heavy brass with nickel plating. Available in Red and Black.

Cat. No.	Handle Length	Handle Width	Overall Length
559	6"	½"	6-15/16"
558	1¼"	½"	2¼"

No. 411 BAKELITE PENCIL TEST PRODS

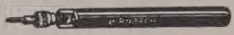


These prods have the Birnbach Scrulok solderless needlepoint tips. They are made of bakelite and are 6" long and 5/16" dia. The connection is made by threading the wire through the handle and securing to the needlepoint tip by locking the Scrulok. The tip is then screwed into the handle.

Available in Red or Black.

Cat. No. **Std. Pkg.**
411—Bakelite Pencil Test Prods............12

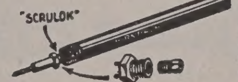
NEEDLEPOINT TEST PROD



A threaded shank needlepoint chuck is threaded into the end of handle. Made of highly polished cast phenolic handle. Available in Red or Black.

Cat. No.		Std. Pkg.
344	4" Handle	50
345	5" Handle	50

SCRULOK NEEDLEPOINT TEST PROD

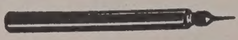


These insulated prods have the Scrulok solderless system of wire connection. Wire is easily attached without soldering. An extra heavy needle is fitted into the tip.

COLORS: Black or Red

Cat. No.		Std. Pkg.
417	4" Handle	50
418	5" Handle	50

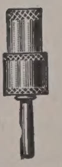
SOLDERLESS TEST PROD



Made of highly polished cast phenolic resin. A solderless phone tip is threaded at end permitting replacement of tip. Available in Red or Black.

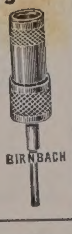
Cat. No.		Std. Pkg.
410	4" Handle	50
343	5" Handle	50

SOLDERLESS PHONE TIPS

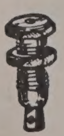


These phone tips are milled of solid brass and nickel plated. Designed for easy insertion of the wire.

Cat. No. **Std. Pkg.**
23—Junior 100
24—Senior 100



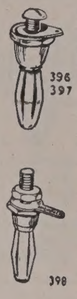
No. 26 PHONE TIP JACK



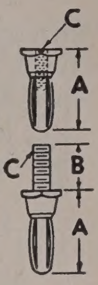
Milled of brass nickel plated. The bronze springs are made to hold the phone tip tight and straight. Mounts in a ¼" dia. hole.

Cat. No. 26...........Std. Pkg. 100

BIRNBACH GIANT PLUGS

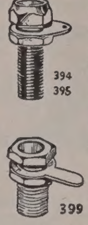


The Giant Plugs are intended for use where heavy current is used. They are rated at 25 amps. The long life nickel silver alloy spring is secured over a pin preventing a collapse of the spring and also maintaining the full spring action of the spring when inserted into the jack. The No. 398A plug has a hole in the thread shank to permit soldering to it. It is used extensively on diathermy electrode pad cables.

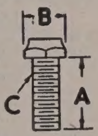


Cat. No.		Std. Pkg.	A	B	C
396	Plug	25	1-5/32	—	10-32
397	Plug	25	1-7/16	—	¼-20
398	Plug	25	1-5/32	⅝	¼-28
398A	Plug	25	1-5/32	⅝	¼-28

BIRNBACH GIANT JACKS

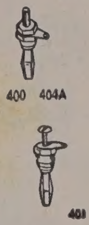


Carefuly milled with the central hole being reamed to size to insure a tight and wobble free fit with all Giant Plugs. The No. 394 and No. 399A have a 10-32 thread tapped at the end permitting connection to be made there with the use of a screw and lug. Made of brass and nickel-plated. Complete with nut and lug.



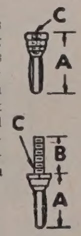
Cat. No.		Std. Pkg.	A	B	C
394	Jack	25	1-1/16	½	⅜-24
395	Jack	25	11/16	½	⅜-24
399	Jack	25	⅞	⅝	½-20
399A	Jack	25	1¼	⅝	½-20

BIRNBACH BANANA PLUGS



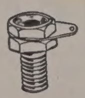
Large area of contact is one of the outstanding features of these jacks and plugs. The No. 400 series of plugs have a nickel silver contact spring secured over a full length central pin, making these plugs non-collapsible and assuring a low resistance contact.

Capacity 5 Amperes.



Cat. No.		Std. Pkg.	A	B	C
400	Plug	100	¾	½	6-32
401	Plug	100	31/32	—	6-32
404A	Plug	100	¾	⅜	¼-28

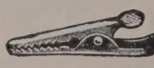
BIRNBACH No. 403 BANANA JACK



Accurately milled. Precision reamed hole helps maintain the tight and smooth action of the plug. Brass nickel plated. With nut and lug.

Cat. No.	Std. Pkg.	A	B	C
403	100	½	⅜	¼-28

No. 31 ALLIGATOR CLIP



Nickel plated steel.

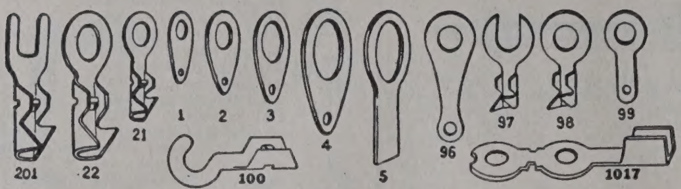
Cat. No.	Length	Std. Pkge.
31	2"	50

Birnbach

Tinned • Solderless • Locking Terminal Lugs
Terminal Strips • Angle Brackets • Fuse Holders

BIRNBACH

BIRNBACH TINNED TERMINAL LUGS



Cat. No.	Hole for Screw	Length In.	Std. Pkg.
1	6	9/16	1000
2	10	5/8	1000
3	1/4	5/8	1000
4	3/8	7/8	1000
5	1/2	1-3/16	1000
21	10	1-3/16	1000
22	1/4	1-3/32	1000
201	8	1-3/16	1000
96	6-8-10	7/8	1000
97	8	5/8	1000
98	6-8-10	11/16	1000
99	4-6-8	11/16	1000
100	10	7/8	1000
1017 (TV)	10	13/16	1000

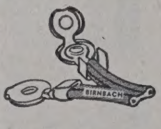
BIRNBACH LUGS IN PACKAGES

BIRNBACH
TERMINAL LUGS

Specify "D" for Display Card

Cat. No.	Quan. in Env.	Lug No.	Cat. No.	Quan. in Env.
1-50	50	1	1-100	100
2-50	50	2	2-100	100
3-50	50	3	3-100	100
21-35	35	21	21-100	100
22-15	15	22	22-100	100
201-35	35	201	201-100	100
96-40	40	96	96-100	100
97-40	40	97	97-100	100
98-35	35	98	98-100	100
99-35	35	99	99-100	100
100-20	20	100	100-100	100
1017-10	10	1017	1017-100	100

FOLD-OVER SOLDERLESS TERMINAL LUGS

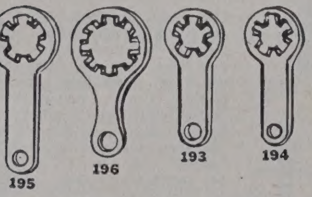


Use this lug for easy, positive vibration-proof terminal connections at antenna mast and for permanent connections at receiver. Simply lay bare wire into groove and fold over. No special tools necessary. For No. 10 hole.

Cat. No.	Quan. in Pkge.	St. Carton
1017-10	10 (Envelope)	25 Pkgs.
1017-50	50 (Envelope)	25 Pkgs.
1017-100	100 (Envelope)	12 Pkgs.
1017-1000	1000 (Box)	10 Pkgs.

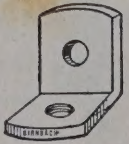
BIRNBACH LOCKING TYPE TERMINAL LUGS

Brass Electro Plated



Cat. No.	Hole for Screw	Thickness	Std. Pkg.
193	4	.020″	1000
194	6	.020″	1000
195	8	.020″	1000
196	¼″	.020″	1000

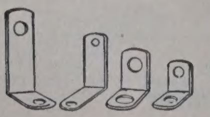
TAPPED ANGLE BRACKET



Steel cadmium plated. ½″ by ½″. One plain .165 hole and one 8/32 tapped hole.

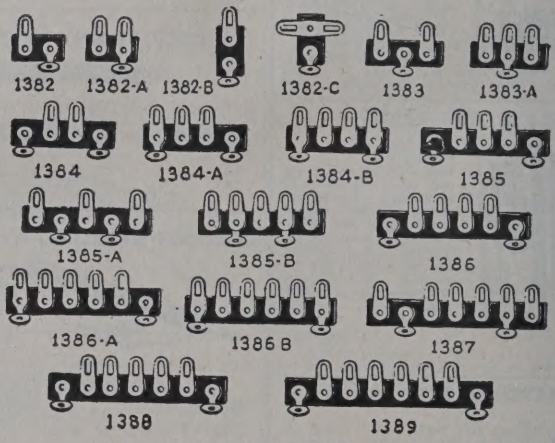
Cat. No.	Std. Pkg.
1120	100

BRASS AND STEEL ANGLES



Cat. No.	Material	Size	Std. Pkg.
1121	Brass N.P.	½″x ½″	100
1122	Brass N.P.	⅝″x ⅝″	100
1123	Steel H.T.	¾″x ¾″	100
1124	Steel H.T.	⅝″x1 ⅛″	100

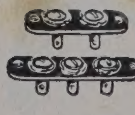
BIRNBACH LUG TERMINAL STRIPS



Cat. No.	Std. Pkg.
1382	100
1382A	100
1382B	100
1382C	100
1383	100
1383A	100
1384	100
1384A	100
1384B	100

Cat. No.	Std. Pkg.
1385	100
1385A	100
1385B	100
1386	100
1386A	100
1386B	100
1387	100
1388—5 Ter., 2 grds.	100
1389—6 Ter., 2 grds.	100

BIRNBACH BAKELITE TERMINAL STRIPS



Terminals are made of brass and cadmium plated. Terminals are mounted on 1/16″ bakelite. 7, 8, 9 and 10 terminals are mounted on 3/32″ bakelite. All terminals are space 7/16″ center to center.

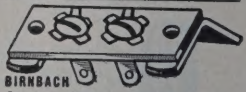
PLAIN

Cat. No.	Terminals	Mtg. Center
1372	2	1-5/16″
1373	3	1-¾″
1374	4	2-3/16″
1375	5	2-⅝″
1376	6	3-1/16″
1377	7	3-½″
1378	8	3-15/16″
1379	9	4-⅜″
1380	10	4-13/16″

MARKED

Cat. No.	Terminals Marked
1260	2; A-G
1261	2; Output
1262	2; Input
1263	3; 1-2-3
1264	4; 1-2-3-4
1265	5; 1-2-3-4-5
1266	6; 1-2-3-4-5-6

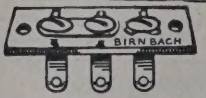
TERMINAL STRIPS 2 POST



Excellent mounting for twin lead transmission lines. Brass hot tiined lugs spaced 7/16″ center to center. 1/16″ bakelite. 1 15/16″ mounting center.

Cat. No. T16......................St. Pkge. 50

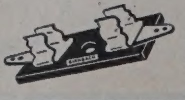
BIRNBACH 3 POST



A synchronizing lock strip for RCA type television receivers. Brass hot tinned lugs. Spaced 7/16″ center to center. Mounting center 1¾″. 1/16″ bakelite.

Cat. No. T16A......................St. Pkge. 50

FUSE MOUNT BASE



Protects high voltage and similar type circuits. Takes 3 AG auto fuse. ⅛″ bakelite.

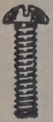
T15.......St. Pkge. 50

See Pages S-41 to S-43 for Birnbach Prices

Birnbach

Machine • Wood • Self-Tapping • Binding Head
Rack Screws • Tube Clamps • Nuts • Washers

BIRNBACH



ROUND HEAD MACHINE SCREWS

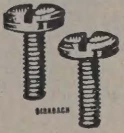
Standard Package 1000

STEEL NICKEL PLATED

Cat. No.	Size
6300	2-56 x 3/16
6301	2-56 x ⅜
6302	2-56 x ½
6303	3-48 x ¾
6304	4-36 x ¼
6305	4-36 x ½
6306	4-36 x ¾
6307	4-40 x ¼
6308	4-40 x ½
6309	4-40 x ¾
6420	6-32 x ¼
6421	6-32 x ⅜
6422	6-32 x ½
6423	6-32 x ⅝
6424	6-32 x ¾
6425	6-32 x 1
6426	8-32 x ¼
6427	8-32 x ⅜
6428	8-32 x ½
6429	8-32 x ⅝
6430	8-32 x ¾
6431	8-32 x 1
6432	8-32 x 1½
6433	10-32 x ¼
6434	10-32 x ⅜
6435	10-32 x ½
6436	10-32 x ⅝
6437	10-32 x ¾
6438	10-32 x 1
6439	¼-20 x ½
6310	¼-20 x 1¼
6311	¼-20 x 2½

BRASS NICKEL PLATED

Cat. No.	Size
6400	4-36 x ¼
6401	4-36 x ⅜
6402	4-36 x ½
6403	4-36 x ¾
6404	4-36 x 1
6312	4-40 x ¼
6313	4-40 x ⅜
6314	4-40 x ½
6315	4-40 x ¾
6405	6-32 x ¼
6406	6-32 x ⅜
6407	6-32 x ½
6408	6-32 x ⅝
6409	6-32 x ¾
6410	6-32 x 1
6411	6-32 x 1¼
6412	6-32 x 1½
6413	8-32 x ¼
6414	8-32 x ⅜
6415	8-32 x ½
6416	8-32 x ⅝
6417	8-32 x ¾
6418	8-32 x 1
6316	10-32 x ¼
6317	10-32 x ⅜
6318	10-32 x ½
6319	10-32 x ¾
6320	10-32 x 1

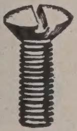


BINDING HEAD MACHINE SCREWS

Steel Nickel Plated

Cat. No.	Size	Std. Pkg.
6321	6-32 x ¼"	1000
6322	6-32 x ⅜"	1000
6323	6-32 x ½"	1000
6324	8-32 x ¼"	1000
6325	8-32 x ⅜"	1000
6326	8-32 x ½"	1000

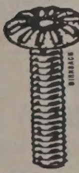
OVAL HEAD RACK SCREWS



Brass Nickel Plated

Widely used for mounting panels on racks and cabinets. Screws are nickel-plated brass.

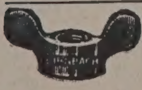
Cat. No.	Size	Std. Pkg.
6600	6-32 x ¼"	100
6601	6-32 x ½"	100
6602	6-32 x ¾"	100
6603	6-32 x 1"	100
6604	8-32 x ¼"	100
6605	8-32 x ½"	100
6606	8-32 x ¾"	100
6607	8-32 x 1"	100
6608	10-32 x ¼"	100
6609	10-32 x ½"	100
6610	10-32 x ⅝"	100
6611	10-32 x ¾"	100
6611-A	10-32 x 1"	100



ORNAMENTAL HEAD SCREWS

Steel—Statuary Bronze Finish

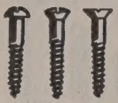
Cat. No.	Size	Std. Pkg.
6327	6-32 x ¾"	1000
6328	6-32 x 1"	1000
6329	8-32 x 1¼"	1000



WING NUTS

High quality brass nickel plated wing nut used extensively on portable and test instruments.

Cat. No.	Thread	Std. Pkg.
6	6-32	100
8	8-32	100
10	10-32	100
11	¼-20	100



BRASS AND STEEL WOOD SCREWS

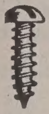
Round, Flat and Oval Heads

BRASS NICKEL PLATED

Cat. No.	Size	Std. Pkg.
6460	⅜ x #4	144
6461	½ x #4	144
6462	⅝ x #5	144
6463	¾ x #5	144
6464	1 x #5	144
6465	1¼ x #6	144
6466	1½ x #6	144

STEEL NICKEL PLATED

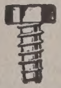
Cat. No.	Size	Std. Pkg.
6470	⅜ x #4	144
6471	½ x #4	144
6472	⅝ x #5	144
6473	¾ x #5	144
6474	1 x #5	144
6477	1 x #6	144
6475	1¼ x #6	144
6476	1½ x #6	144
6478	¾ x #8	144



BIRNBACH SHEET METAL SELF TAPPING SCREWS

Steel Cadmium Plated
TYPE A — SHARP POINT

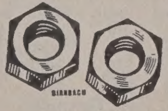
Cat. No.	Size	Std. Pkg.
6500	#4 x ½	144
6501	#6 x ¼	144
6502	#6 x ⅜	144
6503	#6 x ½	144
6504	#6 x ¾	144
6540	#8 x ⅜	144
6541	#8 x ½	144
6505	#8 x 1	144
6542	#10 x ⅜	144
6543	#10 x ½	144
6506	#10 x ¾	144
6507	#10 x 1	144



BIRNBACH HEX HEAD SELF TAPPING SCREWS

TYPE B — BLUNT POINT SLOTTED
Steel Cadmium Plated

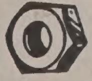
Cat. No.	Size	Std. Pkg.	Cat. No.	Size	Std. Pkg.
6510	#6 x ⅜	144	6515	#8 x ½	144
6511	#6 x ½	144	6516	#8 x ¾	144
6512	#6 x ¾	144	6517	#8 x 1	144
6513	#8 x ¼	144	6518	#10 x ½	144
6514	#8 x ⅜	144	6519	#10 x 1	144



HEXAGON STEEL MACHINE SCREW NUTS

Nickel Plated

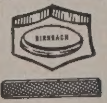
Cat. No.	Thread Size	Width across Flats	Thickness	Std. Pkg.
6330	2-56	3/16"	1/16"	1000
6331	3-48	3/16"	1/16"	1000
6332	4-36	1/4"	3/32"	1000
6333	4-40	1/4"	3/32"	1000
6448	6-32	1/4"	3/32"	1000
6449	6-32	5/16"	7/64"	1000
6334	8-32	1/4"	3/32"	1000
6450	8-32	5/16"	7/64"	1000
6335	10-32	3/8"	1/8"	1000
6336	¼-20	7/16"	3/16"	1000



HEXAGON MACHINE SCREW NUTS

BRASS—NICKEL PLATED

Cat. No.	Thread Size	Width across Flats	Thickness	Std. Pkg.
6440	4-36	1/4"	3/32"	1000
6442	4-40	1/4"	3/32"	1000
6441	6-32	1/4"	5/64"	1000
6443	6-32	5/16"	7/64"	1000
6444	8-32	11/32"	1/8"	1000
6445	10-32	5/16"	7/64"	1000
6446	10-32	3/8"	1/8"	1000
6447	¼-20	7/16"	1/8"	1000

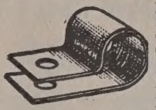


BIRNBACH VOLUME CONTROL & TOGGLE NUTS

BRASS—NICKEL PLATED

No.	Type	Size	Std. Pkg.
6337	Volume Control	⅜-32x½x3/32	1000
6338	Toggle Switch	15-32x9/16x5/64	1000
6339	Toggle Ring Nut	15-32x⅝x1/16	1000

BIRNBACH TUBE CLAMPS

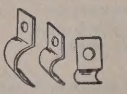


Desirable when mounting resonant lines or elements of directive beam antennas. Made of hard drawn aluminum. The 5/16", ⅜" and ½" have holes for No. 10 screw and the ¾" and 1" dia. clamps have holes for ¼" bolts.

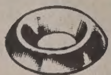
Cat. No.	To Fit Tube	Std. Pkg.
51—Clamp	¼" Dia.	100
52—Clamp	5/16" Dia.	100
53—Clamp	⅜" Dia.	100
54—Clamp	½" Dia.	100
55—Clamp	¾" Dia.	50
57—Clamp	⅞" Dia.	50
56—Clamp	1" Dia.	50

BIRNBACH CABLE CLAMPS

Standard Package of 100



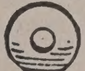
Cat. No.	To fit Cable	L.	W.	Hole
1153	⅛"	7/16"	¼"	4
1154	3/16"	⅝"	⅜"	6
1155	⅜"	11/16"	⅜"	6
1156	½"	15/16"	⅜"	6
1157	⅞"	1¼"	⅜"	10



FINISHING RACK WASHERS

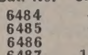
Brass Nickel Plated

Cat. No.	Size	Std. Pkg.
6612	6-32 Cup Washer	100
6613	8-32 Cup Washer	100
6614	10-32 Cup Washer	100



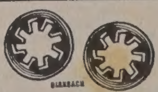
BIRNBACH BRASS NICKEL PLATED FLAT WASHERS

Cat. No.	Fits Screw No.	Hole Size	O.D.	Thickness	Std. Pkg.
6479	4	.118"	9/32"	.025"	1000
6480A	6	.145"	5/16"	.025"	1000
6480	6	.145"	3/8"	.025"	1000
6481	8	.172"	3/8"	.032"	1000
6482	10	.203"	7/16"	.036"	1000
6483	¼-20	.265"	9/16"	.040"	1000



STEEL KANTLINK LOCKWASHERS

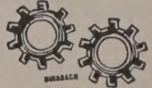
Cat. No.	Screw Size	O.D.	Thickness	Std. Pkg.
6484	4	3/16"	1/32"	1000
6485	6	15/64"	1/32"	1000
6486	8	15/64"	.025"	1000
6487	10	5/16"	.050"	1000
6488	¼	7/16"	5/64"	1000



SHAKEPROOF LOCKWASHERS

INTERNAL TEETH

Cat. No.	Screw Size	Std. Pkg.
6355	2	1000
6356	3	1000
6357	4	1000
6490	6	1000
6491	8	1000
6492	10	1000
6493	¼	1000
6494	⅜	1000



SHAKEPROOF LOCKWASHERS

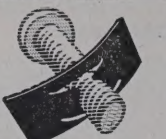
EXTERNAL TEETH

Cat. No.	Screw Size	Std. Pkg.
6358	4	1000
6359	6	1000
6360	8	1000
6361	10	1000
6362	¼	1000
6363	⅜	1000

See Pages S-41 to S-43 for Birnbach Prices

Birnbach

Airplane Insulators • Tube Sockets • Couplings Spacers • Speed Nuts • Tool Kits

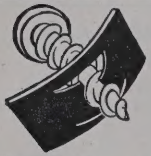


BIRNBACH SPEED NUTS

TEMPERED STEEL PARKERIZED

These speed nuts are self locking and help reduce assembly time. They prevent loosening from vibration, eliminate need of washers and stand up under abuse. For use with machine screws.

Cat. No.	Thread Size	Length	Width	Thickness	Std. Pkg.
6350	4-36	3/8″	1/4″	.012″	1000
6351	6-32	7/16″	9/16″	.017″	1000
6352	8-32	1/2″	5/16″	.017″	1000
6353	10-24	5/8″	3/8″	.022″	1000
6354	¼-20	3/4″	1/2″	.025″	1000



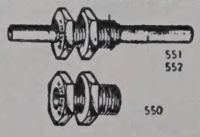
BIRNBACH SPEED NUTS

TEMPERED STEEL PARKERIZED

For use with sheet metal screws.

Cat. No.	Thread Size	Length	Width	Thickness	Std. Pkg.
6350A	4A	3/8″	1/4″	.022″	1000
6351A	6A	1/2″	5/16″	.025″	1000
6352A	8A	5/8″	13/32″	.028″	1000
6353A	10A	3/4″	1/2″	.031″	1000
6354A	14A	7/8″	9/16″	.037″	1000

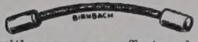
BIRNBACH FRONT PANEL BEARING



Cadmium plated brass for panels up to ⅜″ in thickness and for ¼″ dia. shafts. The No. 551 and No. 552 are complete assemblies of the No. 550 and ¼″ dia. brass shaft cadmium plated.

Cat. No.	Std. Pkg.
550—Front Panel Bearing	50
551—Front Panel Bearing, ¼″ shaft, 3″ long	50
552—Front Panel Bearing, ¼″ shaft, 6″ long	25

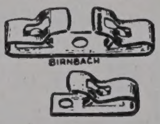
BIRNBACH FLEXIBLE SHAFTS



With couplings and these flexible shafts, locations can be made with ease on an offset and angles up to 90 degrees. The flexible shafts are made of phosphor bronze and fitted into ¼″ dia. hubs.

Cat. No.	Std. Pkg.
553—Flexible Shaft 3″ long	25
554—Flexible Shaft 6″ long	25

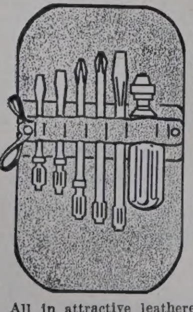
BIRNBACH SPRING WIRE CLIPS



They will hold a wire up to No. 10 B&S Gauge in a secure contact. All clips are brass nickel plated.

Cat. No.	Length	Width	Mtg. Hole	Std. Pkg.
32A—Spring Clip	¾″	5/16″	6	100
32 —Spring Clip	1″	⅜″	10	100
33 —Twin Clip	1¾″	⅜″	10	50

6 PIECE SCREW DRIVER SET



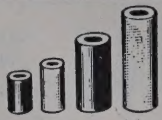
Unbreakable, shock-proof, non-inflammable amber handle, with flange aluminum screw chuck. Blades hardened, tempered and fully polished. For most TV and Radio work.

	Blade Size
1—Cabinet Blade	⅛ x 3¼
1—Cabinet Blade	3/16 x 3½
1—Mechanic Blade	¼ x 5½
1—Recessed Head (#1) Blade	3/16 x 4¼
1—Recessed Head (#2) Blade	¼ x 4¼
1—Amber Handle with Chuck	

All in attractive leatherette case. Wt. 5 lbs.

Cat. No. 3618 .... Std. Pkg. 12

BRASS BUSHING AND SPACERS

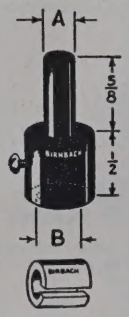


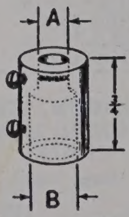
For raising sub panels, chassis, condensers, transformers, etc. Hole will accommodate a No. 6 or No. 8 screw.

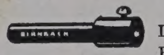
For No. 6 Cat. No.	For No. 6 Std. Pkg.	Length	For No. 8 Cat. No.	For No. 8 Std. Pkg.
		¼″ O.D.		
1125	100	¼″	1130	100
1126	100	⅜″	1131	100
1127	100	½″	1132	100
1128	100	¾″	1133	100
1129	100	1″	1134	100
		⅜″ O.D.		
1135	100	¼″	1140	100
1136	100	⅜″	1141	100
1137	100	½″	1142	100
1138	100	¾″	1143	100
1139	100	1″	1144	100

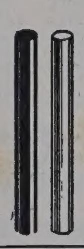
INSULATED BUSHINGS & SPACERS

For No. 6 Cat. No.	For No. 6 Std. Pkg.	¼″ O.D. Length	For No. 8 Cat. No.	For No. 8 Std. Pkg.
1145	100	¼″	1149	100
1146	100	⅜″	1150	100
1147	100	½″	1151	100
1148	100	¾″	1152	100









SHAFT COUPLINGS, REDUCERS AND EXTENDERS

By the use of these units all ¼″ and ⅜″ dia. shafts and knobs can be assembled together. The insulated units are for use where electrical isolation is desired. Furnished complete with set screws shown.

SHAFT COUPLINGS

Brass No.	Insul. No.	Shaft A	Hole B
534	634	¼″	¼″
535	635	¼″	⅜″
536	636	⅜″	¼″

537—Reducer for ⅜″ dia. hole to ¼″ dia. shaft

COUPLINGS

Brass No.	Insul. No.	Shaft A	Hole B
531	631	¼″	¼″
532	632	¼″	⅜″
533	633	⅜″	⅜″

EXTENDERS

	538 Brass	539 Insul.
Length	1¾″	1¾″
Hole I.D.	¼″	¼″
Shaft O.D.	¼″	¼″

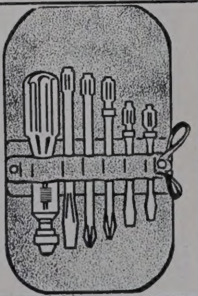
BRASS SHAFTING

No.	Dia.	Length
540	¼″	6″
541	¼″	12″
542	⅜″	8″

FIBRE SHAFTING

No.	Dia.	Length
543	¼″	6″
544	¼″	12″
545	⅜″	8″

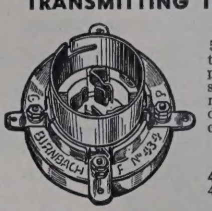
RATCHET HANDLE SCREW DRIVER SET



6 piece set. Same as above but with ratchet amber handle. (3 way: left, right and rigid). Weight: 5 lbs.

Cat. No.	Std. Pkg.
3619	12

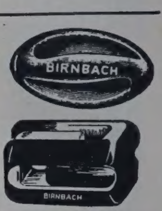
TRANSMITTING TUBE SOCKETS



50-Watt socket has extra heavy side wiping phosphor bronze contact spring with the filament spring having a double contact to safely carry the heavy current.

	Std. Pkg.
434—50 Watt	25
435—10 Watt	25

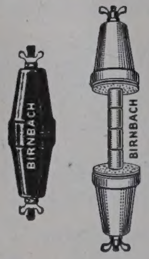
AIRPLANE INSULATORS



Used on mobile and aircraft and also with guy wire on TV installations. Shaped for the least air resistance; have very high tensile strength and low loss. Nos. 473 and 474 made of white glazed low absorption porcelain. No. 472 made of wetprocess glazed brown

Cat. No.		St. Pkge.
472—2¼″	(brown)	25
473—2″	(white)	100
474—1½″	(white)	100

LEADIN INSULATORS

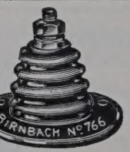


Each cone 2¾″ high, made of low absorption, vitrified glazed porcelain. The Nos. 4237 and 4238 have insulating bushings to insulate rod that goes through the wall. 2 bushings are included, ¼″ and ½″ long, allowing complete insulation of the threaded rod of any length in multiples of ¼″. Complete with brass nickel plated hardware and lead and cork washers to permit water-tight seal.

Cat. No.	Description	Std. Pkg.
4235	10″ Rod	10
4236	15″ Rod	10
4237	10″ Rod with bushings	10
4238	15″ Rod with bushings	10

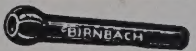
Individually Boxed

BEE-HIVE STANDOFF



Base measures 2″ dia. with 3 holes on a 1⅝″ circle, for No. 6 screws. Complete with 12-24 nickel plated brass screw and nuts. No. 766J has a No. 403 Jack. Available white or brown glaze.

Cat. No.	Hardware	Std. Pkg.
766	Standoff Insulator, 12-24 Screw	10
766J	Jack Type, No. 403 Jack	10

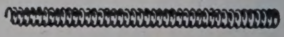


PORCELAIN TUBES

To bring a lead-in into a building. ¾″ diameter hole required.

Cat. No.	Std. Pkg.
42—2″	100
43—3″	100
44—4″	100
46—6″	100
48—8″	100

BIRNBACH THREADED RODS



These brass nickel plated threaded rods are standard parts of our insulator assemblies.

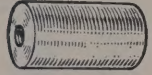
Cat. No.	Length	Thread	Std. Pkg.
16	4″	¼-20	1000
17	5½″	¼-20	1000
18	10″	¼-20	1000
113	15″	¼-20	1000
114	8″	10-32	1000
115	1⅝″	10-32	1000
116	2¼″	10-32	1000
117	8″	10-32	1000
118	8″	8-32	1000
119	8″	6-32	1000
15	2″	6-32	1000

See Pages S-41 to S-43 for Birnbach Prices

Birnbach Ceramic • Lucite • Steatite Insulators * Standoff Pillar • Cone • Feedthru • Button • Antenna

BIRNBACH STEATITE PILLARS

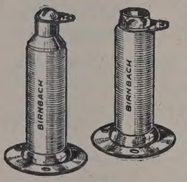
(Without Hardware)

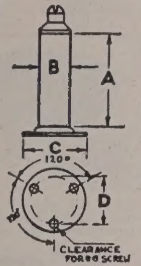


In many constructions, these unmounted threaded steatite pillars will facilitate assembly because of the one hole mounting and parallel mounting surfaces. They are made of glazed Steatite with threaded holes on both sides.

Cat. No.	Height	Dia.	Threaded Hole	Std. Pkg.
443	½	½	6-32	100
444	¾	½	6-32	100
445	1	½	6-32	100
446	1½	½	6-32	100
447	2½	½	6-32	100
448	2½	¾	¼-20	50
449	4	¾	¼-20	50

BIRNBACH STEATITE PILLARS

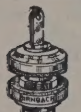




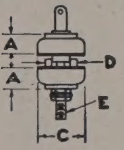
Have great tensile strength with extremely low losses at very high frequencies. Tapped on both ends; supplied with nickel plated mounting base and top hardware.

Cat. No.	Height A	Std. Pkg.	Dimen. B	Base Dia. C	Base Dia. D	Hardware
450	1"	10	½"	1⅛"	⅞"	6-32
450J	1"	10	½"	1⅛"	⅞"	403 Jack
451	1½"	10	½"	1⅛"	⅞"	6-32
451J	1½"	10	½"	1⅛"	⅞"	403 Jack
452	2½"	10	½"	1⅛"	⅞"	6-32
452J	2½"	10	½"	1⅛"	⅞"	403 Jack
453	2½"	5	¾"	1 9/16"	1 3/16"	¼-20
453J	2½"	5	¾"	1 9/16"	1 3/16"	395 Jack
454	4"	5	¾"	1 9/16"	1 3/16"	¼-20
454J	4"	5	¾"	1 9/16"	1 3/16"	395 Jack

BIRNBACH STEATITE BUTTON



This specially designed steatite button is intended for use to simplify wiring and to be used as a binding post or a binding post insulator, or as a standoff insulator. Attention is called to the uniqueness of the design which prevents either section of the insulator from turning in respect to the special screw. The specially designed screw locks both sections.

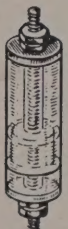


Cat. No.	Std. Pkg.
457—Steatite Button	25

Dimensions

A	B	C	D	E
5/16"	½"	¾"	½"	6-32

"LUCITE" FEEDTHRU INSULATORS

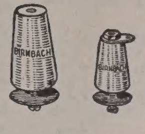


These feedthru insulators are ideal for bringing high frequency leads thru a panel. They are made of genuine DuPont Lucite. Because of its low loss at high frequency, it is well adapted to insulated elements of high frequency circuits. The ½" dia. insulators have brass nickel plated 6-32 hardware and the ¾" dia. insulators, 10-32 hardware.

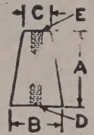
Cat. No.	Height Above Panel	Insulator Dia.	Mtg. Hole	Bottom Height	Std. Pkg.
377	¼"	½"	5/16"	¼"	25
378	½"	½"	5/16"	¼"	25
379	1"	½"	5/16"	¼"	25
475	1½"	¾"	7/16"	½"	25
476	2"	¾"	7/16"	½"	25

CONE STANDOFF INSULATORS

(STEATITE)



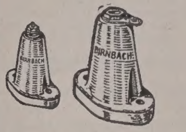
All heights except the No. 430 are available with a Jack or a threaded hole top. Complete with screws, metal and cork washers.

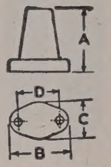


Cat. No.	Height A	Std. Pkg.	Base Dimensions B	Base Dimensions C	Threaded Holes D	Threaded Holes E
430	⅝"	100	⅝"	7/16"	6-32	6-32
431	1"	50	11/16"	½"	8-32	8-32
431J	1"	50	11/16"	½"	8-32	403 Jack
432	1½"	50	⅞"	⅝"	10-32	10-32
432J	1½"	50	⅞"	⅝"	10-32	403 Jack
433	2¾"	25	1¼"	¾"	¼-20	¼-20
433J	2¾"	25	1¼"	¾"	¼-20	395 Jack

Mounting Hole: No. 430—5/32"; 431 & 431J—3/16"; 432 & 432J—7/32"; 433 & 433J—9/32".

BIRNBACH STANDOFF INSULATORS



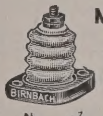


Highly vitrified low absorption glazed porcelain. No washers are necessary for mounting except No. 405 and No. 966. All brass nickel plated hardware is supplied.

Cat. No.	Height A	Std. Pkg.	Base Dimensions B	Base Dimensions C	Base Dimensions D	Mtg. Holes
405	⅝"	100	1"	17/32"	11/16"	5/32"
965	1"	50	1¼"	¾"	13/16"	5/32"
966	1"	50	1⅜"	⅞"	1"	5/32"
966J	1"	50	1⅜"	⅞"	1"	5/16"
866	1½"	25	1¾"	1⅛"	1¼"	5/32"
866J	1½"	25	1¾"	1⅛"	1¼"	5/16"
866SJ	1½"	10	1¾"	1⅛"	1¼"	5/32"
4275	2¾"	10	2¾"	2"	2⅛"	¼"
4275J	2¾"	10	2¾"	2"	2⅛"	¼"
4450	4½"	5	3⅝"	2½"	2⅝"	9/32"
4450J	4½"	5	3⅝"	2½"	2⅝"	9/32"

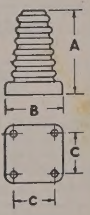
Hardware: No. 405—6-32; 965 & 966—8-32; 966J & 866J—No. 403 Jack; 866—10-32; 866SJ, 4275J & 4450J—No. 399 Jack; 4275 & 4450—¼-20.

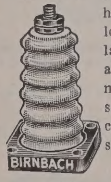
BIRNBACH METAL BASE INSULATORS



No. 867

Extremely long leakage paths due to the corrugated surface is one of the important characteristics. Made from high tensile strength low absorption porcelain smoothly glazed all over. Supplied with nickel plated brass screws and nuts and cadmium plated drawn steel bases.



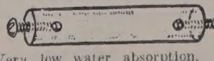


No. 4176

Cat. No.	Height A	Std. Pkg.	Base Dimension B	Base Dimension C	Mounting Screw D
867	1⅜"	25	1⅞x1 5/16"	1½"	2 #8
867J	1⅜"	25	1⅞x1 5/16"	1½"	2 #8
4176	2¾"	10	1¾x1¾"	1⅜"	4 #10
4176J	2¾"	10	1¾x1¾"	1⅜"	4 #10
4451	4½"	5	2¼x2¼"	1¾"	4 #10
4451J	4½"	5	2¼x2¼"	1¾"	4 #10

Hardware: No. 867—10-32; 867J—No. 403 Jack; 4176 & 4451—¼-20; 4176J & 4451J—No. 395 Jack.

BIRNBACH LUCITE SPEADERS



DuPont Lucite rod which has a very low loss at radio frequencies. Very low water absorption. Holes are drilled to take a No. 12 wire. A screw at the end of the spreader locks the wire in position.

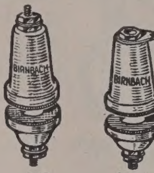
Cat. No.	Wire-Spacing	Std. Pkg.
436	2"	25
437	4"	25
438	6"	25

BIRNBACH LUCITE RODS

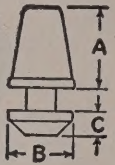
Cat. No.	Length	Dia.	Cat. No.	Length
455	......12"	¼"	455A	......48"
459	......12"	⅜"	459A	......48"
460	......12"	½"	460A	......48"
461	......12"	¾"	461A	......48"

BIRNBACH FEEDTHRU INSULATORS

Made of highly vitrified, low absorption porcelain smoothly glazed. Long insulating sleeves on the lower part of the insulator. Brass nickel plated hardware.

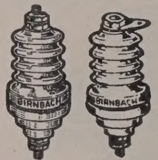


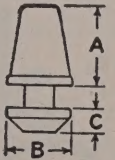
478 478J



Cat. No.	Height A	Std. Pkg.	Dimensions B	Dimensions C	Mtg. Hole	Hardware
458	⅝"	50	11/16"	¼"	5/16"	6-32
478	1"	25	13/16"	5/16"	7/16"	10-32
478J	1"	25	13/16"	5/16"	7/16"	403 Jack
4125	1¼"	25	⅞"	⅜"	7/16"	10-32
4125J	1¼"	25	⅞"	⅜"	7/16"	403 Jack
4234	2¾"	10	2"	1"	¾"	¼-20
4175	2¾"	10	1¼"	¾"	⅝"	¼-20
4175J	2¾"	10	1¼"	¾"	⅝"	394 Jack

BIRNBACH CORRUGATED FEEDTHRU INSULATORS

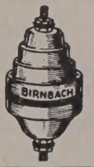




Have more than twice the leakage path of the straight type because of increased surface of the corrugations. Brass nickel plated hardware and cork mounting washers supplied.

Cat. No.	Height A	Std. Pkg.	Dimensions B	Dimensions C	Mtg. Hole	Hardware
479	1⅜"	25	1¼"	11/16"	9/16"	10-32
.479J	1⅜"	25	1¼"	11/16"	9/16"	403 Jack
4276	2¾"	10	1⅝"	1"	¾"	¼-20
4276J	2¾"	10	1⅝"	1"	¾"	394 Jack
4452	4½"	5	2⅛"	1½"	1"	¼-20
4452J	4½"	5	2⅛"	1½"	1"	394 Jack

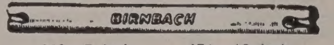
BIRNBACH HIGH VOLTAGE FEEDTHRU INSULATOR



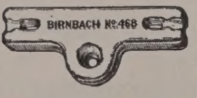
High dielectric and mechanical strength. The extra long leakage path is made possible by the corrugations on the top insulator. The bottom sleeve tapers from a base dia. of 1-3/16".

Cat. No.	H.	Std. Pkg.	Base Dia.	Mtg. Hole	Hardware
4233	1⅝"	10	2"	1¼"	¼-20

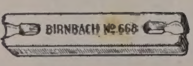
BIRNBACH ANTENNA INSULATORS



470—7 inch 471—12 inch

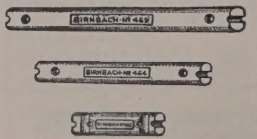


Low moisture absorption. The leakage path is long and the cross section is small. White glaze overall.



Cat. No.	Std. Pkg.
Center Insulator	
468—4½" long	...10
668—4¼" long	...25
470—7" long	10
471—12" long	 5

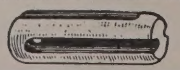
BIRNBACH FEEDER SPREADERS



⅜" x ½". Vitrified, low absorption, high tensile strength porcelain with smooth white glaze overall.

Cat. No.	Std. Pkg.
462—Spreader, 2" long	25
464—Spreader, 4" long	25
469—Spreader, 6" long	25

STEATITE AIRPLANE INSULATORS

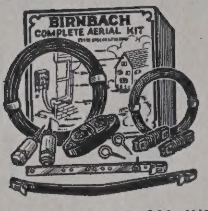


It is 1½" long and ½" diameter.

463.....Std. Pkg. 25

See Pages S-41 to S-43 for Birnbach Prices

BIRNBACH ANTENNA KITS

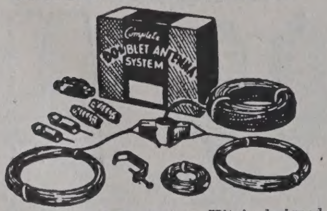


Cat. No. 503 — AERIAL KIT

75 ft. 7/24 Copper Wire
35 ft. R.C. Lead-in Wire
1—No. 650 Lightning Arrestor
1—No. 600 Ground Clamp
1—No. 611 Lead-in Strip
2—No. 666 Porcelain Insulators
2—No. 669 Glazed Nailit Knobs
2—No. 665 Galvanized Screw Eyes

Std. Pkg. 24 Weight 65 lbs.

UNIVERSAL ALL WAVE KIT



The No. 149 All Wave Antenna Kit is designed for efficient operation with all types of receivers.

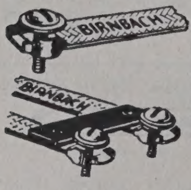
List of Parts:

2—30 ft. coils 7/24 bare copper aerial wire
1—50 ft. coil Stranded Transmission Cable
1—Transfer unit
2—Porcelain Insulators
2—All Wave Lead-in Strip
1—Ground Clamp
2—Glazed Nailit Knobs

The above completely assembled for simple installation.

Cat. No.	Std. Pkg.
149—Universal All Wave Kit	24

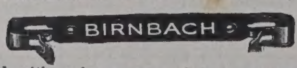
SCREW TERMINAL LEAD-IN STRIP



Locks wire together with strip in a secure connection assuring perfect contact. Has weather-proof covering over a copper strip with cadmium plated terminals. White or Black.

Cat. No.	Std. Pkg.
617—Lead-in Strip	50
2617—Doublet Lead-in Strip	25

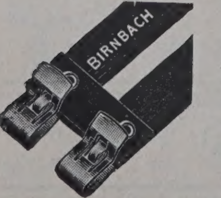
BIRNBACH LEAD-IN STRIPS



Covered with a heavy cotton braid and weatherproofed, with numerous coats of lacquer. Clips are riveted and soldered at both ends.

Cat. No.	Std. Pkg.
611—Black 12" long	50
613—White 12" long	50

DOUBLET LEAD-IN STRIPS



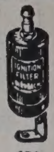
Consists of two strips held parallel by a piece of bakelite. This assembly prevents the strips from moving back and forth.

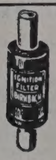
Cat. No.	Std. Pkg.
2611	25

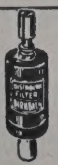
Black or White

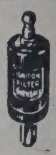
BIRNBACH IGNITION FILTERS

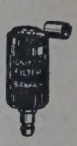
Completely eliminate all ignition and high tension circuit interference. Copper wound inductance accounts for the low resistance of 120 ohms for the Ignition Filter. Due to the low resistance of these filters, less gasoline is consumed than when high resistance filters are used.


350


351

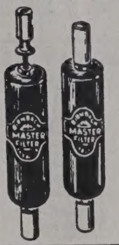

352


353


359

Cat. No.	Std. Pkg.
350—Ignition Filter (Bracket Type)	25
351—Ignition Filter (Cable Type)	25
352—Distributor Filter	10
353—Ignition Filter (Screw Type)	25
359—Ignition Filter (Slip-on Type)	25

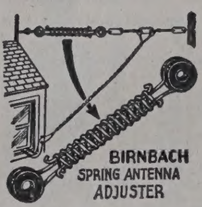
BIRNBACH MASTER FILTER



Eliminates all ignition interference, does away with necessity of having filter for each spark plug. Distributor type for easy insertion into distributor head. Cable type to be placed into the distributor lead where impossible to insert into distributor head.

Cat. No.	Std. Pkg.
354—Cable or Distributor Type	12

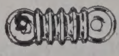
AERIAL SPRING ADJUSTER



Corrects excessive sag of doublet antennas. Prevents swinging and swaying, eliminates resultant fading of signals. Consists of two hooks with porcelain rings, powerful compression spring. Cadmium plated thruout.

Cat. No.
765—Birnbach Aerial Spring Adjuster

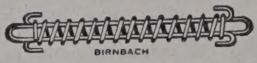
BIRNBACH GLASS INSULATORS



Made of crystal clear glass and have a smooth surface which prevents dirt or ice from collecting.

Cat. No. 00—3" Std. Pkg. 100

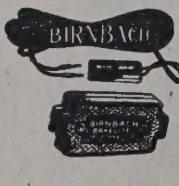
BIRNBACH AIRPLANE SPRING



Rust-proof steel, cadmium plated thruout. Compact compression spring for taking up slack in guy wire due to pull or strain on antenna.

Cat. No.	Std. Pkg.
764—Airplane Spring	100

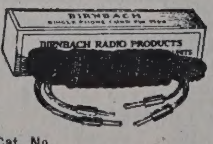
SPEAKER EXTENSION CORDS



These extension cords are constructed of stranded annealed copper wire insulated with rubber over which a brown mercerized cotton braid is closely woven. Complete with easily attached bakelite connector.

Cat. No.	
166	10 ft. Cord
120	20 ft. Cord
151	Bakelite Extension Cord Connector Only

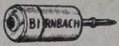
SPEAKER CORDS



Stranded wire, insulated with rubber, with closely woven brown mercerized cotton overall.

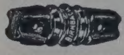
Cat. No.	
102	5 ft. with Pin Tips on both ends
103	5 ft. with Pin and Spade Tips
106	5 ft. with Pin and Eye Tips
413	10 ft. with Pin and Eye Tips

BIRNBACH NAIL-IT KNOBS



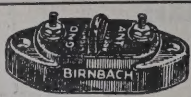
Cat. No.	Std. Pkg.
669—Glazed	100

BIRNBACH PORCELAIN INSULATORS



Cat. No.	Std. Pkg.
666—White	100

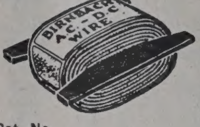
BIRNBACH LIGHTNING ARRESTOR



Glazed porcelain body, nickel-plated hardware. Outdoor or indoor use. Mounting screws and instructions.

Cat. No.	Std. Pkg.
650—Lightning Arrestor	50

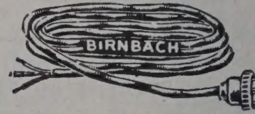
AC-DC ANTENNA WIRE



Low cost, flexible, stranded cotton braided wire ideal as an indoor antenna for AC-DC Universal Receivers. Colors Brown or White.

Cat. No.	Ft.
2125	25 Ft. Hank
2100	100 Ft. Spool
2500	500 Ft. Spool
2000	1000 Ft. Spool

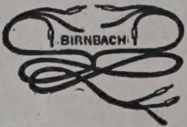
AC-DC RESISTANCE CORDS



Consists of a line cord into which a third element has been incorporated. The voltage dropping resistor reduces the voltage to that needed for the filament of the tubes. The 135, 160, 180 and 200-ohm cords can also be used for single light 20 and 15-watt fluorescent fixtures. All 6-ft. long, color coded with tinned leads and all rubber plugs. All individually boxed.

Cat. No.	Cord Rating	Sets Having Following Tubes:
35	135 ohm	25Z5-43-4 (6.3 volt tubes)
36	160 ohm	25Z5-43-3 (6.3 volt tubes)
34	180 ohm	12Z3-43-4 (6.3 volt tubes)
49	200 ohm	25Z5-43-2 (6.3 volt tubes)
37	220 ohm	12Z3-43-3 (6.3 volt tubes)
41	250 ohm	12Z3-43-2 (6.3 volt tubes)
		25Z5 -3 (6.3 volt tubes)
38	290 ohm	12Z3 -3 (6.3 volt tubes)
45	300 ohm	
39	330 ohm	-4 (6.3 volt tubes)
		12Z3 -2 (6.3 volt tubes)
40	350 ohm	12Z3 -1 (6.3 volt tubes)
47	390 ohm	-2 (6.3 volt tubes)
58	560 ohm	For 3-way portables, AC-DC battery sets
59	960 ohm	Wherever 45Z3 rectifier is used (All pocket type radios)
125	220-110 volt	Step down reducing cords

HEADSET PHONE CORDS



These cords are closely woven and are very durable and strong. Standard cords listed match practically all headsets manufactured.

Cat. No.	
104	5 ft. with Pin Tips on both ends
105	5 ft. with Pin and Spade Tips
107	5 ft. with Pin and Eye Tips
108	8 ft. with Pin and Eye Tips
109	10 ft. with Pin and Eye Tips

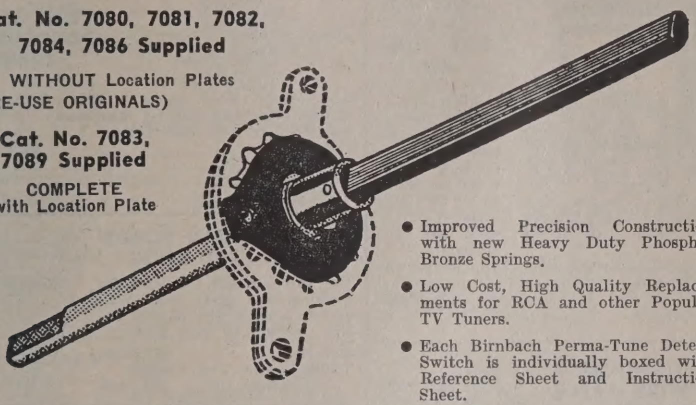
See Pages S-41 to S-43 for Birnbach Prices

Birnbach

Perma-Tune Detent Switch Controls
TV Antenna Accessories

Cat. No. 7080, 7081, 7082, 7084, 7086 Supplied
WITHOUT Location Plates
(RE-USE ORIGINALS)

Cat. No. 7083, 7089 Supplied
COMPLETE
with Location Plate



- Improved Precision Construction with new Heavy Duty Phosphor Bronze Springs.
- Low Cost, High Quality Replacements for RCA and other Popular TV Tuners.
- Each Birnbach Perma-Tune Detent Switch is individually boxed with Reference Sheet and Instruction Sheet.

*CAT. No. 7080—(Short Shaft)

Replaces RCA Part No. 71463 (Short Shaft)

621TS 648PV 8PCS41
630TS 648PTK 8TCS41C
641TV 8TV41

CAT. No. 7081—(Long Shaft)

Replaces RCA Part No. 72743 (Long Shaft)

RCA CHASSIS NUMBERS:
721TS 721TCS 730TCS 730TV2 8TS30

CAT. No. 7082—(Extra Long Shaft)

Replaces Admiral Part No. 76B14
(Extra Long Shaft)

As used in late series Admiral chassis Models 30A and 8C. Some early model Admirals use short shaft—Admiral Part No. A158294A5. The Birnbach replacement for this is Cat. No. 7080.

Also replaces Capehart Part No. 461-P12

Also replaces RCA Part No. 71531

REPLACEMENT DETENTS FOR TELETONE

Some Teletone models use detents with either 3/16″ or ¼″ shaft diameters.

Chassis numbers do not indicate which size shaft was used, so check shaft diameter before ordering.

Cat. No. 7084 (without location plate)—Replaces ¼″ diam. brass shaft detent.

Cat. No. 7086 (without location plate)—Replaces 3/16″ brass shaft detent. (Thin)

CAT. No. 7088—(Magnavox)

Replaces Magnavox Part No. 633722-1

CAT. No. 7089—(All Phenolic Shaft)

(COMPLETE)

For use with RCA Chassis Numbers:

2T51 6T54 6T74 6T79 6T87
2T60 6T65 6T76 6T84 9T57
2T81 6T71 6T77 6T86 9T89

CAT. No. 7083—BIRNBACH PERMA-TUNE DETENT SWITCH

COMPLETE ALL-PHENOLIC SHAFT — RCA Part No. 73440 Replacement

This complete All-Phenolic Shaft Detent No. 7083 is designed for use with RCA TV Tuner Type No. 74941, 73435, and 74571.

The following is a list of RCA Chassis Models using the Birnbach Detent No. 7083 and its corresponding RCA TV Tuner Numbers:

RCA TV Tuner Type No. 73435
Chassis Numbers:

T120 8TR29 8TV321 9TC247
T121 8TK29 8TV323 9TC249
TC124 8T241 9T240 9TW309
TC125 8T243 9T240K 9TW333
TC127 8T244 9TC245

RCA TV Tuner Type No. 74941
Chassis Numbers:

S1000 TC168 9TC240
T164 8TC270 9TC270
TC165 8TC271 9TC272
TC166 8TK320 9TC275
TC167 9TW390

RCA TV Tuner Type No. 74571
Chassis Numbers:

9T246
9T256
T100

*Other TV Sets Using BIRNBACH CAT. No. 7080 DETENT Replacement for RCA Part No. 71463:

AIRKING
A1000
A1001
A2000
A2001
A2002

DE WALD
BT100
CT101
CT102
CT103
CT104

CORONADO
94TV2-43-8970
94TV2-43-8971
94TV2-43-8985
94TV2-43-8986

CAPEHART
610P
651P
661P
501P
502P
504P
461P

EMERSON
545
585
608
617
618

FADA
TV30
930
899
880
799

GAROD
920
940
1020
1030
1120
1130
1220
1230

OLYMPIC
TV104
TV105
TV106
TV922
TV923
TV-928
TV944
TV945
TV946

PACKARD BELL
894
1091
1291
1391
3191
3192
3193
3194
3381
4580
4691

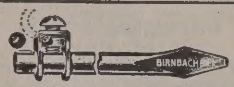
PHILMORE
PC030

REGAL
1030
1031
1230
1631

TECH-MASTER
930
1530
1630

TRUETONE
D1991
D1993
D1994

US TELE-VISION
T10823
T10925
T12823
T15823
T15925
CFM15925
KRF15933

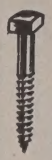


BIRNBACH GROUND RODS

Highly efficient. For FM and TV antennas.

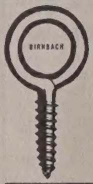
Cat. No.	St. Pkge.
616—4 ft.	12
618—6 ft.	12
619—8 ft.	12

BIRNBACH LAG BOLTS



Galvanized steel. Screws easily into wood, brick, etc. For permanently holding brackets, etc., in place. Available in four sizes—1″, 1½″, 2″, 3″. Specify size.

Cat. No.	St. Pkge.
7043—1″	100
7043—1½″	100
7043—2″	100
7043—3″	100

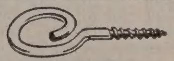


SCREW EYE BOLT

Use this sturdy, steel eye-bolt for guy wire on TV mast installation. Overall length 2½″. Shank length 1⅜″. Thread length 1 1/16″. Inside diameter 23/32″.

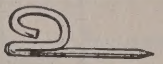
Cat. No.	St. Pkge.
T10	100

BRIDLE RING



Ruggedly constructed. Will stand up under maximum strain. Made of galvanized steel.

Cat. No.	St. Pkge.
7037	100

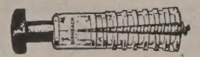


DRIVE RING

Can be used for securing guy wire. Made of steel galvanized. When hammered in at an angle will remain secure under any condition.

Cat. No.	St. Pkge.
7036	100

LAG SCREW EXPANSION SHIELDS

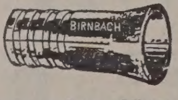


Used widely in television installations. Will fit ¼″ lag screws. Completely rust-proofed. Provides greater load strength and the outside corrugations add additional strength on masonry. T17 is used with the Birnbach No. 7043—(1″). T18 is used with No. 7043—(1½″) lag screw.

Cat. No.	St. Pkge.
T17—1″ x ½″ O.D.	100
T18—1½″ x ½″ O.D.	100

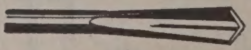
BIRNBACH LEAD ANCHORS

FOR WOOD SCREWS



Small installation holes can be made with these anchors. Very popular for wood screws. Takes No. 10-12-14 wood screw and are 5/16″ O.D. Will fit ¼″ and 5/16″ holes.

Cat. No.	St. Pkge.
T19—(¾″ long)	100
T19—(1″ long)	100
T19—(1½″ long)	100



BIRNBACH STAR DRILLS

Made of hand tempered and hand forged high grade tool steel for hand drilling in brick, stone and concrete.

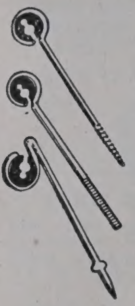
Cat. No.	St. Pkge.
7049A—¼″—12″ long	12
7049B—5/16″—12″ long	12
7049 —⅜″—12″ long	12
7050 —½″—12″ long	12

See Pages S-41 to S-43 for Birnbach Prices

Birnbach

TV Standoffs • Strap Clamps • Couplers • Knobs
Porcelain Tubes • Winding Machine

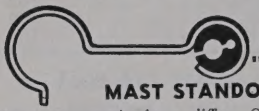
BIRNBACH



UNIVERSAL SCREW EYE STANDOFFS

Insulated twin lead standoff constructed of low loss polyethylene and universal for both 300 ohm line and RC59U cable. Completely weatherproofed. No. 1965—3½″ machine screw standoff designed for mounting in metal mast—uses a 10-32 thread. No. 1968 — 3½″ Drivin Insulators.

Cat. No.	St. Pkge.
1963—3½″	100
1964—7½″	100
1967—12½″	100
1965—3½″ M.S.	100
1968—3½″ Drive-in	100



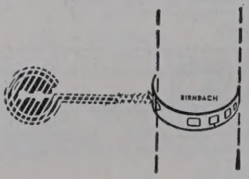
BIRNBACH "SNAP-ON" MAST STANDOFF CLAMP

Snaps on masts in a jiffy. One piece construction for added strength; has universal polyethylene insert for both twin lead and coax cable. Constructed of .120 spring alloy music wire, heavily zinc plated for preventing rust.

Cat. No.		St. Pkge.
T100—to fit 1″ masts	4 5/16″ long	100
T101—to fit 1¼″ masts	4 7/16″ long	100
T102—to fit 1½″ masts	4 7/16″ long	100

BIRNBACH STRAP CLAMP

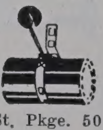
For Standoff Insulator



Just bend this clamp around a mast or vent pipe and screw in any wood screw standoff to tighten. No tools required. Adjustable ⅜″ to 2″ diam.

Cat. No.	St. Pkge.
629	100

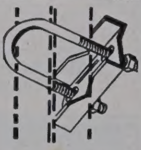
MAST STAND-OFF ASSEMBLY



For fast mounting of twin lead or coaxial cable. Complete with polyethylene universal insert. Fits all size masts from ⅜″ to 2″ pipes. Fully weatherproofed.

Cat. No. 628.............................St. Pkge. 50

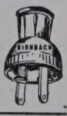
U-BOLT MAST COUPLER



Galvanized steel bracket couples mast securely. Will take two masts. Also permits fast and secure attachment of crossarms to masts up to 1½″.

Cat. No. T8....St. Pkge. 50

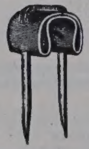
MALE RUBBER PLUGS



Brass prongs. Rated 15 amps at 125 Volts. ⅜″ hole.

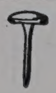
	St. Pkge.
814—Rubber Male Plug	100

INSULATED STAPLES



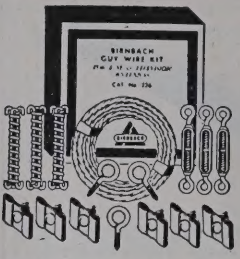
Essential for securing lead-in, ground, and other wires for installation.

Cat. No.	St. Pkge.
R100—Plain Staples, 100 to box	1000
D59—Plain Staples, 50 to box	1000



INSULATED WIRING NAILS

Perfected for twin lead indoors. Low capacity effect. Fully insulated.
Cat No. T42—White or Brown (100 to box) - (1000 to carton)

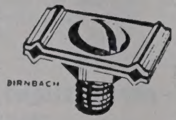


BIRNBACH TV-FM GUY WIRE KIT

Simple and complete directions with each individually boxed kit. Contains 50 ft. 6 strands heavy No. 20 Guy Wire—3 Birnbach No. 764 Springs — 6 Birnbach Vibration-proof No. 762 Clamps, and Guy Wire Ring.

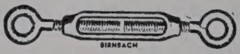
Cat. No.	St. Pkge.
226	24

VIBRATION-PROOF GUY WIRE CABLE CLAMP



For positive grip on guy wire. Weatherproofed.
762—Guy Wire Clamp....St. Pkge. 100

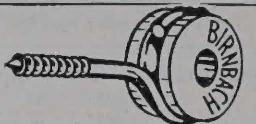
BIRNBACH TURNBUCKLES



Constructed of rust-proofed, galvanized steel. Used to take up any slack guy wire. Convenient, durable, dependable.

Cat. No.	Sizes of Turnbuckles	St. Pkge.
763—3	3½″	100
763—5	5½″	100
763—7	7½″	50

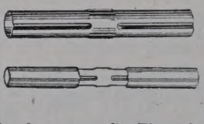
BIRNBACH SCREW EYES



Porcelain screw eye handles up to 300 ohm line. Bakelite screw eye can take any size coaxial cable.

Cat. No.	St. Pkge.
PORCELAIN EYES	
663— 3″	100
664— 7″	50
667—12″	25
BAKELITE EYES	
963— 3″	100
964— 7″	50
967—12″	25

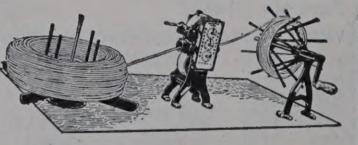
MAST COUPLERS



Will join 2 sections of mast easily, quickly and permanently, allowing an additional mast to be added without any trouble. Takes 1¼″ Masts.

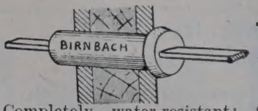
Cat. No. T103—Mast Coupler.......St. Pkge. 25

BIRNBACH WIRE WINDING and MEASURING OUTFIT



Consists of a Folding Reel, Measuring Machine, and a Wire Winder. This outfit is shipped complete, ready to assemble. It registers up to 1000 feet, and is accurate, simple to use, and time saving. Very compact, this unit can be easily set up on counter, table or bench.

Cat. No.		Shpg. Wt.
7401	Complete Outfit	23 lbs.

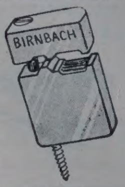


TWIN LEAD PORCELAIN TUBE

Completely water-resistant; fits ¾″ hole. Brings twin lead directly into house. Lengths specified are from underhead.

Cat. No.	St. Pkge.
T44—4″	100
T46—6″	100
T48—8″	50

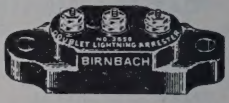
TV PORCELAIN SCREW TWIN-LEAD KNOB



Use this standoff insulator for keeping line away from wall and to anchor the end of the line. Complete with screw.

Cat. No.	St. Pkge.
T669—Screw Twin-Lead Knob	100

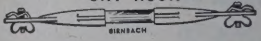
DOUBLET LIGHTNING ARRRESTOR



Air gap type, accepted means of protecting doublet antennas from lightning. Complete with mounting screws. Instructions printed on box.

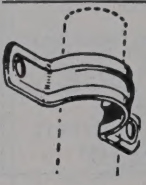
Cat. No. 2650....................St. Pkge. 25

ANTENNA STABILIZER
"SKY HOOK"



Used on conical antennas to take the chatter and wow from the vibrating elements. Superior rigid universal construction handles various sized elements; prevents loosening and breakage of dipoles.

Cat. No. T104—Antenna Stabilizer...St. Pkge. 50

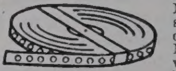


PIPE HANGERS

Galvanized steel. Can be used for fastening poles, masts to walls, roofs, gables, etc. Two sizes: 1″, 1¼″; specify size.

Cat. No.	St. Pkge.
7038	100

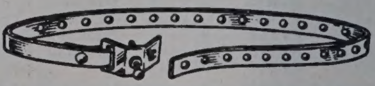
PERFORATED HANGER STRAPPING



For mounting Antenna Masts to various odd shaped objects such as chimneys, towers, etc. Made of ¾″ x .023 galvanized steel strap. Tough but flexible.

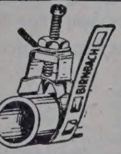
7032— 12 ft. Coil—Strapping.....St. Pkge. 25
7033—100 ft. Coil—Strapping.....St. Pkge. 8

VENT PIPE MOUNTING STRAP



For securing poles of television or mast antennas to vent pipes. Cadmium plated steel, 24″ long.

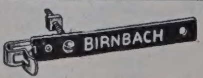
Cat. No. 626....................St. Pkg. 25



SADDLE GROUND CLAMPS

Have hard pointed screw which digs through rust and makes a positive contact. Fits ⅜″ to 2″ pipe.

Cat. No. 625.....St. Pkge. 50



COPPER STRAP CLAMP

Will takes ⅜″ to 2″ pipe. Made of copper with Birnbach clip riveted and soldered to strap. Complete with nut and bolt.

Cat. No. 600....................St. Pkge. 50

See Pages S-41 to S-43 for Birnbach Prices

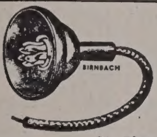
Birnbach TV Accessories • Twin Lead • Loom Microphone Connectors

HALF-MOON DUO-DECAL SOCKET

For CR Television tubes. Solid moulded black bakelite provides 100% insulation around clip and lead. Multi-colored lead-in wires. 19" leads supplied.

Cat. No.	St. Pkge.
T20—Duo-Decal Socket	25

Hi-Voltage Anode Cap with Lead

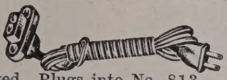


Dependable protection from high voltages found on cathode ray tubes. Supplied with 18" lead.

Cat. No.	St. Pkge.
T14—Hi-Volt Anode Cap with Lead	25

For RCA, G.E., and Sylvania Tubes.

TELEVISION SAFETY CORD



6 Ft. UL approved. Plugs into No. 813.

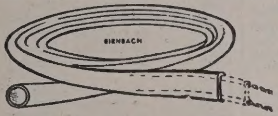
815—TV Safety Cord................St. Pkge. 100

MALE AC INTERLOCK PLUG

Designed to mount on TV receiver cabinet and serves as socket for Safety Cord No. 815.

813—AC Interlock Plug St. Pkge. 100

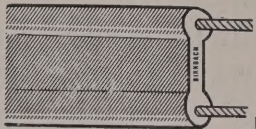
CLEAR VINYL TUBING FOR TV



For 300 ohm line. Protects it from grounding when going over corners and eaves of buildings. Waterproofs line and eliminates loss of signal.

Cat. No.		St. Pkge.
321BC	100 ft. coils	8

TWIN-LEAD 300 OHM TRANS-MISSION LINE

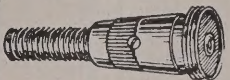


FM - Television

Smooth Polyethylene insulation resists water, alkalies, oil, acids and abrasions—superior in resistance to sunlight and moisture.

Cat. No.		St. Pkge.
7028—	50 ft. coils	25
7029—	100 ft. coils	12
7030—	1000 ft. spool	8

No. 231-MC Microphone Connector



Made of milled brass and chrome plated. Wire secured by threading thru coiled spring and bending shield back on spring and soldering. Center conductor of cable is threaded thru eyelet of bakelite insulator and soldered. Set screw then tightened completing connection.

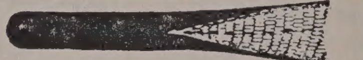
Cat. No.	Std. Pkg.
231-MC—Microphone Connector	100

No. 232-FC Microphone Connector

Milled from brass, chromium plated. Fits all standard male fittings having ⅝-27 thread.

Cat. No.	Std. Pkg.
232-FC—Female Connector	100

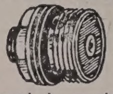
BIRNBACH TELEVISION LOOM



⅜" Non-Metallic Loom used for the protection of Twin Lead and Coax Cable on television installations.

Cat. No.	Spool
1013	25 ft.
1014	50 ft.
1015	100 ft.

No. 233-CC CHASSIS CONNECTOR

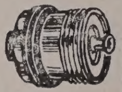


Milled of solid brass. Mounts in .385" dia. hole to ground shell directly to chassis. Mounts in ½" hole when insulation from panel is required. Supplied with shoulder and flat fibre and metal washers and hex lock nut.

Cat. No.	Std. Pkg.
233-CC—Chassis Connector	100

No. 234-CLC CHASSIS CONNECTOR

CLOSED CIRCUIT



Circuit is closed before cable circuit breaks. Prevents open grid circuit howls. Milled of solid brass, complete with shoulder and flat fibre and metal washers and lock nut.

Cat. No.	Std. Pkg.
234-CLC—Closed Circuit Jack	100

No. 235 PHONE PLUG ADAPTER

⅝-27 thread; screws into coupling ring of No. 232-FC Connector permitting cable to be plugged into standard phone jack. Made of brass and nickel-plated.

Cat. No.	Std. Pkg.
235-PC	50

Birnbach PRICE LIST

NUMERICALLY ARRANGED BY CATALOG NUMBER
See BIRNBACH Pages S-22 thru S-37

Cat. No.	List Price	Cat. No.	List Price	Cat. No.	List Price	Cat. No.	List Price	Cat. No.	List Price	Cat. No.	List Price	No. Cat.	Price List
00	$11.00/C	32-A	$ 1.80/C	77	$22.00/Ea	113	$ 1.10/Ea.	221-A	$ 1.40/Ea.	282	$ .82/Ea.	304-VC	$30.00/Ea.
1-50	.45/Ea	33	10.50/C	80	.63/Ea.	114	10.00/C	226	4.00/Ea.	283	.90/Ea.	305-V	1.50/Ea.
1-100	.90/Ea.	34	1.40/Ea.	81	.70/Ea.	115	11.00/C	231-MC	55.00/C	284	1.00/Ea.	305-VC	14.00/Ea.
1-1000	6.75/M	35	1.40/Ea.	82	.70/Ea.	116	12.00/C	232-FC	60.00/C	285	1.10/Ea.	306-V	1.60/Ea.
2-50	.45/Ea.	36	1.40/Ea.	83	.80/Ea.	117	14.00/C	233-CC	45.00/C	286	1.35/Ea.	306-VC	15.00/Ea.
2-100	.90/Ea.	37	1.40/Ea.	84	2.50/Ea.	118	6.50/C	234-CLC	55.00/C	287	1.60/Ea.	307	.30/Ea.
2-1000	6.75/M	38	1.40/Ea.	85	2.75/Ea.	119	6.50/C	235-PC	60.00/C	288	2.05/Ea.	307-V	1.80/Ea.
3-50	.45/Ea.	39	1.40/Ea.	86	3.00/Ea.	120	2.75/Ea.	236-FC1	5.50/Ea.	289	2.25/Ea.	307-VC	9.00/Ea.
3-100	.90/Ea.	40	1.40/Ea.	87	3.25/Ea.	125	2.50/Ea.	237-FC1	9.25/Ea.	290	1.25/Ea.	309	1.70/Ea.
3-1000	6.75/M	41	1.40/Ea.	88	12.50/Ea.	149	6.25/Ea.	238-FC1	15.40/Ea.	291	.19/Ea.	310	25.00/C
4-1000	37.50/M	42	7.00/C	89	14.00/Ea.	151	.60/Ea.	239-FC2	6.20/Ea.	291-V	1.70/Ea.	312	1.90/Ea.
5-1000	50.00/M	43	8.00/C	90	14.25/Ea.	154	7.00/Ea.	240-FC2	9.75/Ea.	291-VC	6.00/Ea.	313	.17/Ea.
6	12.00/C	44	10.00/C	91	16.00/Ea.	155	7.00/Ea.	241-FC2	16.00/Ea.	292	2.15/Ea.	313-B	.75/Ea.
8	12.50/C	45	1.40/Ea.	92	22.00/Ea.	156	4.50/Ea.	242-MC1	5.50/Ea.	293	.19/Ea.	313-BC	2.75/Ea.
10	12.50/C	46	14.00/C	93	24.50/Ea.	157	4.50/Ea.	243-MC1	9.25/Ea.	293-V	1.70/Ea.	314	.17/Ea.
11	17.50/C	47	1.40/Ea.	94	26.75/Ea.	158	12.00/Ea.	244-MC1	15.40/Ea.	293-VC	6.00/Ea.	314-B	.75/Ea.
15	7.00/C	48	32.50/C	95	30.00/Ea.	160	4.25/Ea.	245-MFC	6.20/Ea.	294	.19/Ea.	314-BC	2.75/Ea.
16	.25/Ea.	49	1.40/Ea.	96-40	.45/Ea.	161	4.65/Ea.	246-MFC	9.25/Ea.	294-V	1.70/Ea.	315	.18/Ea.
17	.55/Ea.	51	.25/Ea.	96-100	1.05/Ea.	164	.40/Ea.	247-MFC	16.70/Ea.	294-VC	6.00/Ea.	315-B	.75/Ea.
18	1.00/Ea.	52	.25/Ea.	96-1000	9.75/M	166	2.00/Ea.	248	10.00/C	295	.19/Ea.	315-BC	2.75/Ea.
19	.45/Ea.	53	.25/Ea.	97-40	.45/Ea.	172	10.50/Ea.	248-S	10.00/C	295-V	1.70/Ea.	316	.19/Ea.
20	.90/Ea.	54	.25/Ea.	97-100	1.10/Ea.	173	14.25/Ea.	249	14.00/C	295-VC	6.75/Ea.	316-B	.80/Ea.
20-A	.75/Ea.	55	.40/Ea.	97-1000	9.75/M	174	17.80/Ea.	249-A	18.00/C	296	1.25/Ea.	316-BC	3.00/Ea.
21-35	.45/Ea.	56	.50/Ea.	98-35	.45/Ea.	175	22.00/Ea.	250	4.60/Ea.	296-VC	42.50/Ea.	317	.19/Ea.
21-100	1.35/Ea.	57	.50/Ea.	98-100	1.35/Ea.	176	26.00/Ea.	251	8.00/Ea.	297	.45/Ea.	317-B	.80/Ea.
21-1000	11.50/M	58	1.50/Ea.	98-1000	11.50/M	177	31.00/Ea.	252	12.85/Ea.	298	.50/Ea.	317-BC	3.00/Ea.
22-15	.45/Ea.	59	1.80/Ea.	99-35	.45/Ea.	178	37.00/Ea.	255	4.25/Ea.	299	1.20/Ea.	318	.40/Ea.
22-100	3.20/Ea.	61	4.90/Ea.	99-100	1.30/Ea.	179	45.00/Ea.	256	7.25/Ea.	299-VC	39.50/Ea.	318-B	.75/Ea.
22-1000	29.50/M	62	24.00/Ea.	99-1000	11.50/M	180	53.00/Ea.	257	12.50/Ea.	300	.19/Ea.	318-BC	4.70/Ea.
23	15.00/C	66	6.00/Ea.	100-20	.45/Ea.	182	61.00/Ea.	263	8.50/Ea.	300-V	1.75/Ea.	319	.45/Ea.
24	15.00/C	67	27.50/Ea.	100-100	2.25/Ea.	193	14.00/M	264	11.00/Ea.	300-VC	7.00/Ea.	319-B	.75/Ea.
26	15.00/C	68	7.75/Ea.	100-1000	20.00/M	194	14.00/M	265	13.25/Ea.	301	.35/Ea.	319-BC	6.75/Ea.
27	.11/Ea.	69	38.00/Ea.	102	.90/Ea.	195	14.00/M	266	15.50/Ea.	301-V	1.75/Ea.	320	.50/Ea.
27-C	.21/Ea.	70	.52/Ea.	103	.90/Ea.	196	18.00/M	267	17.50/Ea.	301-VC	10.00/Ea.	320-B	.75/Ea.
27-R	.195/Ea.	71	.60/Ea.	104	1.50/Ea.	201-35	.45/Ea.	268	19.50/Ea.	302	.35/Ea.	320-BC	6.75/Ea.
28	.11/Ea.	72	2.15/Ea.	105	1.50/Ea.	201-100	1.30/Ea.	269	22.50/Ea.	302-V	1.25/Ea.	321	.60/Ea.
29	.14/Ea.	73	2.50/Ea.	106	.90/Ea.	201-1000	11.50/M	270	25.00/Ea.	302-VC	11.00/Ea.	321-BC	8.50/Ea.
30	.24/Ea.	74	10.50/Ea.	107	1.50/Ea.	220	8.50/Ea.	272	31.00/Ea.	303	.65/Ea.	322	.6 /Ea.
31	.11/Ea.	75	12.50/Ea.	108	1.90/Ea.	220-A	6.75/Ea.	280	.70/Ea.	303-VC	25.00/Ea.	322-BC	14.00/Ea.
32	2.50/C	76	19.50/Ea.	109	2.75/Ea.	221	1.80/Ea.	281	.80/Ea.	304	.75/Ea.	323	1.00/Ea.

Cat. No.	List Price	Cat. No.	List Price	Cat. No.	List Price	Cat. No.	List Price	Cat. No.	List Price	Cat. No.	List Price	Cat. No.	List Price
323-BC	$22.50/Ea.	433-J	$1.40/Ea.	543	$ .25/Ea.	770	$2.50/Ea.	1013	$2.75/Ea.	1386-B	$11.50/C	1800	$13.25/Ea.
324	1.10/Ea.	434	1.90/Ea.	544	.50/Ea.	771	16.75/Ea.	1014	5.25/Ea.	1387	12.50/C	1818	11.90/Ea.
324-BC	27.50/Ea.	435	1.40/Ea.	545	.60/Ea.	772	16.75/Ea.	1015	10.00/Ea.	1388	12.75/C	1820	11.00/Ea.
325	.35/Ea.	436	.60/Ea.	550	.25/Ea.	772/18	21.00/Ea.	1017	35.00/M	1389	12.75/C	1822	6.75/Ea.
325-B	.75/Ea.	437	.65/Ea.	551	.50/Ea.	773	21.75/Ea.	1017-10	.45/Ea.	1401	2.85/Ea.	1822-B	30.00/Ea.
325-BC	4.40/Ea.	438	.75/Ea.	552	.60/Ea.	774	24.00/Ea.	1017-50	1.95/Ea.	1402	5.60/Ea.	1822-C	56.00/Ea.
326	.40/Ea.	439	.35/Ea.	553	.90/Ea.	775	27.50/Ea.	1017-100	3.85/Ea.	1403	51.50/Ea.	1824	26.00/Ea.
326-B	.75/Ea.	440	2.35/Ea.	554	1.30/Ea.	776	32.00/Ea.	1017-1000	35.00/M	1405	1.80/Ea.	1824-M	50.00/Ea.
326-BC	5.00/Ea.	443	.18/Ea.	555	1.80/Ea.	777	35.00/Ea.	1025	1.35/Ea.	1406	3.40/Ea.	1825	31.00/Ea.
330	25.00/C	444	.20/Ea.	558	.85/Ea.	778	45.00/Ea.	1050	2.50/Ea.	1407	31.00/Ea.	1825-M	61.00/Ea.
331	25.00/C	445	.30/Ea.	559	1.30/Ea.	781	20.00/Ea.	1051	4.50/Ea.	1409	1.25/Ea.	1870	28.00/Ea.
331-A	13.00/C	446	.35/Ea.	560	2.25/Ea.	782	1.40/Ea.	1052	37.00/Ea.	1410	2.25/Ea.	1872	33.00/Ea.
332	18.00/C	447	.40/Ea.	561	2.25/Ea.	784	1.95/Ea.	1053	.75/Ea.	1411	22.20/Ea.	1874	75.00/Ea.
332-A	20.00/M	448	.55/Ea.	562	6.00/Ea.	786	27.50/Ea.	1054	1.40/Ea.	1413	.85/Ea.	1874-A	40.00/Ea.
333	25.00/C	449	.75/Ea.	566	40.00/Ea.	787	38.50/Ea.	1055	2.75/Ea.	1414	1.40/Ea.	1875	110.00/Ea.
334	50.00/C	450	.56/Ea.	568	30.00/Ea.	788	13.00/Ea.	1056	21.00/Ea.	1415	13.90/Ea.	1875-A	57.50/Ea.
335	60.00/C	450-J	.67/Ea.	570	6.25/Ea.	789	31.75/Ea.	1057	1.45/Ea.	1417	.75/Ea.	1878	165.00/Ea.
340	11.00/C	451	.67/Ea.	572	15.50/Ea.	790	15.50/Ea.	1058	2.80/Ea.	1418	1.40/Ea.	1878-A	85.00/Ea.
341	.60/Ea.	451-J	.72/Ea.	573	28.00/Ea.	791	37.50/Ea.	1059	5.00/Ea.	1419	13.90/Ea.	1963	.06/Ea.
342	2.50/Ea.	452	.72/Ea.	574	28.25/Ea.	792	18.75/Ea.	1060	40.00/Ea.	1421	.63/Ea.	1964	.10/Ea.
343	.55/Ea.	452-J	.95/Ea.	578	33.75/Ea.	793	45.75/Ea.	1101	3.50/Ea.	1422	1.25/Ea.	1965	.10/Ea.
344	.50/Ea.	453	1.30/Ea.	580	26.25/Ea.	794	22.00/Ea.	1111	30.00/Ea.	1423	9.00/Ea.	1967	.20/Ea.
345	.55/Ea.	453-J	1.50/Ea.	581	29.00/Ea.	795	55.00/Ea.	1112	57.50/Ea.	1433	14.00/Ea.	1968	.10/Ea.
348	2.00/Ea.	454	1.70/Ea.	582	30.50/Ea.	796	27.50/Ea.	1113	115.00/Ea.	1434	5.75/Ea.	1972	10.00/Ea.
350	1.10/Ea.	454-J	1.75/Ea.	583	32.50/Ea.	797	65.00/Ea.	1120	5.00/C	1440	4.25/Ea.	1972-A	75.00/Ea.
351	1.10/Ea.	455	1.00/Ea.	584	35.00/Ea.	798	29.00/Ea.	1121	2.80/C	1490	22.50/Ea.	1973	18.50/Ea.
352	1.10/Ea.	455-A	4.00/Ea.	585	40.00/Ea.	799	20.00/Ea.	1122	5.50/C	1492	35.00/Ea.	1974	21.50/Ea.
353	1.10/Ea.	457	.35/Ea.	586	44.00/Ea.	800	27.50/Ea.	1123	2.20/C	1497	55.00/Ea.	1975	26.75/Ea.
354	3.50/Ea.	458	.25/Ea.	587	50.00/Ea.	801	30.00/Ea.	1124	2.20/C	1516	28.50/Ea.	1976	31.25/Ea.
359	1.10/Ea.	459	1.50/Ea.	588	79.00/Ea.	802	21.00/Ea.	1125	5.00/C	1518	1.20/Ea.	2000	14.00/Ea.
365	.40/Ea.	459-A	6.00/Ea.	589	87.50/Ea.	803	16.00/Ea.	1126	6.50/C	1519	2.30/Ea.	2010	11.00/Ea.
366	12.00/C	460	2.00/Ea.	600	.11/Ea.	806	12.00/Ea.	1127	8.00/C	1520	11.00/Ea.	2012	9.00/Ea.
367	20.00/C	460-A	8.00/Ea.	604	.25/Ea.	809	6.50/Ea.	1128	9.50/C	1526	1.40/Ea.	2013	7.75/Ea.
368	2.00/C	461	3.75/Ea.	605	.35/Ea.	810	31.25/Ea.	1129	11.00/C	1527	2.70/Ea.	2014	7.00/Ea.
369	2.00/C	461-A	15.00/Ea.	611	.14/Ea.	813	20.00/C	1130	5.00/C	1528	13.00/Ea.	2015	5.75/Ea.
370	4.50/C	462	.25/Ea.	613	.15/Ea.	814	15.00/C	1131	6.50/C	1542	12.50/Ea.	2016	4.75/Ea.
371	2.50/C	463	.40/Ea.	616	1.40/Ea.	815	.80/Ea.	1132	8.00/C	1543	4.25/Ea.	2025	1.45/Ea.
372	2.00/C	464	.35/Ea.	617	.20/Ea.	816	.55/Ea.	1133	9.50/C	1544	20.00/Ea.	2050	2.80/Ea.
373	6.00/C	468	.45/Ea.	618	2.25/Ea.	817	.70/Ea.	1134	11.00/C	1545	25.00/Ea.	2051	5.00/Ea.
377	.45/Ea.	469	.45/Ea.	619	2.80/Ea.	818	10.75/Ea.	1135	8.00/C	1548	22.50/Ea.	2052	40.00/Ea.
378	.60/Ea.	470	1.00/Ea.	625	.23/Ea.	819	.75/Ea.	1136	9.50/C	1549	18.00/Ea.	2100	1.60/Ea.
379	.65/Ea.	471	1.40/Ea.	626	.56/Ea.	820	9.50/Ea.	1137	11.00/C	1550	3.75/Ea.	2125	.42/Ea.
380	2.85/Ea.	472	.45/Ea.	628	.28/Ea.	822	40.00/Ea.	1138	12.50/C	1553	25.00/Ea.	2330	15.00/Ea.
381	3.15/Ea.	473	.20/Ea.	629	8.50/C	824	47.50/Ea.	1139	14.00/C	1561	2.65/Ea.	2331	3.25/Ea.
382	3.15/Ea.	474	.16/Ea.	631	.25/Ea.	825	45.00/Ea.	1140	8.00/C	1562	5.10/Ea.	2440	19.00/Ea.
383	3.50/Ea.	475	1.40/Ea.	632	.25/Ea.	826	75.00/Ea.	1141	9.50/C	1563	47.50/Ea.	2500	7.00/Ea.
384	3.90/Ea.	476	1.05/Ea.	633	.25/Ea.	851	8.50/Ea.	1142	11.00/C	1565	1.55/Ea.	2611	.30/Ea.
385	4.25/Ea.	478	.35/Ea.	634	.25/Ea.	855-50′	3.00/Ea.	1143	12.50/C	1566	3.10/Ea.	2617	.40/Ea.
386	5.25/Ea.	478-J	.42/Ea.	635	.25/Ea.	856-50′	18.00/Ea.	1144	14.00/C	1567	29.00/Ea.	2650	.56/Ea.
387	6.25/Ea.	479	.62/Ea.	636	.25/Ea.	857-50′	15.50/Ea.	1145	6.00/C	1569	1.10/Ea.	2810	13.25/Ea.
388	8.50/Ea.	479-J	.75/Ea.	647	.70/Ea.	858-50′	3.10/Ea.	1146	6.75/C	1570	2.10/Ea.	2812	8.75/Ea.
389	9.00/Ea.	480	14.00/Ea.	650	.50/Ea.	859-50′	3.30/Ea.	1147	7.00/C	1571	21.00/Ea.	2814	6.00/Ea.
391	.22/Ea.	481	15.75/Ea.	663	14.00/C	860-50′	3.50/Ea.	1148	9.00/C	1573	.70/Ea.	2816	5.00/Ea.
392	.56/Ea.	482	15.75/Ea.	664	19.50/C	863-50′	4.10/Ea.	1149	6.00/C	1574	1.20/Ea.	2818	4.40/Ea.
393	.50/Ea.	483	17.50/Ea.	666	11.00/C	864-50′	6.00/Ea.	1150	6.75/C	1575	11.70/Ea.	3000 to	
393-A	.50/Ea.	484	19.50/Ea.	667	45.00/C	865-50′	9.50/Ea.	1151	7.00/C	1600	14.00/Ea.	3024	1.40/Ea.
394	.35/Ea.	485	21.50/Ea.	668	.35/Ea.	866	.23/Ea.	1152	9.00/C	1618	14.00/Ea.	3025	1.35/Ea.
395	.30/Ea.	486	24.00/Ea.	669	11.00/C	866-J	.30/Ea.	1153	1.50/C	1620	9.00/M	3050	2.50/Ea.
396	.35/Ea.	487	25.00/Ea.	681	.85/Ea.	866-SJ	.70/Ea.	1154	1.80/C	1622	7.00/M	3051	4.50/Ea.
397	.40/Ea.	488	40.00/Ea.	697	3.25/Ea.	867	.35/Ea.	1155	2.00/C	1627	15.50/Ea.	3052	28.00/Ea.
398	.35/Ea.	489	43.50/Ea.	700	.85/Ea.	867-J	.45/Ea.	1156	2.00/C	1628	14.50/Ea.	3416	10.00/Ea.
398-A	.35/Ea.	490	2.25/Ea.	701	28.00/Ea.	868-50′	9.50/Ea.	1157	2.00/C	1631	19.00/Ea.	3418	7.50/Ea.
399	.35/Ea.	490-A	3.40/Ea.	702	32.00/Ea.	870	11.25/Ea.	1220	17.00/Ea.	1633	18.00/Ea.	3420	6.00/Ea.
399-A	.40/Ea.	490-B	4.50/Ea.	703	59.00/Ea.	872	13.50/Ea.	1220-A	12.50/Ea.	1634	15.00/Ea.	3425	1.25/Ea.
400	.20/Ea.	492	3.50/Ea.	704	40.00/Ea.	907	14.00/Ea.	1225	25.00/Ea.	1637	23.50/Ea.	3450	2.50/Ea.
401	.20/Ea.	492-A	5.25/Ea.	705	56.00/Ea.	908	32.00/Ea.	1260	.23/Ea.	1638	20.75/Ea.	3460	5.00/Ea.
402	3.00/C	492-B	7.00/Ea.	710-100	5.70/Ea.	909	63.20/Ea.	1261	.23/Ea.	1639	18.00/Ea.	3600	22.50/Ea.
402-A	5.00/C	493	3.15/Ea.	710-250	14.25/Ea.	910	125.00/Ea.	1262	.23/Ea.	1640	1.45/Ea.	3618	2.35/Ea.
403	.15/Ea.	495	4.10/Ea.	710-500	28.25/Ea.	919	30.00/Ea.	1263	.40/Ea.	1641	1.75/Ea.	3619	2.75/Ea.
404	.30/Ea.	497	5.50/Ea.	710-1000	55.00/Ea.	920	60.00/Ea.	1264	.45/Ea.	1642	1.90/Ea.	4000 to	
404-A	.27/Ea.	499	10.75/Ea.	710-2500	135.00/Ea.	923	59.25/Ea.	1265	.56/Ea.	1643	.90/Ea.	4006	9.00/M
404-B	.35/Ea.	501	2.85/Ea.	712-100	3.95/Ea.	951	4.50/Ea.	1266	.62/Ea.	1644	1.30/Ea.	4007 to	
405	.14/Ea.	503	2.75/Ea.	712-250	9.75/Ea.	952	22.25/Ea.	1372	.15/Ea.	1645	1.50/Ea.	4013	10.00/M
406	.20/Ea.	505	2.40/Ea.	712-500	19.50/Ea.	953	140.00/Ea.	1373	.21/Ea.	1646	.95/Ea.	4014	11.25/M
407	.20/Ea.	516	2.00/Ea.	712-1000	38.25/Ea.	954	70.00/Ea.	1374	.26/Ea.	1647	12.25/Ea.	4015 to	
408	3.00/Ea.	518	17.50/Ea.	712-2500	95.00/Ea.	955	35.00/Ea.	1375	.32/Ea.	1648	8.50/Ea.	4019	12.25/M
409	.23/Ea.	519	3.80/Ea.	714-100	2.45/Ea.	956	14.00/Ea.	1376	.37/Ea.	1670	1.90/Ea.	4020-21	13.50/M
410	.50/Ea.	520	2.25/Ea.	714-250	6.00/Ea.	963	14.00/C	1377	.42/Ea.	1671	2.10/Ea.	4022-23	28.00/M
411	1.20/Ea.	522	4.25/Ea.	714-500	12.00/Ea.	964	19.50/C	1378	.47/Ea.	1672	2.45/Ea.	4025	.85/Ea.
412	.30/Ea.	523	20.00/Ea.	714-1000	23.50/Ea.	965	.17/Ea.	1379	.52/Ea.	1673	1.50/Ea.	4050	1.60/Ea.
413	1.50/Ea.	524	6.25/Ea.	714-2500	58.00/Ea.	966	.17/Ea.	1380	.57/Ea.	1674	1.80/Ea.	4051	2.80/Ea.
415	.23/Ea.	526	6.00/Ea.	740	.69/Ea.	966-J	.23/Ea.	1382	3.50/C	1675	1.90/Ea.	4052	25.00/Ea.
417	.50/Ea.	527	15.00/Ea.	749	35.00/Ea.	967	45.00/C	1382-A	4.00/C	1680	1.25/Ea.	4125	.40/Ea.
418	.55/Ea.	531	.25/Ea.	756	17.50/Ea.	968	.10/Ea.	1382-B	4.00/C	1682	1.55/Ea.	4125-J	.45/Ea.
419	.35/Ea.	532	.25/Ea.	757	157.50/Ea.	972	13.00/Ea.	1382-C	4.00/C	1683	1.25/Ea.	4175	.90/Ea.
420	1.30/Ea.	533	.25/Ea.	762	.20/Ea.	972-A	70.00/Ea.	1383	5.00/C	1696	1.45/Ea.	4175-J	1.30/Ea.
421	1.30/Ea.	534	.25/Ea.	763-3	.30/Ea.	972-B	60.00/Ea.	1383-A	5.60/C	1697	1.15/Ea.	4176	.62/Ea.
422	1.30/Ea.	535	.25/Ea.	763-5	.38/Ea.	972-S	50.00/Ea.	1384	6.75/C	1716	42.00/Ea.	4176-J	.80/Ea.
423	1.30/Ea.	536	.25/Ea.	763-7	.40/Ea.	973	15.00/Ea.	1384-A	7.25/C	1741	8.50/Ea.	4233	.90/Ea.
430	.23/Ea.	537	.25/Ea.	764	.35/Ea.	973-S	60.00/Ea.	1384-B	8.10/C	1772	40.00/Ea.	4234	1.00/Ea.
431	.35/Ea.	538	.30/Ea.	765	.90/Ea.	974	18.75/Ea.	1385	8.50/C	1773	50.00/Ea.	4235	2.25/Ea.
431-J	.40/Ea.	539	.30/Ea.	766	.50/Ea.	975	22.75/Ea.	1385-A	8.50/C	1774	56.00/Ea.	4236	2.50/Ea.
432	.62/Ea.	540	.30/Ea.	766-J	.75/Ea.	976	27.50/Ea.	1385-B	9.75/C	1775	67.50/Ea.	4237	2.75/Ea.
432-J	.85/Ea.	541	.60/Ea.	768	.70/Ea.	977	35.00/Ea.	1386	10.00/C	1776	80.00/Ea.	4238	3.50/Ea.
433	1.15/Ea.	542	.45/Ea.	769	1.40/Ea.	978	40.00/Ea.	1386-A	11.00/C	1777	87.50/Ea.	4275	.60/Ea.

Birnbach PRICE LIST NUMERICALLY ARRANGED BY CATALOG NUMBER

Cat. No.	List Price
4275-J	$1.00/Ea.
4276	1.15/Ea.
4276-J	1.35/Ea.
4450	1.15/Ea.
4450-J	1.50/Ea.
4451	.92/Ea.
4451-J	1.30/Ea.
4452	1.70/Ea.
4452-J	2.00/Ea.
5000	1.10/Ea.
5002	1.35/Ea.
5003	1.70/Ea.
5004	.90/Ea.
5005	1.05/Ea.
5006	1.35/Ea.
5007	1.05/Ea.
5008	1.45/Ea.
5009	1.70/Ea.
5010	3.30/Ea.
5011	3.30/Ea.
5012	4.75/Ea.
5013	4.75/Ea.
5015-5016	.75/Ea.
5017-5018	.75/Ea.
5040	.23/Ea.
5041	.23/Ea.
5042	.24/Ea.
5043	.24/Ea.
5044	.24/Ea.
5045	.24/Ea.
5046	.24/Ea.
5047	.23/Ea.
5050	.45/Ea.
5051	.45/Ea.
5052	.35/Ea.
5053	.30/Ea.
5060 to 5063	.17/Ea.
5070	.23/Ea.
5071	.30/Ea.
5075	.30/Ea.
5076	.30/Ea.
5080	.30/Ea.
5081	.35/Ea.
5085	.30/Ea.
5086	.35/Ea.
5090	.30/Ea.
5091	.32/Ea.
5095	.36/Ea.
5096	.35/Ea.
5105	.35/Ea.
5106	.40/Ea.
5110-5111	.40/Ea.
5115	.60/Ea.
5130 to 5134	.30/Ea.
5140	.30/Ea.
5141	.35/Ea.
5142	.35/Ea.
5143	.40/Ea.
5160	.23/Ea.
5161	.25/Ea.
5165-66	.30/Ea.
5170	.30/Ea.
5171	.30/Ea.
5180	.25/Ea.
5181	.30/Ea.
5185	.30/Ea.
5190	.17/Ea.
5191	.17/Ea.
5195	.30/Ea.
5200	.25/Ea.
5201	.25/Ea.
6000	4.90/Ea.
6100	.50/Ea.
6102	.60/Ea.
6103	.85/Ea.
6104	.85/Ea.
6105	3.00/Ea.
6200	.75/Ea.
6201	1.00/Ea.
6202	1.00/Ea.
6203	1.20/Ea.
6204	1.40/Ea.
6205	1.60/Ea.
6206	1.60/Ea.
6207	1.85/Ea.
6208	.15/Ea.
6210	1.00/Ea.
6211	1.15/Ea.
6212	1.20/Ea.
6213	1.35/Ea.
6214	1.50/Ea.
6215	1.65/Ea.
6216	1.85/Ea.
6217	2.00/Ea.
6220	.75/Ea.
6221	1.00/Ea.
6222	1.40/Ea.
6223	1.60/Ea.
6224	1.40/Ea.
6225	2.10/Ea.

Cat. No.	List Price
6226	$2.75/Ea.
6627	6.25/Ea.
6228	8.25/Ea.
6229	12.00/Ea.
6230	.90/Ea.
6231	2.25/Ea.
6232	.35/Ea.
6233	.80/Ea.
6234	.85/Ea.
6235	.90/Ea.
6236	1.30/Ea.
6241	1.60/Ea.
6242	2.50/Ea.
6243	1.45/Ea.
6244	.55/Ea.
6245	.35/Ea.
6246	.40/Ea.
6247	.50/Ea.
6248	.55/Ea.
6249	.45/Ea.
6250	1.65/Ea.
6251	1.90/Ea.
6252	2.35/Ea.
6253	2.60/Ea.
6300	5.25/M
6301	5.30/M
6302	5.35/M
6303	7.00/M
6304	5.80/M
6305	5.80/M
6306	5.80/M
6307	6.40/M
6308	6.40/M
6309	7.40/M
6310	29.05/M
6311	49.50/M
6312	5.80/M
6313	5.80/M
6314	6.40/M
6315	7.40/M
6316	10.85/M
6317	11.00/M
6318	11.20/M
6319	13.25/M
6320	15.00/M
6321	6.50/M
6322	7.00/M
6323	7.50/M
6324	8.50/M
6325	8.95/M
6326	9.60/M
6327	9.30/M
6328	9.90/M
6329	11.70/M
6330	8.20/M
6331	8.20/M
6332	7.80/M
6333	7.80/M
6334	8.70/M
6335	9.60/M
6336	22.80/M
6337	21.00/M
6338	30.00/M
6339	30.00/M
6350	10.00/M
6350-A	10.00/M
6351	10.00/M
6351-A	10.00/M
6352	10.00/M
6352-A	10.00/M
6353	11.00/M
6353-A	11.00/M
6354	13.50/M
6354-A	13.50/M
6355	8.25/M
6356	7.70/M
6357	7.70/M
6358	5.50/M
6359	5.50/M
6360	5.75/M
6361	5.75/M
6362	7.15/M
6363	12.65/M
6400	7.50/M
6401	8.10/M
6402	10.50/M
6403	11.50/M
6404	13.00/M
6405	10.30/M
6406	11.90/M
6407	13.50/M
6408	16.20/M
6409	19.80/M
6410	20.00/M
6411	21.50/M
6412	23.50/M
6413	14.70/M
6414	16.60/M
6415	18.60/M
6416	20.30/M

Cat. No.	List Price
6417	$22.90/M
6418	27.10/M
6420	6.50/M
6421	7.00/M
6422	7.50/M
6423	8.00/M
6424	8.75/M
6425	9.75/M
6426	8.30/M
6427	8.75/M
6428	9.60/M
6429	10.00/M
6430	11.00/M
6431	12.65/M
6432	14.65/M
6433	10.85/M
6434	11.00/M
6435	11.20/M
6436	12.50/M
6437	13.25/M
6438	15.00/M
6439	19.15/M
6440	10.30/M
6441	14.70/M
6442	10.30/M
6443	16.05/M
6444	17.05/M
6445	17.10/M
6446	18.10/M
6447	35.00/M
6448	7.80/M
6449	8.65/M
6450	9.60/M
6460	3.35/Gr.
6461	3.60/Gr.
6462	4.45/Gr.
6463	5.00/Gr.
6464	6.95/Gr.
6465	7.75/Gr.
6466	8.55/Gr.
6470	2.75/Gr.
6471	2.95/Gr.
6472	3.10/Gr.
6473	3.25/Gr.
6474	3.40/Gr.
6475	3.60/Gr.
6476	4.00/Gr.
6477	4.35/Gr.
6478	3.60/Gr.
6479	5.50/M
6480	5.50/M
6480-A	5.50/M
6481	6.75/M
6482	7.50/M
6483	25.00/M
6484	4.95/M
6485	4.65/M
6486	5.20/M
6487	5.20/M
6488	7.50/M
6491	5.50/M
6490	5.50/M
6492	5.75/M
6493	7.15/M
6494	12.65/M
6500	1.70/Gr.
6501	1.85/Gr.
6502	1.70/Gr.
6503	1.80/Gr.
6504	2.00/Gr.
6505	2.80/Gr.
6506	2.90/Gr.
6507	3.25/Gr.
6510	1.70/Gr.
6511	1.80/Gr.
6512	2.00/Gr.
6513	2.00/Gr.
6514	2.00/Gr.
6515	2.15/Gr.
6516	2.65/Gr.
6517	2.80/Gr.
6518	2.60/Gr.
6519	3.25/Gr.
6525 to 6534	1.55/C
6540	2.00/Gr.
6541	2.15/Gr.
6542	2.50/Gr.
6543	2.60/Gr.
6600	.72/C
6601	.75/C
6602	.87/C
6603	.90/C
6604	.74/C
6605	.75/C
6606	.98/C
6607	1.00/C
6608	.93/C
6609	1.00/C
6610	1.20/C
6611	1.33/C

Cat. No.	List Price
6611-A	$1.40/C
6612	4.10/C
6613	4.65/C
6614	5.20/C
7000	13.75/Ea.
7000-1	1.50/Ea.
7001	17.00/Ea.
7001S	20.00/M
7001-1	1.85/Ea.
7001-1S	2.15/Ea.
7002	16.75/Ea.
7002-1	1.80/Ea.
7003	21.50/Ea.
7003S	24.50/M
7003-1	2.30/Ea.
7003-1S	2.60/Ea.
7004	21.25/Ea.
7004-1	2.25/Ea.
7005	26.00/Ea.
7005-1	2.75/Ea.
7007	37.50/Ea.
7007-1	3.90/Ea.
7009	56.50/Ea.
7009-1	5.80/Ea.
7011	100.00/Ea.
7011-1	10.15/Ea.
7016	50.00/Ea,
7016-1	5.15/Ea.
7018	40.50/Ea.
7018-1	4.20/Ea.
7020	35.00/Ea.
7020-1	3.65/Ea.
7022	32.00/Ea.
7022-1	3.35/Ea.
7024	17.25/Ea.
7024-1	1.85/Ea.
7026-FM	2.75/Ea.
7027	3.50/Ea.
7027-HF	2.50/Ea.
7028	5.00/Ea.
7029	10.00/Ea.
7030	85.00/Ea.
7031	5.00/Ea.
7032	.95/Ea.
7033	5.95/Ea.
7034	.15/Ea.
7035	.25/Ea.
7036	10.00/C
7037	10.00/C
7038	9.00/C
7039	11.00/C
7040	20.00/C
7041	15.00/C
7042	22.50/C
7043-1"	7.50/C
7043-1½"	7.50/C
7043-2"	8.00/C
7043-3"	10.00/C
7044	18.00/C
7045	28.00/C
7046	4.75/Ea.
7047	2.25/Ea.
7048	25.00/C
7049	.85/Ea.
7049-A	.85/Ea.
7049-B	.85/Ea.
7050	.90/Ea.
7052	1.10/Ea.
7053	1.50/Ea.
7054	2.75/Ea.
7055	3.00/Ea.
7061	1.55/Ea.
7062	3.00/Ea.
7063	14.00/Ea.
7064	27.80/Ea.
7065	1.25/Ea.
7066	1.50/Ea.
7068	70.00/Ea.
7070	62.50/Ea.
7072	56.00/Ea.
7074	50.00/Ea.
7080	1.68/Ea.
7081	1.68/Ea.
7082	2.10/Ea.
7083	4.75/Ea.
7084	2.10/Ea.
7085	2.70/Ea.
7086	2.10/Ea.
7087	2.70/Ea.
7088	2.10/Ea.
7201	21.50/Ea.
7201-1	2.30/Ea.
7202	18.75/Ea.
7202-1	1.95/Ea.
7203	24.50/Ea.

Cat. No.	List Price
7203-1	2.60/Ea.
7204	21.00/Ea.
7204-1	2.25/Ea.
7205	31.50/Ea.
7205-1	3.30/Ea.
7207	$41.00/Ea.
7207-1	4.25/Ea.
7210	160.00/M
7210-1	18.00/Ea.
7212	120.00/M
7212-1	13.50/Ea.
7214	87.50/M
7214-1	9.50/Ea.
7216	65.00/M
7216-1	7.25/Ea.
7218	50.00/M
7218-1	5.50/Ea.
7220	40.00/M
7220-1	4.50/Ea.
7222	33.50/M
7222-1	4.00/Ea.
7224	32.50/M
7224-1	3.75/Ea.
7312	107.50/M
7312-1	11.50/Ea.
7314	62.50/M
7314-1	6.75/Ea.
7316	52.50/M
7316-1	5.75/Ea.
7318	38.00/M
7318-1	4.20/Ea.
7320	30.00/M
7320-1	3.25/Ea.
7322	25.00/M
7322-1	2.75/Ea.
7400	199.50/Ea.
7401	125.00/Ea.
7402	40.00/M
7402-1	4.50/Ea.
7412	54.00/M
7412-1	6.00/Ea.
7418	55.00/M
7418-1	6.10/Ea.
7428	85.00/M
7428-1	9.00/Ea.
7448	129.50/M
7448-1	13.50/Ea.
D-50	4.50/M
R-100	4.50/M
T-6	.20/Ea.
T-7	.50/Ea.
T-8	.40/Ea.
T-9	.15/Ea.
T-10	.08/Ea.
T-11	.30/Ea.
T-12	.15/Ea.
T-14	.70/Ea.
T-14A	.80/Ea.
T-15	.25/Ea.
T-16	.25/Ea.
T-16A	.25/Ea.
T-17	20.00/C
T-18	20.00/C
T-19-¾	9.50/C
T-19-1	9.50/C
T-19-1½	13.50/C
T-20	.80/Ea.
T-42	7.00/M
T-44	18.00/C
T-46	28.00/C
T-48	48.00/C
T-100-1"	.08/Ea.
T-101-1¼"	.08/Ea.
T-102-1½"	.10/Ea.
T-103	.84/Ea.
T-104	.55/Ea.
T-105-14	9.45/Ea.
T-105-16	11.25/Ea.
T-105-16R	11.95/Ea.
T-105-17R	12.95/Ea.
T-105-19R	18.50/Ea.
T-105-20	18.85/Ea.
T-105-21	20.00/Ea.
T-110	1.25/Ea.
T-250	20.00/C
T-250-A	22.00/C
T-669	17.00/C

SPECIAL SPOOLS

Magnet Wire	.72/Ea.
Solid Tinned	.72/Ea.

PLAIN ENAMEL MAGNET WIRE

¼ Lb. Spools

Size	Ft.	List Price
10	8	$ .59
12	12	.60
14	20	.63
16	32	.64
18	50	.65
20	80	$ .70
22	127	.73
24	201	.77
26	320	.92
28	507	.97
30	805	1.05
32	1282	1.17
34	2037	1.32
36	3221	1.54
38	5132	1.75
40	8143	2.65

½ Lb. Spools

Size	Ft.	List Price
10	16	$1.11
12	25	1.12
14	40	1.14
16	63	1.17
18	100	1.18
20	160	1.20
22	254	1.27
24	403	1.35
26	640	1.62
28	1015	1.70
30	1610	1.93
32	2564	2.07
34	4075	2.38
36	6443	2.79
38	10246	3.24
40	16286	4.85

1 Lb. Spools

Size	Ft.	List Price
10	32	1.88
12	50	1.89
14	80	1.93
16	126	1.97
18	201	2.05
20	320	2.12
22	508	2.23
24	806	2.33
26	1280	2.90
28	2030	3.07
30	3220	3.50
32	5128	3.82
34	8150	4.78
36	12887	5.22
38	20492	6.08
40	32573	9.20

DOUBLE COTTON MAGNET WIRE

¼ Lb. Spools

Size	Ft.	List Price
12	12	.70
14	19	.73
16	31	.78
18	48	.79
20	78	.87
22	119	.97
24	184	1.13
26	284	1.35
28	435	1.60
30	641	1.92
32	976	2.37
34	1365	3.35
36	1827	4.55
38	2738	8.00
40	3405	11.50

½ Lb. Spools

Size	Ft.	List Price
12	24	1.23
14	39	1.25
16	62	1.28
18	97	1.42
20	157	1.58
22	238	1.80
24	369	2.12
26	568	2.53
28	871	3.07
30	1284	3.60
32	1953	4.47
34	2735	6.30
36	3654	8.72
38	5476	13.09
40	6811	19.60

1 Lb. Spools

Size	Ft.	List Price
12	49	2.23
14	78	2.28
16	123	2.33
18	194	2.40
20	304	2.70
22	477	3.07
24	739	3.82
26	1136	4.45
28	1742	5.20
30	2569	6.18
32	3906	8.50
34	5470	12.15
36	7309	16.37
38	10952	24.50
40	13623	36.40

DOUBLE SILK MAGNET WIRE

¼ Lb. Spools

Size	Ft.	List Price
12	12	1.00
14	19	1.05
16	31	1.15
18	49	1.27
20	78	1.45
22	123	$1.70
24	195	1.85
26	303	2.25
28	478	2.50
30	739	2.85
32	1136	3.82
34	1712	4.92
36	2551	7.65
38	3770	10.94
40	5040	17.00

½ Lb. Spools

Size	Ft.	List Price
12	24	1.97
14	39	2.02
16	62	2.20
18	99	2.30
20	157	2.84
22	247	3.28
24	390	3.60
26	606	4.38
28	956	4.92
30	1479	5.47
32	2272	7.44
34	3424	9.63
36	5102	14.88
38	7541	20.74
40	10080	32.00

1 Lb. Spools

Size	Ft.	List Price
12	49	3.73
14	78	3.77
16	125	3.98
18	198	4.38
20	314	5.34
22	495	5.87
24	781	7.00
26	1212	8.58
28	1912	9.30
30	2958	10.10
32	4545	14.88
34	6849	18.55
36	10204	28.44
38	15082	39.40
40	20161	60.00

SOLID TINNED (SOFT DRAWN)

¼ Lb. Spools

Size	Ft.	List Price
10	8	.59
12	12	.60
14	20	.63
16	32	.64
18	50	.65
20	80	.70
22	127	.73
24	201	.77
26	320	.92
28	507	.97
30	805	1.05
32	1282	1.17
34	2037	1.32
36	3221	1.54
38	8143	1.75
40	5132	2.65

½ Lb. Spools

Size	Ft.	List Price
10	16	1.11
12	25	1.12
14	40	1.14
16	63	1.17
18	100	1.18
20	160	1.20
22	254	1.27
24	403	1.35
26	640	1.62
28	1015	1.70
30	1610	1.93
32	2564	2.07
34	4075	2.38
36	6443	2.79
38	10246	3.24
40	16286	4.85

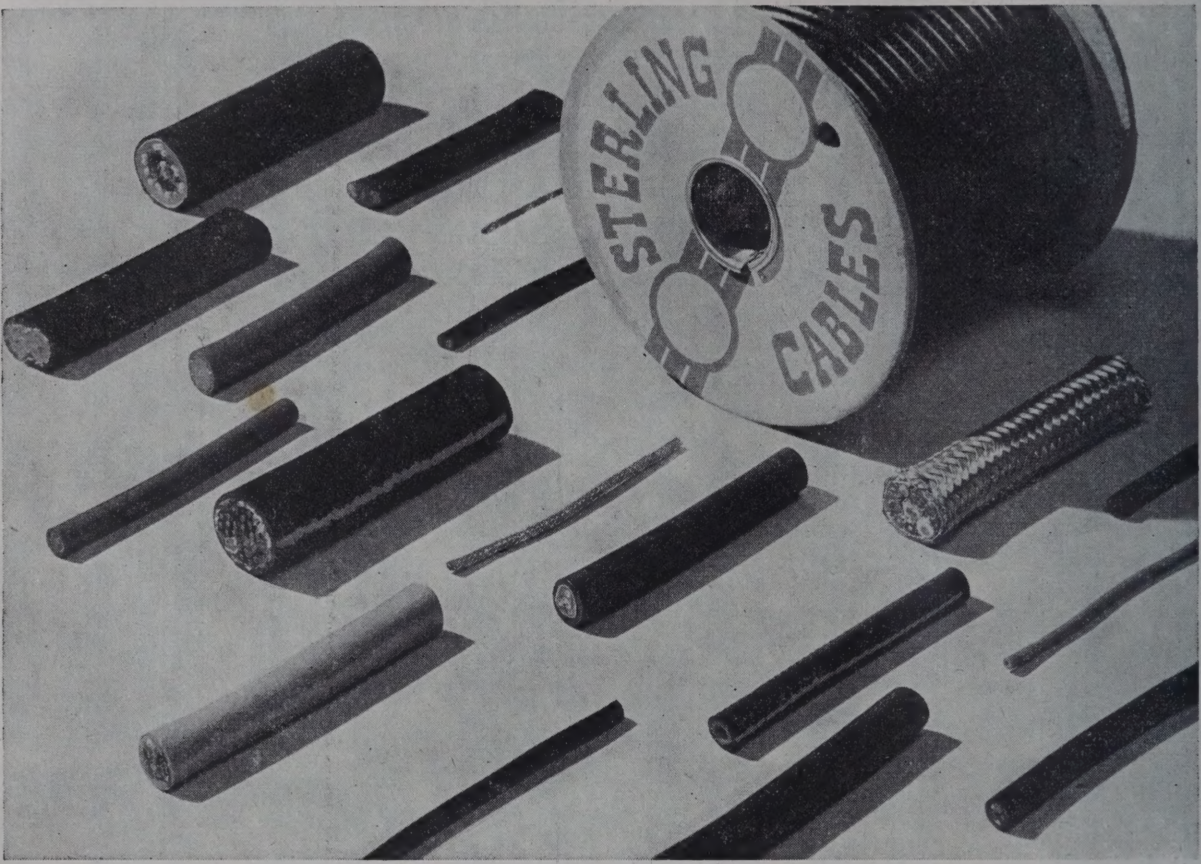
1 Lb. Spools

Size	Ft.	List Price
10	32	1.88
12	50	1.89
14	80	1.93
16	126	1.97
18	201	2.05
20	320	2.12
22	508	2.23
24	806	2.33
26	1280	2.90
28	2030	3.07
30	3220	3.50
32	5128	3.82
34	8150	4.78
36	12887	5.22
38	20492	6.08
40	32573	9.20

Where wire is shipped on returnable spools or reels a deposit covering same will be required. No credit will be allowed for returnable reels and spools unless returned prepaid within 12 months from date of shipment. All deposit spools and reels are billed separately on invoice and not included in price of materials sold.

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

STERLING CABLE THRU BEAM INSTRUMENTS



Sterling Cable Company manufactures a full range of Electrical, Radio and Television wires and cables which is sold exclusively through Beam Instruments Corporation.

Due to the very large number of different types of wire and cable no attempt is made to list or classify them here.

Substantial stocks of the more popular Television cables are maintained in New York.

Television Camera Cables
300 ohm twin lead.
4-8 Conductor Antenna Rotator cable
Coaxial cables
R.G. 59U (S C 2132)
R.G. 11 U
R.G. 5 U, etc., etc.
Multi-Conductor Cables (Shielded or Unshielded), for Communications and Audio, etc., etc.

PAPER AND CAMBRIC INSULATED
CABLES HIGH AND LOW TENSION
LEAD SHEATHED
STEEL TAPED
WIRE ARMOURED
RUBBER
POLYVINYL CHLORIDE INSULATED
POLYTHENE INSULATED
RUBBER, PLASTIC, TEXTILE AND
POLYCHLOROPRENE FINISHES.

Quotations for special cables and regular types on request.

Send for fuller information.

BEAM INSTRUMENTS CORPORATION

350 Fifth Avenue, New York 1, N. Y.

Rome Hi-Temp . . . . A ROME CABLE PRODUCT

RUBBER INSULATED HOOK-UP WIRE

Underwriters' approved and labeled* for 75°C.—300 volts

The result of extensive laboratory development and proved by a decade of service—Rome Hi-Temp is offered for radio and electronic circuits where resistance to moisture and heat is required.

SPECIFICATIONS

Conductors: Annealed tinned, solid or stranded copper conforming to A.S.T.M. Specification B 33 and/or Underwriters' Standards.

In order to provide maximum flexibility and prevent unraveling of the strands a short lay stranding is used as follows:

No. 22 Awg. .33 inch max.
No. 20 Awg. .50 inch. max.

Insulation: Rome Hi-Temp—a high quality, free-stripping heat-resistant rubber insulation approved by Undedwriters' Laboratories.

Typical Test Results

Breakdown Voltage (1/32" Hi-Temp)....................10500 volts
Insulation Resistance....................Over 10000 megohms feet

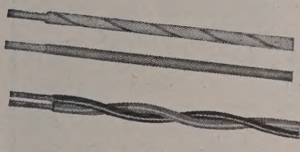
*Only factory length reels are furnished with U/L's labels.

Cat. No.	Size No.	Stranding No.	Length	Insulation Thickness	Diameter	List Price Each
901	22	Solid	25 ft. carton	1/32"	.075"	$0.44
903	22	Solid	100 ft. carton	1/32"		1.65
905	22	Solid	500 ft. spool	1/32"		6.56
907	22	Solid	1000 ft. spool	1/32"		12.70
911	20	Solid	25 ft. carton	1/32"	.086"	.50
913	20	Solid	100 ft. carton	1/32"		1.79
915	20	Solid	500 ft. spool	1/32"		7.40
917	20	Solid	1000 ft. spool	1/32"		14.30
921	22	7 x 30	25 ft. carton	1/32"	.085"	.50
923	22	7 x 30	100 ft. carton	1/32"		1.79
925	22	7 x 30	500 ft. spool	1/32"		7.40
927	22	7 x 30	1000 ft. spool	1/32"		14.30
931	20	10 x 30	25 ft. carton	1/32"	.090"	.62
933	20	10 x 30	100 ft. carton	1/32"		2.04
935	20	10 x 30	500 ft. spool	1/32"		9.07
937	20	10 x 30	1000 ft. spool	1/32"		16.95

U/L Voltage Rating—300 Volts Maximum
Colors: Black, Blue, Brown, Green, Orange, Pink, Red, Slate, White, Yellow

Rome Synthinol . . . . A ROME CABLE PRODUCT

THERMOPLASTIC INSULATED HOOK-UP WIRE


U/L Voltage Rating—300 Volts Max.
Single and Two-Conductor Twisted Cable: Color Coded

Rome Synthinol is a polyvinyl chloride type of thermoplastic insulation impervious to oils, acids, alkalies, moisture and flame, and possessing unusually high dielectric strength. Colors are of gem-like permanency.

Approved by Underwriters' Laboratories where exposed to temperatures not exceeding 80° Centigrade or where exposed to oil at temperatures not exceeding 60° Centigrade with ratings at 300 and 600 volts as indicated below. The Underwriters' approval seal appears on every factory length reel of Rome Synthinol.

Rome Synthinol is specially designed for the chassis and sub-chassis wiring of radio and television receivers and transmitters as well as all other types of electronic equipment. It has physical and electrical characteristics of unusual permanency.

SPECIFICATIONS

Conductors: Annealed tinned solid or stranded copper conforming to A.S.T.M. Specification B 33 and/or Underwriters' Standards.

In order to provide maximum flexibility and prevent unraveling of the strands, a short lay stranding is used as follows:

No. 22 Awg. .33 inch max. No. 20 Awg. .50 inch max.

Insulation: Rome Synthinol—Approved by and conforming to Underwriters' requirements and the performance specifications of A.S.T.M. D 734. Available in solid colors or with a surface applied contrasting colored spiral stripe.

Typical Test Results

Breakdown Voltage (1/64" Synthinol)....................over 10000 volts
Breakdown Voltage (1/32" Synthinol)....................over 18000 volts
Insulation Resistance (1/32" Synthinol)....................over 5000 megohms feet

Cat. No.	No. Size Condr.	Stranding No.	Length	Insulation Thickness	Diameter	List Price Each
801	22	Solid	25 ft. carton	.032"	.062"	$0.44
803	22	Solid	100 ft. carton	.020"		1.65
805	22	Solid	500 ft. spool	.020"		6.56
807	22	Solid	1000 ft. spool	.020"		12.70
811	20	Solid	25 ft. carton	.020"	.092"	.50
813	20	Solid	100 ft. carton	.020"		1.79
815	20	Solid	500 ft. spool	.020"		7.40
817	20	Solid	1000 ft. spool	.020"		14.30
821	22	7 x 30	25 ft. carton	.020"	.064"	.50
823	22	7 x 30	100 ft. carton	.020"		1.79
825	22	7 x 30	500 ft. spool	.020"		7.40
827	22	7 x 30	1000 ft. spool	.020"		14.30
831	20	10 x 30	25 ft. carton	.020"	.095"	.62
833	20	10 x 30	100 ft. carton	.020"		2.04
835	20	10 x 30	500 ft. spool	.020"		9.07
837	20	10 x 30	1000 ft. spool	.020"		16.95
881	20-2	10 x 30	100 ft. coil	.025"	.125"	4.29
882	20-2	10 x 30	500 ft. spool	.025"	.125"	19.82
883	20-2	10 x 30	1000 ft. spool	.025"	.125"	41.40

FORMVAR WIRE—No. 2000

Covered with the new, tough, abrasion-resisting film. Takes up less space. Has these imporant qualities: No danger from stretching and bending during assembly. Tough at higher temperature. Resists abrasion better. Stable under heat aging. Does not fail after 2 hours at 105° C. Completely insoluble to petroleum solvents. Adequate acid and alkali resistance. Constant dialectric properties. Infinite resistance to water and moisture.

Use Single Formvar for low voltage coils, Heavy Formvar to replace Enamel Paper, Enamel Cotton, Enamel Silk, Double Cotton and Double Silk.

ON PROTECTA-SLEEVE SPOOLS.

Single Formvar Magnet Wire				Heavy Formvar Magnet Wire			
Size	¼ Lb.	½ Lb.	1 Lb.	Size	¼ Lb.	½ Lb.	1 Lb.
14	$0.66	$1.12	$2.07	14	$0.73	$1.24	$2.27
15	.66	1.20	2.10	15	.73	1.34	2.33
16	.75	1.25	2.14	16	.84	1.39	2.35
17	.75	1.30	2.15	17	.84	1.44	2.37
18	.75	1.34	2.17	18	.84	1.47	2.39
19	.83	1.39	2.23	19	.92	1.52	2.45
20	.83	1.40	2.25	20	.92	1.54	2.51
21	.83	1.42	2.37	21	.92	1.55	2.61
22	.83	1.45	2.56	22	.92	1.60	2.80
23	.89	1.49	2.62	23	.97	1.64	2.87
24	.90	1.50	2.80	24	1.00	1.65	3.07
25	.97	1.65	2.92	25	1.15	1.97	3.50
26	.99	1.65	3.05	26	1.19	1.98	3.64
27	1.05	1.74	3.20	27	1.25	2.07	3.84
28	1.10	1.80	3.37	28	1.34	2.15	4.04
29	1.14	1.87	3.46	29	1.37	2.24	4.14
30	1.20	1.95	3.52	30	1.44	2.34	4.22
31	1.34	2.02	3.67	31	1.67	2.52	4.58
32	1.35	2.10	3.75	32	1.69	2.63	4.67
33	1.42	2.25	3.95	33	1.77	2.81	4.94
34	1.50	2.55	4.12	34	1.87	3.19	5.16
35	1.64	2.81	4.70	35	2.04	3.46	5.88
36	1.92	3.00	5.26	36	2.39	3.75	6.58
37	2.17	3.37	6.00	37	2.72	4.20	7.50
38	2.55	3.75	6.76	38	3.17	4.69	8.45
39	2.80	4.50	7.50	39	3.50	5.64	9.38
40	3.75	5.64	9.00	40	4.69	7.04	11.27

BARE COPPER WIRE—No. 2000

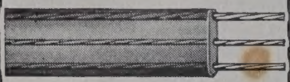
ON PROTECTA-SLEEVE SPOOLS

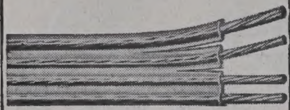
Handy convenient way to stock small quantities of wire. Prevents wire from matting or tangling. Supplied on spools as shown and in heavier weights.

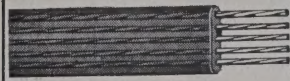
Bare Copper Wire				Tinned Copper Wire			
Size	¼ Lb.	½ Lb.	1 Lb.	Size	¼ Lb.	½ Lb.	1 Lb.
14	$0.53	$0.97	$1.54	14	$0.67	$1.13	$1.75
15	.57	1.00	1.60	15	.73	1.27	1.92
16	.60	1.10	1.83	16	.80	1.40	2.00
17	.52	1.12	1.87	17	.84	1.44	2.03
18	.63	1.14	1.90	18	.87	1.47	2.08
19	.65	1.17	1.95	19	.90	1.50	2.12
20	.67	1.20	2.00	20	.94	1.53	2.17
21	.68	1.22	2.07	21	.95	1.53	2.24
22	.70	1.24	2.14	22	.97	1.57	2.30
23	.70	1.27	2.17	23	.98	1.58	2.34
24	.70	1.30	2.20	24	1.00	1.60	2.37
25	.72	1.30	2.20	25	1.00	1.60	2.37
26	.73	1.34	2.27	26	1.00	1.60	2.37
27	.75	1.37	2.30	27	1.05	1.67	2.64
28	.77	1.40	2.40	28	1.10	1.75	2.90
29	.77	1.42	2.47	29	1.13	1.84	2.94
30	.77	1.42	2.47	30	1.17	1.92	2.97
31	.77	1.44	2.53	31	1.20	2.00	3.04
32	.77	1.44	2.60	32	1.24	2.09	3.10
33	.78	1.47	2.68	33	1.27	2.17	3.19
34	.80	1.50	2.77	34	1.30	2.25	3.27
35	.82	1.55	2.90	35	1.32	2.30	3.40
36	.84	1.60	3.04	36	1.34	2.34	3.54
37	.92	1.75	3.22	37	1.36	2.42	3.72
38	1.00	1.90	3.40	38	1.38	2.50	3.90
39	1.02	1.97	3.45	39	1.39	2.59	3.95
40	1.04	2.04	3.50	40	1.40	2.67	4.00

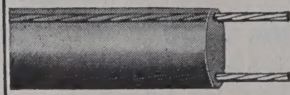
CONSOLIDATED

TELEVISION CABLE









No.	Type	Length	Size & Stranding	Specifications and General Applications	Nominal Diam. (in.)	Frequency (mc)	Attenuation Per 100 ft.	Impedance (ohms)	Velocity of Propagation (%)	Capacitance Per Ft. (mmf)	List Price Each
4501	2 condr.	100 ft. Spool	20 7x28	Both conductors bare copper; flexible stranding; conductors parallel; insulated with polyethylene. **USE: Receiving antenna at high frequencies.**	.072 x .400	50 100 200 300 400 500	.72 1.1 1.7 2.2 2.7 3.1	300	85	4.6	$7.50
4303	2 condr.	500 ft. Spool	20 7x28	Same as 4501	.072 x .400	Same as 4501	Same as 4501	300	85	4.6	35.75
4505	3 condr.	100 ft. Spool	20 7x28	Two bare, one tinned copper conductor; flexible stranding; conductors parallel; polyethylene insulation. **USE: Same as 4501, but third conductor may be used for ground or other purposes.**	.072 x .400	Same as 4501	Same as 4501	300	85	4.6	7.90
4507	3 condr.	500 ft. Spool	20 7x28	Same as 4505	.072 x .400	Same as 4501	Same as 4501	300	85	4.6	38.40
4508	4 condr.	100 ft. Spool	20 7x28	Same as 4501 except three conductors bare copper, one conductor tinned. Amber polyethylene plastic insulation overall is semi-transparent for easy conductor identification and is grooved between conductors for ease of separation and stripping. **USE: Rotor Aerials.**	.072 x .400	Same as 4501	Same as 4501	300	85	4.6	8.10
4509	4 condr.	500 ft. Spool	20 7x28	Same as 4508	.072 x .400	Same as 4501	Same as 4501	300	85	4.6	68.75
4511	4 condr.	100 ft. Spool	20 7x28	Three conductors bare copper, one conductor tinned—with heavy wall of polyethylene plastic insulation overall. **USE: Rotor Aerials.**	.090 x .400						8.10
4513	4 condr.	500 ft. Spool	20 7x28	Same as 4511	.090 x .400						68.75
4515	5 condr.	100 ft. Spool	20 7x28	Same as 4511 except four conductors bare copper, one conductor tinned copper. **USE: Rotor Aerials.**	.090 x .400						8.35
4517	5 condr.	500 ft. Spool	20 7x28	Same as 4515	.090 x .400						40.60
4521	8 condr.	500 ft. Spool	22 7x28	Tinned copper conductors. .010 thermoplastic insulation over each conductor with jacket overall. **USE: Rotor Aerials.**	.235						47.75
4523	2 condr. Heavy Duty	500 ft. Spool	18 7x26	Conductors bare copper; flexible stranding; conductors run parallel. **USE: TV and FM receiving antenna. Especially designed for use in TV fringe areas. Also adapted to use with low-power transmitting antenna.**	.200 x .520	50 100 200 300 400 500	.70 1.10 1.73 2.28 2.74 3.18	300	82	5.0	83.50

MAGNET WIRE

CONSOLIDATED
COMPANIES

Popular, profitable specialty wire packaged for easy selling in radio - electrical, department, specialty and hardware stores.

Wide variety of sizes and insulations.

Keeps stock in perfect order, always saleable.

For all wire pages 16, 17, 18.

Supplied on Spool as Shown and in Heavier Weights.

Here is a handy and convenient way to stock small quantities of wire. It prevents wire from matting or tangling. The sleeve is accurately made and can be readily slipped out of the way when any length of wire is desired.

PROTECTA-SLEEVE SPOOLS

	DOUBLE COTTON COVERED				PLAIN ENAMEL				SINGLE COTTON ENAMEL				SINGLE SILK ENAMEL		
Size	¼ lb.	½ lb.	1 lb.	Size	¼ lb.	½ lb.	1 lb.	Size	¼ lb.	½ lb.	1 lb.	Size	¼ lb.	½ lb.	1 lb.
14	$0.55	$0.95	$1.87	14	$0.45	$0.75	$1.39	14	$0.57	$1.10	$1.95	14			
15	.58	.98	1.90	15	.45	.80	1.40	15	.58	1.10	2.00	15			
16	.60	1.00	1.95	16	.50	.84	1.42	16	.60	1.15	2.05	16	$0.84	$1.35	$2.50
17	.60	1.05	2.00	17	.50	.87	1.44	17	.63	1.18	2.09	17	.85	1.45	2.75
18	.60	1.10	2.05	18	.50	.89	1.45	18	.65	1.25	2.10	18	.88	1.50	2.89
19	.65	1.15	2.28	19	.55	.92	1.49	19	.67	1.28	2.14	19	.90	1.60	3.00
20	.65	1.25	2.34	20	.55	.94	1.50	20	.68	1.34	2.19	20	.94	1.65	3.14
21	.77	1.34	2.50	21	.55	.95	1.59	21	.70	1.39	2.20	21	.96	1.70	3.25
22	.82	1.39	2.64	22	.55	.97	1.70	22	.73	1.43	2.30	22	1.00	1.75	3.39
23	.88	1.50	2.75	23	.58	.99	1.75	23	.78	1.50	2.38	23	1.05	1.87	3.50
24	.94	1.60	3.00	24	.60	1.00	1.87	24	.84	1.55	2.50	24	1.10	1.90	3.64
25	.95	1.65	3.14	25	.65	1.10	1.95	25	.85	1.63	2.63	25	1.18	2.00	3.75
26	1.00	1.75	3.39	26	.65	1.10	2.03	26	.90	1.70	2.75	26	1.20	2.20	4.14
27	1.15	1.89	3.64	27	.70	1.15	2.14	27	1.00	1.75	2.89	27	1.30	2.39	4.50
28	1.20	2.14	4.00	28	.73	1.20	2.25	28	1.05	1.80	3.00	28	1.40	2.50	4.67
29	1.30	2.39	4.50	29	.75	1.25	2.30	29	1.10	1.95	3.14	29	1.54	2.89	5.25
30	1.32	2.50	4.75	30	.80	1.30	2.35	30	1.15	2.04	3.39	30	1.65	3.05	5.90
31	1.50	2.75	5.00	31	.89	1.35	2.45	31	1.25	2.25	3.64	31	1.87	3.39	6.65
32	1.75	3.00	5.64	32	.90	1.40	2.50	32	1.39	2.50	4.00	32	2.20	4.00	7.25
33	1.89	3.37	6.25	33	.95	1.50	2.65	33	1.60	3.00	4.50	33	2.50	4.39	8.25
34	2.14	3.89	7.00	34	1.00	1.70	2.75	34	1.80	3.14	5.00	34	2.70	4.89	9.25
35	2.39	4.25	7.50	35	1.09	1.84	3.14	35	2.14	3.64	5.64	35	2.80	5.25	10.00
36	2.75	4.89	8.65	36	1.29	2.00	3.50	36	2.40	4.14	6.50	36	3.14	5.90	11.40
37	2.25	6.25	11.40	37	1.45	2.25	4.00	37	3.20	5.64	10.25	37	3.75	7.15	14.00
38	4.75	8.65	16.50	38	1.70	2.50	4.50	38	4.00	7.25	12.00	38	4.39	8.65	16.00
39	6.00	11.50	20.00	39	1.87	3.00	5.00	39	5.00	8.75	15.25	39	5.39	10.25	20.00
40	8.00	15.00	28.15	40	2.50	3.75	6.00	40	6.41	12.25	19.00	40	6.75	13.00	25.00

ARMORED SPEAKER CABLE — For severe use, chafing, etc.

CONSOLIDATED

SPECIFICATIONS: Flexible copper conductors mounted parallel each covered with cotton serve and 1/64 wall of live rubber; overall wrap of galvanized steel armor

TYPE NO.		LENGTH	SIZE	STRANDING	INSULATION THICKNESS	FINISHED O.D. (Inches)	LIST PRICE EACH
1458	2 Conductors	100 ft.	18	16 x 30	1/64	.235 x .155	$9.00

PHONOGRAPH PICK-UP-ARM CABLE

CONSOLIDATED

SPECIFICATIONS: Tinned copper; flexible stranding; vinylite plastic insulation—SHIELDED.

TYPE No.	LENGTH	SIZE	STRANDING	INSULATION THICKNESS	FINISHED O.D. (Inches)	LIST PRICE EACH
1470	100 ft.	23	20 x .005	.010	.070	$3.60

CONSOLIDATED

TELEPHONE AND COMMUNICATION CABLE

INTERIOR TYPE—Dry Braid

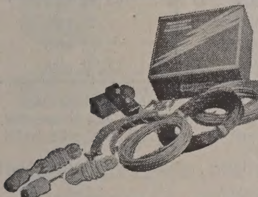
Consists of solid twisted pair, copper wire, with one wire coded for identification, covered with special rubber insulation and with an overall dry braid covering. Designed for interior use in telephone service, on inter-communicating systems of all kinds, etc.

2 CONDUCTOR No.	List Price Each	3 CONDUCTOR No.	List Price Each
3875— 100 ft. coil	$ 5.40	3878— 100 ft. coil	$ 8.35
3876— 500 ft. coil	26.30	3879— 500 ft. coil	37.00
3877—1000 ft. coil	50.00	3880—1000 ft. coil	71.80

EXTERIOR TYPE—Black Finish

Consists of Solid Copper Coded ire with special cotton serve, rubber insulation and with an overall covering of black weather-proofed braid. Designed for exterior use in intercommunicating and telephone service of all kinds.

2 CONDUCTOR No.	List Price Each	3 CONDUCTOR No.	List Price Each
3881— 100 ft. coil	$ 5.00	3884— 100 ft. coil	$ 8.10
3882— 500 ft. coil	24.20	3885— 500 ft. coil	36.40
3883—1000 ft. coil	45.50	3886—1000 ft. coil	68.00



AERIAL KITS for Every Radio Receiver

Consolidated Aerial Kits are made up with the same painstaking care that has always featured our assemblies. All materials and parts are of highest standard and are guaranteed as to Length, Weight, Size and Count as Specified. If your needs are not answered in the stock listings below, write us regarding your special requirements.

50 FOOT SERIES	
No. 506—THE PRICE LEADER 50 feet 7x26 Bare Copper Aerial Wire; 25 feet No. 16 Rubber Covered Lead-in Wire; 1 Adjustable Ground Clamp; 2 Porcelain Insulators; 2 Porcelain Nail Knobs; 1 Window Lead-in Strip; Installation Instructions.	$1.37 each
No. 507—Contains 1 Underwriter Approved Lightning Arrestor, otherwise same as No. 506.	1.72 each
No. 501—A SUPER VALUE 50 feet 7x26 Bare Copper Aerial Wire; 35 feet No. 16 Rubber Covered Lead-in Wire; 1 Adjustable Ground Clamp; 2 Porcelain Insulators; 2 Porcelain Nail Knobs; 1 Window Lead-in- Strip; Installation Instructions.	1.44 each
No. 502—Contains 1 Underwriter Approved Lightning Arrestor, otherwise same as No. 501.	1.78 each
No. 512—DE LUXE AERIAL 50 feet 7x22 Enamel Aerial Wire; 35 feet No. 16 Rubber Covered Lead-in Wire; 1 Underwriter Approved Lightning Arrestor; 2 Large Glass Insulators; 1 Shur Grip Ground Clamp; 1 Duco Window Lead-in Strip; 2 Porcelain Nail Knobs; Installation Instructions.	2.62 each
60 FOOT SERIES	
No. 516—PRICE KIT—Contains 60 feet 7x26 Bare Copper Aerial Wire, otherwise same as No. 501.	1.57 each
No. 517—Contains 60 feet 7x26 Bare Copper Aerial Wire, 1 Underwriter Approved Lightning Aresstor, otherwise same as No. 501.	1.94 each
No. 518 AERIAL—Contains 60 feet 7x22 Enamel Aerial Wire, otherwise same as No. 512.	2.87 each
75 FOOT SERIES	
No. 531—75 FOOT SPECIAL 75 feet 7x26 Bare Copper Aerial Wire; 25 feet No. 16 Rubber Covered Lead-in Wire; 1 Adjustable Ground Clamp; 2 Porcelain Insulators; 2 Porcelain Nail Knobs; 1 Window Lead-in Strip; Installation Instructions.	1.72 each
No. 532—Contains 1 Underwriter Approved Lightning Arrestor, otherwise same as No. 531.	2.07 each
No. 522—SUPERFINE AERIAL 75 feet 7x24 Enameled Aerial Wire; 25 feet No. 16 Rubber Covered Lead-in Wire; 1 Underwriter Approved Lightning Arrestor; 2 Large Glass Insulators; 1 Shur Grip Gound Clamp; 1 Duco Window Lead-in Strip; 2 Porcelain Nail Knobs; Installation Instructions.	2.82 each
100 FOOT SERIES	
No. 541—EXTRA VALUE 100 feet 7x26 Bare Copper Aerial Wire; 25 feet No. 16 Rubber Covered Lead-in Wire; 1 Adjustable Ground Clamp; 2 Porcelain Insulators; 2 Porcelain Nail Knobs; 1 Window Lead-in Strip; Installation Instructions.	1.87 each
No. 542—Contains Underwriter Approved Lightning Arrestor, otherwise same as No. 541.	2.22 each
No. 551—Contains 100 feet 7x24 Copper Aerial Wire, otherwise same as No. 541.	2.03 each
No. 552—Contains 100 feet 7x24 Aerial Wire; 1 Underwriter Approved Lightning Arrestor, otherwise same as No. 541.	3.20 each

CONSOLIDATED

RESISTANCE LINE CORDS for AC-DC Radio Sets

The cords have a wide market for replacement on AC-DC radios with worn out cords; also on those formerly having hot resistance. Consists of a 6 foot cord with red and black rubber covered line cord wires and an asbestos covered resistance having separate terminal braid. Consolidated cords have an exclusive tinned copper terminal on the resistance cord that can be soldered. Colored cotton tracer designates ohmage.

VOLTAGE DATA

The table and example below indicate tube voltages and how to determine proper cord. Check the voltages of aech tube in the voltage table. Add all voltages together, allowing 10% variation, plus or minus.

TUBE VOLTAGES

6.3 volt tubes: 36, 37, 38, 39, 77, 78, 6B7, KR1, 6D6, 6C6, 6A7, 6F7.

12 volt tubes: 12Z3, 12A5.

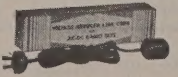
25 volt tubes: 25Z5, 43.

EXAMPLE:
Radio Contains

1 77 tube—voltage	6.3
1 78 tube—voltage	6.3
1 43 tube—voltage	25.
1 25Z5 tube—voltage	25.
Total voltage	62.6

Radio uses 160 ohm cord.

		List Price
No. 2401	135 ohms—Blue	$ 1.05 ea.
No. 2413	150 ohms—Blue and Red—Cross tracer	1.05 ea.
No. 2402	160 ohms—Red	1.05 ea.
No. 2412	180 ohms—Blue and White—Cross tracer	1.05 ea.
No. 2411	200 ohms—Red and White—Cross tracer	1.05 ea.
No. 2403	220 ohms—Grey	1.05 ea.
No. 2410	250 ohms—Red and Green—Cross tracer	1.05 ea.
No. 2409	280 ohms—White and Green—Cross tracer	1.05 ea.
No. 2404	290 ohms—White	1.05 ea.
No. 2408	310 ohms—Yellow and Green—Cross tracer	1.05 ea.
No. 2405	330 ohms—Yellow	1.05 ea.
No. 2407	350 ohms—Yellow and Red—Cross tracer	1.05 ea.
No. 2406	360 ohms—Green	1.05 ea.
No. 2414	525 ohms—Grey and White—Cross tracer	1.05 ea.
No. 2415	30 ohms Per Ft.—100 Ft. Spools	13.75
No. 2421	60 ohms Per Ft.—100 Ft. Spools	13.75



VOLTAGE REDUCER CORD SETS

No. 2451

The Consolidated Voltage Reducer Cord Set can be used anywhere that it is necessary to reduce line voltage from 220 volts to 110 volts for radios, electric clocks, household appliances, electric dry shavers, etc. It has a special built-in resistor which reduces 220 volts AC or DC to 110 volts without any additional devices. It comes as a 6 foot cord with dark brown glazed cotton covering. Packed in attractive two-color box.

No. 2451—American male plug with American female receptacle	$1.90
No. 2452—English male plug with American female receptacle	2.40
No. 2453—French male plug with American female receptacle	2.40

STA--PUT PUSHBACK HOOK-UP WIRE

STRIPS AND REMAINS BACK FOR CLEAN TERMINAL

Seven colors for each: Black, blue, brown, green, red, yellow, white. **Be sure to specify color when ordering.**

Every unit packaged in handsome 3-color display carton for easy merchandising by dealer.

SPECIFICATIONS: Tinned copper conductor; cotton serve and cotton braid through paraffin impregnation.

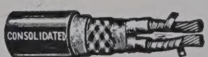
TYPE No.	SIZE	LENGTH	STRANDING	FINISHED O.D.	LIST PRICE
1048	18	25 ft. carton	16 x 30	.072	$0.55 each
1049	18	100 ft. carton	16 x 30	.072	1.90 each
1050	18	1000 ft. spool	16 x 30	.072	19.00 each
1091	22	25 ft. carton	7 x 30	.066	.38 each
1092	22	100 ft. carton	7 x 30	.066	1.20 each
1093	22	1000 ft. spool	7 x 30	.066	11.20 each
1101	20	25 ft. carton	10 x 30	.068	.48 each
1102	20	100 ft. carton	10 x 30	.068	1.67 each
1103	20	1000 ft. spool	10 x 30	.068	13.70 each
1045	18	25 ft. carton	Solid	.070	.47 each
1046	18	100 ft. carton	Solid	.070	1.67 each
1047	18	1000 ft. spool	Solid	.070	16.50 each
1096	22	25 ft. carton	Solid	.065	.37 each
1097	22	100 ft. carton	Solid	.065	1.15 each
1098	22	1000 ft. spool	Solid	.065	10.50 each
1106	20	25 ft. carton	Solid	.067	.45 each
1107	20	100 ft. carton	Solid	.067	1.65 each
1108	20	1000 ft. spool	Solid	.067	12.50 each

HI-Q LO-LOSS PUSHBACK HOOK-UP WIRE

High efficiency wire ideal for use where high conductivity with negligible loss is essential. 3-color display carton. Real pushback — insulation will not creep. R.M.A. color coded.

SPECIFICATIONS: Tinned pure copper serve of cellulose acetate yarn; cotton braid overall with high gloss lacquer.

1051	22	25 ft. carton	7 x 30	.065	$1.05 each
1052	22	100 ft. carton	7 x 30	.065	2.75 each
1053	22	1000 ft. spool	7 x 30	.065	12.00 each
1056	20	25 ft. carton	10 x 30	.066	1.07 each
1057	20	100 ft. carton	10 x 30	.066	2.90 each
1058	20	1000 ft. spool	10 x 30	.066	23.65 each
1061	22	25 ft. carton	Solid	.064	.70 each
1062	22	100 ft. carton	Solid	.064	2.47 each
1063	22	1000 ft. spool	Solid	.064	18.40 each
1066	20	25 ft. carton	Solid	.065	.94 each
1067	20	100 ft. carton	Solid	.065	3.20 each
1068	20	1000 ft. spool	Solid	.065	23.50 each



MICROPHONE CABLE

On 100 ft. spools—Conductor color chart: 1—Black; 2—White; 3—Red; 4—Green; 5—Yellow; 6—Blue; 7—Brown.

SHIELDED; Weatherproof rubber jacket for all microphone or weatherproof extension work. (Longer continuous lengths if desired.)

TYPE No.	TYPE	SIZE	SPECIAL USE	SPECIFICATIONS	STRANDING	FINISHED O.D. (Inches)	NOMINAL CAPACITY per ft. (mmf)	LIST PRICE
1459	1 conductor	20	Lapel microphone	Tinned copper wire; covered with cotton serve and wall of live colored rubber insulation, then covered with second cotton serve, closely woven tinned copper shield, another cotton serve, and a heavy live rubber overall jacket.	26 x 34	.175	40.	$10.15 each
1460	1 conductor	20	Crystal microphone	Tinned copper ,glass yarn serve; wall of live rubber; tinned copper braid shield; rubber jacket overall.	26 x 34	.240	33.	10.50 each
1462	2 conductor	20	Carbon microphones	Same as 1549; color coded.	26 x 34	.280	63.	11.35 each
1463	3 conductor	20	Carbon microphones	Same as 1549; color coded.	26 x 34	.290	.54	12.75 each
1464	4 conductor	20	Carbon microphones	Same as 1549; color coded.	26 x 34	.300	.33	16.85 each
1465	5 conductor	20	Carbon microphones	Same as 1549; color coded.	26 x 34	.340	.32	19.00 each
1466	6 conductor	20	Carbon microphones	Same as 1549; color coded.	26 x 34	.350	.32	24.70 each
1467	7 conductor	20	Carbon microphones	Same as 1549; color coded.	26 x 34	.370	.30	25.90 each

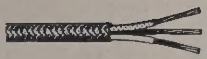
CONSOLIDATED

See color chart shown above for coding.

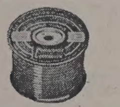
All rubber covered; highly flexible; easy to handle for extensions, etc.; practically wear-proof.

1496	2 conductor	18		Tinned copper wire; heavy live rubber insulating color; color coded.	16 x 30	.280		$ 7.40 each
1497	3 conductor	18		Same as 1496	16 x 30	.325		12.40 each
1498	4 conductor	18		Same as 1496	16 x 30	.325		14.30 each

PHONOGRAPH MULTIPLE CABLE



TYPE No.	LENGTH	SIZE	SPECIAL USE	SPECIFICATIONS	STRANDING	FINISHED O.D. (Inches)	LIST PRICE EACH
5130	500 ft.	2-16 28-22	Connections between commercial electric phonographs (juke boxes) and record selectors.	1 condr. No. 16 gauge bare copper wire with 1/64" black vinylite insulation. 1 condr. No. 16 gauge solid bare copper wire with 1/64" red vinylite insulation. 14 condrs. No. 22 gauge solid bare copper wire with .010" vinylite insulation, all individually color coded. 14 condrs. No. 22 gauge tinned copper wire with a .010" vinylite insulation, all individually color coded. All condrs. grouped into cable form with a tight, spiral cotton wrapping and with a heavy black vinylite jacket over-all.	Solid		$382.00
5103	1,000 ft.	3-22	Connections for commercial electric phonographs and record selectors.	3 condrs. No. 22 with 1/64" thermoplastic insulation, all individually color coded. All conductors grouped into cable form with a treated cotton braid overall lacquered.	7 x 30	.125	44.25
5113	1,000 ft.	2-16 1-18	Connections for commercial electric phonographs and record selectors.	2 condrs. No. 16 1/32" thermoplastic insulation. 1 condr. No. 18 1/32" thermoplastic insulation, all individually color coded. All conductors grouped into cable form with a treated brown cotton braid overall lacquered.	2-26 x 30 1-16 x 30	.165	105.70



MULTI-COLOR CABLES . . . for intercom and p.a. systems

CONDUCTOR COLOR CHART (colored rubber): 1st—Red; 2nd—Black; 3rd—Blue; 4th—Green; 5th—Brown; 6th—Yellow; 7th—White; 8th—Tan; 9th—Pink; 10th—Gray; 11th—Purple; 12th—Orange.

FLEXIBLE COTTON BRAIDED

For speakers, testers, battery hook-up, etc. (longer continuous lengths if desired).

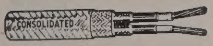
SPECIFICATION: Tinned flexible copper; cotton sleeve; live colored rubber insulation; bunched individual conductors; heavy brown cotton braid over-all; color coded.

TYPE No.	TYPE	LENGTH	SIZE	STRANDING	INSULATION THICKNESS (Inches)	FINISHED O.D (Inches)	LIST PRICE EACH
1481	1 conductor	100 ft.	20	10 x 30	1/64	.150	$ 4.15
1482	2 conductor	100 ft.	20	10 x 30	1/64	.175	5.60
1483	3 conductor	100 ft.	20	10 x 30	1/64	.200	7.75
1484	4 conductor	100 ft.	20	10 x 30	1/64	.275	9.65
1485	5 conductor	100 ft.	20	10 x 30	1/64	.250	11.60
1486	6 conductor	100 ft.	20	10 x 30	1/64	.260	14.45
1487	7 conductor	100 ft.	20	10 x 30	1/64	.275	16.60
1488	8 conductor	100 ft.	20	10 x 30	1/64	.300	22.45
1489	9 conductor	100 ft.	20	10 x 30	1/64	.310	23.25
1490	10 conductor	100 ft.	20	10 x 30	1/64	.325	25.30
1494	11 conductor	100 ft.	20	10 x 30	1/64	.335	27.20
1495	12 conductor	100 ft.	20	10 x 30	1/64	.350	33.80

ANALYZER CABLE

SPECIFICATIONS: Extra flexible tinned capper; rubber covered; color coded; Brown cotton braid overall.

TYPE No.	TYPE	LENGTH	SIZE	STRANDING	INSULATION THICKNESS (Inches)	FINISHED O.D. (Inches)	LIST PRICE EACH
1456	8 conductors	100 ft.	2-14 6-18	41 x 30 16 x 30	1/64	.300	$26.30
1457	9 conductors	100 ft.	2-14 7-18	41 x 30 16 x 30	1/64	.320	27.50



TINNED COPPER SHIELDED

For radio, auto and electrical work.

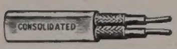
SPECIFICATIONS: Extra flexible; tinned copper stranded; cotton serve; live color-coded rubber insulation; cotton serve over all conductors; tinned shielded overall braid.

TYPE No.	TYPE	LENGTH	SIZE	STRANDING	INSULATION THICKNESS (Inches)	FINISHED O.D. (Inches)	LIST PRICE EACH
1471	1 conductor	100 ft.	18	16 x 30	1/64	.110	$ 6.60
1472	2 conductors	100 ft.	20	10 x 30	1/64	.190	8.50
1473	3 conductors	100 ft.	20	10 x 30	1/64	.200	11.00
1474	4 conductors	100 ft.	20	10 x 30	1/64	.220	14.45
1475	5 conductors	100 ft.	20	10 x 30	1/64	.235	17.05
1476	6 conductors	100 ft.	20	10 x 30	1/64	.250	21.00
1477	7 conductors	100 ft.	20	10 x 30	1/64	.265	25.30

CONTROL PANEL INTERCOM CABLE

SPECIFICATIONS: Tinned copper; vinylite plastic insulation; wires twisted together; closely woven braided tinned copper shield.

TYPE No.	TYPE	LENGTH	SIZE	STRANDING	INSULATION THICKNESS (Inches)	FINISHED O.D. (Inches)	LIST PRICE EACH
1468	2 conductors	100 ft.	22	Solid	.010	.110	$ 5.25
1469	3 conductors	100 ft.	22	Solid	.010	.145	6.70



LEAD COVERED CABLE

For freedom from interference, corrosion and dampness.

SPECIFICATIONS: Tinned copper wire; heavy rubber insulation and cotton braid; heavy lead sheath.

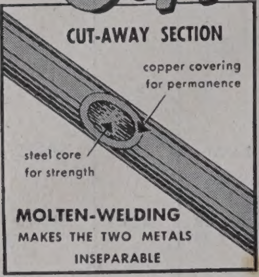
TYPE No.	TYPE	LENGTH	SIZE	STRANDING	INSULATION THICKNESS (Inches)	FINISHED O.D. (Inches)	LIST PRICE EACH
1453	2 conductors	100 ft.	18	Solid	1/32	.240 x .200	$21.50
1454	3 conductors	100 ft.	18	Solid	1/32	.420	37.50

PROVED DEPENDABILITY

Copperweld TRADE MARK **NON-RUSTING**

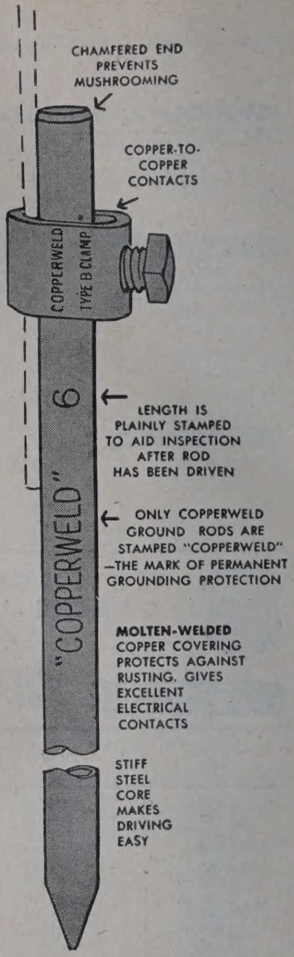
GROUND RODS and CLAMPS

FOR RADIO AND TELEVISION

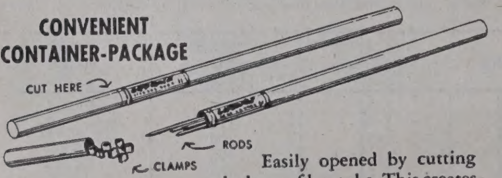

CUT-AWAY SECTION
copper covering for permanence
steel core for strength
MOLTEN-WELDING MAKES THE TWO METALS INSEPARABLE

Copperweld Ground Rods and Clamps provide the reliable grounding protection necessary for successful performance, elimination of interference and safe operation of radio and television equipment. The rugged steel core gives the stiffness you need for easy driving. High conductance and lasting protection against corrosion are provided by the heavy molten-welded copper covering.

Millions of Copperweld Ground Rods are rendering permanent grounding protection. You're SAFE when you use Copperweld — the only Molten-Welded Ground Rods. They give you PROVED dependability — PROVED economy — PROVED longer service.


CHAMFERED END PREVENTS MUSHROOMING
COPPER-TO-COPPER CONTACTS
COPPERWELD TYPE B CLAMP
LENGTH IS PLAINLY STAMPED TO AID INSPECTION AFTER ROD HAS BEEN DRIVEN
"COPPERWELD" 6
ONLY COPPERWELD GROUND RODS ARE STAMPED "COPPERWELD" —THE MARK OF PERMANENT GROUNDING PROTECTION
MOLTEN-WELDED COPPER COVERING PROTECTS AGAINST RUSTING. GIVES EXCELLENT ELECTRICAL CONTACTS
STIFF STEEL CORE MAKES DRIVING EASY

CONVENIENT CONTAINER-PACKAGE


CUT HERE
RODS
CLAMPS

Easily opened by cutting the heavy fiber tube. This creates a bin for the rods and a convenient container for the clamps.

SPECIFICATIONS

Catalog Number	Size	Pounds Per 100 Pcs.	Pcs. Per Package
RT 34	3/8″ x 4′	150	25
RT 36	3/8″ x 6′	220	25
RT 38	3/8″ x 8′	285	20
RT 45	1/2″ x 5′	330	10
RT 46	1/2″ x 6′	395	10
RT 48	1/2″ x 8′	515	10

Above weights include clamps.

COPPERWELD GUY STRAND

Ideal for guying radio and television antenna masts and towers. It provides greater safety, permanent high strength and rust proof construction for the life of the antenna. Furnished in three sizes, 3 No. 18 (breaking strength 435 lbs.), 3 No. 14 (breaking strength 1000 lbs.) and 3 No. 12 (breaking strength 2236 lbs.). Lengths of 100′, 250′, 500′ and 1000′ are available.

COPPERWELD ANTENNA WIRE

Preferred for many years by professionals and amateurs. Because of its high strength, it maintains a fixed length. Furnished in 3 sizes, No. 12 Awg, No. 14 Awg and No. 18 Awg, in coil lengths of 100, 250, 1000 and 3000 feet.

COPPERWELD GROUNDING WIRE

Used to connect antenna mast to ground rod. Annealed for easy handling. Available in two sizes, No. 8 Awg and No. 10 Awg. Coils are furnished in various lengths ranging from 50 to 500 ft.

Copperweld is also used for television twin-lead wire, coaxial cable, resistor and condenser pigtails, radio tube parts and various allied components manufactured and sold by other companies.
Additional information available upon request.

COPPERWELD STEEL COMPANY
GLASSPORT, PA.

WIRE BENCHES WITH

Pierceway

TRADE MARK REG. U.S. PAT OFF.

PACKAGED WIRING SYSTEMS

APPROVED BY
UNDERWRITERS
LABORATORIES, INC.

For more convenient and efficient use of portable power tools . . .

The Pierceway Packaged Wiring System shown here assembled is the 4-foot, 6-outlet system with back-feed section in center.

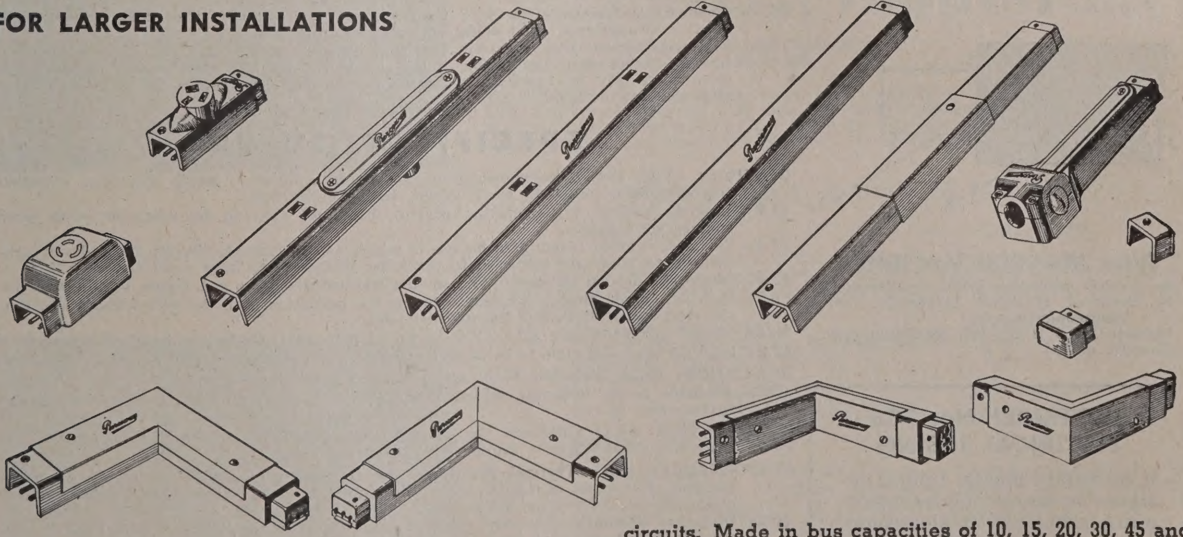
Here is the quick, easy, economical way to get all the outlets you need for efficient use of portable power tools and appliances. With 2 outlets in each section of Pierceway plastic duct, you get an outlet approximately every 8 inches.

Pierceway Packaged Wiring Systems are complete and ready to install, with copper conductors built in as an integral part of each section. These systems are easy to assemble and install—all you need is a screwdriver.

Pierceway Packaged Wiring Systems are available in both 2-wire and 3-wire systems, with a choice of end-feed or back-feed connection. Service is brought into feed section by non-metallic cable through any standard angle or straight ½-inch coupler.

Pierceway systems are packaged in 3 lengths: 4-foot system with 6 outlets; 6-foot, 8-inch system with 10 outlets; 9-foot, 4-inch system with 14 outlets.

FOR LARGER INSTALLATIONS



With the parts shown here, Pierceway systems can be assembled into many types and any size of electrical circuit. They provide an exceptionally flexible installation—if necessary, a Pierceway system can easily and quickly be taken apart and reassembled to meet any change in electrical distribution requirements. All parts are 100% salvable.

Pierceway systems can be provided for voltages of 125 and 250; for all types of 2-wire and 3-wire circuits; for single-phase or 3-phase systems, and for A.C. and D.C. circuits. Made in bus capacities of 10, 15, 20, 30, 45 and 60 amperes. Available with outlets for 2-wire or 3-wire cord caps; with outlet capacities of 10, 15 and 20 amperes; with standard 2-wire or 3-wire polarized receptacles; with Pierceway Twist-Lock or Twist-Tite receptacles, and with adequate grounding facilities.

PIERCEWAY DIVISION

CLIFTON CONDUIT COMPANY, INC.

75 Montgomery Street, Jersey City 2, N. J.

Representatives in Principal Cities

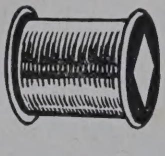
THE REX CORPORATION

51 LANDSDOWNE ST., CAMBRIDGE 39, MASS.

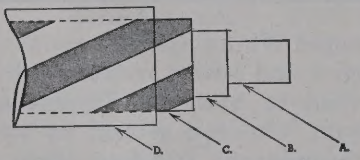
NONSTRIP*

125°C MICROWALL INSULATED WIRE

Rex "Nonstrip" is microwall insulated, multi-color coded, small gauge, copper wires, utilized in both military and commercial services for aircraft, radio, instrument, telephone and miniature component wiring. Rex "Nonstrip" has the distinct advantage of permitting soldering directly without stripping the insulation and without affecting adversely the electrical properties of the soldered joint. Nonstrip is available in two types: JR for use at 200 VAC and FJR at 1000 VAC. Manufactured on equipment of exclusive design and built solely for the production of microwall insulated conductors, "Nonstrip" is produced under carefully controlled conditions yielding a consistently superior product that is unique in the insulated wire field.



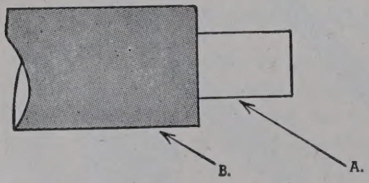
NONSTRIP CONSTRUCTION DETAILS



Type FJR—1000 Vac Rated

A. Copper conductor (solid or stranded).
B. Extruded synthetic polyamide type thermoplastic insulation.
C. Serve of thermoplastic type marker threads (over 300 different color codes available).
D. Extruded synthetic polyamide type thermoplastic jacket.

Diameter of D is 20 mils maximum over diameter of A.



Type JR—200 Vac Rated

A. Copper conductor (solid or stranded).
B. Extruded synthetic polyamide type thermoplastic resin.

Diameter of B is 10 mils maximum over diameter of A.

REXTRUDE* No. 105 ELECTRICAL TUBING

A polyvinyl plastic tubing designed to answer high temperature problems in electronic, electrical and communication fields. Meets Underwriters' Laboratories specifications for 105°C rating. Also listed under the Re-examination Service of Underwriters' Laboratories, Inc.

ASK YOUR JOBBER TO GET YOU TEST SAMPLES

SPECIFICATION FJR

GENERAL: (1.1) Design recommendation for single conductor, small diameter, multi-color coded, extruded synthetic resin insulated, small gauge, light weight wire.
(1.2) Material quality, manufacturing control, handling, etc., to be consistent with good engineering practice.
(1.3) Improved abrasion resistance with smaller finished diameters and higher tensile strength.
(1.4) May be soldered directly without stripping the insulation from the wire without affecting the electrical resistance of the soldered joint.
(1.5) Designed to withstand action of solvents, mild acids, oils, alkalies, etc.
(1.6) This specification covers wire to be used in telephone, instrument, aircraft and radio apparatus wherein they are subjected to operating temperatures from —50°C to +125°C.

SIZES: (2.1) Conductors are #18 AWG Cu Sn to #32 AWG Cu Sn, — Solid or Stranded.
(2.2) Finished wire diameters to be 20 mils maximum over the bare copper conductor diameter.

INSULATION: (3.1) Core dielectric to be an extruded thermoplastic resin
(3.2) Coding markers may include solid colors or any combination of colors may be specified.
(3.3) Jacket to be extruded transparent thermoplastic film.

CONSTRUCTION: (4.1) Conductor per ASTM Specification B-33 and as specified in Section 2.1.
(4.2) Dielectric "NONSTRIP"* synthetic thermoplastic resin.
(4.3) Markers for the desired color combination shall be spiralled and sealed within the extruded walls providing a minimum of 90% coverage.
(4.4) Jacket "NONSTRIP"* synthetic thermoplastic resin.

PERFORMANCE: (5.1) **Thermal Stability**—The finished wire shall be capable of withstanding 120 hours at 125°C, in an air circulated oven, without serious deterioration of the dielectric's physical properties.
(5.2) **Dielectric Strength**—After 5.1 the wire shall be capable of withstanding 2,000 VAC for 30 seconds after one (1) hour immersion in tap water at room temperature.
(5.3) **Conductor migration**—A wire specimen shall pass 5.2 after being draped over mandrel 5 times wire diameter, with a one-half lb. weight attached to the bared conductor and held in an air circulated oven at 125°C for 72 hours.
(5.4) **Insulation Resistance**—After 24 hours at 90% RH at 30°C, a 50 ft. length of twisted pairs shall not have less than 300 megohms after one (1) minute electrification at 20°C with an applied potential of 500 Vdc. An additional dielectric test as in 5.2 shall be applied without failure.
(5.5) **Chemical Resistance**—This wire shall perform satisfactorily after long exposures to reactive atmospheres, mild acids, solvents, hot oils, etc.
(5.6) **Flammability**—A wire specimen, horizontally suspended, shall not burn more than six (6) inches upon application of the standard flame test. For smaller sizes, two or more wires may be twisted together to provide sufficient copper for heat dissipation after removal of flame.

SPECIFICATION JR

GENERAL: (1.1) Design recommendation for single conductor, small diameter, extruded synthetic resin insulated, small gauge, light weight wire.
(1.2) Material quality, manufacturing control, handling, etc., to be consistent with good engineering practice.
(1.3) This specification covers wire for use in telephone, instrument, aircraft and radio apparatus wherein they are subjected to operating temperatures from —50°C to +125°C.
(1.4) Improved abrasion resistance with smaller finished diameters and higher tensile strength.
(1.5) May be soldered directly without stripping the insulation from the wire without affecting the electrical resistance of the soldered joint.

SIZES: (2.1) Conductors are #18 AWG Cu Sn to #32 AWG Cu Sn, — Solid or Stranded.
(2.2) Finished wire diameters to be 10 mils maximum over the bare copper conductor diameter.

INSULATION: (3.1) Dielectric to be an extruded thermoplastic resin.
(3.2) Available in the following colors: Black, White, Clear, Red, Blue, Orange, Yellow and Green.

CONSTRUCTION: (4.1) Conductor per ASTM Specification B-33 and specified in Section 2.1.
(4.2) Dielectric "NONSTRIP"* synthetic thermoplastic resin.

PERFORMANCE: (5.1) **Thermal Stability**—The finished wire shall be capable of withstanding 120 hours at 125°C, in an air circulated oven, without serious deterioration of the dielectric's physical properties.
(5.2) **Dielectric Strength**—The wire shall be capable of withstanding 1,400 VAC for 30 seconds, in tap water at room temperature after one (1) hour at 15.5°C.
(5.3) **Conductor Migration**—A wire specimen shall pass 5.2 at a reduced potential of 700VAC after being draped over mendrel 5 times wire diameter, with a weight attached to the bared conductor and held in an air circulated oven at 125°C for 72 hours.
(5.4) **Insulation Resistance**—After 1 hour at 90% RH at 15.5°C, a 50 ft. length of twisted pairs shall not have less than 20 megohms after one (1) minute electrification at 20°C with an applied potential of 500 Vdc.
(5.5) **Chemical Resistance**—This wire shall perform satisfactorily in most oil, gasoline, reactive atmospheres, mild acids and solvents.
(5.6) **Flammability**—A wire specimen, horizontally suspended, shall not burn more than six (6) inches upon application of the standard flame test.

*"NONSTRIP" Registered Trademark U. S. Patent Office. †U. S. Patent applied for.
*"REXTRUDE" Registered Trademark U. S. Patent Office.

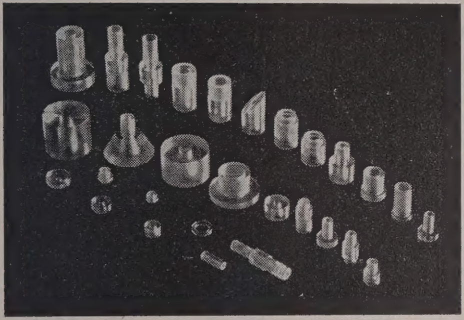
THE REX CORPORATION

REXOLITE DIVISION — HAYWARD ROAD, ACTON, MASS.

REXOLITE 1422 U.H.F. INSULATION

COMBINES EVERY DESIREABLE PHYSICAL, CHEMICAL AND ELECTRICAL PROPERTY IN ONE INSULATING MATERIAL FOR UHF

- MEETS JAN-P-77 AND MIL-P-77A SPECIFICATIONS.
- SPECIFICALLY DESIGNED TO MEET THE GROWING NEED FOR A UHF INSULATING MATERIAL THAT IS LOW IN COST.
- WITHSTANDS HIGH TEMPERATURE DUE TO ITS THERMOSETTING NATURE.
- HAS OUTSTANDING ELECTRICAL PROPERTIES.
- HAS LOW SPECIFIC GRAVITY—IS STRONG AND RIGID WITH UNUSUALLY HIGH COMPRESSIVE AND TENSILE STRENGTHS.
- HAS EXCELLENT IMPACT STRENGTH AND HARDNESS, ALLOWING ITS USE UNDER HIGHLY ABUSIVE CONDITIONS.
- ITS DIMENSIONAL STABILITY AND UNUSUAL CHEMICAL INERTNESS ALLOW ITS USE WHERE OTHER MATERIALS FAIL.
- READILY MACHINABLE TO EXTREMELY CLOSE TOLERANCES.
- AVAILABLE AS CENTERLESS GROUND RODS IN ANY DIAMETER UP TO 1″. ALSO AVAILABLE IN LARGER DIAMETER RODS AND SHEETS.

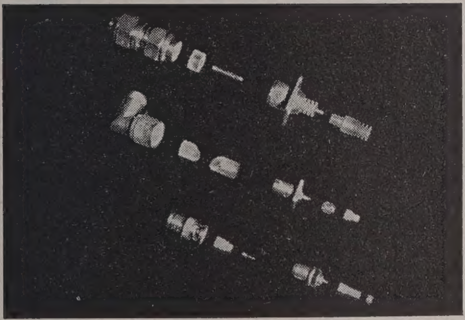


HEAT RESISTANCE

Heat Distortion (ASTM-D648-41T)	105-113°C.

Rexolite #1422 has been specifically formulated to resist high temperature. Having a heat distortion temperature a full 30°C above Polystyrene, it will withstand very high temperatures for short times, and permits the use of high-frequency induction heating for connector assembling. Under load-free conditions Rexolite #1422 maintains its original shape up to temperatures of 200°C (392°F). Even in this range it does not flow but merely becomes flexible, and upon cooling it regains its former rigidity without any dimensional changes. By loading at these high temperatures, Rexolite #1422 will distort and maintain this change if cooled while still under the distorting force. If the load is removed and the part is heated again to its softening point, the distortion vanishes and the piece regains its original form. Rexolite #1422 does not exhibit cold flow.

High frequency insulators and connector beads made from Rexolite #1422 will thus maintain their shape under light load up to 200°C (392°F) and when fully loaded they surpass the highest operating temperatures recommended for RG type coaxial cables.



ELECTRICAL PROPERTIES

Dielectric Constant—at 3000 MC	2.4 - 2.5
Power Factor—at 3000 MC	0.0006 - .0009

The low dielectric constant and power factor exhibited by Rexolite #1422 at ultra-high frequencies—plus its high heat resistance—recommend the use of Rexolite #1422 for UG connector beads, UHF antenna and oscillator coils, stand-off insulators, feeder spreaders, supports for air-wound coils, terminal strips and rigid coaxial spacers.

PHYSICAL PROPERTIES

Specific Gravity	1.045 - 1.050

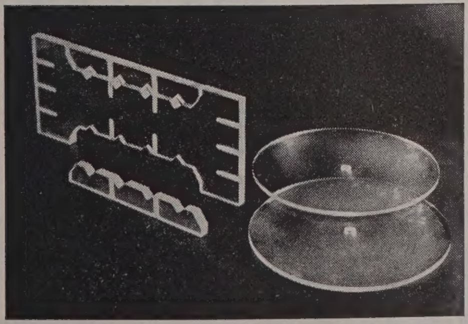
The low specific gravity of Rexolite #1422 permits a greater number of insulator parts to be fabricated per pound of material than is possible with a plastic of higher density. This advantage is reflected in lower cost per finished unit through the use of Rexolite #1422.

Tensile Strength—p.s.i.	8,000 - 10,000
Flexural Strength—p.s.i.—(ASTM-D638-42T)	15,000 - 18,000
Modulus of Elasticity in Flexure—p.s.i.	2.9 - 3.3 x 10^5
Compressive strength—p.s.i.—(ASTM-D649-42T)	18,500 - 19,000
Impact Strength Izod—ft. lbs. per inch of notch (ASTM-D256-43T)	0.25 - .35
Rockwell Hardness—H scale	68 - 72

The above data indicates that Rexolite #1422 is a strong and rigid material with high tensile and good impact strengths. This makes Rexolite #1422 especially favored for certain applications where the finished article must be able to withstand considerable strains and abuse under severe service conditions.

Coefficient of Linear Thermal Expansion—cm./cm./°C. (ASTM-D696-42T)	5.9 - 7.0 x 10^{-5}
Thermal Conductivity—cal./sec./sq. cm./°C./cm.	0.00025

Rexolite #1422 displays extremely low coefficients of thermal expansion. In applications where this plastic is used for high frequency insulation, compensations for dimensional changes with temperature are reduced to a minimum. In the engineering of UG type connectors, for example, closer fits of the beads within the connector are thus possible with minimum allowances for thermal contraction and expansion of the insulators. With proper designing, Rexolite #1422 assures no migration or distortion of the contact points in the temperature range under which the connector must operate.



ASK YOUR JOBBER TO GET YOU COMPLETE TECHNICAL INFORMATION AND SAMPLES

POLYSTYRENE ROD — TUBING — SHEET

For radio and electronic applications, because of its very low loss factor at ultra high frequencies, Polystyrene is the ideal material for insulators, coil forms, shields, etc. It has excellent arc resistance, is non-tracking and has splendid insulating properties. Because its water absorption is practically zero it has excellent dimensional stability.

POLYSTYRENE ROD—Transparent

Available in 12″ or 48″ lengths

Catalog Number	Diameter	Net Price 12″ lgth.	Net Price 48″ lgth.
JB-100	⅛″	$ .03	$ .12
JB-101	3/16″	.06	.24
JB-102	¼″	.10	.40
JB-103	5/16″	.16	.64
JB-104	⅜″	.21	.84
JB-105	7/16″	.30	1.20
JB-106	½″	.40	1.60
JB-107	⅝″	.57	2.28
JB-108	¾″	.80	3.20
JB-109	⅞″	1.15	4.60
JB-110	1″	1.55	6.20
JB-111	1⅛″	2.00	8.00
JB-112	1¼″	2.30	9.20
JB-113	1⅜″	3.00	12.00
JB-114	1½″	3.30	13.20
JB-116	1¾″	4.50	18.00
JB-118	2″	5.90	23.60

POLYSTYRENE TUBING—Satin Finish

Available in 12″ or 48″ lengths.

Catalog Number	O.D.	I.D.	Net Price 12″ lgth.	Net Price 48″ lgth.
JB-201	¼″	⅛″	$ .07	$ .28
JB-202	5/16″	3/16″	.10	.40
JB-203	⅜″	¼″	.13	.52
JB-205	½″	⅜″	.18	.72
JB-206	⅝″	½″	.23	.92
JB-207	¾″	⅝″	.29	1.16
JB-208	1″	⅞″	.38	1.52
JB-220	1½″	1¼″	1.13	4.52
JB-222	2″	1¾″	1.50	6.00

POLYSTYRENE SHEET

The following sheets are all crystal clear with smooth surfaces fully protected against abrasion by masking paper on both sides.

Catalog Number	Thickness	Sheet Size	Net Price
JB-125	1/16″	12″ x 12″	$2.50
JB-126	3/32″	12″ x 12″	2.75
JB-127	⅛″	12″ x 12″	3.00
JB-128	3/16″	12″ x 12″	3.75
JB-129	¼″	12″ x 12″	4.60
JB-245	1/16″	12″ x 24″	4.90
JB-246	3/32″	12″ x 24″	5.25
JB-247	⅛″	12″ x 24″	5.90
JB-248	3/16″	12″ x 24″	7.25
JB-249	¼″	12″ x 24″	8.25
JB-300	1/32″	20″ x 20″	7.75
JB-301	1/16″	24″ x 24″	9.50
JB-302	3/32″	24″ x 24″	10.25
JB-303	⅛″	24″ x 24″	11.75
JB-304	3/16″	24″ x 24″	14.00
JB-305	¼″	24″ x 24″	16.00
JB-306	5/16″	20″ x 20″	14.50
JB-308	⅜″	20″ x 20″	16.00
JB-309	⅜″	24″ x 24″	23.75
JB-310	½″	20″ x 20″	21.50
JB-311	½″	24″ x 24″	31.88
JB-312	⅝″	20″ x 20″	34.50
JB-313	¾″	20″ x 20″	41.00
JB-314	1″	20″ x 20″	55.50

SINCE 1910

JULIUS BLUM & CO., INC. 532-540 West 22nd Street, New York 11, N. Y.
TELEPHONE: WATKINS 9-7042

Net

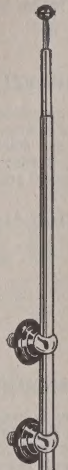
WARD AERIALS

World's Finest

FOR

CAR AND HOME

SIDE COWL MOUNTS



Two stanchions for sturdy installation. Smartly designed insulators with chrome caps. Conversion kit for torpedo bodies included.

LONG RANGER

Special sensitivity for low signal strength areas. Two stanchion, triple chrome plated, rattle-proof.

Four sections, extends to 100"
36" Elektran Cable
EZ-on installation

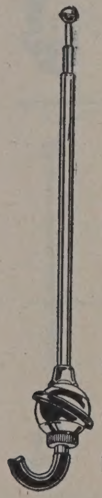
Model SC-8—Individually packed, 12 to a master carton, 22 lbs. Individual weight, 1 lb. 10 oz.

AIR KING

Smartly styled for side mounting. Rugged construction. Finest quality heavy duty brass tubing, with corrosion free triple chrome plate. Rattle-proof.

Three sections, opens to 66"
36" Elektran Cable
EZ-on installation

Model SC-6—Individually packed 12 to a master carton, 17 lbs. Individual weight, 1 lb. 5 oz.

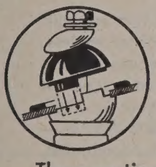


World Famous WARD Exclusive Patented

EIGHT-BALL

Non-Disappearing

TOP COWL OR FENDER MOUNTS



Installed in five minutes . . . at any desired angle. Fits any car. Rugged construction. Completely rattleproof. Smart appearance. The universal, most popular auto aerial.

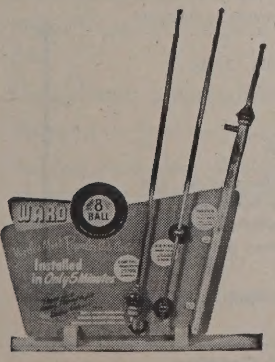
Three sections; adjustable from 56" to 22"
36" Elektran Cable

Model TCF-3B—Individually packed, 12 to master carton. 14 lbs. Individual weight 1 lb.

Model TCF-2B—Same as Model TCF-3B with only two sections.

Model TCF-3C—Same as Model TCF-3B with 54" lead.

DISPLAY WARD AUTO AERIALS



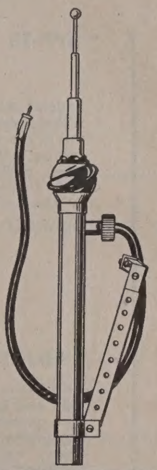
Here is a handsome, colorful display to catch the eye, create interest and make sales . . . on your counter or in your windows. Available at your distributors.

Put this business builder to work for YOU. Identify yourself with the world's oldest, largest, exclusive manufacturer of antennas.

Model WCD-2

PHANTOM

Disappearing



A disappearing antenna — 100% shielded against engine noises. Includes Eight-Ball for easy, smart installation plus popular disappearing feature for attractive built-in appearance.

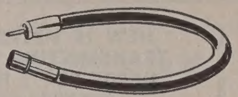
Three sections, 56" to 3½" when collapsed.
36" Elektran Cable

Universal mounting bracket for sturdy installation

Model DCF-3—Individually packed, 12 to master carton, 17 lbs. Individual weight 1 lb.

Model DCF-3A—Same as Model DCF-3 with 54" lead.

EACH MODEL COMPLETE WITH A WARD ELEKTRAN LEAD CABLE



Made of the finest insulating materials—Polyethylene, wire shield braid, oil and abrasion-proof vinylite.

WARD'S exclusive lead connector fitting provides an easy coaxial connection, 100% shielded. Bayonet adapter for pin plug included so lead will fit every car radio.

Model C-8 (12 inches)
Model C-9 (18 inches)

Provides additional lead length required for fender installation.

Covered by one or more of the following Patent Numbers: 104968, 119160, 2152316, 2251889, 2252671, 2269947, 2366634.

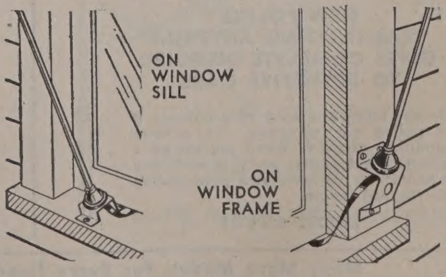
WINDOW MAST

3-Section, 8-Foot, Collapsible to 42 inches

FEATURES . . . Simple 3-point, 3-minute installation for apartments, homes, office buildings. Two-way mounting bracket, 12-inch lead-in strap, and heavy, weatherproof cadmium plating.

Model WM-3

Individually packed — 12 to a master carton.
Approx. ind. shipping weight — 1 lb. 2 oz.



THE WARD PRODUCTS CORPORATION

Special COMMUNICATION *ANTENNAS*

by WARD

BUILT FOR RIGOROUS SERVICE

UNIVERSAL SWIVEL MOUNTS

Antennas built for the hardest mobile use. Separate components may be combined to meet any requirements. These rear-mounting Transmitting Antennas are designed for the 25-45 mc. services. Base mounts in such a way as to allow the whip rod to be held vertically regardless of contour of vehicle body.

← SPP-3B

SINGLE ROD

Special Alloy Whip Rod of maximum resilience and durability. 84" Single rod for use in the range of 30 to 45 mcs. Non-Corroding, stainless steel tapered for proper stress distribution. Base Adapter threaded ⅜-24 to permit mounting on SPP-3 Base or SPP-3A Spring.

Individually packed. Approx. wt.: 2½ lbs.

SPP-12 →

ADJUSTABLE 2-SECTION ROD

Adjustable Rod. Telescopes from 85" to 103" and is equipped with a locking device that permits removal of the whip rod and replacement at the exact previous length. Heavy wall, hard drawn brass tubing — threaded ⅜-24 to fit either SPP-3 Base or SPP-3A Spring. See SPP-3B for Rod description.

Ind. packed. Approx. weight: 2 lbs. 10 oz.

SPP-3

SWIVEL BASE

Swivel base for mounting at any desired point. Half balls of cast aluminum tapped ⅜-24 to accept whip rods and shock springs. Insulator of black bakelite — rubber gaskets — steel backup plate. All screws are Allen Head type with wrenches supplied.

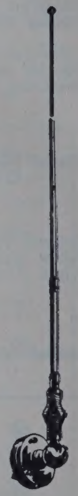
Individually packed. Approx. wt.: 1 lb. 10 oz.

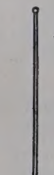
SPP-3A

SHOCK MOUNTING SPRING

This sturdy spring is used to lessen damage to the whip rod. A flexible lead through the center of the spring maintains constant electrical impedance through the spring assembly. ⅜-24 stud on one end — ⅜-24 tapped hole on opposite end — approximately 6" in height — made of oil tempered wire.

Individually packed. Approx. wt.: 2 lbs. 3 oz.

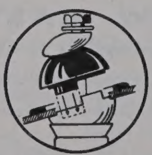




← NEW 10 METER MOBILE TRANSMITTING ANTENNA NEEDS BUT 1 HOLE FOR INSTALLATION!

Ward's SPP-143 transmitting antenna can be installed on cowl, fender or flat rear deck of any automobile without the necessity of drilling a series of unsightly holes. It is developed to use one 15/16" hole, that can easily be plugged or used to mount a Ward 8-Ball standard broadcast antenna. The short, standard 55½" rod reduces damage from overhead constructions.

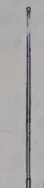
MODEL SPP-143



NEW POLICE TRANSMITTING ANTENNA → GIVES COMPLETE DISGUISE TO DETECTIVE CARS

To any criminal a long whip antenna is a police car giveaway. To achieve complete disguise, Ward engineered a standard automotive aerial to withstand transmitting currents and permanently fix the rod length.

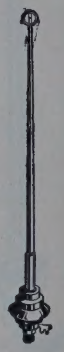
MODEL SPPB-71

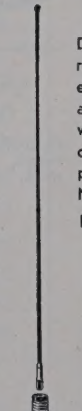


MOTORCYCLE MOUNTS

These Antennas are designed for use on motorcycles and are built to withstand the rugged service and high vibration of vehicle. Rod is electrically short but can be used on all frequencies. 40" rod of same material as SPP-3B — ¼-20 mounting stud in insulator for mounting to motorcycle. Flexible base of rubber to allow movement when rod is bent — Model SPP-6 with safety ring tip — Model SPP-6A with stainless steel ball tip — no lead supplied. Individually packed. Approx. weight: 1 lb. 5 oz.

Model SPP-6—Ring Tip (Illustrated)
Model SPP-6A—Ball Tip (Not Shown)





ROOF TOP MOUNT

Developed for roof top mountings in 30 to 45 Megacycle range. Advantages of this type of antenna is that directional effects caused by car body shielding of antenna are avoided. Base is designed to be used with the SPP-3B rod which is sold separately. This unit consists of all components of Universal Swivel Mounts except that half-balls are replaced by SPP-3A Spring fastened permanently to insulator. No lead supplied.

Individually packed. Approximate weight: 3 lbs.

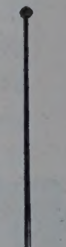
Model SPP-26 Base

ROOF TOP ANTENNA →

This model is designed for taxicabs, police services, and others using the 140 to 165 Megacycles frequencies. Installed entirely from the outside of vehicle — 12 ft. length of RG-58/U coaxial cable attached permanently to antenna. Whip rod is replaceable.

Individually packed. Approximate weight: 1 lb.

Model SPP-18



Many More Models for Every Need — Write or See Your Distributor for Catalog.

THE WARD PRODUCTS CORPORATION

WARD

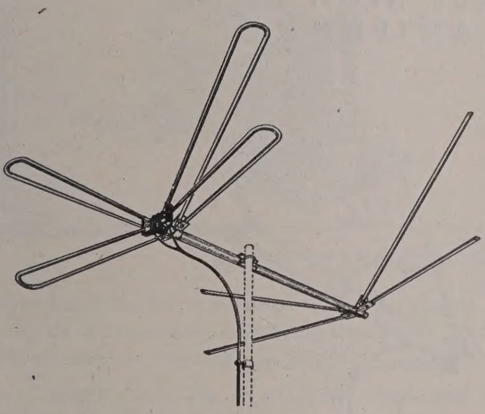
SIGNALINE

TV ANTENNAS

1 LUCKY 4
2 5 STAR
3 TROMBONE
4 U-VEE
5 MUSKETEER
6 ZIP-HI MAST

LUCKY 4

NEW PRINCIPLE IN CONICAL ANTENNAS



MODEL TV-136

Delivers higher gain with better impedance match, less loss, more signal strength. New design permits extra strength. Plastic pieces have estimated 50% less strain. Lightweight aluminum cuts mast tension. Assures extra performance wherever Conical Antennas are recommended. Completely preassembled.

A new WARD "Signaline" TV Antenna

---

5 STAR

DESIGNED FOR FRINGE AREAS . . . HAS FIVE OUTSTANDING FEATURES

Extra efficient — with exclusive radar-proved "T" match, exclusive offset elements.

Extra gain, higher front-to-back ratio.

Almost perfect impedance match — to 300 ohm line.

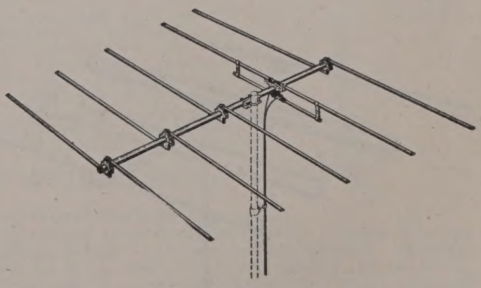
Completely preassembled — installed in seconds.

Rugged — light — reliable.

Added Features: All-aluminum doweled elements, aluminum castings, aluminum construction throughout, hi-impact plastic insulator.

Specifications: Gain — 8.5 db.
VSWR — 1.5 to 1

A new WARD "Signaline" TV Antenna



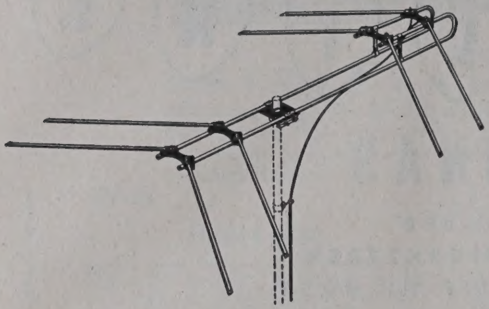
MODEL WY5

(Specify channel when ordering)

THE WARD PRODUCTS CORPORATION

WARD *SIGNALINE* TV ANTENNAS

TROMBONE FOR BOTH UHF and VHF



MODEL TV-132

New high gain, fringe area, all-channel antenna. Designed to deliver high-gain on all channels. Has eight driven elements properly placed in streamlined manner. Equivalent to double and four stack models of some designs. Lightweight for tower mounting. All aluminum construction. Doweled elements. Completely preassembled; goes up in seconds. Windproof — vibration proof, as tested in 24 hour shake table test. Electrically engineered for sharp directivity — 300 ohm impedance — close match and low VSWR.

A new WARD "Signaline" TV Antenna

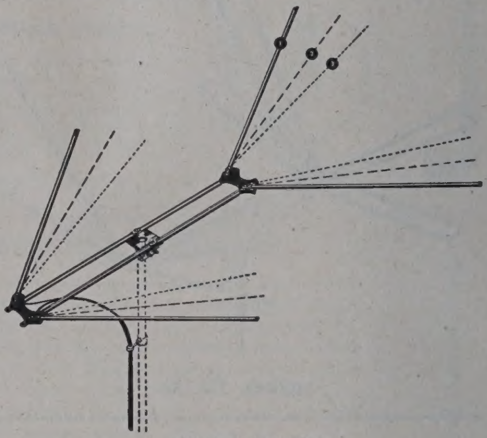
U-VEE

VHF and UHF ALL-CHANNEL HIGH GAIN SHARP DIRECTIVITY ANTENNA

First antenna to allow for UHF and still give top performance on VHF. Elements can be assembled at three different angles as shown in sketch. Position 1—VHF only; gains up to 8 db; exceeds most Yagis on high band. Position 2—VHF, UHF gain up to 6 db on VHF; to 12 db on UHF. Position 3—UHF only; gain up to 14 db.

Matches 300 ohm line. Impedance match comparable to commercial antennas. Completely preassembled. All aluminum construction, light, rugged, lasting. Streamlined for less wind resistance. Makes excellent appearance.

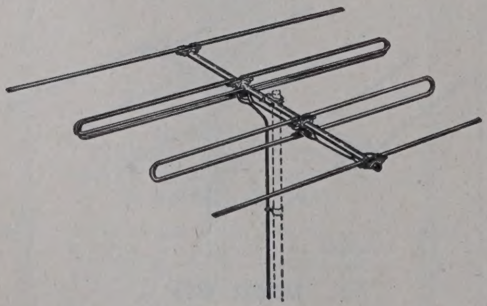
A new WARD "Signaline" TV Antenna



MODEL TV-130

MUSKETEER

BROAD BAND YAGI HIGH GAIN ON 3 ADJACENT CHANNELS



MODEL TV-138

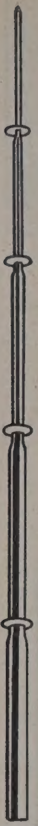
Designed to give uniform high gain coverage on channels 4, 5 and 6, it permits one fringe area antenna—only one lead. With three driven elements working together, it has these unique features:

- High gain on channels 4, 5 and 6, plus extra gain on channel 3.
- Highly efficient match to 300 ohm line.
- Exclusive interlocking dipole.

Has all-aluminum doweled elements, corrosion-proof Permatube crossarm. Hi-impact plastic insulator. Preassembled; installs in seconds.

A new WARD "Signaline" TV Antenna

THE WARD PRODUCTS CORPORATION



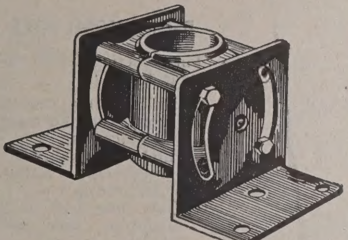
ZIP-HI MAST

TELESCOPING MAST IN 2, 3, 4 and 5 SECTIONS
EXTENDS QUICKLY AND EASILY

Specially designed for quick, easy, safe, one-man installation, mast is available in 2, 3, 4 and 5 section models for extension to any desired height. Equipped with self-locking guy rings, it cannot collapse during installation. Double-lock prevents pulling sections apart. Does not require matching of fastening holes. Made of rugged electricweld Permatube, its plastic coating permanently resists corrosion, assures long, trouble-free life. Shipped collapsed complete with guy rings and all hardware. Antenna mounts directly on top section.

MODEL	NUMBER OF SECTIONS	DIAMETER OF SECTIONS
ME 20	2	1¼" - 1½"
ME 30	3	1¼" - 1½" - 1¾"
ME 40	4	1¼" - 1½" - 1¾" - 2"
ME 50	5	1¼" - 1½" - 1¾" - 2" - 2¼"

ANTENNA ACCESSORIES—TV AND FM



SELF SUPPORTING BASE — Model C-14

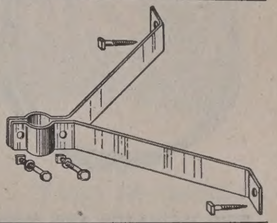
New, heavy, weatherproofed metal base for sturdy installation on any angle. The self-supporting base eliminates the need for guy wire on most installations. Accommodates 1¼" O.D. Mast. Ind. packed: six to a master carton. Approx. ind. shipping weight 1 lb. 7 oz.

Model C-11—For use with 1" O.D. Mast. Ind. boxed. Approx. ind. shipping weight: 1½ lbs.

MAST STAND-OFF BRACKET KIT

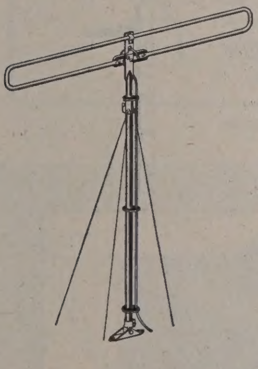
Two pairs of heavy, cadmium-plated steel stand-off brackets, for 1¼" O.D., to extend mast from side of house or parapet for clearance of 7" or larger size for clearance of 14". Complete with all necessary mounting hardware.

Model C-16—For 7" clearance. Individually packed: 6 kits to a master carton.
Model C-17—For 14" clearance. Individually packed: 6 kits to a master carton.



WARD *Magic Wand* FM ANTENNAS

FM MODELS



FM FOLDED DIPOLE

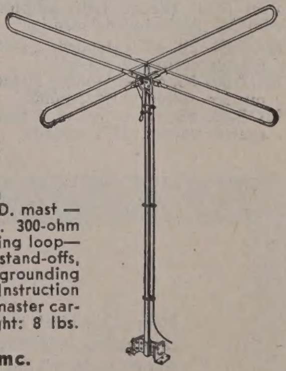
Bi-directional.
Matched impedance to 300-ohm line for broad tuning, high signal gain over entire 88-106 mc. band.
Adjustable mounting design for greater ease of orienting.
Pre-assembly into component parts for quick installation.
Contents: Dipole element of ⅜" reinforced aluminum — molded bakelite insulator — 5 ft. 1" O.D. mast and guy wire ring — universal mounting base — conduit clamp—grounding solder lug—Technical Data and Instruction Sheets. Ind. packed: twelve to a master carton. Approx. individ. shipping weight: 5 lbs.

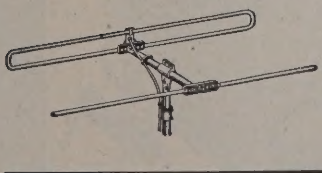
Model FM-55—88-108 mc.

FM FOLDED TURNSTILE

Exceptional high signal gain from All DIRECTIONS.
Does not require orienting.
Packed complete, partially Pre-Assembled components for quick and simple installation.
Contents: ⅜" reinforced aluminum folded dipole elements — 5 ft. 1" O.D. mast — molded bakelite insulators — 60 ft. 300-ohm colinear line and ¼ wave length phasing loop—rubber stand-off pads — 6 plastic stand-offs, guy wire ring and conduit clamp — grounding solder lug — Technical Data and Instruction Sheets. Individually packed: six to a master carton. Approx. individ. shipping weight: 8 lbs.

Model FMT-56—88-108 mc.





FM REFLECTOR KIT — Model FMR-63 88-108 mc.

Combines quickly and easily to make high gain directional array with Model FM-55. Increases gain and eliminates reflections. Most effective when transmitting stations are in same general direction. Maximum energy transfer of signal from antenna to set as result of accurately determined spacing and correct reflector length. — Contents: ⅜" reinforced aluminum reflector element—weather-proofed metal cross arm and brackets plus mounting hardware—Technical Data and Instruction Sheets.
Ind. packed: six to a master carton. Approx. individ. shipping weight: 3 lbs.

← *Reflector for use with Folded Dipole*

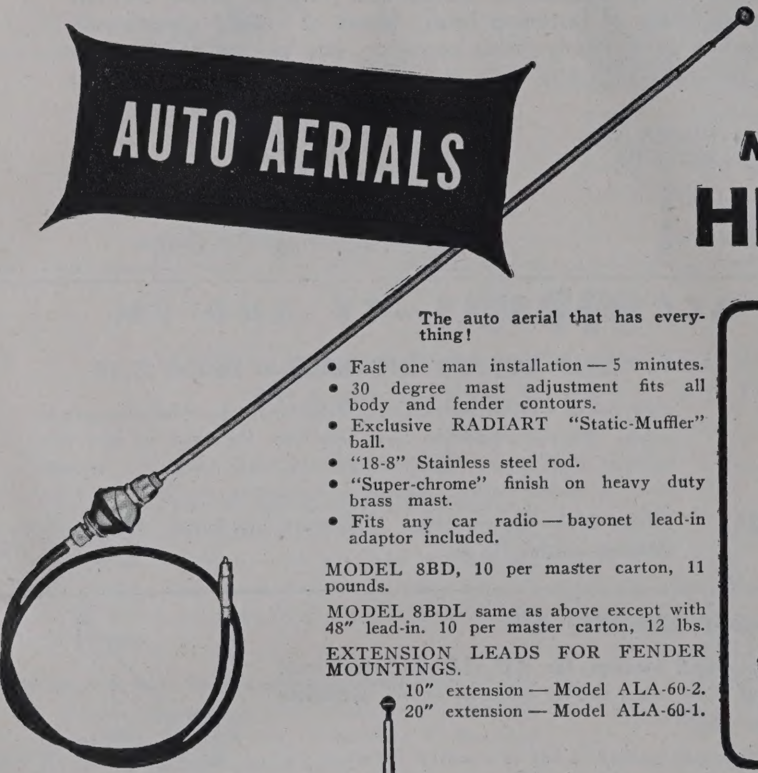
THE WARD PRODUCTS CORPORATION

- ROTATORS
- VIBRATORS
- AUTO AERIALS
- TV ANTENNAS
- POWER SUPPLIES

THE RADIART CORPORATION

CLEVELAND 2, OHIO

AUTO AERIALS



Model 8BD

HI•BALL

The auto aerial that has everything!

- Fast one man installation — 5 minutes.
- 30 degree mast adjustment fits all body and fender contours.
- Exclusive RADIART "Static-Muffler" ball.
- "18-8" Stainless steel rod.
- "Super-chrome" finish on heavy duty brass mast.
- Fits any car radio — bayonet lead-in adaptor included.

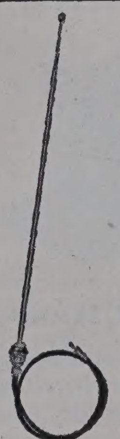
MODEL 8BD, 10 per master carton, 11 pounds.

MODEL 8BDL same as above except with 48" lead-in. 10 per master carton, 12 lbs.

EXTENSION LEADS FOR FENDER MOUNTINGS.

10" extension — Model ALA-60-2.

20" extension — Model ALA-60-1.



DELUXE MODEL 4BX3

Three section design extends to 59½".

- Brilliant long lasting chrome finished mast and spacer cap
- Full length quality 36" polyethylene waterproof lead-in
- Only one half inch mounting hole required

SUPERIOR STANDARD MODEL 4BX2

Two section design extends to 43".

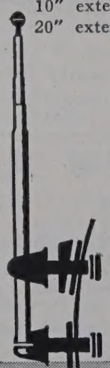
TWO INSULATOR SIDE MOUNT TYPES

Sturdy high quality construction throughout. Brilliant chromed brass masts with stainless steel rods. Wedge type adaptor furnished, with 36" polyethylene lead-in.

MODEL 2S, 43" extended, 2 sections. 10 per master carton, 9 pounds

MODEL 3S, 63" extended, 3 sections. 10 per master carton, 13¼ pounds

MODEL 4S, 92" extended, 3 sections. 10 per master carton, 17½ pounds

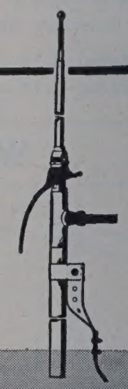


DISAPPEARING MOUNT

A handsome addition to any car collapses to 6 inches and extends to 60 inches. Fits either fender or cowl and features the exclusive "O" ring seal around the mast that prevents water from entering inside the aerial. Only one 9/16" mounting hole required.

MODEL 3D, 60" extended. 3 sections, 2 pounds each

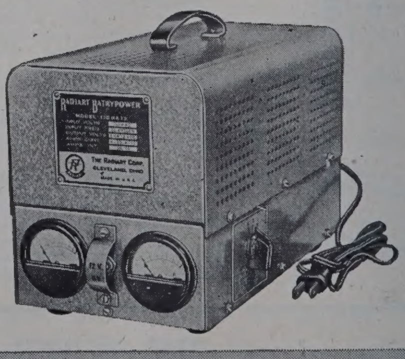
10 per master carton weighing 19 pounds.



BATRY POWER

Here is the ideal, compact, efficient unit for testing or demonstrating auto radios. SMOOTH DC POWER, 6 or 12 volts from the 110 volt 60 cycle AC line.

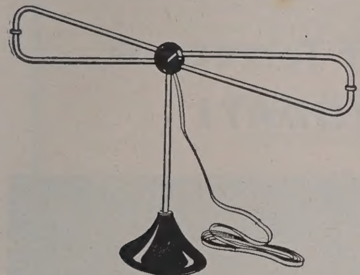
Model No.	Output	Watts	Size	Wt. Lbs.
110BA6	6V DC @ 10A	60	7⅝ x 12¼ x 8½	16
110BA12	6V DC @ 20A 12V DC @ 10A	120	7⅝ x 13 x 8½	24½



THE RADIART CORPORATION
CLEVELAND 2, OHIO

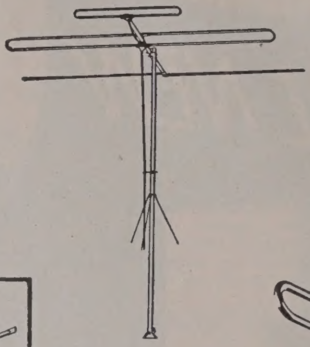
STANDARD OF COMPARISON
RADIART

- ROTATORS
- VIBRATORS
- AUTO AERIALS
- TV ANTENNAS
- POWER SUPPLIES



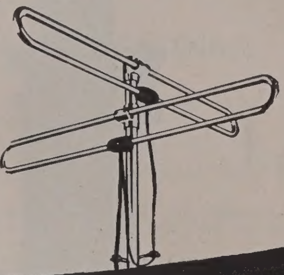
THE "LOADED X" INDOOR

The highest rated indoor antenna. This unusual RADIART design delivers peak performance comparing favorably with many outdoor installations.



"STRATE-LINE" ANTENNAS

Another feature in the complete RADIART line, this STRATE-LINE array is designed for both high and low band uni-directional reception.

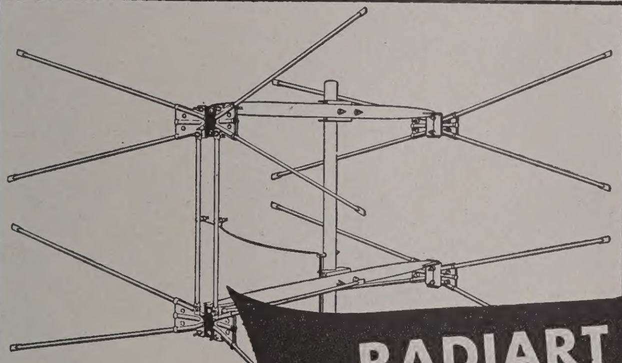


FM ANTENNAS

High quality FM antennas for peak performance under all conditions. Well designed . . . sturdy . . . easy to install.

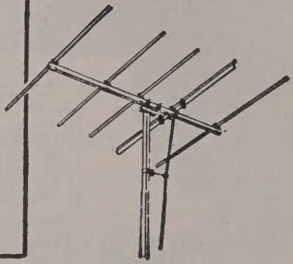
RADIART TV ANTENNAS

SUPERIOR DESIGN · QUICKLY INSTALLED · TROUBLE-FREE PERFORMANCE



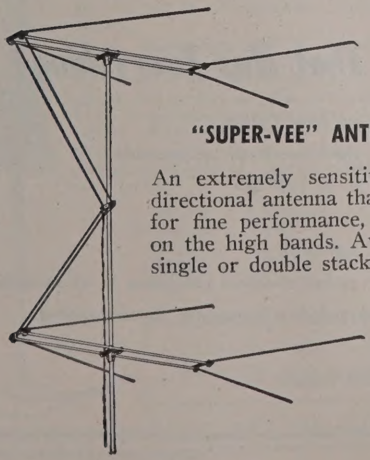
"LAZY X" CONICALS

A complete group of conical-type antennas in assortments for single bays, double-stacked and quadruple-stacked arrays. The ideal "all-channel" antenna. Also available in ALL ALUMINUM construction.



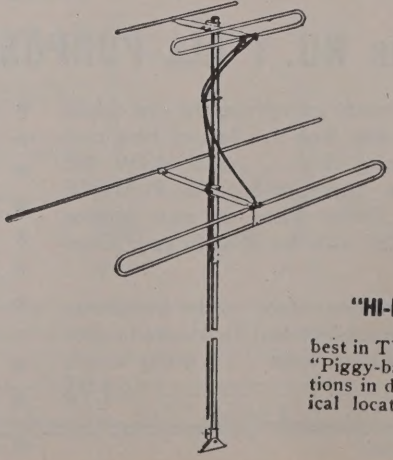
"YAGI" TV ANTENNAS

The perfect answer to the demand for maximum signal pick-up in FRINGE areas. Each YAGI is cut for a specific channel . . . in pre-assembled QUICK-FOLD-OUT design for fast installations.



"SUPER-VEE" ANTENNAS

An extremely sensitive, highly directional antenna that is noted for fine performance, especially on the high bands. Available in single or double stacked arrays.



"HI-lo" ANTENNAS

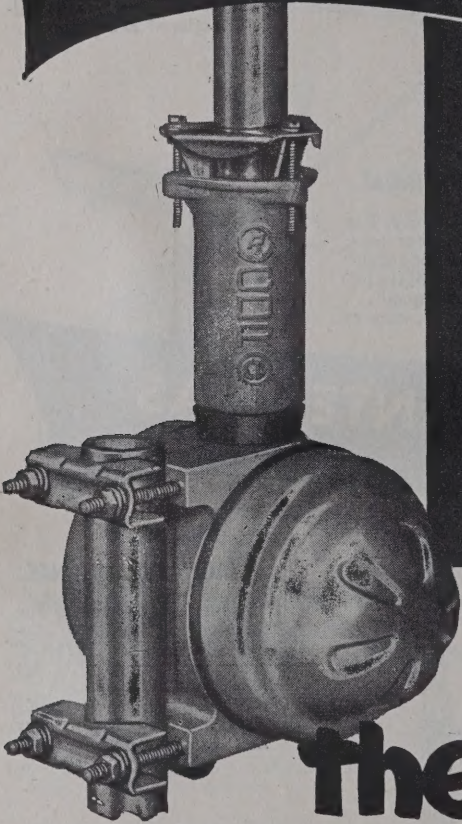
best in TV reception, where "Piggy-back" style for stations in different geographical locations is indicated.

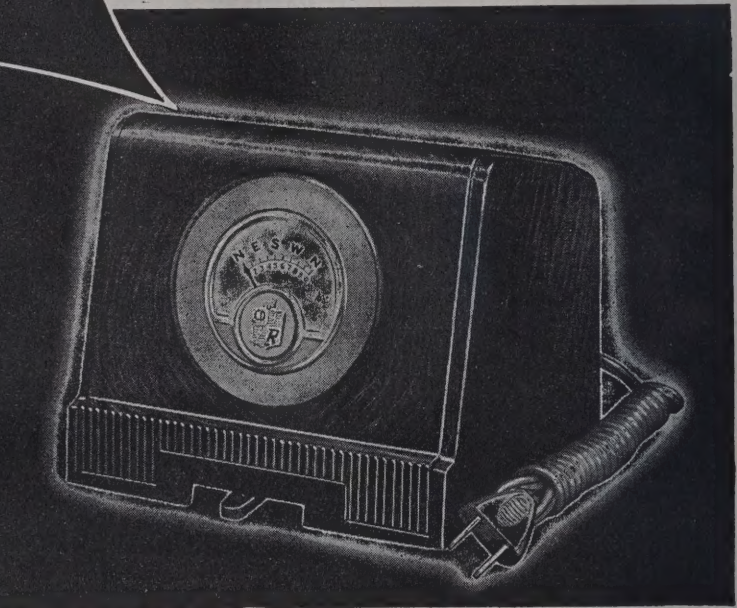
- ROTATORS
- VIBRATORS
- AUTO AERIALS
- TV ANTENNAS
- POWER SUPPLIES

THE RADIART CORPORATION
CLEVELAND 2, OHIO

IT'S ALL NEW

the Rotor of Tomorrow HERE TODAY!





the CD R Rotor

The NO. 1 ALL-PURPOSE ROTOR *That Has Everything!*

Designed to give the trade everything they've asked for. To do this, it's taken time . . . lots of time and money and engineering skill . . . and NOW WE HAVE IT . . . . the best possible ALL-PURPOSE ROTOR! It's TOPS! Order them at your jobber NOW . . . be the FIRST with the BEST in your area!

MODEL TR-11 Complete rotor with handsome modern design plastic cabinet and illuminated meter control dial . . . fingertip lever . . . using 4-wire cable $44.95

★ Quick Mounting Antenna Mast Collet
★ Speedy Installation — No Loose Parts to Assemble
★ Takes Antenna Masts up to 1½" OD
★ High Torque
★ Instant Locking — will not drift
★ Instantly Reversible — makes complete revolution in 45 seconds
★ Completely Weather-proofed — Thoroughly Water-proofed
★ Less wind resistance
★ High strength with low weight
★ Fits standard towers

PREMAX Telescoping and Whip Antennas

PREMAX ALUMINUM ANTENNAS FOR LIGHT-WEIGHT VERTICALS

Premax Telescoping Adjustable Aluminum Antennas have light weight, corrosion resistance and adequate strength to meet needs for marine, mobile and commercial installations where convenience in erecting and dependable performance are essential. They are built up of specially-drawn, seamless, tempered aluminum tubing engineered to withstand wind velocities up to 60 m.p.h. Positive locking device is provided on each section.

SPECIFICATIONS

No.	Description	Ext'd Lgth.	Col'd Lgth.	Base O.D.	Base I.D.	Wgt. Lbs.
AL-312	2-Sec. Tele.	12′4″	6′4″	.500″	.334″	1½
AL-518	3-Sec. Tele.	18′5″	6′4″	.750″	.584″	3
AL-324	4-Sec. Tele.	24′4″	6′4″	1.000″	.834″	5
AL-530	5-Sec. Tele.	30′0″	6′5″	1.250″	1.084″	7
AL-535	6-Sec. Tele.	35′8″	6′5″	1.500″	1.310″	12

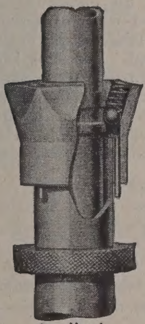
STEEL ANTENNAS FOR LOW COST VERTICAL INSTALLATIONS

SPECIFICATIONS

No.	Description	Ext'd. Lgth.	C'laps'd. Lgth.	Base O.D.	Base I.D.	Wgt. ea. lbs.
112-M	2-Sec. Tele.	11′8″	6′1″	.656″	.556″	4
318-M	3-Sec. Tele.	17′3″	6′2″	.875″	.775″	7
224-M	4-Sec. Tele.	22′9″	6′3″	1.063″	.963″	11
130-M	5-Sec. Tele.	28′3″	6′4″	1.250″	1.150″	15
136-M	6-Sec. Tele.	33′9″	6′5″	1.500″	1.400″	20

(For Base Insulators and Mountings, See Page S-65)

Low-cost, satisfactory, adjustable Steel Antennas for commercial, municipal, amateur, civil defense and other installations are made of high-tensile, copper-nickel steel tubing, heavily cadmium-plated and highly resistant to corrosion. They are fully telescoping and adjustable to any height by means of a positive locking device that also provides efficient electrical contact between the sections. We recommend the guying of all vertical antennas or supporting them by stand-off insulators against abnormal winds or severe strains. Steel antennas NOT recommended for marine use on salt water.



One-Hand Operation— Up or Down

PREMAX STAINLESS STEEL AUTO-MANIC MARINE ANTENNA

A Marine Antenna that can be raised or lowered with one hand when passing under bridges or other obstructions. It's the Premax "Auto-Manic" which has a locking device on each of its telescoping sections which allows free movement when the sliding sections are raised inches at a time with one hand, and locks them securely at any point when reverse pressure is applied. At full extension of each section, a positive locking action occurs which is proof against severe strains and vibrations. To lower the antenna, the touch of a finger raises a special ring on the base section, which releases the lower lock and the entire antenna, section by section, telescopes to its minimum 6 to 7-foot collapsed length.

This "Auto-Manic" Antenna is made up of 3 to 5 sections of a special grade of stainless steel tubing, hard-drawn to an extremely high tensile and yield strength. Standard Premax Mountings and Insulators will fit these antennas. "Auto-Manic" Stainless Steel Antennas are currently available only for military use.

SPECIFICATIONS

No.	Description	Ext'd Lgth.	Col'd Lgth.	Base O.D.	Base I.D.	Wgt. Lbs.
SS-1016	3-Sec. Tele.	16′0″	6′0″	1.000″	.900″	6½
SS-1022	4-Sec. Tele:	22′0″	6′6″	1.250″	1.120″	12
SS-1028	5-Sec. Tele.	28′0″	7′0″	1.500″	1.370″	18

ONE-PIECE SOLID GROUND TAPER WHIPS—TYPE E

Type E Antennas are designed for maximum strength with extreme flexibility and are available in two grades. Base diameter ¼″ tapering to 3/32″ tip. Easily cut to exact frequency as base requires no extra fittings for use with any Premax Mounting.

Chrome Silicon Steel Grade has exceptionally high tensile strength and uniformity of temper. Special heat treatment to insure high fatigue values. Cadmium-plated finish.

Stainless Steel Grade in a special formula which compares with spring steel in hardness and temper. Polished finish.

SPECIFICATIONS

Length Overall	Chrome-Silicon Steel	Stainless Steel
60″	**EC-660**	**ES-760**
72″	**EC-672**	**ES-772**
84″	**EC-684**	**ES-784**
96″	**EC-696**	**ES-796**

Type E

Type A

SOLID JOINTED STEP-TAPER WHIPS—TYPE A

Length Overall	Stainless Steel	Cad. Plated Steel
60″	**AS-160**	**AC-160**
72″	**AS-172**	**AC-172**
84″	**AS-184**	**AC-184**
96″	**AS-196**	**AC-196**

Type A Rods are made up of sections of varying diameters, joined securely and permanently into a solid step-tapered Antenna with ¼″ base diameter, ⅛″ tip, fitting all Premax Mobile Mountings. Two styles: An extremely high carbon content steel, heat-treated and oil-tempered, with heavy cadmium-plated finish; and in polished hard-drawn stainless steel, highly corrosion-resistant.

VHF ANTENNAS FOR 100 TO 250 Mc. OPERATION

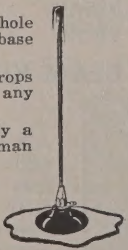
CD-11, 100 to 230 mc. Rooftop Antenna—Requires single ½″ hole for mounting. High-tensile spring-steel wire whip, cadmium-plated.

CD-21, Temporary 100 to 300 mc. Rooftop Antenna—No hole needed! Heavy-duty suction cup holds indefinitely. Lug at base for co-ax. Easy to attach in emergency.

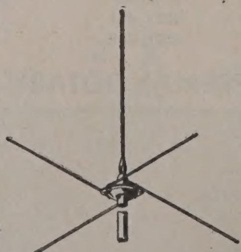
GP-31, 100 to 230 mc. Fixed Ground Plane Antenna—Cable drops down from waterproof housing through ½″ standard pipe of any height. Skirt wires can be bent to match co-ax.

DSH-118, a 152-162 mc. Rooftop Antenna that requires only a single small hole in car-top, which is sealed. Positively one-man installation.

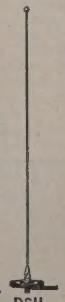
2-Meter Frequency	Aircraft Frequency	Police-Taxi Frequency	152-162 mc. Frequency
CD-114	**CD-112**	**CD-115**	—
CD-214	**CD-212**	**CD-215**	—
GP-314	**GP-312**	**GP-315**	—
—	—	—	**DSH-118**



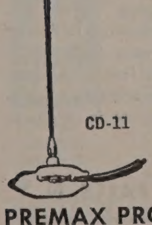
CD-21



GP-31



DSH 118



CD-11

All Premax Whip Antennas can be supplied with Base Adaptors to fit competitive mounts. For 5/16″-18 thread specify TYPE L ADAPTOR; for ⅜″-24 thread specify TYPE W ADAPTOR.

PREMAX PRODUCTS, DIV. OF CHISHOLM-RYDER CO., INC., 5107 HIGHLAND, NIAGARA FALLS, N. Y.

PREMAX

Mobile and Beam Antennas

SERIES C TELESCOPING MARINE ANTENNA—2 TO 3 MEG.

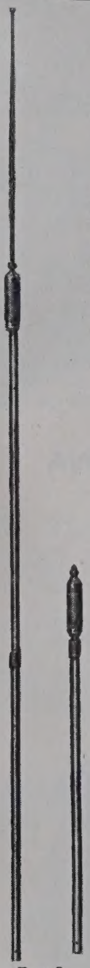
SPECIFICATIONS

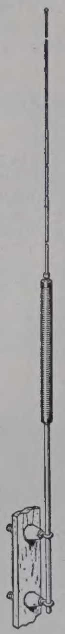
No.	Type	Base O.D.	Base I.D.	Weight Lbs.
CLA-619	Aluminum	1.000″	.834″	5
CLM-519	Monel	.893″	.799″	7
CLS-1019	Stainless	1.000″	.902″	7

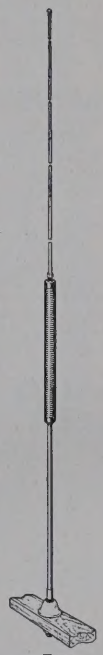
For Mountings see Page S-65

A Center-Loaded Collapsible Type Antenna for marine use which provides a remarkable gain over the signal produced by a straight vertical where the loading coil is housed in the transmitter cabinet. At the high-frequency end of its 2 to 3 meg. range it gives a measured effective signal power gain of 6 db., equivalent to quadrupling transmitter power output. The base presents such a low impedance that little loss is experienced due to icing, wet weather or water spray. The line feeding the base is a low impedance line and is not critical as to length and body-capacity effects.

The Antenna consists of two telescoping adjustable base sections of seamless aluminum, monel or stainless steel tubing on which the loading coil is mounted, with a top whip section, giving a total extended length of about 17 ft. The antenna collapses to a single unit with the whip section telescoping through the coil into the lower section, making a collapsed length of 7 ft. The coil is wound on low-loss bakelite tubing and treated after assembly with weatherproof varnish. Monel and stainless steel types are currently available only for military use.


Type C Center-Loaded Antenna 2 to 3 Mc.


Type B25-SL


Type B25-SV

SERIES B LOW-COST CENTER-LOADED ANTENNAS

To meet the need for low-cost center loaded antennas which are now a "must" for mobile and marine communications between 2 and 8 mc., Premax has developed an outstanding series of Antennas that have won wide acclaim. They consist of a 6 ft. tapered whip of hi-carbon heat-treated steel mounted above a loading coil and a special base rod 24″ long, with couplings to fit any standard Premax Mobile Mounting, making a 9½ ft. overall height. The coil is wound on a treated wood form, then weather-proofed with low-loss insulation varnish. With these Premax Center Loaded Antennas a gain of 8 db. or more can be secured over conventional whip types, equivalent to multiplying the power by 6.3 times—a most inexpensive way of extending both transmitting and receiving range. In cases where it is impossible to use the 9½ ft. height, the 24″ base section may be omitted, which reduces the effective gain to about 6 db., still equal to quadrupling the power over a straight vertical antenna.

SERIES B MARINE ANTENNA

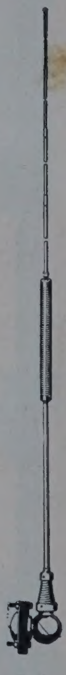
The Series B Marine Antenna for 2000 to 3000 ky., as described above, comes complete with either the XL or V Type mounting, or you can, at a small additional cost, include the Spring Mounting which is very effective in counteracting pitching or shock. Stainless Steel Whip and Base Section.

Cat. No.	Mounting Included
B25-SL	Type XL only
B25-SLS	Type XL and spring
B-25-SV	Type V only
B25-SVS	Type V and spring

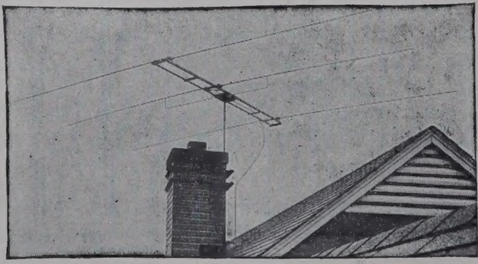
SERIES B COVERING AMATEUR "75", 14 AND 10 METERS, C.A.P., AIRPORT AND PUBLIC SERVICE FREQUENCIES, 2 TO 8 MC.

The basic 75 meter Antenna covers the entire mobile phone band. It may also be used for multi-band amateur operation by shorting out turns (approximately 75% on 14 Mc.) or by completely jumpering out the coil to make an efficient quarter-wave antenna on 10 meters. Can be used with any standard Premax Mounting shown on page S-65.
Also available for the 2374 Ky. C.A.P. band and the 3105 Ky. Airport band. Coils for other frequencies on special order.

Frequency	Cadmium Plated Whip	Stainless Whip	Type	Height	Mounting
75 Meters	BXC-386	BXS-386	Center Loaded	9½ ft.	Not
75 Meters	BLC-386	BLS-386	Base Loaded	8 ft.	included,
3105 Ky.	BXC-316	BXS-316	Center Loaded	9½ ft.	See Page
2374 Ky.	BXC-236	BXS-236	Center Loaded	9½ ft.	S-65.


Type BX With RS Mount

PREMAX ROTARY BEAM KIT—6, 10 AND 11 METERS



A Rotary Beam Kit with braced frame of heavy-duty aluminum angle and solid bakelite insulation blocks that will not crack or snap under vibration and shock make this 20-pound Beam for 6, 10 and 11 meters popular with amateurs. Each telescoping element can be tightly clamped to provide positive adjustment. Parasitic elements may be left open at the center with tuning hairpins inserted or may be used as six elements on 6 meters. The RB-6309 Kit includes frame and three pairs of elements with necessary insulators and hardware, including T-match accessories but without transmission line. Complete in a single carton with assembly instructions.

PREMAX PRODUCTS, DIV. OF CHISHOLM-RYDER CO., INC., 5107 HIGHLAND, NIAGARA FALLS, N. Y.

PREMAX Mountings-Insulators-Accessories

TYPE 1 BASE INSULATOR

Heavy - duty type with compression rating up to 10,000 lbs. Galvanized malleable iron or chrome-plated bronze. Rigid or hinged post. Height to post base, 7″ to 9″. Wt. 8 lbs.

Rigid Post		Hinged Post		Dia. Post
Galv.	Bronze	Galv.	Bronze	in 32nds
1PG-24	1PB-24	1HG-24	1HB-24	24
1PG-25	1PB-25	1HG-25	1HB-25	25
1PG-26	1PB-26	1HG-26	1HB-26	26
1PG-28	1PB-28	1HG-28	1HB-28	28
1PG-30	1PB-30	1HG-30	1HB-30	30
1PG-34	1PB-34	1HG-34	1HG-34	34
1PG-35	1PB-35	1HG-35	1HB-35	35
1PG-41	—	1HG-41	—	41
1PG-43	1PB-43	1HG-43	1HB-43	43
1PG-44	—	1HG-44	—	44

TYPE IX—SOCKET-TOP INSULATOR

Same as Type 1 except without post; top tapped ¾″-16 thread. Weight 7 lbs.

No. 1-XG—Galvanized
No. 1-XB—Bronze

TYPE 2 BASE INSULATOR

Light design for masts, guyed or supported by standoff insulators. Brown-glazed porcelain with removable top post and base support cemented into insulator. Height to post base 6″. Wt. 4 lbs.

No.	Post Diameter
2P-24	¾″
2P-25	25/32″
2P-26	13/16″

DECK BUSHING

Brown glazed porcelain with galvanized malleable flange which bolts thru rubber gasket to roof or deck. Weight 2 to 5 lbs.

No.	I.D.	Total Lgth.	Above Deck	Flange Diam.
5D-24	¾″	6″	3″	4″
5D-40	1¼″	8″	4¼″	4½″
5D-56	1¾″	8½″	4½″	5⅜″

TYPE 6 BASE INSULATOR

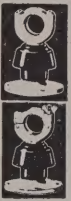
For marine, tower platform or roof. Lead-thru construction permits antenna connections below roof or deck. Flanges 6″ in diameter with studs and bolts for ½″ to 3″ deck. In galvanized malleable iron or chrome - plated bronze. Height to post base 3″ to 5″; weight 11½ lbs.

Rigid Post		Hinged Post		Dia. Post
Galv.	Bronze	Galv.	Bronze	in 32nds
6PG-24	6PB-24	6HG-24	6HB-24	24
6PG-25	6PB-25	6HG-25	6HB-25	25
6PG-26	6PB-26	6HG-26	6HB-26	26
6PG-28	6PB-28	6HG-28	6HB-28	28
6PG-30	6PB-30	6HG-30	6HB-30	30
6PG-34	6PB-34	6HG-34	6HB-34	34
6PG-35	6PB-35	6HG-35	6HB-35	35
6PG-41	—	6HG-41	—	41
6PG-43	6PB-43	6HG-43	6HB-43	43
6PG-44	—	6HG-44	—	44

TYPE 10-S STANDOFF

Heavy-duty Insulator with chrome-plated bronze base and head-caps, brown-glaze porcelain insulator with solid or hinged clamp. Height to center about 4½″; wt. 3 lbs.

Solid	Hinged	Fits Tube O.D.
10S-2832	10SH-2832	⅞″ to 1″
10S-3236	10SH-3236	1″ to 1⅛″
10S-3642	10SH-3642	1⅛″ to 1 5/16″



TYPE 13-S STANDOFF INSULATOR SOLID OR HINGED TYPE

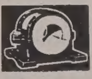
Fits all sizes of Premax Antennas. Heavy, rugged cast caps and base plates, aluminum or chrome - plated bronze; brown glaze porcelain insulator, 3″ diameter. Height to center 4¾″; weight about 2½ lbs.

Solid Cap		Hinged Cap		Fits
Alum.	Brass	Alum.	Brass	O.D.
13SA-24	13SC-24	13HA-24	13HC-24	¾″
13SA-28	13SC-28	13HA-28	13HC-28	⅞″
13SA-32	13SC-32	13HA-32	13HC-32	1″
13SA-34	13SC-34	13HA-34	13HC-34	1 1/16″
13SA-40	13SC-40	13HA-40	13HC-40	1¼″
13SA-48	13SC-48	13HA-48	13HC-48	1½″

TYPE 3 STANDOFF INSULATOR

Galvanized iron or bronze with porcelain body, 3″ in diameter. Height to center about 4¼″; weight about 2 lbs.

Available only in limited sizes. Details on request.



TYPE 8-C MOUNTING CLAMP

For horizontal or verticals. Galvanized malleable iron frame, white porcelain split bushing. Overall width 3½″; height to center 1½″; weight 1 lb.

No.	Fits Tube O.D.	No.	Fits Tube O.D.
8C-20	⅝″	8C-28	⅞″
8C-24	¾″	8C-32	1″

TYPE 9-C MOUNTING CLAMP

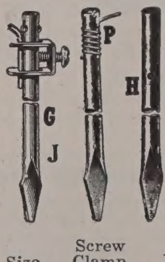
Compact mounting for horizontals or support for verticals. Gray galvanized iron frame, white porcelain split bushing. Height to center 2″; weight 1 lb.

No.	Fits Tube O.D.	No.	Fits Tube O.D.
9C-20	⅝″	9C-28	⅞″
9C-24	¾″	9C-32	1″

TYPE 10-C MOUNTING CLAMP

Similar to Type 9-C but more compact, lighter weight. Stamped steel electro-plated frame. Height to center 2″; weight ¾ lb.

No.	Fits Tube O.D.	No.	Fits Tube O.D.
10C-20	⅝″	10C-28	⅞″
10C-24	¾″	10C-32	1″

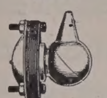


PREMAX GROUND RODS

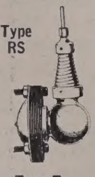
Copper - plated steel rods, pointed for driving. Screw type clamp (J and G) takes No. 4 to 14 conductor. Other styles as illustrated. Order by number. Packed 25 per bundle.

Size	Screw Clamp	Hole	Pigtail	Plain
⅜″x4′	J-64	—	—	—
⅜″x6′	J-66	—	—	—
½″x5′	G-85	H-85	P-85	X-85
½″x6′	G-86	H-86	P-86	X-86
½″x8′	G-88	H-88	P-88	X-88
⅝″x6′	G-106	H-106	P-106	X-106
⅝″x8′	G-108	H-108	P-108	X-108

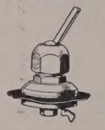
Type R



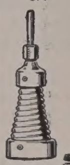
Type RS



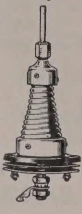
Type F



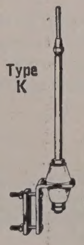
Type SA



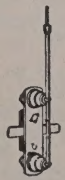
Type S



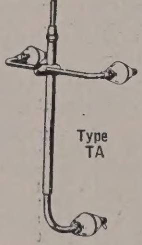
Type K



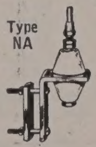
Type L



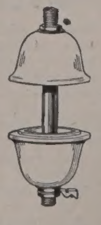
Type TA



Type NA



Type V



MOBILE MOUNTINGS

TYPE R Universal Mounting consists of solid aluminum split-ball fixture which can be adjusted to any angle. Attaches thru heavy plastic insulation disc fitted with waterproof gasket. New type backplate provides positive ground and shielding for co-ax connector. Fits any ¼″ dia. antenna.

TYPE RS Universal Mounting is similar to above but with spring as detailed under Type S.

TYPE F 30° Adjustable Mounting for fender, cowl or gravel pan. Chrome-plated brass with heavy bakelite insulation. Replaces any existing fender or cowl antenna without new holes. Fits ¼″ whip.

TYPE S Spring Mounting for roof or horizontal surface. Heavy - duty spring with bakelite insulation, rubber gasket and steel backplate. Compression type clamp fits any ¼″ whip. Overall height about 5″; base diameter 3″.

TYPE SA Spring Adaptor, a supplemental mounting similar to Type S which can be attached to Type K, L, TA or NA to convert to spring mountings. Height 4¾″, diameter 1⅝″.

TYPE L Bumper Mounting permits 10″ adjustment in antenna height. Has two pairs of ceramic insulators spaced 6″ apart. Compression clamp for any ¼″ whip. Bracket parts cadmium-plated.

TYPE XL Panel Mounting, similar to Type L except it does not have steel bumper bracket.

TYPE K Bumper Mounting permits 10″ maximum height adjustment of antenna. Heavy-duty glazed ceramic cones, heavily cadmium - plated steel bracket. Compression clamp fits any ¼″ whip.

TYPE TA Trunk or Panel Mounting fits any contour of surface. White glazed ceramic cone insulators, lower support a solid brass rod joined to 12″ brass tube with locking device at top; upper support 24″ brass rod adjustable at any height on tube. Antenna tube provides 10″ maximum height adjustment. Compression clamp fits any ¼″ whip. All metal parts heavily cadmium-plated.

TYPE NA Bumper Mounting permits attachment by means of two heavy bolts and steel backplate. Special heavy duty glazed ceramic cone with compression clamp that fits any ¼″ whip.

TYPE V Thru - Deck Mounting for B-25 or similar antennas. White porcelain cones, brass stud threaded 7/16″-24. Maximum opening 1½″ between cones.

PREMAX PRODUCTS, DIV. OF CHISHOLM-RYDER CO., INC., 5107 HIGHLAND, NIAGARA FALLS, N. Y.

WALSCO *products*

Help The Radio Man

WALTER L. SCHOTT COMPANY, LOS ANGELES 18, CALIF.

INSULATING TUBING SPECIALTY ITEMS

WALSCO SILICONE COMPOUND

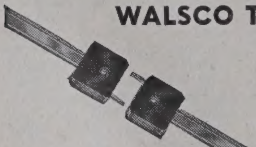
WALSCO
SILICONE

For treating TV and amateur antenna lead wires, insulators and terminals to prevent impedance changes due to moisture conditions. Effective even in seacoast and marine locations.

This compound also prevents high voltage breakdown and arcing under humid conditions since it forms a moisture-repellent high-dielectric seal. WALSCO Silicone is very effective in waterproofing and preserving automobile and aircraft spark plugs and ignition systems.

Cat. No.		List Price
24	1 oz. tube	$ 2.00
24D	Display of 12 1 oz. tubes	24.00

WALSCO TWIN-LEAD CONNECTOR



For quickly connecting and disconnecting Twin-Lead. Molded low-loss shells and precision machined contacts.

Cat. No.		List Price
1580	Pair of Connectors	$ 1.40
1580D	Display of 20 pairs	28.00

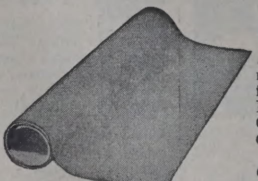
WALSCO SPAGHETTI BARGAIN ASSORTMENT

WALSCO
SPAGHETTI BARGAIN ASSORTMENT
WALSCO

Twenty-four 8 inch lengths of durable varnished tubing. Comes in assorted sizes and bright colors. Useful for all connections in electronic devices. Special low price.

Cat. No.		List Price
644		$0.49
644-D	Display of 25 No. 644	12.25

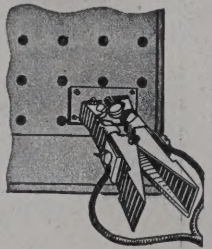
WALSCO INSULATING CAMBRIC



High-voltage (5000-v.) insulating material for repairing transformers, field coils, solenoids, relays, etc. Yellow color; very flexible and durable.

Cat. No.		List Price
645	Roll of approx. 210 sq. in.	$0.85
645-D	Display of 10 No. 645 rolls	8.50

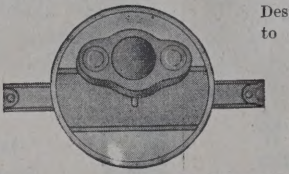
WALSCO QUIK-KLIP



A quick method of attaching lead-in wires to TV sets. Used in service shops, demonstrating rooms, etc. Made of high impact polystyrene. Can't short out. Rugged construction. Works in any position. Free display with order of 50 units.

Cat. No.		List Price
1525	Quik-Klip	$0.50
1525-D	Display of 50 No. 1525	25.00

WALSCO TWIN-LEAD WIRING NAILS



Designed for attaching 300-ohm leads to walls, moldings, etc. Ornamental head greatly improves the appearance of the installation. WALSCO nails have no appreciable effect on the impedance of the line as the heads consist almost entirely of insulating material.

Cat. No.	Approx. Quant. Per Pkg.	List Price
†2552	35	$0.45
2552-99	200	1.80
2552-BU	Bulk	7.70 per M

WALSCO INSULATING TUBING (SPAGHETTI)

WALSCO FLEXITUBE

A high-grade synthetic extruded vinylite tubing for electronic and electrical insulation. Extremely flexible and resistant to abrasion. High dielectric strength (average 12,000-volt). Resistant to cold or heat from minus 65°F to plus 185°F. (Minus 54°C to 85°C). This tubing is impervious to water, oil, alcohol and most acids and alkalies.

List Price, per pkg. $1.00

Cat. No.	Size B & S Gauge No.	Approx. I.D. inch	mm	Quantity per pkg.*
600	18	.042	1	20 ft.
601	16	.053	1.4	20 ft.
602	14	.066	1.6	18 ft.
603	12	.085	2	16 ft.
604	10	.106	2.7	14 ft.
605	8	.133	3.5	12 ft.
606	6	.166	4	10 ft.
607	4	.208	5	6 ft.
608	2	.263	6.5	6 ft.

Color: Clear will be supplied unless order specifies color. Black, Green or Red available subject to stock on hand.

WALSCO
FLEXITUBE

*For larger quantities, write for quotation.

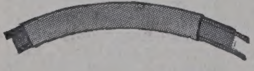
WALSCO RAYOFLEX

A new type "spaghetti tubing" made of heavily lacquered rayon braid. More flexible and superior in many other respects to the conventional varnished tubing. Good dielectric strength (4,000 to 5,000 volts). RAYOFLEX has a smooth and tough surface inside and out. Meets ASTM and VTA Specifications #B2. Sizes up to #6 are packed in handy boxes.

Cat. No.	Size B & S Gauge No.	Approx inch	Quantity per pkg.*	List Price per pkg.
630	18	.042	10 ft.	$1.05
631	15	.059	10 ft.	1.05
632	12	.085	8 ft.	1.05
633	9	.118	5 ft.	1.05
634	6	.166	5 ft.	1.05
635	2	¼"	30 in.	0.60
636	0	5/16"	30 in.	0.70
637	00	⅜"	30 in.	0.75
638	0000	½"	30 in.	1.25

Available in: Black, Blue, Red, Yellow. Please specify color when ordering.

WALSCO FLEXITUBE *(Twin-Lead Size)*



Special clear, vinylite tubing, weather-resistant. Slips easily over standard 300-ohm twin-lead. Prevents deterioration of lead-in under adverse climatic conditions. Also used as protection when installing lead close to walls, over metal gutters, etc.

Cat. No.		List Price
609-75	75 ft. Hank (Standard Pack: 12 hanks)	$6.50/hank

HANDY ASSORTMENTS

Cat. No.	FLEXITUBE	List Price
620	20 ft. of Assorted sizes and colors, from size 18 to 10	$ 1.00
620-D	36 Assortments of No. 620 in one Display Box	36.00
621	12 ft. of Assorted sizes and colors, from size 10 to 2	1.00
621-D	24 Assortments of No. 621 in one Display Box	24.00

Cat. No.	RAYOFLEX	List Price
640	12 ft. of Assorted sizes and colors, from size 18 to 9	$ 1.00
640-D	36 Assortments of No. 640 in one Display Box	36.00
641	6 ft. of Assorted sizes and colors, from size 9 to ½"	1.00
641-D	24 Assortments of No. 641 in one Display Box	24.00

---

†Available Either in Standard Display Box of 20 Packages or on Standard Display Card of 20 Packages. When ordering add suffix "B" for box or suffix "D" for display card.

WALSCO TELEVISION ANTENNAS

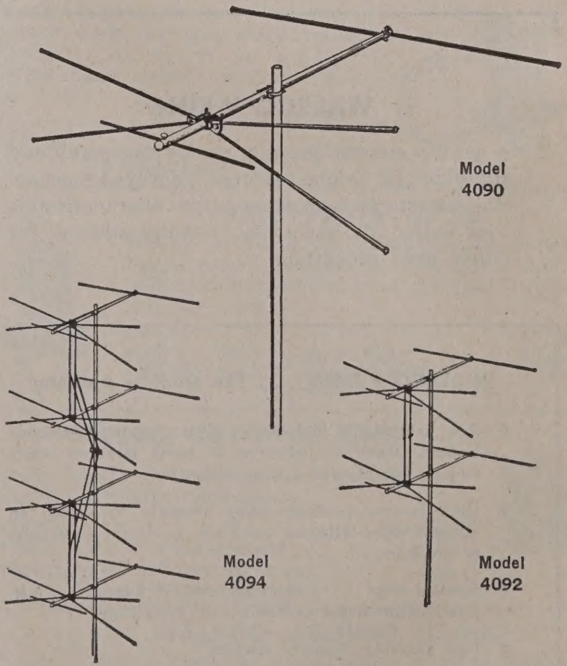
Exclusive advantages available in WALSCO Antennas assures outstanding performance in any climate . . . anywhere. All WALSCO antennas are unconditionally guaranteed for one full year. WALSCO originated the high tensile butt-seamed tubing in order to provide greater flexibility. It will not bend or break under adverse weather conditions. As a result of the exclusive U-bolt design, using hardened, serrated steel clamps, turning or slipping of the antenna on the mast is positively prevented. Antenna elements are made of special chromium - magnesium - aluminum alloy which has a 94% higher tensile strength than regular aluminum generally used for antennas. Special fold-over terminals with built-in strain relief are supplied with all WALSCO antennas and stacking bars. Stacking Kits are precision engineered for each antenna model and are formed to provide for an exact match to the transmission line. This guarantees maximum performance on stacked arrays.

WALSCO SIGNAL KING ANTENNA

The one antenna that does more to guarantee outstanding reception, trouble-free performance even in the fringe areas. The WALSCO Signal King, with its amazing new patented design, assures longer, dependable service under the most adverse weather conditions.

IMPORTANT FEATURES OF THE NEW SIGNAL KING ANTENNA

- High gain on all channels—no weak spots. Readily stacked for fringe area reception.
- Radically new insulator design (Patent Pending). Guaranteed unbreakable—outstanding and lasting dielectric properties, under all climatic conditions. Nothing like it anywhere.
- Marine type aluminum alloy elements. One end reinforced, other end sealed.
- Hi-Speed assembly—two nuts, three thumbscrews—takes less than two minutes. No loose hardware or parts.



Cat. No.	List Price
4090—Single Bay, no mast	$ 9.25
4092—Dual Stack, no mast	19.85
4094—4-Bay Stack, no mast	44.50

STACKING KITS

Cat. No.	List Price
4005-7—To convert 2 single bays to one dual stack	$1.50
4005-8—To convert 2 dual stacks to one 4-bay stack	5.60

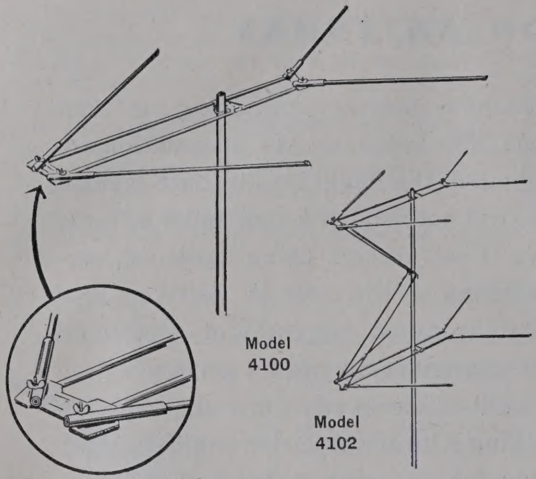
WALSCO products
Help The Radio Man
WALTER L. SCHOTT COMPANY, LOS ANGELES 18, CALIF.

TELEVISION ANTENNAS

WALSCO "DOUBLE-VEE" ANTENNA*

A new engineering idea in a Double-Vee Antenna . . . "TWINTUBE" element construction eliminates sag and makes breakage impossible; keeps elements in perfect alignment for lasting high-gain performance.

*Licensed under patents of the Workshop Assoc., Inc.



"TWINTUBE elements have double wall, reinforced ends.

Cat. No.	List Price
4100—Single Bay, no mast	$ 7.50
4102—Dual Stack, no mast	17.75

STACKING KIT

4005-9—To convert 2 Single Bays to one Dual Stack	$ 2.90

OUTSTANDING FEATURES OF THE WALSCO "DOUBLE-VEE" ANTENNA

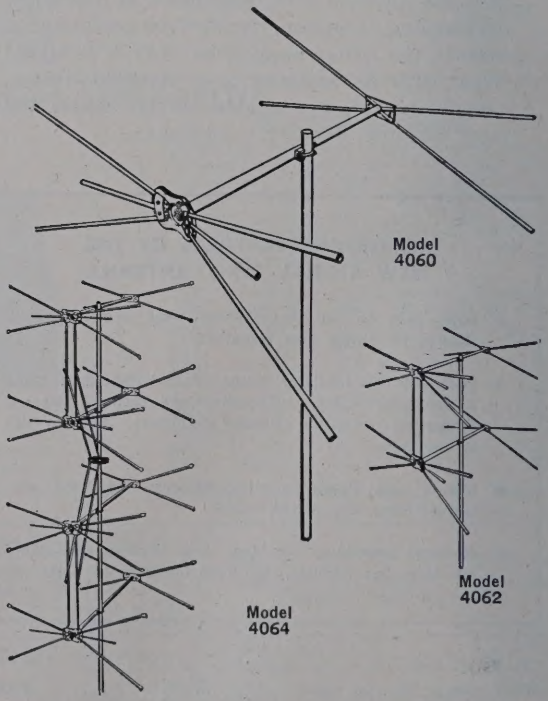
- Extra-high gain on all channels.
- Highly directive—eliminates or reduces ghosts and interference.
- Completely assembled—no loose parts—ready in less than 30 seconds.
- "Twinlube" elements eliminate mechanical failure—even under severe weather conditions.
- New molded insulators guaranteed unbreakable—outstanding and lasting dielectric properties—nothing like it anywhere.
- Marine-type, chromium-aluminum alloy elements—closed outer ends.

WALSCO V-KING

A quality conical antenna embodying many outstanding and unique features, improved mechanical design and excellent gain characteristics over entire TV spectrum. Readily stacked for fringe area reception.

WALSCO V-KING . . . The Quality Antenna

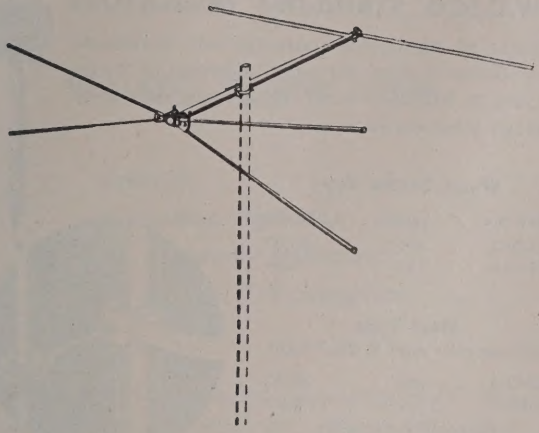
- New unbreakable high-impact styron insulator—silicone treated. Ideal for industrial or beach locations where soot or salt deposits are encountered.
- High tensile aluminum alloy element. Reinforced on clamped end—sealed on outer end to prevent wind noise or breakage.
- Weather-proof . . . corrosion-resistant alloys and A.N. specification plated hardware used exclusively.
- Fast assembly—Readily stacked.



Cat. No.	List Price
4060—Single Bay, no mast	$ 9.25
4062—Dual Stack, no mast	19.85
4064—4-Bay Stack, no mast	44.50

STACKING KITS

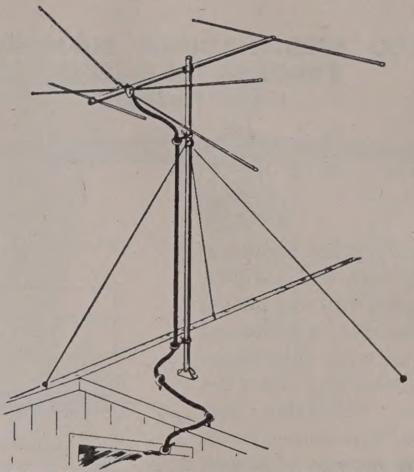
Cat. No.	List Price
4005-6—To convert 2 Single Bays to one Dual Stack	$1.50
4005-5—To convert 2 Dual Stacks to one 4-Bay Stack	5.60



WALSCO ECON ANTENNA

A new, quality conical antenna at a very low price. Quick assembly, no loose hardware. High gain conical array; readily stacked for fringe area reception. All-aluminum elements—one end reinforced, other end sealed. Sturdy "Galvaneal" crossarm full 1″ O.D.

Cat. No.	Model	Per Carton	List Price
4050	Single Bay	6	$ 5.95
4052	Dual Stack	3	13.10



WALSCO U-INSTALL ANTENNA KIT

Contains everything for the average home installation: 1 Complete Antenna • 1 Mast • 1 Mast Base • 1 Guy Wire Ring • 40 Ft. Guy Wire • 50 Ft. 300 Ohm Lead-in • 3 Screw Eyes • 2 Mast Stand-off Insulators • 3 Wood Screw Stand-off Insulators. (Also available at same prices with Chimney Mount in place of Guy Wire, Base, Ring and Screw Eyes. Add "CM" to part number.)
Choose any one of 3 famous Walsco Models to best suit your area.

Cat. No.	Model	List Price
4066	V-King	$14.25
4096	Signal King	14.25
4106	Double-Vee	12.50

REPLACEMENT ELEMENTS FOR CONICAL ANTENNAS

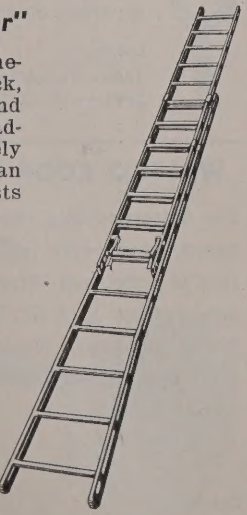
⅜″ Diameter elements made of butt-seamed high-strength chromium-aluminum alloy. One end reinforced, other end crimped, on 44″, 48″ and 50″ length.

Cat. No.	List Price
4004-20 —20″ long, each	$0.22
4004-44A—44″ long, each	0.60
4004-48A—48″ long, each	0.65
4004-26A—26″ long, each	0.30
4004-50A—50″ long, each	0.65

WALSCO MAGNESIUM LADDER
for Antenna Installation

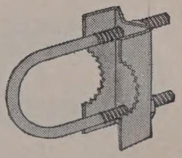
"The World's Finest Ladder"

Strong, safe, light-weight magnesium ladders that will not crack, splinter, or rot. Easy to carry and load on truck or car. (20-ft. ladder weighs only approximately 23 lbs.) Weighs much less than wooden ladders and outlasts them three to one.



Cat. No.	Dealer's Net
1600—20 ft. Magnesium extension ladder	$53.40
1602—28 ft. Magnesium extension ladder	75.90
1603—40 ft. Magnesium extension ladder	125.70
1605—Pivoted Safety Shoes for above ladder, per pair	4.68

U-BOLT BRACKET ASSEMBLY

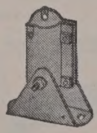


Made of serrated steel, cadmium-plated with cadmium-plated steel U-bolts; fits masts up to 1½″. Grips mast tightly, will not slip or turn.

Cat. No.	List Price
4005-20	$0.60

(Standard Pack: 25)

MAST SWIVEL BASE

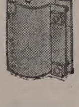


Heavy all-angle cadmium-plated steel base. Accommodates to any pitch roof. Allows orientation of mast AFTER installing antenna.

Cat. No.	List Price
4005-2 —For 1″ Diameter Masts	$0.85
4005-27—For 1¼″ Diameter Masts	0.95

(Standard Pack: 25)

WALSCO GUY-WIRE RING

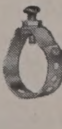


Made of aluminum-alloy. Very strong and highly corrosion-resistant.

Cat. No.	List Price
4005-1 —For 1″ Diameter Masts	$0.45
4005-26—For 1¼″ Diameter Masts	0.50

(Standard Pack: 25)

WALSCO GROUND CLAMP



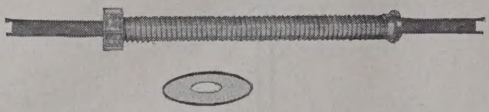
Made of heavily plated steel. Provides excellent contact even on rusty pipes and rods. Adjustable for ⅜″ to 1¼″ pipe sizes. Finest clamp made.

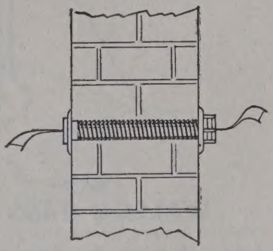
Cat. No.	List Price
4005-10	$0.20

(Standard Pack: 25 units)

WALSCO FEED-THROUGH BUSHING FOR 300-OHM TWIN-LEAD

(Patent Pending)

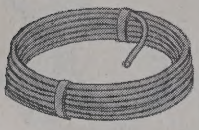




The ideal method for bringing TV and FM antenna Twin-Lead into the house. Weather-tight installation is now possible. Eliminates bringing the wire under the window. Attractive professional appearance on inside and outside of house. Supplied in 8⅝" length to fit most walls. Easy to cut off for thinner walls. Low-loss polystyrene holds line securely but will not change line impedance.

Cat. No.	List Price
1550 (Old No. 4011)—Feed-through Bushing	$ 1.10
1550-D (Old No. 4011-D)—Display of 12 Bushings	13.20

WALSCO ALUMINUM GROUND WIRE

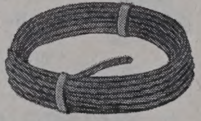


High-conductivity, solid aluminum ground wire. Very soft and easy to install. ⅛" thick (No. 8 B & S gauge). For grounding of antennas.

Cat. No.	List Price
1500—100-ft. coil	$ 2.75
1505—500-ft. coil	12.80

WALSCO GUY WIRE

High-grade galvanized steel stranded Guy Wire, fully rust-resistant, excellent for masts and towers. Put up in 200-ft. continuous lengths, wired off into four 50-ft. coils.



Cat. No.	List Price
1510—4 Strand No. 20; $\frac{3}{32}$" diam.	$1.45 per C ft.
1512—6 Strand No. 20; ⅛" diam.	1.90 per C ft.

(Standard Pack: 1200 ft.)

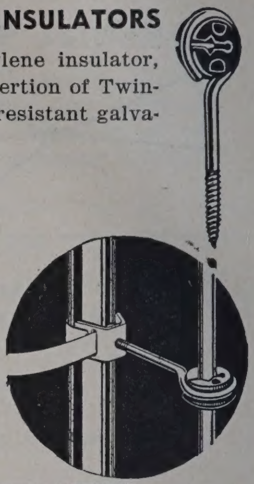
WALSCO PERFORATED STEEL STRAP

¾" wide, galvanized strapping for fastening masts to chimneys, vent-pipes, etc. Flexible and strong. ¼" diam. holes punched ¾" apart.

Cat. No.	List Price
1518—10-ft. coil	$0.70

(Standard Pack: 25 rolls)

WALSCO STAND-OFF INSULATORS



Made of high-grade polyethylene insulator, precision molded for easy insertion of Twin-Lead or RG-59/U co-ax. Rust-resistant galvanized steel screw eyes.

Wood Screw Type

Cat. No.	Length	List Price
1560-1	3½"	$0.07
1560-3	7½"	0.09

Mast Type

(Fits any size mast to 2⅛" O.D.)

Cat. No.	Length	List Price
1565-1	3½"	$0.21
1565-3	7½"	0.29

(Standard Pack: 100)

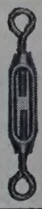
BULK QUANTITY PRICES ON REQUEST

ANTENNA INSULATOR ASSEMBLY

Complete insulator with holding straps, clamps, screws, nuts and lugs for the V-King Antennas.

Cat. No.	List Price
4005-11A	$1.75

WALSCO TURNBUCKLES

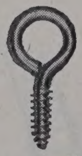


Strong and rustproof. Indispensable for high mast and tower installations.

Cat. No.	Length Open	Length Closed	List Price
1533	4¼"	3"	$0.30
1535	7½"	5½"	0.40
1537	10½"	7½"	0.95

(Standard Pack: 1 Dozen)

WALSCO SCREW EYES



Heavy steel cadmium-plated screw eyes for securing of guy wires.

Cat.No.	List Price Each	Per Gross
1540—Over-all length 2"	$0.05	$5.40
1542—Over-all length 3"	0.08	8.25

(Standard Pack: 144)

WALSCO ROOF PATCHING COMPOUND

For waterproofing around mast-bases, screw-eyes or wherever roof is punctured. Made of highest quality asphalt base with fibred asbestos. Easy to apply with applicators furnished with each can.

WALSCO
W
ROOF PATCHING COMPOUND
WALTER L. SCHOTT CO.

Cat. No.	List Price
1548—16 oz. can	$1.00

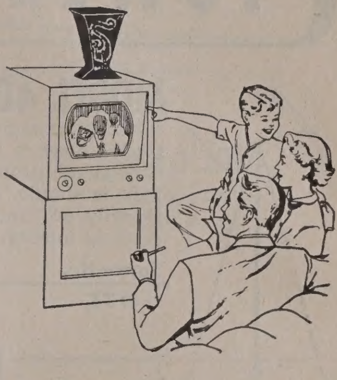
(Standard Pack: 24)

WALSCO *products*
Help The Radio Man
WALTER L. SCHOTT COMPANY, LOS ANGELES 18, CALIF.

TELEVISION LAMPS
T-V DETENTS

WALSCO T-VIEW LAMP

natural,
glare-free lighting
. . . properly balanced
for clearer T-V reception



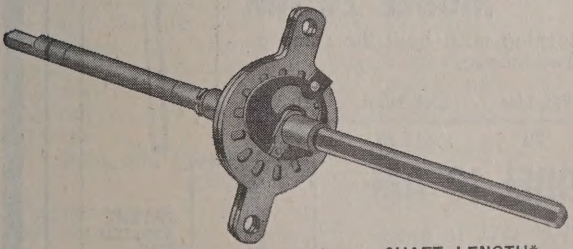
A beautiful, hand-painted television lamp that actually improves the TV picture. The new WALSCO T-VIEW Lamp provides a subdued, indirect illumination of any size room. Gives a proper balance of soft, glare-free, natural light for sharper, brighter TV reception.

The new T-VIEW Lamp eliminates eye-strain by preventing glare or reflections on the television screen.

Cat. No.		List Price
TVL	Black	$6.95
TVL	Chartreuse	6.95
TVL	Maroon	6.95

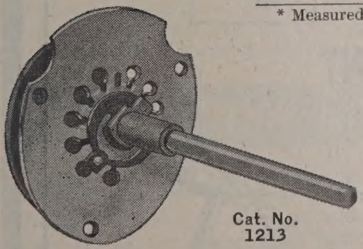
WALSCO T-V TUNER DETENTS

Three point ball-bearing suspension for smooth, positive tuning. Phosphor-bronze spring for longer lasting, dependable performance. Linen base phenolic shafts are rigid, precise, non-warping.

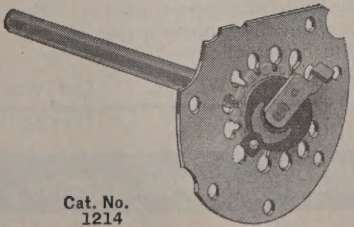


	SHAFT LENGTH*	
Cat. No.	Brass	Phenolic
1210	2 13/16"	3 ¾"
1211	3 9/16"	3 ¾"
1212	4 ½"	3 ¾"

* Measured from "C" Washer



Cat. No.
1213



Cat. No.
1214

Part No. 1210 replaces RCA part 71463

Part No. 1211 replaces RCA part 72743

Part No. 1212 replaces RCA part 201E1 for use with Tuner No. 71531

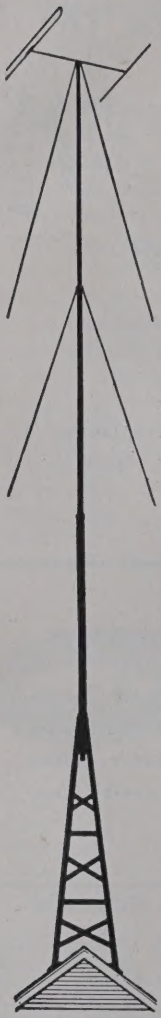
Part No. 1213 replaces RCA part 73440

Part No. 1214 replaces RCA part 75162

Cat. No.	List Price
1210	$2.80
1211	3.15
1212	4.15
1213	4.75
1214	4.00

Monitor

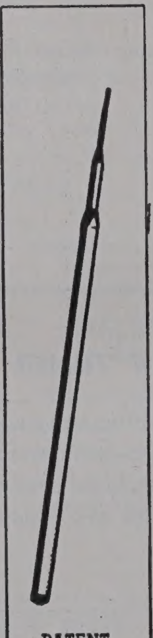
TOWERS FOR TELEVISION



MODEL 40 TK

Complete 40′ installation including 010 TK and 30 AM, described below. Tower 10′ high with especially designed 30′ telescoping mast allows for simple one man erection of antenna 40′ over a roof. Includes base to fit all roofs, self contained permanent ladder, two sturdy cast iron mast clamps adjustable for mast diameter 1″ to 2″, and guy washers. Exclusive built-in mast joint is simple, rigid. Safety catch holds mast during erection, installer has hands free. Heavily galvanized, built to withstand 80 mile wind. Shipped flat with major assembly done at factory.

Tower No.	Height	Wt. Lbs.	List Price	Net Dealer Price
40 TK	40′ (10′ Tower & 30′ mast)	80	$54.60	$32.76



PATENT APPLIED FOR

MODEL 30 AM

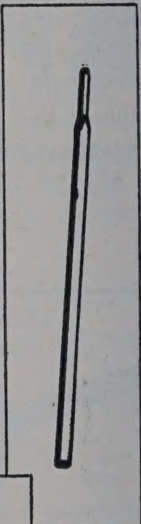
Economical 30′ three-section telescoping steel mast for simple, one man straight-up vertical erection, eliminating cumbersome tip-ups and high climbing. Special hardware makes tight rigid joints, and holds mast during erection, installer has hands free. Light and sturdy —will withstand 80 mile wind.

No.	Height	Wt. Lbs.	List Price	Dealer
30 AM	30′ Mast	30	$24.15	$14.49
31 AM	Roof Mount with 30′ Telescoping Mast	39	$31.95	19.17

MODEL 20 AM

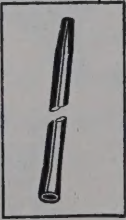
A two-section 20′ telescoping mast built the same as the 30 AM mast described above.

No.	Height	Wt. Lbs.	List Price	Dealer
20 AM	20′ Mast	20	$15.50	$9.30



PATENT APPLIED FOR

MODEL 10 AM



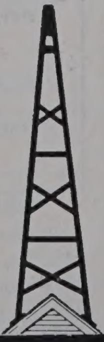
10′ sections of sturdy 1¼″ O.D. 18 gauge tubing with special Baker joint for stacking. The sections are rust proofed with Perma-tube coating inside and out.

No.	Height	Wt. Lbs.	List Price	Dealer
10 AM	10′ Mast	8	$3.80	$2.28

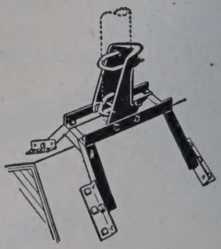
MODEL 010 TK

Self supporting steel tower 10′ high. Includes base to fit all roofs, self contained permanent ladder, and two sturdy mast clamps, spaced 16″ apart, adjustable for mast diameter 1″ to 2″. Folded flat for shipment. Heavily galvanized.

Tower No.	Height	Wt. Lbs.	List Price	Dealer
010 TK	10′ Tower	50	$36.49	$21.89



ROOF MOUNT



Fits any roof. Sturdy casting and two U bolts clamp firmly to base of mast, diameter 1″ to 2″ Mount pivots in 2 directions to allow double tip-up Built strong enough to support mast temporarily without guys during erection.

No.	Wt. Lbs.	List Price	Dealer
1 FM	9¼	$7.95	$4.77

BAKER MANUFACTURING COMPANY EVANSVILLE, WISCONSIN

Prices, F.O.B., Evansville, Wisconsin. Prices and specifications subject to change without notice.

RCA ELECTRONIC COMPONENTS

TELEVISION ANTENNAS

COMPLETELY NEW DESIGN — BUILT TO LAST RCA 12-CHANNEL TELEVISION ANTENNA — TYPE 215A1

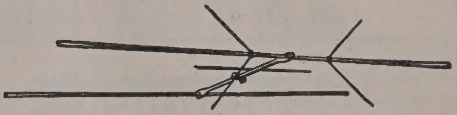
BASED UPON YEARS OF FIELD EXPERIENCE

• **Easily Assembled** • **Ruggedly Constructed** • **Uni-Directional**

Here's an RCA "Leader" to meet the majority of your everyday antenna needs. Engineered and developed by RCA for plus-value service, RCA-215A1 is intended for use in most receiver locations where both high and low-frequency stations are in the same general direction. Unique RCA "V" attachments provide uniform directional characteristics for all 12 channels.

RCA-215A1 12-Channel Television Antenna is simple in design and appearance. Sturdily built of aluminum, it will withstand high winds, sleet, and ice. Designed for use with 300-ohm transmission line, the 215A1 rates "A" for antenna achievement: — for over-all performance and unusually flat response over each of the two television bands.

Supplied with all necessary hardware but less mast. Completely illustrated instructions for installation are included.



215A1

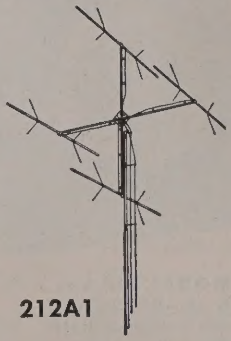
$13.50
Suggested List Price

THE RCA REVERSIBLE-BEAM TV ANTENNA ARRAY — TYPE 212A1

For Locations with Co-channel Interference

The RCA Reversible-Beam TV Antenna Array receives signals from only one direction at a time; eliminates co-channel interference where stations are approximately 180° apart. It also eliminates adjacent-channel interference where the receiver lacks selectivity. RCA-developed "V" attachments provide uniform directional characteristics for all twelve channels. A high overall front-to-back ratio is achieved through the use of driven elements, instead of parasitic elements. This design also makes possible the unique feature of lobe switching.

Sturdily built throughout of high-quality aluminum, the RCA Reversible-Beam Antenna consists of an array of four eight-foot dipoles in the form of a square. A dual transmission line connects the horizontal and vertical dipoles to an attractively packaged diplexing network located at the rear of the receiver. By the mere flick of a switch on the diplexer, antenna directivity can be reversed.

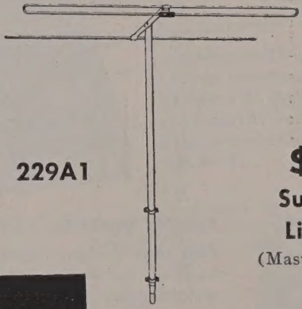


212A1

$59.50
Suggested List Price

RCA FM FOLDED-DIPOLE ANTENNA AND REFLECTOR

Engineered by RCA for use with FM receivers having a 300-ohm input, the RCA 229A1 has an unusually flat signal response providing efficient coverage of the entire FM band from 88 Mc to 108 Mc. Excellent for use in fringe area installations, the 229A1 has high uni-directional gain—maximum interference rejection in opposite direction—requires no adjustment of elements, and is easily oriented for maximum signal. Constructed of lightweight aluminum elements for greater durability . . . easy to install, no special tools needed. Complete with all hardware.



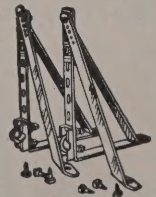
229A1

$7.60
Suggested List Price
(Mast not included)

ANTENNA ACCESSORIES

Antenna Mounting Brackets

Readily adjustable to permit mounting on any roof—regardless of overhang. Can be attached to brick, stone or wood. Entire bracket is plated with bright zinc, preventing rusting and subsequent staining of building surfaces. Special angular supports eliminate sagging. Stock No. 227A1. Sugg'd List Price: $6.75 per pair.

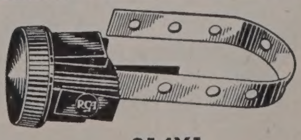


227A1

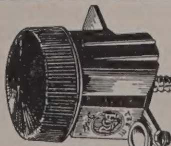
Twin-Lead Lightning Arrester

For use with FM and TV antennas. Easy to install—cutting or stripping of transmission line is unnecessary. Fits any ½"-2" pipe. Continually dissipates static surges. Does not unbalance line. Brown plastic case. Stock No. 214X1. Sugg'd List Price: $1.10.

New outdoor type arrester—wood screw firmly secured in body—no special tools needed. Stock No. 215X1. Sugg'd List Price: $1.25



214X1

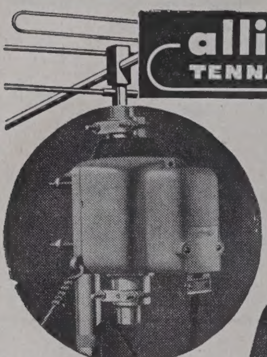


215X1

All prices in effect 3/1/51.

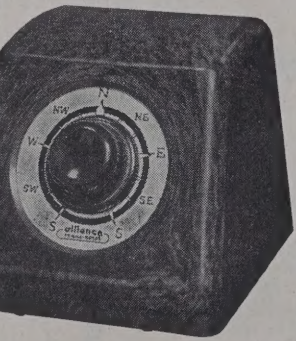
ALLIANCE TV PRODUCTS—Antenna Rotators • Boosters

ALLIANCE TENNA-ROTOR—3 MODELS
ALLIANCE TENNA-SCOPE—*NEW* BOOSTER

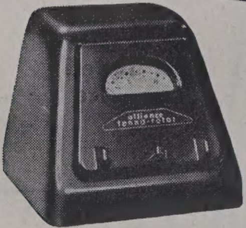


alliance TENNA • ROTOR

SEALED ROTATOR works in all weather—guaranteed one year—UL approved.



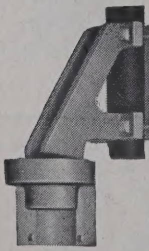
DELUXE MODEL HIR Directional Fully Automatic Rotator! "Just set it and forget it!" List . . . **$44.95**



MODEL DIR has N—E—W—S direction indicator dial! Especially noted for its extreme accuracy. UL approved! List . . . **$44.95**

TURN LEFT
TURN RIGHT
alliance

MODEL ATR—this standard model with illuminated screen. Shows when limit of travel in either direction is reached. One year guarantee—UL approved! List. . . . **$34.95**



THRUST BEARING BRACKET — (Model TBB) new design, recommended for the heavier installations, transfers antenna weight from rotor through mast to ground. Also, recommended with rotator for most 3-element manufactured 10 meter beams. List **$7.95**

OFF
CHANNEL
alliance

ALLIANCE TENNA-SCOPE BOOSTER—unusually high gain—one simple control—interference-rejecting—automatic on-off switch—performs on all channels. List **$29.95**

National TV Advertising Assures Consumer Acceptance!

- **MODEL HIR**—the ultimate, fully automatic Alliance Tenna-Rotor. Simply set pointer—antenna turns to that point and stops. Light moves along dial—shows antenna position while rotating. No fumbling or "hunting" for direction—eraseable dial provides directional marking. Quickly accessible connections on control box make for fast installation. N—E—W—S directions shown. By far the most practical and convenient rotator!

- **MODEL DIR**—provides positive accurate instant control of rotation—has direction indicator dial.

- **ALLIANCE TENNA-SCOPE**—new Alliance Booster with two tubes offers electronic features for maximum reception in both fringe and primary TV areas. Features exceptional high channel reception; uniformity of picture and sound. Superbly styled walnut plastic case blends with all furniture. Brings in more stations, clearer, brighter images, stronger signals—works with indoor or outdoor antenna. Low noise factor.

- Special Alliance 4-conductor "ZIP" cable can be used with all Alliance Tenna-Rotors to speed installation. Alliance TV products are backed by more national advertising than any other TV accessories! Alliance Tenna-Rotor is the universal rotator!

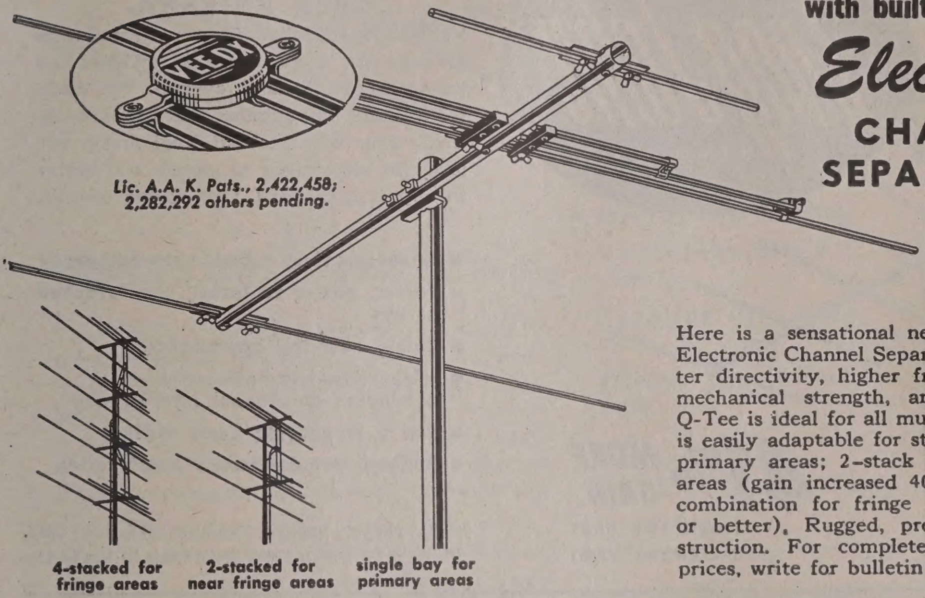
FOR COMPLETE DETAILED SPECIFICATIONS, BOTH ELECTRICAL AND MECHANICAL, ON EACH ALLIANCE PRODUCT—WRITE THE FACTORY FOR CATALOG SHEETS.

ALLIANCE MANUFACTURING COMPANY
ALLIANCE OHIO

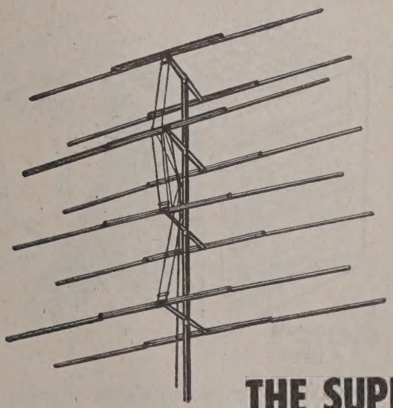
VEE-D-X Builders of The World's Most Powerful Antennas

New! VEE-D-X All-Channel Q-Tee

with built-in patented *Electronic* CHANNEL SEPARATORS


VEE-DX
Lic. A.A. K. Pats., 2,422,458; 2,282,292 others pending.
4-stacked for fringe areas
2-stacked for near fringe areas
single bay for primary areas

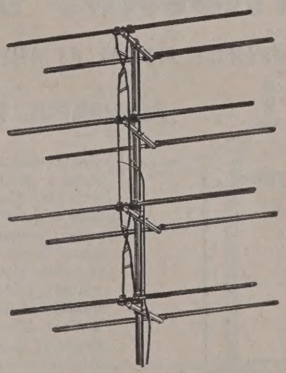
Here is a sensational new all-channel antenna with Electronic Channel Separators for increased gain, better directivity, higher front-to-back ratio, increased mechanical strength, and better appearance. The Q-Tee is ideal for all multi-channel requirements and is easily adaptable for stacked arrays—single bay for primary areas; 2-stack combination for near fringe areas (gain increased 40% or better); and 4-stack combination for fringe areas (gain increased 100% or better). Rugged, pre-assembled VEE-D-X construction. For complete technical information and prices, write for bulletin on the Q-Tee.



THE SUPER

MODEL RD-13A

Highest gain and most powerful all-channel television antenna ever manufactured. Holds every record for long distance reception. The Super is a four-bay, full wave, 32 element stacked array of extra heavy construction. Sharp beam angle minimizes ghosts, noise and co-channel interference. **$129.50** list.



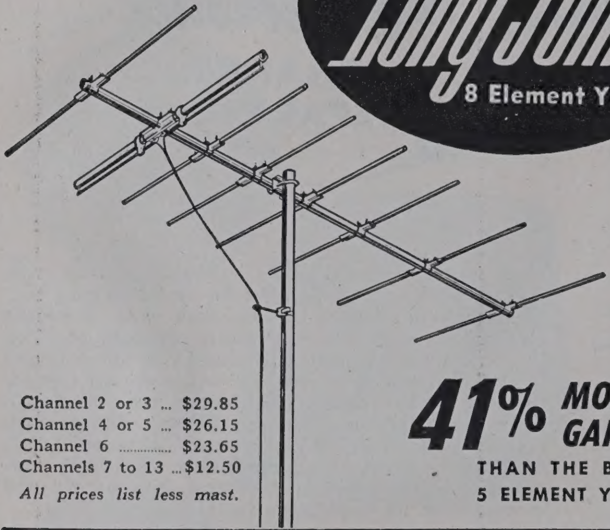
COLINEAR

Here is the lowest priced four-bay array ever manufactured. High gain all-channel performance. Pre-assembled construction. The ideal antenna where powerful multi-channel reception is required. Complete with attached phasing harness, less mast. **$26.13** list

THE LaPOINTE-PLASCOMOLD CORPORATION, ROCKVILLE, CONNECTICUT

VEE-D-X Builders of The World's Most Powerful Antennas

Now! EXTRA POWER *for single channel reception . . .*



NEW VEE-D-X
Long John
8 Element Yagi

Channel 2 or 3 ... $29.85
Channel 4 or 5 ... $26.15
Channel 6 .... $23.65
Channels 7 to 13 ... $12.50
All prices list less mast.

41% MORE GAIN
THAN THE BEST 5 ELEMENT YAGI

THE GREAT NEW FRINGE AREA ANTENNA

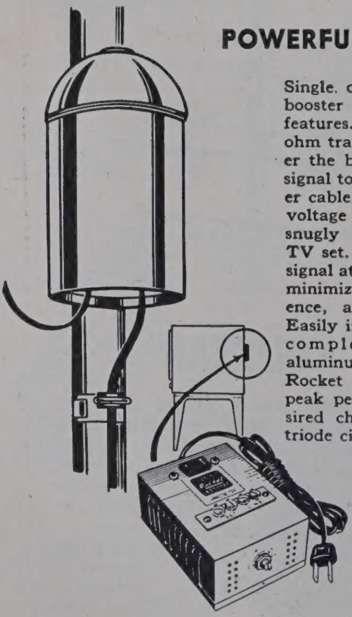
VEE-D-X engineers have perfected this entirely new 8 element Yagi to meet the increasing demands throughout the trade for a single bay antenna that produces as much gain as a stacked Yagi array, yet lower in cost, easier to install, and better in appearance. Long John is the answer.

- **Costs less than a double-stacked array**
- **Faster, easier to install than stacked arrays**
- **Better roof-top appearance**
- **Higher front-to-back ratio—eliminates co-channel interference**
- **Full 6 megacycle band width**
- **Rugged, pre-assembled construction**

SPECIAL PHASING HARNESS PRODUCES 50% MORE GAIN IN DOUBLE-STACKED LONG JOHN THAN IN SINGLE LJ

NEW *ROCKET* BOOSTER

PRE-AMPLIFIES SIGNAL AT ANTENNA HEIGHT

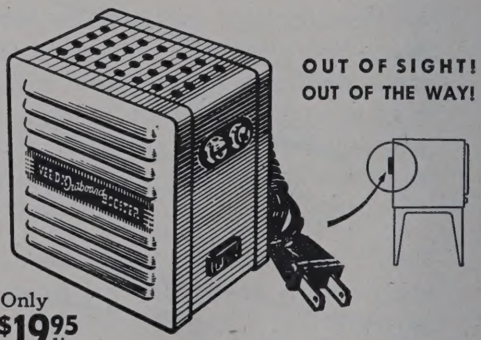


POWERFUL 18 db GAIN

Single channel mast-mounted booster with exclusive new features. Uses *only one* 300 ohm transmission line to power the booster unit and bring signal to set. No separate power cable. Control unit has line voltage compensator and fits snugly against back of any TV set. The Rocket amplifies signal at antenna height which minimizes line noise, interference, and signal instability. Easily installed mast unit has completely weather-proof aluminum case, *not steel.* The Rocket is factory pre-set for peak performance on any desired channel. Push-pull 6J6 triode circuit.

ONLY
$34.95 LIST
COMPLETE WITH POWER UNIT

OUTBOARD BOOSTER



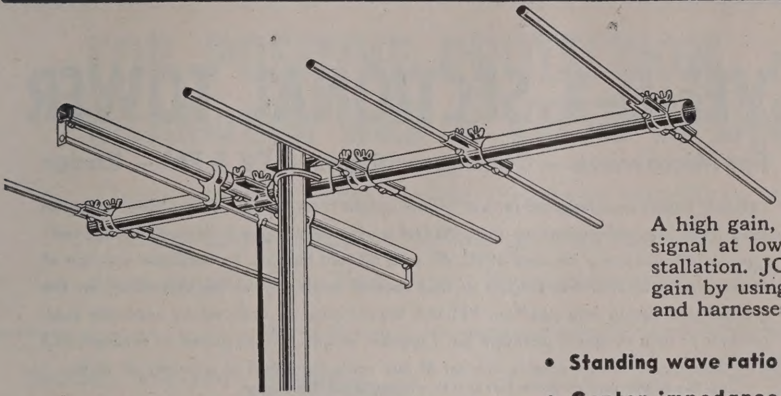
OUT OF SIGHT!
OUT OF THE WAY!

Only
$19.95 list

Powerful set-mounted single channel booster. Pre-set for any desired channel, the VEE-D-X Outboard costs much less than any tuned booster, yet delivers 18 db gain with full 5 megacycle band width. Individual slug tuned grid and plate coils assure perfect alignment—6J6 push-pull cross-neutralized amplifier will not oscillate—unique RF assembly is compact and precision engineered. Prevents re-radiation. No special tuning tool required.

THE LaPOINTE-PLASCOMOLD CORPORATION, ROCKVILLE, CONNECTICUT

VEE-D-X Builders of The World's Most Powerful Antennas



JC YAGI

SINGLE BAY 5 ELEMENT

A high gain, 5 element Yagi that provides powerful signal at low cost. Pre-assembled for fast, easy installation. JC Yagis may be stacked for additional gain by using VEE-D-X phasing harness. Antennas and harnesses are ordered by channel number.

WORLD'S MOST POPULAR YAGI

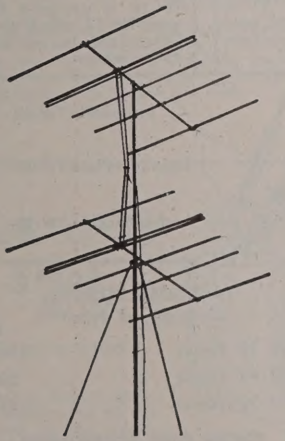
The VEE-D-X JC is by far the most popular Yagi for performance, construction and ease of installation. Perfected by VEE-D-X engineers in collaboration with a foremost authority on wave propagation, these stacked arrays make a world of difference in picture quality. Choice of array depends on area terrain and reception conditions.

- **Standing wave ratio 1.28**
- **Center impedance 317 ohms**
- **Supplied with mast clamp**
- **Excellent signal-to-noise ratio**
- **Most compact five element beam on the market**
- **High forward gain**
- **All screws and miscellaneous hardware cadmium-plated to prevent electrolysis and rusting**

JC—Low Channels	**$17.60** list
JC—High Channels	**$ 9.57** list

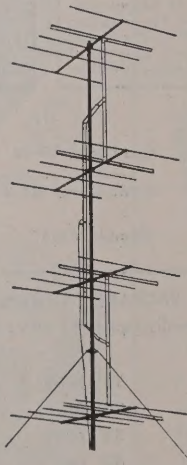
STACKED ARRAYS *FOR EXTRA POWER*

FOR SINGLE CHANNEL PERFORMANCE



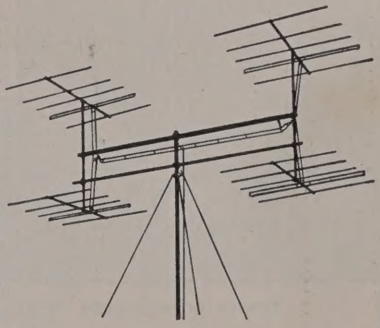
Double-stacked JC array with half-wave spacing. Provides added gain and better signal-to-noise ratio.

***JH** Harness	
High Channel	**$1.45** list
Low Channel	**$2.30** list



Four-stacked vertical JC array provides extremely high gain and excellent improvement of signal-to-noise ratio. Ideal for long distance reception areas with relatively flat terrain.

***JHVA** Vertical Harness	
High Channel	**$ 7.05** list
Low Channel	**$10.35** list



Four-stacked side-by-side array. Ideal for powerful long distance reception in hilly and mountainous terrain.

***JHHA** Horizontal Harness	
High Channel	**$16.75** list
Low Channel	**$20.05** list

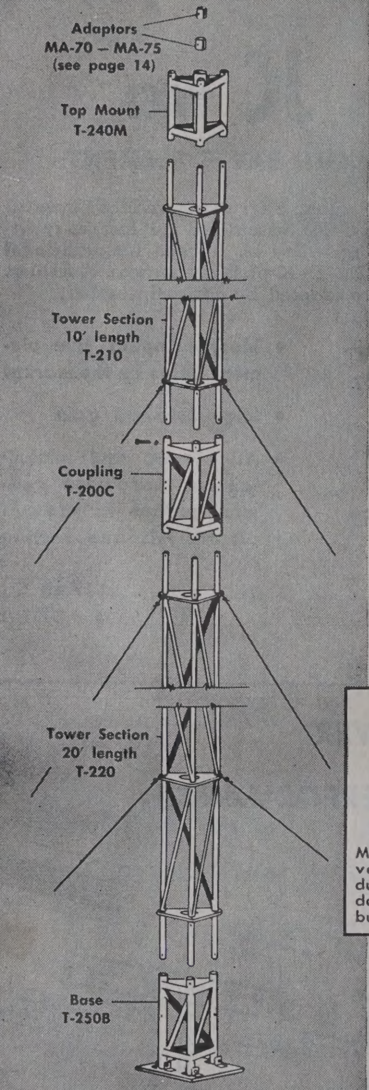
SHARP, CLEAR PICTURES

The new vertical and horizontal four-stacked JC Yagis have produced sharp, clear pictures at amazing distances. Four JC antennas stacked provide 55% more gain than the double-stacked. They were developed to reduce noise interference to a minimum and provide still higher gain in difficult reception areas. Choice of array depends on area terrain and conditions.

****Be sure to specify Channel Number when ordering harness.***

THE LaPOINTE-PLASCOMOLD CORPORATION, ROCKVILLE, CONNECTICUT

VEE-D-X *Builders of The World's Most Powerful Antennas*



VEE-D-X SECTIONAL TOWER

For Microwave — Communications — TV & FM — Radar

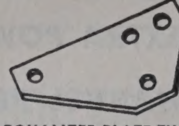
VEE-D-X towers are designed for use at any height from 10 to 200 feet, depending on load. They are self-supporting up to 20 feet and, where space is limited, semi-guyed* type installations may be used at 30, 40, and 50 foot heights. To facilitate erection of tower, the base mount is hinged so that several sections may be assembled on the ground and swung into position. VEE-D-X towers may be ordered by separate components or as a complete package for a specific height. (Either guyed or semi-guyed.)

* Semi-guyed towers employ one set of guy cables attached at a height of 10 ft. up the tower and anchored at a 6 ft. radius from the base.

- **Rugged, all-welded construction diagonally laced with angle iron for maximum rigidity.**
- **Can be erected on ground or on flat or peaked roof.**
- **Patented plate spaced at two foot intervals prevents twisting and affords rigidity found in no other tower.**
- **Safe and easy to climb.**
- **Completely galvanized, light weight tubular steel . . . 20 ft. section 80 lbs.**

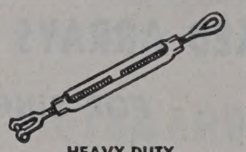
Write for additional engineering and construction data.

ACCESSORIES FOR GUYING VEE-D-X TOWER



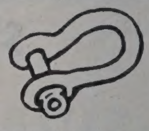
EQUALIZER PLATE TW-15

Manufactured of heavy galvanized steel for rugged duty. Designed to accommodate three heavy duty turnbuckles and anchor shackle.



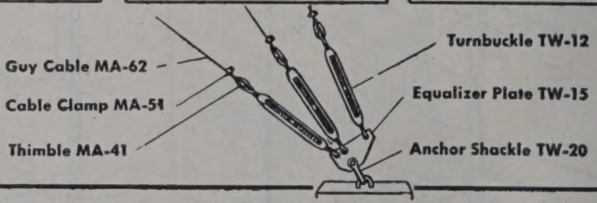
HEAVY DUTY TURNBUCKLE TW-12

Made from forged steel, galvanized to prevent rust. Jaw and eye type ½" x 6".



ANCHOR SHACKLE TW-20

Heavy duty anchor shackle TW-20 is designed for use with TW-15 equalizer plate. Galvanized to prevent rust and corrosion.



TOWER COMPONENTS

		List
T-200C	Coupling	$9.55
T-210	Tower Section 10' length	36.75
T-220	Tower Section 20' length	73.65
T-320	Tower Section 20' length	90.35
T-240M	Top Mount for 2" OD Mast	9.85
T-424M	Top Mount for 2¼" OD Mast	10.55
T-428M	Top Mount for MA-120 Rotator Adaptor	14.55
T-434M	Top Mount for 2½" OD Mast	11.55
T-250B	Base	16.75

PACKAGED TOWERS
(Normally Equipped with T-240M)

		List
PTG-10	10' Tower	$63.35
PTG-20	20' Tower	100.25
PTG-30	30' Tower	146.55
PTG-40	40' Tower	183.45
PTG-50	50' Tower	229.75
PTG-60	60' Tower	266.65
PTG-70	70' Tower	312.95
PTG-80	80' Tower	349.85
PTG-90	90' Tower	396.15
PTG-100	100' Tower	433.05

PRICES ON TOWER ERECTION COMPONENTS (Packaged Guy Equipment) AVAILABLE UPON REQUEST.

PACKAGED TOWERS
(Semi-guyed Type)

		List
PTS-30	30' Tower	$163.25
PTS-40	40' Tower	200.15
PTS-50	50' Tower	246.50

TOWER GUY ACCESSORIES

TW-12	½" x 6" Heavy Duty Forged Turnbuckle	4.30
TW-15	3-Guy Equalizer Plate	3.35
TW-20	½" Anchor Shackle (round pin)	2.50
MA-41	¼" Thimble	14.00/C
MA-51	¼" Cable Clamp	30.00/C
MA-62	¼" Guy Cable	67.50/M

THE LaPOINTE-PLASCOMOLD CORPORATION, ROCKVILLE, CONNECTICUT

VEE-D-X Builders of The World's Most Powerful Antennas

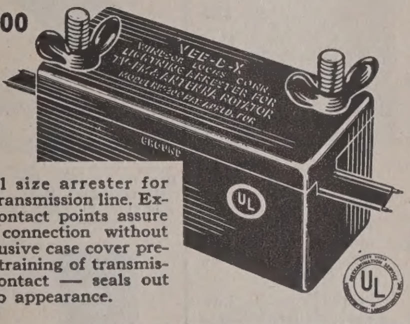
FOR POSITIVE PROTECTION...equip every TV installation with a VEE-D-X Lightning Arrester

These are the finest, safest lightning arresters made for TV and FM, offering unmatched value and protection. Full size—no midgets trying to do a giant's job. Fast, easy line connections. All arresters UL approved.

MODEL RW-200

$1.25 LIST

UL Approved

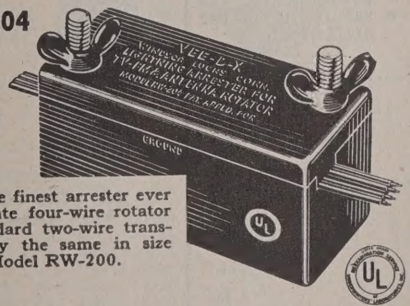

VEE-D-X
WINDSOR LOCKS CONN.
LIGHTNING ARRESTER FOR
TV-FM & ANTENNA ROTATOR
MODEL RW-200 PAT. APPLD. FOR
GROUND
UL

Most popular full size arrester for standard two-wire transmission line. Exclusive saw-tooth contact points assure positive electrical connection without wire stripping. Exclusive case cover prevents pulling and straining of transmission line against contact — seals out moisture — adds to appearance.

MODEL RW-204

$1.50 LIST

UL Approved

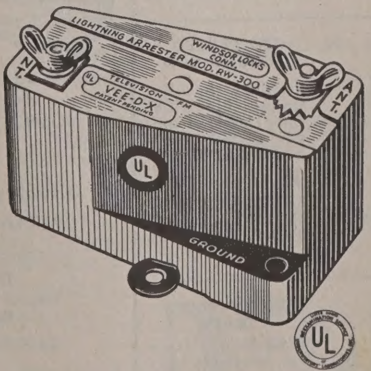

VEE-D-X
WINDSOR LOCKS CONN.
LIGHTNING ARRESTER FOR
TV-FM & ANTENNA ROTATOR
MODEL RW-204 PAT. APPLD. FOR
GROUND
UL

The first and still the finest arrester ever made to accommodate four-wire rotator line as well as standard two-wire transmission line. Exactly the same in size and appearance as Model RW-200.

MODEL RW-300

$2.00 LIST

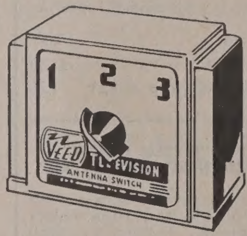
UL Approved


LIGHTNING ARRESTER MOD. RW-300
WINDSOR LOCKS CONN.
TELEVISION — FM
VEE-D-X
PATENT PENDING
ANT.
ANT.
GROUND
UL

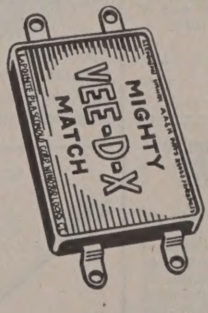
For extra heavy duty. First arrester to be introduced to the television trade. It is the time-accepted standard with TV installation men everywhere. Air gap plus resistors provide double protection.

Models RW-200 and RW-204 available with strap for mast or pipe mounting as well as standard models for wall or window ledge. No wire stripping required on any VEE-D-X arrester.

3-WAY ANTENNA SWITCH


1
2
3
VEED
TELEVISION
ANTENNA SWITCH

3-way switch for stacked arrays or multiple antennas. Instant changeover to each antenna. Attractive mahogany plastic case. **$4.95** list


MIGHTY
VEE-D-X
MATCH
LAPOINTE PLASCOMOLD CORP.

New! Improved MIGHTY MATCH

Lic. A.A. K. Pats., 2,422,458; 2,282,292 others pending.

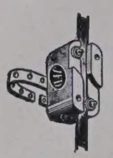
Here it is! The new, improved MIGHTY MATCH that permits the use of a single 300 ohm transmission line between separate high and low channel antennas mounted on the same mast. Saves transmission line — saves installation time and money — saves extra accessory costs. Now, a compact single unit, 3¼ inches long, 2¼ inches wide, and ¼ inch thick, replaces the former four cartridge style. Firehouse-red, weather-proof polystyrene case houses die stamped circuit.

THE LaPOINTE-PLASCOMOLD CORPORATION, ROCKVILLE, CONNECTICUT

JFD TELEVISION BRACKETS & ACCESSORIES

JFD JUMBO LIGHTNING ARRESTERS

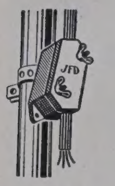
UL Approved



For use either indoors or outdoors. Universal mounting. With 4' aluminum ground wire and hanger strap.

No.	List
AT102 (for ribbon twin lead)	$2.25
AT103 (oval jumbo & tubular twin lead)	$2.25

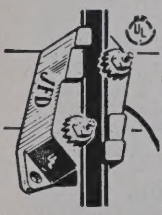
JFD 4-WIRE 8-CONTACT LIGHTNING ARRESTERS



Especially designed for antenna rotator installations. No wire cutting or stripping. High dielectric plastic.

No.	List
AT104	$1.50
AT104S (with strap)	1.75

JFD "LITTLE GIANT" LIGHTNING ARRESTERS

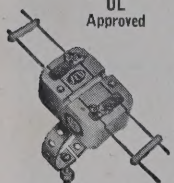


Mounts anywhere. Compact yet superbly efficient. High dielectric plastic. Features patented retaining flange. For ribbon and oval jumbo twin lead.

No.	List
AT105	$1.25
AT105S (with strap)	1.50

JFD OPEN WIRE LIGHTNING ARRESTER

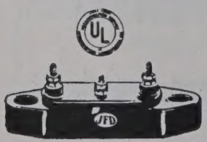
UL Approved



Especially developed for open wire installation. Patented strain-relief design. Universal Mounting. Complete with hanger and 4' aluminum ground wire.

No.	List
AT107	$3.50

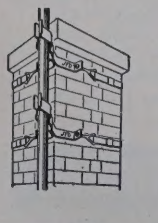
JFD DOUBLET LIGHTNING ARRESTER



Fits most types of radio and TV lead-ins. Especially designed to match all antennas. Quick, very easy installation. Non-hyroscopic porcelain construction.

No.	List
403	$0.75

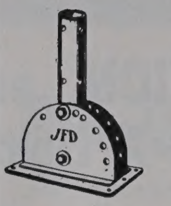
JFD SNAP-FIT CHIMNEY MOUNT



Snap the mast in place for instant set-up. Made of heavy gauge steel. Supports all masts up to 1¾" OD. Complete with two 12' mounting straps and all necessary hardware.

No.	List
BR6	$3.95

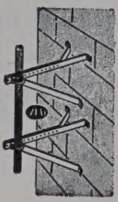
JFD ANTENNA BASE MOUNT



Mounts masts anywhere. Permits mast setting at any angle. Heavy gauge, galvanized steel.

No.	List
BR8 (up to 1⅝" Masts)	$7.50
BR8-2¼ (up to 2¼" Masts)	8.50

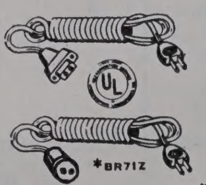
JFD ADJUSTABLE WALL MOUNT



Ideal for clearing eaves and other projections. Anchors ⅞" to 1⅝" masts securely. Heavy gauge, rust resistant steel.

No.	List
BR11 (6" to 15" wall clearance)	$7.50
BR11X (extension for 15"-24" clearance)	3.00

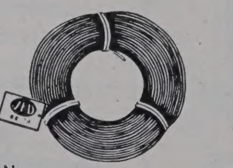
JFD AC SAFETY CORD



Cuts off line voltage when TV receiver is opened. For use with the JFD Interlock Plug No. BR75.

No.		List
BR71-6	(6')	$0.75
BR71-9	(9')	1.01
BR71-12	(12')	1.22
BR71-15	(15')	1.43
* BR71Z	(Spec. Zenith)	1.00

JFD No. 8 ALUMINUM GROUND WIRE



Ductile solid aluminum wire for grounding. Approved by National Electrical Code.

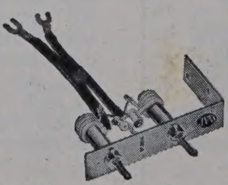
No.		List
BR79-100	(100 ft.)	$ 3.00
BR79-500	(500 ft.)	14.00
BR79-3000	(3000 ft.)	26.00 per M ft.

JFD PLATED GROUND ROD

Required by National Electrical Code. Made of copper-plated heavy gauge steel ⅜" OD.

No.	List
BR80-4 (4 ft.)	$1.50
BR80-6 (6 ft.)	2.25
BR80-8 (8 ft. ½" OD)	4.25

JFD TV WAVE TRAPS



BR106-10-30 Traps out amateur Harmonic Interference.

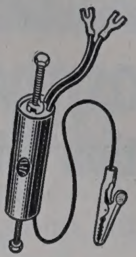
BR106-80-110 Traps out FM Image Interference.

BR106-30-60 Traps out 30-60 mc. amateur Harmonic Interference.

BR106-60-90 Traps out 60-90 mc. Diathermy Interference.

List Price **$2.75**

JFD PICTURE CLARIFIER

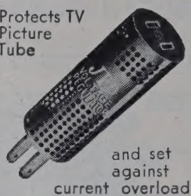


Filters out annoying TV interference.

No.	List
BR120-10-30 (14-28 mc. Band Interf.)	$2.75
BR120-80-110 (FM Image Interf.)	2.75
BR120-30-60 (30-60 mc. Interf.)	2.75
BR120-60-90 (60-90 mc. Interf.)	2.75

JFD TV VOLTAGE REGULATORS

Protects TV Picture Tube

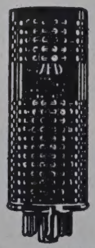


and set against current overload

Produces steadier TV pictures despite line voltage changes. Operates on 110v AC or DC.

No.	Watts	TV-Set	List
94-4	200	7"	$2.85
94-5	250	9"-10"	2.85
93-7	300	12"-16"	2.85
93-8	375	16"-24"	2.85

Use the Ballast the Manufacturers Use in their Original Equipment



List ea. $2.25

JFD TV BALLAST

Emerson: 397021, 397022, 397023, 571,606, *397036.

Teletone: TBR102D, TBR103D, TBR104D.

Stewart-Warner: SW-507300.

Pilot: 35-37.

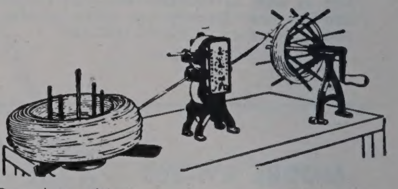
Electromatic: 408100.

Motorola: 17A470303, 17A-485459.

Raytheon-Belmont: B9M16534, B9M15822, B9M16067, B9M17571, B9M18941.

Emerson: No. 397036 Only ($1.25)

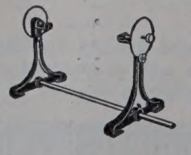
JFD WIRE MEASURING OUTFIT
Save Wire . . Work . . . Time



Complete with Reel, Measuring Machine, Wire Winder. Measures accurately. Sets up in no time at all. Operates simply, smoothly and silently.

No.		List
66C	(Complete)	$125.00
66M	(With Metric Scale for Foreign Use)	175.00

JFD "REPAIRACK"
Not a Gadget, But a Sturdy Serviceman's Tool!

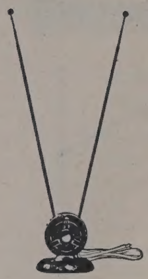


Holds television, FM, radio and phono turntable chassis securely in position. Rotates freely and permits access to remotest corners of set. Rigidly supports up to 200 lbs. in weight.

No.	List
79-3	$28.00

JFD TELEVISION BRACKETS & ACCESSORIES

JFD "PANORAMA" INDOOR TV ANTENNAS

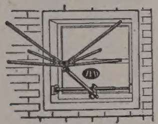


Absolutely Tip-Proof!

Strikingly attractive! All-channel reception. 3 Section triple chrome plated dipoles.

No.	List
TA135 Deluxe	$6.95
TA136 Standard	5.95
TA138 Economy	5.50

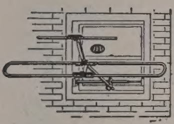
JFD "QUIK-RIG" WINDOW CONICAL



Simple installation! Immediate operation! Delivers fine all channel reception.

No	List
C119	$12.35
EX119 (Extension for 5' windows)	2.50
EX30 (Extension for 6' windows)	3.50

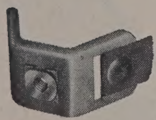
JFD HI-LOW WINDOW ANTENNA



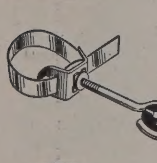
Delivers excellent reception on all 12 channels. Hi-band dipoles adjustable to conical V pattern.

No.	List
C120	$12.35
EX119 (Extension for 5' windows)	2.50
EX30 (Extension for 6' windows)	3.50

JFD "NUT" UNIVERSAL STAND-OFF IT'S THE NUT THAT COUNTS!

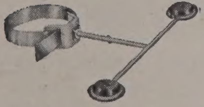


Makes all other screw-eyes obsolete! Six — count 'em — six cleanly machined threads. Beveled Arch-Bridge construction. Bright zinc-coated steel. Galvanized steel strap.



For Single Twin Lead

No.	List
NUT350 (3½")	$.19
NUT550 (5½")	.24
NUT750 (7½")	.25
NUT1200 (12")	.46



For Dual Twin Lead

No.	List
DNUT350 (3½")	.35
DNUT550 (5½")	.39
DNUT750 (7½")	.40
DNUT1200 (12")	.55

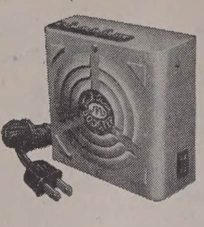
For Coaxial Cable, Substitute R for T in No.

JFD TELE-TWIN SET COUPLER

Couples two sets to one antenna. Strong signal reception. Simple to set up. 72 or 300 ohm input and either two 300 ohm outputs or four 72 ohm outputs.

No.	List
TT2-300	$5.95

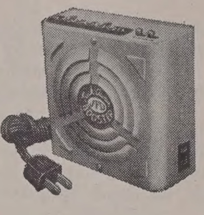
JFD 'VB' SINGLE CHANNEL TUCK-AWAY TV BOOSTER



Pre-tuned for up to 20 db gain. Best single channel booster buy.

No.	List
VB2, VB3, VB4, VB4-5 VB5, VB6 VB7, VB8 VB9, VB10 VB11, VB12, VB13	$19.95

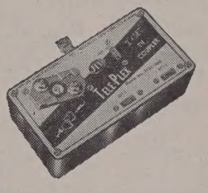
JFD 'SW' SINGLE CHANNEL TUCK-AWAY TV BOOSTER



Up to 20 db gain. Single channel booster with By-Pass switch for use in all areas, including Multi-Channel locations.

No.	List
SW2, SW3 SW4, SW4-5 SW5, SW6 SW7, SW8 SW9, SW10 SW11, SW12, SW13	$23.95

JFD TELEPLEX 2 SET COUPLER



Instantly hooks up two TV sets for operation from single 300 ohm antenna. No loss in signal strength. Built-in lightning arrester, too. Complete with connectors.

No. TC2L-300 List $11.95

JFD TELEPLEX 4-SET COUPLER

Provides reception on four sets from single antenna. Lightning arrester built in. Complete with connectors.

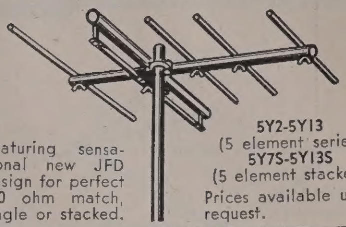
No.	List
TC4L-300 (300 ohm)	$12.95
TC4L-72 (72 ohm)	12.95

JFD ANTENNA SELECTOR

Offers maximum use of multiple antenna installations. Quick, easy, low-loss switching.

No.	List
AS3 (For 3 Antennas)	4.95
AS4 (For 4 Antennas)	5.95

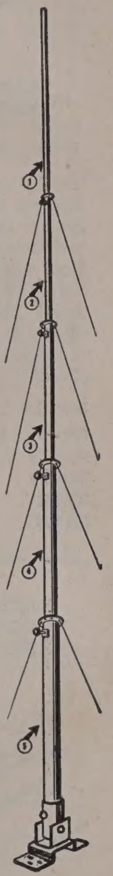
JFD "CORSAIR" 5 & 4 Element Yagis



Featuring sensational new JFD design for perfect 300 ohm match, single or stacked.

5Y2-5Y13
(5 element series)
5Y7S-5Y13S
(5 element stacked)
Prices available upon request.

JFD "ZOOM-UP" TELESCOPING MAST



Get Antennas Up — High as 50 Feet!

Section 1. (16 Gauge) 10 ft. 1¼" OD — .065 Wall

Section 2. (16 Gauge) 10 ft. 1½" OD — .065 Wall

Section 3. (16 Gauge) 10 ft. 1¾" OD — .065 Wall

Section 4. (16 Gauge) 10 ft. 2" OD — .065 Wall

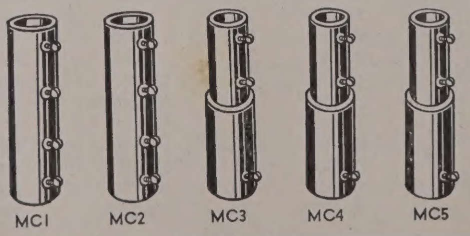
Section 5. (16 Gauge) 10 ft. 2¼" OD — .065 Wall

Rigid, Strong, Secure. Comes to you collapsed, all welded nuts in position. Complete with heavy duty supporting bolts and hardware. Insures permanent antenna installation.

No.	Sections	List
ZU12-20	1 and 2 (20 ft.)	$12.50
ZU23-20	2 and 3 (20 ft.)	15.28
ZU34-20	3 and 4 (20 ft.)	22.08
ZU123-30	1, 2 and 3 (30 ft.)	29.03
ZU234-30	2, 3 and 4 (30 ft.)	29.03
ZU1234-40	1, 2, 3 and 4 (40 ft.)	34.72
*ZU12345-50	1, 2, 3, 4 and 5 (50 ft.)	52.78

*Complete with Combination Base and Peak Roof Mount Model ZUB2¼.

JFD MAST COUPLERS

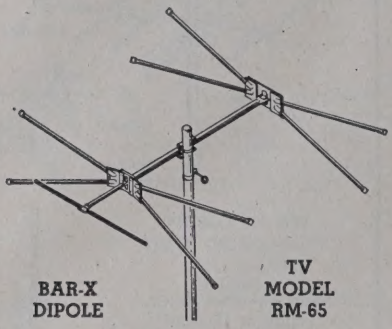


Cast aluminum. Will securely join two mast sections of either same or different diameters.

No.	Mast Size	List
MC1	1" EMT to 1" EMT	$2.25
MC2	1¼" OD to 1¼" OD	2.25
MC3	1¼" OD to 1½" OD	2.75
MC4	1¼" EMT to 1½"EMT	2.75
MC5	1" EMT to 1¼" EMT	2.50

RADELCO AERIALS

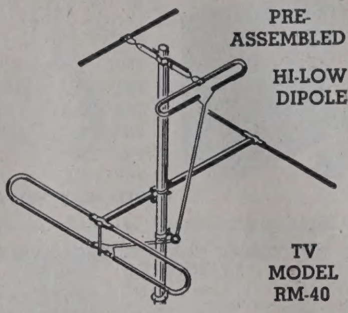
RADELCO
CLEVELAND



NOW PREASSEMBLED!

Vastly superior to ordinary conicals! Director Bar in front of receiving dipole greatly increases signal strength on high channels. Rugged 1¼" galvanized steel mast with 1" cross boom. Heavy duty construction throughout. Aluminum elements specially engineered to reduce vibration and noise. Accessories consist of swivel base, guy ring and clamp-type standoff insulator.

Model	List	Description
RM-65	**$10.95**	10' mast and accessories.
RM-65S	**8.95**	5' mast only.
RM-652	**19.25**	2 bays, 10' mast and acc.
RS-751	**7.45**	Single array only.
RS-752	**15.75**	2 bays, jumper bars.



A fine general purpose antenna for local and near fringe reception. Ruggedly constructed with 1¼" galvanized steel mast and heavy duty 1" galvanized steel cross beam.

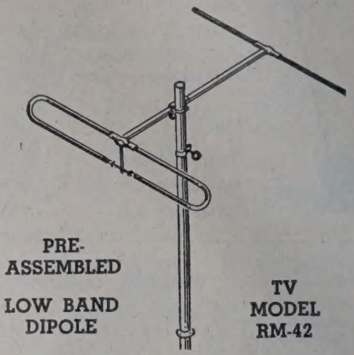
Model RM-40 includes two 5-ft. sections of 1¼" mast, swivel base, guy ring, clamp-type standoff insulator, jumper cable and arrays.

Model RM-40S includes high and low channel arrays and 5-ft. mast only.

Model	List	Ship. Wt.
RM-40	**$10.95**	9.2 lbs.
RM-40S	**8.95**	7.5 lbs.

HIGH BAND ARRAY ONLY

Model	List	Freq.	Ship. Wt.
RT-51	**$2.50**	74-216 mc.	1.3 lbs.



Ideal for local and near fringe areas where only low channels are operating. Add RT-51 array for high channel reception. Same rugged construction as RM-40.

Model RM-42 includes two 5-ft. sections of 1¼" galvanized steel mast, swivel base, guy ring, clamp-type standoff insulator and low channel array.

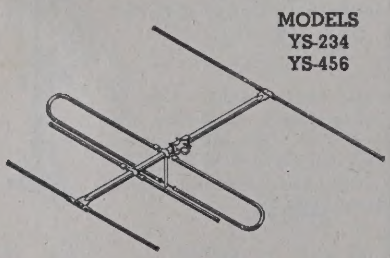
Model RM-42S includes low channel array and 5-ft. most only.

Model	List	Ship. Wt.
RM-42	**$8.95**	8.8 lbs.
RM-42S	**7.45**	6.2 lbs.

LOW BAND ARRAY ONLY

Model	List	Freq.	Ship. Wt.
RS-52	**$5.95**	54-88 mc.	4.5 lbs.

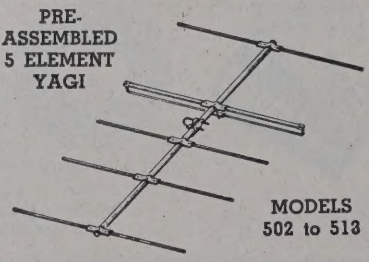
RADELCO TRI-CHANNEL YAGI COVERS THREE CHANNELS INSTEAD OF ONLY ONE!



NOW PREASSEMBLED!

Radelco Tri-Channel Yagi covers 3 channels instead of only one! High gain with flat response across 3 channels instead of high gain at the center of one channel only. Guaranteed to absolutely show no side band cutting. Impedance is practically constant at 300 ohms across the full three channel coverage. Ideally suited for stacking. In many cities the Tri-Channel Yagi will do the work of two antennas.

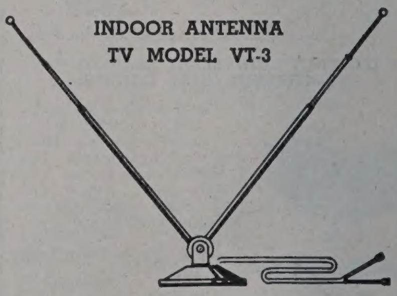
Model	List	MC.	Channels	Wt.
YS-234	**$11.45**	54-72	2-3-4	6.1 lbs.
YS-456	**10.45**	66-88	4-5-6	5.5 lbs.



The ideal aerial for extreme fringe areas. Custom cut. Five heavy-duty aluminum elements pre-assembled on 1" steel boom. U-bolt mounting assembly accommodates up to 1½" mast.

Model	Chan.	Mc.	List
YS-502	2	54-60	**$13.50**
YS-503	3	60-66	**12.75**
YS-504	4	66-72	**12.00**
YS-505	5	76-82	**11.25**
YS-506	6	82-88	**10.50**
YS-507	7	174-180	**7.00**
YS-508	8	180-186	**7.00**
YS-509	9	186-192	**7.00**
YS-510	10	192-198	**7.00**
YS-511	11	198-204	**7.00**
YS-512	12	204-210	**7.00**
YS-513	13	210-216	**7.00**

INDOOR ANTENNA TV MODEL VT-3



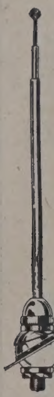
The Radelco VT-3 is a high quality antenna made with three sections of chrome-plated seamless brass tubing to provide excellent indoor reception.

The VT-3 has a heavily weighted mahogany lacquered base and is smartly designed to harmonize with all furnishings. The VT-3 is equipped with 5-ft. lead and is individually packed in a corrugated carton.

Attractively priced at the low list of $4.25 . . . makes it one of the finest values today in indoor antennas.

Model	List	Ship. Wt.
VT-3	**$4.25**	1.4 lbs.

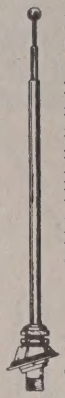
RADELCO AERIALS



MONARCH
Cowl-Fender

Model MH-3—Ball-joint metal mounting base, adjustable from flat to 30°. Base sufficiently large to cover largest holes. Lovely chrome finish. Waterproof construction. Holds angular adjustment permanently. 36″ cable.

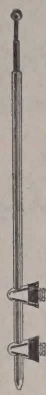
Model	Sec.	List
MH-3	3-57″	**$5.65**
MH-3A	3-70″	**6.25**



ROTOLOK
Cowl-Fender

Model CO-3A — Easy mounting, all tightening outside. Half-inch mounting hole. Chrome-plated mounting base. Exclusive VISE-LOCK eliminates clumsy braces. Fits any fender or top cowl. 36″ Radar type cable.

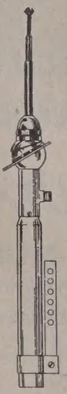
Model	Sec.	List
CO-3A	3-57″	**$5.15**



CHAMPION
Side Cowl

Model CS-3 — A competitively priced aerial built to RADELCO's high quality standard. Chrome-plated brass tubing. Shielded polyethylene cable with black cover. Screw-on connector and chrome capped insulators.

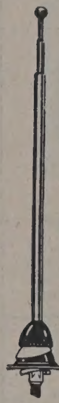
Model	Sec.	List
CS-3	3-60′	**$3.85**



CONCEALED
Cowl-Fender

Model FD-3, 3A — Chrome-plated all-metal adjustable mounting base. Strong, non-crushable! Waterproof, electrically efficient, guaranteed trouble free. 48″ Radar cable.

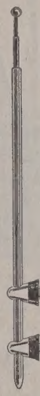
Model	Sec.	List
FD-3	3-4″-55″	**$7.45**
FD-3A	3-9″-68″	**$7.95**



"SCREW BALL"
Cowl-Fender

New, entirely different! Installed entirely from outside by only one man. The screw portion of the assembly assures quick and economical installation. The ball portion provides angular adjustment for every type of fender or cowl contour.

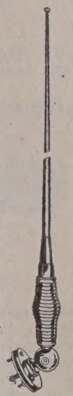
Model	Sec.	List
EZ-3	3-57″	**$4.95**



DELUXE
Side Cowl

Model RAD-3, 4, 5 — Built to superior quality standards. Automotive specification chrome-plate. Low loss 100% shielded 36″ Radar cable with screw-on connectors.

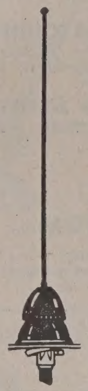
Model	Sec.	List
RAD-3	3-70″	**$5.15**
RAD-4	4-92″	**$6.25**
RAD-5	5-112″	**$7.25**



COMMUNICATION
Antenna

Built for the hardest mobile use.

SWIVEL BASE	
MB-1	**List $5.00**
SWIVEL BASE AND SPRING	
MB-2	**List $7.25**
STEEL MASTS	
MM-60	**List $5.75**
MM-72	**List $5.75**
MM-84	**List $6.00**
MM-96	**List $6.75**
BASE SPRINGS Regular	
MBS-1	**List $2.25**
Heavy Duty	
MBS-2	**List $3.25**



ROOF TOP
Communication

Quick mounting roof top antenna, embodying the exclusive "Screw-ball" feature for ease of installation. Installed entirely from the outside. Complete with 11′ of coaxial cable.

Model	Freq.	List
MR-1	152-163 mc.	**$4.95**

F-254 FORD REPLACEMENT MAST

For 1941-42-46-47 Ford-Mercury Roof Antenna that operates behind windshield center post.

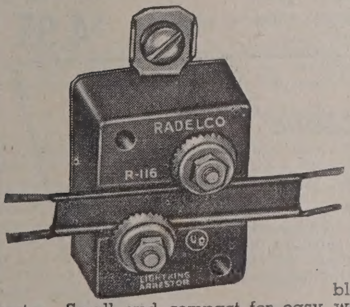
F-254	**List $2.25**	**2 Sec.**	**54″**

B-448 BUICK REPLACEMENT MAST

Replacement mast for roof aerials on all Buicks 1940 to present.

B-448	**List $2.75**	**4 Sec.**	**45″**

★ ★ ★ RADELCO TV & FM ITEMS ★ ★ ★



RADELCO LIGHTNING ARRESTOR R-116

List $ .90

Combination resistance bleeder and gap-type arrestor. Small and compact for easy wall installation. Arrestor network is completely enclosed in molded Bakelite housing. No stripping of insulation . . . positive piercing contacts provide perfect electrical path, regardless of variation in width or thickness of insulation. Does not disturb impedance of twin line. Improves both picture and sound by carrying off small static charges. Ground terminal accommodates up to .125″ wire. Complete with wood screws. Individually packaged, 50 to master carton.

MAST EXTENSIONS

Heavily galvanized, internal lock-seam steel tube with swedged end and key way lock.

ME-48	**List $1.35**	**1″ Dia. x 4′ long**
ME-60	**List $1.50**	**1¼″ Dia. x 5′ long**

STANDOFF INSULATOR

Clamp-type for masts from 1″ to 1¼″

R-102 **List $ .20**

TERMINAL BLOCK

Mast mounting terminal block for coupling phasing bars to lead cable.

R-111 **List $ .75**

CHIMNEY MOUNT

Bracket arms of double strength. Complete with four adjusting eyebolts and extra thick ¾″ steel strap, heavily galvanized for long, dependable service.

R-105 **List $2.45** Ship. Wt. 3.3 lbs.

WALL MOUNT

Exclusive design with double strength brackets allowing 5″ clearance from wall. Large bearing plate with four mounting holes, suitable for wood siding or masonry walls. Adjustable for 1″ to 1$\frac{5}{16}$″ masts.

R-106 **List $1.60** Ship. Wt. 2.5 lbs.

JUMPER AND PHASING BARS

Jumper bars are used to connect two arrays into a double stack. Phasing bars are used to connect two double stack arrays to a terminal block on the mast forming a quad stack.

RQ-42	**JUMPER BAR**	**List $.50 ea.**
RQ-45	**PHASING BAR**	**List .70 ea.**

QUAD STACK PHASING KITS

Four phasing bars RQ-45 plus one R-111 Terminal Block. Couples two double stack arrays into a quad stack.

R-114 **List $3.50**

GROUND ROD

Four-foot copper coated ground rod complete with terminal bolt.

R-110 **List $ .95**

SWIVEL MOUNTING BASE

Type R-107 is for 1¼″ mast. One-inch mast uses Type R-104.

R-107..........**List $ .50** **R-104**..........**List $ .40**

Spico

INDOOR ALL-CHANNEL TELEVISION & FM ANTENNAS

REVOLUTIONARY NEW "Adjusta-knob" *Super-Phantom*

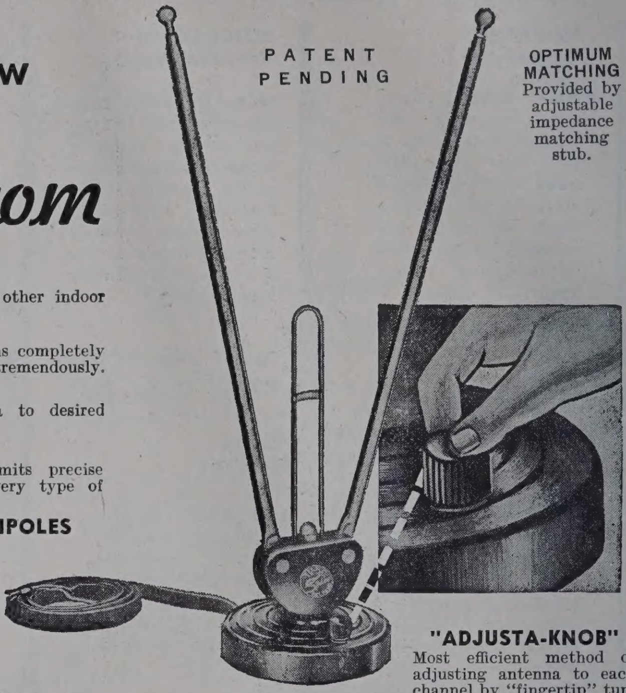
MODEL TV-503

Provides better reception over greater distances than any other indoor TV Antenna!

EXHAUSTIVE TESTS PROVE:

"SUPER-PHANTOM" sharply reduces, and in many locations completely eliminates ghosts and interference, improving reception tremendously.

- **ADJUSTA-KNOB**
  New "fingertip" tuning control adjusts antenna to desired channel.
- **OPTIMUM MATCHING**
  New designed adjustable "Matching Stub" permits precise Optimum Impedance Matching of antenna to every type of Television Set.
- **TELESCOPING 3-SECTION PLATED BRASS DIPOLES**
  To provide greatly increased gain.



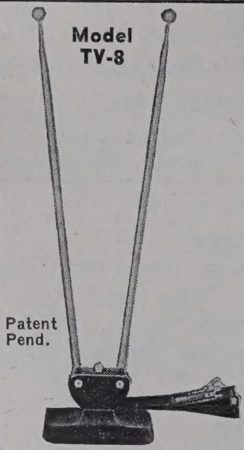
PATENT PENDING

OPTIMUM MATCHING Provided by adjustable impedance matching stub.

"ADJUSTA-KNOB" Most efficient method of adjusting antenna to each channel by "fingertip" tuning, assuring peak TV signal.

"Spico"
SUPER-PHANTOM

MODEL TV-503 Shipping Wt. 1½ lbs. Individually boxed and packed 25 to master carton. List Price.................... **$7.95**



Model TV-8

Patent Pend.

Lowest Price Ever!

''Spico''

Indoor-Tenna

UNCONDITIONALLY GUARANTEED

- ***UNBREAKABLE***
- ***RUSTPROOF***
- ***TILTPROOF***

ECONOMY MODEL

Written "Unconditional Guarantee" with each unit:

UNBREAKABLE: Will not break when dropped from heights of 6 feet. Top plates are made of solid bakelite securely mounted on a heavy metal base.
RUSTPROOF: Triple-section brass telescopic dipoles (not steel) will not rust, assuring permanent contact and easy telescopic adjustment.
TILTPROOF: Heavy base prevents tipping with any combination of extended elements.

All channel reception—concealed wiring—felt padding. Gleaming bakelite plates on matching crackle finished metal base, makes Indoor-Tenna a most attractive unit.

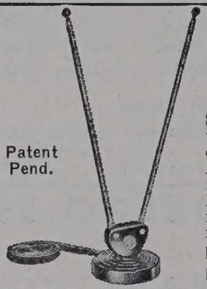
Individually packed in an attractive 2-color carton. Shipped 25 to a master carton. Weighs 1½ lbs., measures 18" (closed) x 2" x 4".

Model TV-8....................Competitively Priced for Volume Sales

All Spico TV and FM Indoor Antennas feature:

• Plated brass tubing or unplated • All concealed wiring • Non-scratch pad • No lugs or solder shown • Complete with 300 ohm wire.

Spico, the TV and FM Indoor Antenna line carried by leading jobbers as one of their fastest selling—most profitable lines.



Patent Pend.

''Spico''

Masterette

Model TV16 or TV-6A

Sturdy construction, plated brass tubing throughout to insure permanent rust-free contacts, three section dipoles.
A handsome, efficient model that's always in demand—always a leading seller.
Model TV-6A, same as TV-6 except tubing is unplated. Packed 2 to a box; 50 to a master carton.

MODEL TV-6
List Price................................ **$4.95**

''Spico''

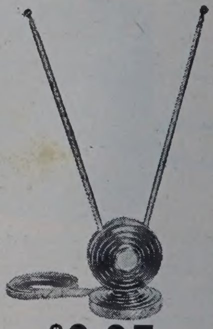
"Tenna-Master"

MODEL TV93B

U.S. Patent No. 156379

An engineering job that gives peak mechanical performance and outstanding reception. Tenna-Master is superbly designed to blend with and add to the beauty of the most tastefully furnished home.
Exclusive patented feature of LOCK-NOTCH VERTICAL ORIENTATION assures permanent non-skid automatic positioning, eliminates tightening or loosening of dipole elements.
Tenna-Master is one of the most popular models in the Spico line—many thousands sold to date!

MODEL TV93B



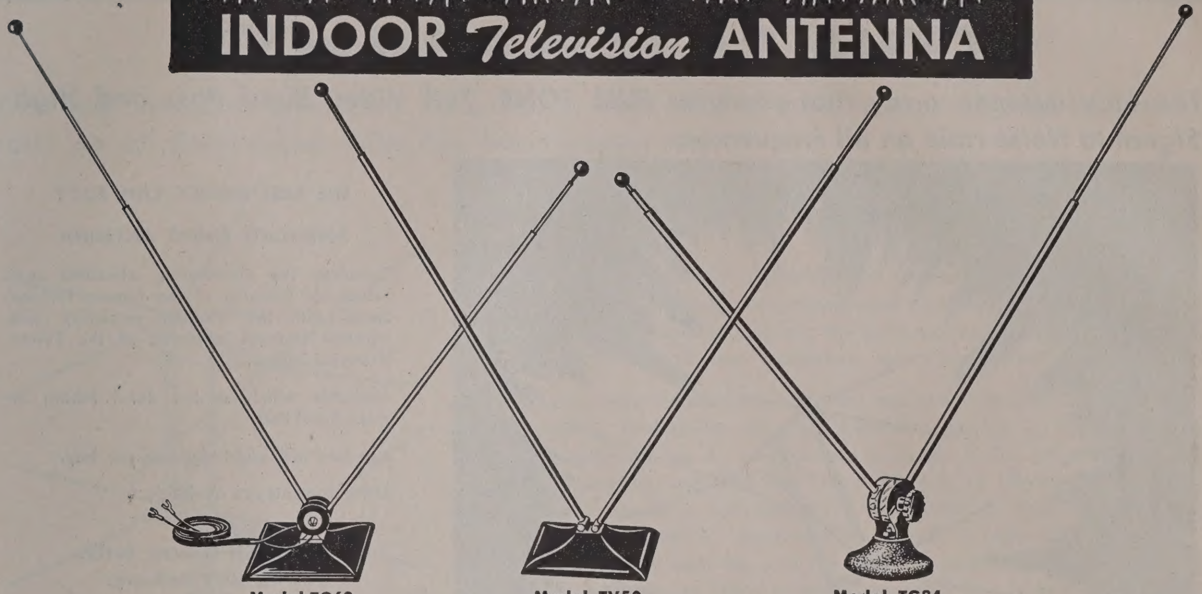
$6.95 List Price

Engineer-approved and sold by nationally known TV set manufacturers. Distributed thru jobbers only.

SPIRLING PRODUCTS CO., INC., New York 13, N. Y.

"ONE OF AMERICA'S LEADING MANUFACTURERS OF TV & FM INDOOR ANTENNAS"

GOLDEN WAND
INDOOR *Television* ANTENNA



Model TG62 **Model TV50** **Model TG84**

SUPERIOR PERFORMANCE AT LOW COST

The strength of an incoming TV signal picked up by your antenna is infinitesimal. Only an efficiently designed antenna can preserve its strength and make it available to your receiver. GOLDEN WAND Indoor TV Antennas are engineered to deliver to your receiver all the strength of the TV signal without losses. Because of their superior design, better materials and skilled craftsmanship, GOLDEN WAND Antennas bring you a clearer, brighter picture on your screen. They offer full 12-channel reception plus FM.

PORTABLE, IDEAL FOR DEMONSTRATIONS

GOLDEN WAND TV Antennas are extremely portable; can be carried into the house and from room to room without effort. That's why servicemen use GOLDEN WAND in making home demonstrations. That's the reason why many TV owners use GOLDEN WAND to make TV reception available in every room of the house.

WHERE ROOF ANTENNAS ARE TABOO

Restrictions against roof antennas by landlords need not worry you. GOLDEN WAND will bring you excellent reception in areas where indoor antennas can be used without the erection of an outdoor antenna.

THREE MODELS

GOLDEN WAND Indoor Television Antennas are offered in three designs to suit all tastes. All are attractive in appearance, well built and will last a lifetime. *All models are tip-proof.*

Model TG62 — Three-section satin finish *Admiralty brass* dipoles. Constant tension at all telescopic joints provides perfect electrical contact and velvety smooth jamless telescopic action. Base is of walnut-mahogany polystyrene heavily weighted and padded. Slot in base is provided for mounting on wall, window frame or ceiling. Harmonizes with any room or furniture. Furnished with 300-ohm twin lead. List price, **$5.95**

Model TG50 — Two-section polished finish *Admiralty brass* dipoles. Unique design at all telescopic joints provides perfect electrical contact and jamless, smooth telescopic action. Base is of walnut-mahogany polystyrene heavily weighted and padded. Slot in base is provided for mounting on wall, window frame or ceiling. Harmonizes with any home decoration. Furnished with 300-ohm twin lead. List price, **$3.95**

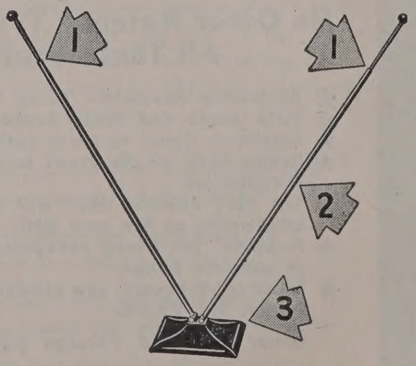
Model TG84 — Three-section satin finish *Admiralty brass* dipoles. Constant tension at all telescopic joints provides perfect electrical contact and velvety smooth jamless telescopic action. Base is heavily weighted and padded and finished in gold. Harmonizes with any room or furnishings. Furnished with 300-ohm twin lead. List price, **$6.95**

Exclusive Features

1. Unique design at all joints gives perfect electrical contact and smooth, jamless telescopic action.

2. *Admiralty brass* dipoles provide maximum electrical conductivity and eliminate internal corrosion and need for oil.

3. Polystyrene base and insulators give better insulation to prevent losses. Terminals completely enclosed. Built-in strain suppressor relieves strain on terminals and prevents breakage.



PEERLESS PRODUCTS INDUSTRIES

812 N. PULASKI RD. • CHICAGO 51, ILLINOIS

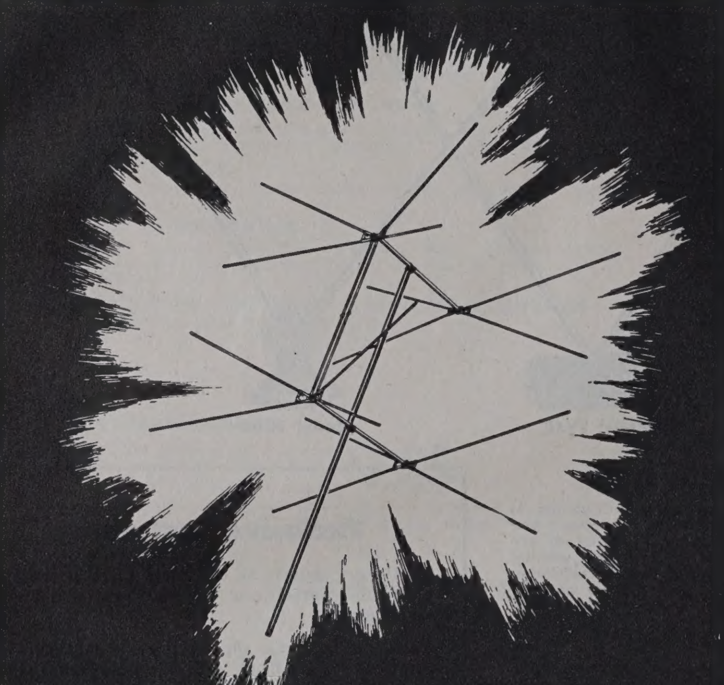
ANTENNA
DESIGN ENGINEERS
SINCE 1921
Telephone—ASBURY PARK 2-7252

telrex INC.

ANTENNA
DEVELOPMENT
MANUFACTURING
ASBURY PARK 1, N.J.

"CONICAL-V-BEAMS"

The only antenna array that produces FULL TONE, Full Video Band Pass and High Signal to Noise ratio on all Frequencies.



America's Standard of Comparison

No Other Antenna Type Can Have All These Features.

- ★ All-Station Reception. 10 to 11 db gain
- ★ FULL audio and Video Response
- ★ Maximum signal to noise ratio
- ★ Better than 12 db Front to Back Ratio on all Frequencies
- ★ The only antenna that will produce gain and bandwidth on the new UHF
- ★ A Model for every reception area — primary to extreme fringe.
- ★ "Conical-V-Beams" are produced under Re-issue Patent No. 23,346

Other U.S. and Foreign patents pending

THE BEST MONEY CAN BUY!

AMERICA'S FINEST ANTENNA

Combines the outstanding electrical constructional features of the famous DeLuxe Series with the unusual versatility and selective channel emphasis of the Telrex Universal Series.

Available with doweled dural tubing or Solid Dural Rod.

Supplied with eight elements per bay.

Extra elements are available.

MONARCH-DeLuxe Series With Hi-V-Reflector

2X-TV — Single bay, uni-directional "Conical-V-Beam" with reflectors. Finest quality materials — fine performer.

Standard Pack	1/carton
Shipping wgt.	5 lbs.
List Price	**$12.60**

4X-TV — 2 bay, stacked, uni-directional "Conical-V-Beam" with reflectors. America's outstanding TV antenna. 10 to 12 db gain.

Standard Pack	1/carton
Shipping wgt.	9 lbs.
List Price	**$25.21**

4X-TVS — (4X-TV ½ wave) 2 bay, stacked, uni-directional "Conical-V-Beam" with reflectors. ½-wave transmission line bars, full wave spacing at Channel 6, 30% more gain performance on Channels 2 to 6.

Standard Pack	1/carton
Shipping wgt.	10 lbs.
List Price	**$28.80**

UNIVERSAL SERIES
WITH HI-V-REFLECTOR

U2X-TV — Single bay, uni-directional "Conical-V-Beam" with reflectors; modified for selective channel emphasis.

Standard Pack	3/carton
Shipping wgt.	12 lbs.
List Price	**$9.30**

U4X-TV — 2 bay, stacked, uni-directional "Conical-V-Beam" with reflectors; modified for selective channel emphasis. 10 to 12 db gain.

Standard Pack	3/carton
Shipping wgt.	24 lbs.
List Price	**$19.94**

ORIGINATORS • PATENTEES • MANUFACTURERS OF "CONICAL-V-BEAMS"

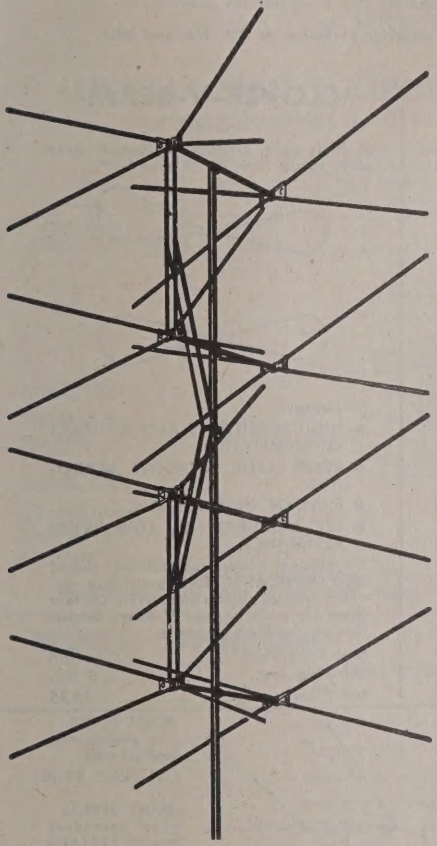
ANTENNA
DESIGN ENGINEERS
SINCE 1921
Telephone—ASBURY PARK 2-7252

telrex INC.

ANTENNA
DEVELOPMENT
MANUFACTURING
ASBURY PARK 1, N.J.

"CONICAL-V-BEAMS"

The only Antenna producing FULL TONE, FULL VIDEO and Highest Signal to Noise ratio on all Frequencies with one transmission line.



The Ultimate in Multi-Station Long Distance Arrays. Gains up to 16DB.

The Telrex MONARCH DELUXE 8X-TV will outperform Any antenna or Combination of cut-to-frequency antennas. UNEQUALLED for LONG Distance reception up to 200 miles. "If the 8X-TV does not provide a useable signal, TV reception is impossible or impractical."

MONARCH Deluxe 8X-TV With Hi-V-Reflector Uni-directional. 4 Bay, Conical-V-Beam.

Standard Pack	1/carton
Shipping wgt.	18 lbs.
List Price	$53.11

UNIVERSAL ECONOMY MODEL U8X-TV WITH HI-V-REFLECTOR

Uni-directional, 4-bay "Conical V-Beam" modified for selective channel emphasis.

Standard Pack	1/carton
Shipping wgt.	16 lbs.
List Price	$43.89

TECHNICAL NOTES

Telrex "Conical-V-Beams" technically and practically assume characteristics similar to solid cones, giving broad band and high gain response with full audio and video band pass over the entire television frequency range. Therefore, "Conical-V-Beams" outperform any other television antenna.

Nominal center impedance is 150 ohms and non-varying due to conical configuration. The dipoles are tilted forward presenting a "V" to the incoming wave, forcing the forward lobe to remain in line irrespective of channel being received. Thus the Telrex dipole is an effective ½ wave element on channel 2, increasing to ⅝ wavelength on channel 3, and increasing in effective "V" beam action to channel 13 where it becomes a full wavelength on each leg with the maximum receiving lobe being in line. The reflectors are effective at all frequencies with a front to back ratio of better than 12 DB on all frequencies. The "Conical-V-Beam" is the only antenna which can produce in this manner.

Unlike other methods of covering both bands, Telrex "Conical-V-Beams" do not introduce phase shift or favor one band versus the other, and, only one transmission line is used. Where stations are displaced beyond the normal acceptance lobe of a single "Conical-V-Beam" or array, the DO-X (Duo Orienting) array is recommended. This permits separate orientation of two groups of stations at any angle. Only one transmission line is needed due to the unique Telrex coupling line and phasing loop.

When the stations are within a 5 to 15 degree sector, the Telrex "Conical-V-Beam" used for maximum efficiency at low frequencies becomes a much more efficient antenna on the high frequencies than a separate cut-to-frequency stacked antenna.

The 150 ohm non-varying center impedance makes it possible to use any of the commercially available transmission lines from 75 ohm coaxial, to 300 ohm ribbon, with a standing wave ratio never exceeding 1.6 to 1 on any channel. Standing waves cause excessive phase-shift, blurred pictures, multiple images and decreased sensitivity.

An 8X-TV "Conical-V-Beam" will outperform any cut-to-frequency antenna on the market.

You are invited to consult our engineering staff on any unusual antenna problems.

"Conical-V-Beams" are produced under RE-issue Patent No. 23,346.

"LONG DISTANCE ALL-STATION CHAMPION"

"UNEQUALLED FOR PERFORMANCE AND DURABILITY"

AMERICA'S LARGEST MANUFACTURER OF "CONICAL-V-BEAMS"

ANTENNA
DESIGN ENGINEERS
SINCE 1921
Telephone—ASBURY PARK 2-7252

telrex INC.

ANTENNA
DEVELOPMENT
MANUFACTURING
ASBURY PARK 1, N.J.

"CONICAL-V-BEAMS"

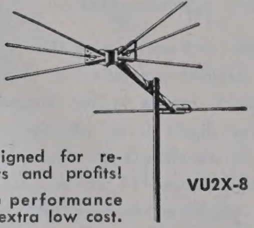
Custom-Designed Antennas

— at mass production prices!

Another Telrex first in superior antenna service. Conical-V-Beams custom designed for best results in your particular area. Regular list prices prevail, meaning you get better performance, value and more satisfied customers. Your selling territory for TV receivers is increased tremendously. Installing customized Telrex antennas is insurance against callbacks due to antenna adjustments and you enjoy the added protection of Telrex super-durable, all-weather construction. Just specify the installation area when ordering. Telrex will supply your antennas cut-to-area for the finest pictures ever!

— for superior reception on TV, FM, and UHF.

VANGUARD SERIES
"Conical-V-Beams"
The New Economy Line



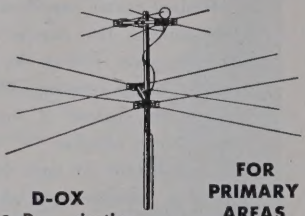
VU2X-8

- Designed for results and profits!
- Top performance at extra low cost.
- The Vanguard will outperform and outsell any comparably priced TV Antenna.

Model VM2X-6
(single bay) ....$ 7.22 List
Model VM4X-12
(2 bay stacked)........$15.28 List
Model VU2X-8
(single bay) ....$ 7.92 List
Model VU4X-16
(2 bay stacked)........$16.83 List
Vanguard Series Bulk Packed

DUO-ORIENTING
"Conical-V-Beam"

Designed to receive any combination of stations displaced by any angle:



D-OX

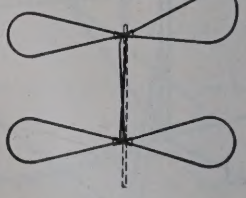
FOR PRIMARY AREAS

- Duo-orienting, uni-directional "Conical-V-Beams" with reflectors.
- Top bay for Hi frequency — lower bay for Hi-Low frequency reception.
- Complete with phasing loop, coupling line and solid hi-strength aluminum elements.
- An all-station duo-orienting array, superior to any Hi-Low type.

Standard Pack 1/carton
Shipping wgt. ....6 lbs.
List Price **$13.75**

CLOVER-V-BEAM
"E-Z RIG"

A high gain, compact indoor or outdoor array for TV, FM and UHF.



featuring:

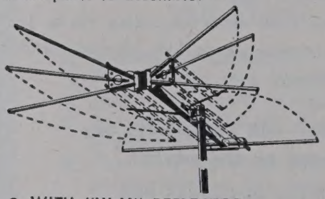
- HIGH SENSITIVITY AND COMPACT CONFIGURATION.
- ROOF, ATTIC, WINDOW MOUNTING.
- EASE OF INSTALLATION.
- ICE LOADING NIL, LOW WIND RESISTANCE.

The efficient transposed collinear closed loop CONICAL-V-BEAM providing resonant conical dipole sensitivity on low channels with hi-gain V-Beam operation on the high channels.

Standard Pack 4/carton
Shipping wgt. ....8 lbs.
List Price **$4.75**

"METEOR"
CONICAL-V-BEAM
E-Z-RIG

TELREX "METEOR," the CONICAL-V-BEAM with E-Z-RIG assembly. A complete E-Z-RIG assembly with no separate parts to assemble.

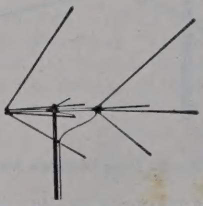


- WITH "HI-V" REFLECTOR.
- SOLID, HIGH TENSILE STRENGTH, ALUMINUM ELEMENTS.
- RECORD BREAKING ALL CHANNEL GAIN.
- ICE LOADING NIL, LOW WIND RESISTANCE.

Standard Pack 1/carton
Model ME-2X **$12.50**
Model ME-4X **$25.60**
Model ME-8X **$52.79**

"DUBL-CONICAL-V-BEAM"
WITH HI-V-REFLECTOR

For outstanding all-station performance. Particularly effective in eliminating ghosts and for use where secondary emission is encountered. Features "Conical-V-Beam" broad band gain with Yagi directivity and pattern.



MODEL DCVB-8
(For primary area and suburbs)
LIST PRICE $9.30

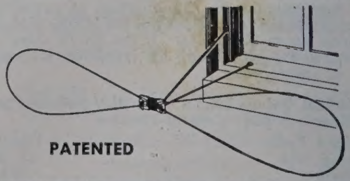
MODEL DCVB-16
(For secondary areas) STACKED ARRAY
LIST PRICE $19.94

Packed one to a carton

"SUPEREX"
WINDOW ANTENNA

For primary signal areas. Easily mounted on any window sill. Can also be mounted indoors on walls, in closets, behind furniture, etc.

Standard Pack	Shipping wgt.	List Price
6/carton	5 lbs.	$2.70

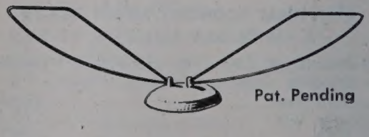


PATENTED

TELREX "BAT-WING"

Outperforms any top-of-set antenna on 80% of all TV channels. Requires no pruning or tuning. Attractive ornamental design!

Standard Pack 1/carton
Shipping wgt. ....1½ lbs.
List Price **$3.99**



Pat. Pending

ORIGINATORS • PATENTEES • MANUFACTURERS OF "CONICAL-V-BEAMS"

ANTENNA
DESIGN ENGINEERS
SINCE 1921
Telephone—ASBURY PARK 2-7252

telrex INC.

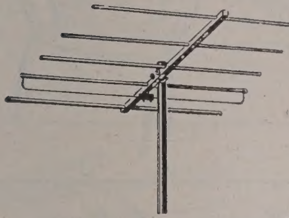
ANTENNA
DEVELOPMENT
MANUFACTURING
ASBURY PARK 1, N.J.

TELREX "CUSTOM BUILT" YAGI'S

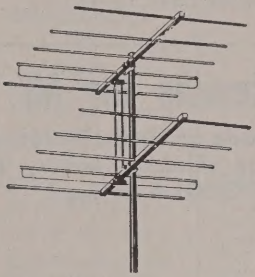
- PRECISION TUNED
- EXCELLENT IMPEDANCE MATCH
- HIGH FRONT TO BACK RATIO
- FULL BAND WIDTH
- HIGH IMPEDANCE TRANSFORMATION

AMERICA'S FINEST 5 ELEMENT YAGI

FOR HIGH CHANNELS 7 TO 13



A precision tuned narrow beam array offers 10 db gain and high front to back ratio. Full band-width for full audio and video, excellent match with 150 or 300 ohm transmission line.



MODEL Y5X1 — 7 to 13

Standard Pack	2/carton
List Price	$6.11

MODEL Y5X2 — 7 to 13

(Stacked Array)

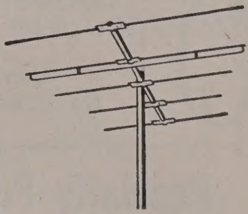
Standard Pack	1/carton
List Price	$13.05

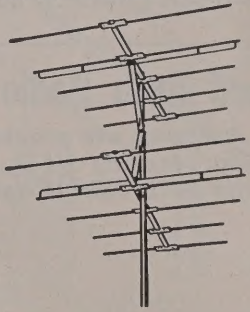
High Channel 5-Element Yagis.
Have Wood Cross Arms for Maximum Signal To Noise Ratio.

PRECISION TUNED 5-ELEMENT, LOW CHANNEL YAGI

FOR CHANNELS 2 TO 6

Uniformly high gain over full channel with exceptional front-to-back ratio. High impedance transformation provides excellent match for 300 ohm lines, minimizing standing waves and noise pick up.





MODEL Y5X1 —
FOR CHANNELS 2 TO 6

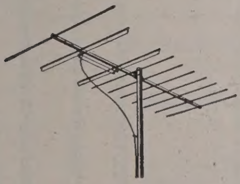
	List Price
(Channels 2 and 3)	$16.19
(Channels 4, 5 & 6)	$15.28

MODEL Y5X2 —
FOR CHANNELS 2 TO 6
(Stacked Array)

	List Price
(Channels 2 and 3)	$37.08
(Channels 4, 5 & 6)	$35.25

TELREX "FISHBONE"

TEN WORKING ELEMENTS



Guaranteed to outperform any Yagi antenna. The most powerful twin-driven single channel array ever made. **Telrex guaranteed,** to outperform any yagi antenna on the market. Up to 15db gain.

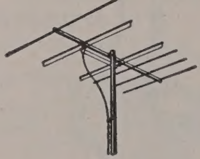
MODEL FBT-1 — FOR CHANNELS 7 TO 13

Standard Pack	1/carton
List Price	$13.35

Also available stacked.

AVAILABLE FOR LOW CHANNELS
CUSTOM BUILT
Write for price and literature.

TELREX TWIN-DRIVEN SIX ELEMENT "FISHBONE"



Twin-driven for higher gain. This antenna will outperform arrays having two extra elements. 12 db gain.

MODEL Y6X1

Standard Pack	1/carton
	List Prices
Channels 2-3	**$21.41**
Channels 4-5-6	**$19.68**

ALSO AVAILABLE STACKED

CUSTOM BUILT COMMUNICATION ANTENNA ARRAYS

FOR 2 METERS
4 element "Conical" array
6 element "Fishbone"
10 element "Fishbone"

FOR 10 METER
2 Element Conical array
2 Bay 4 Element Conical array
6 Element In-Line Yagi

FOR 6 METERS
6 element yagi
10 element "Fishbone"
4X Conical V Beam (can be used for TV reception also)

FOR 20 METERS
2 Element Yagi
3 Element Yagi
4 Element Yagi

"ALL WAVE KIT"

All-wave "Conical-V-Beam" antenna kit for transmitting or receiving. Ideal for amateurs, commercials or S-W-L. Operates on 160, 80, 40, 20, 10, 6, 2 meters and all FM-TV and short wave reception.

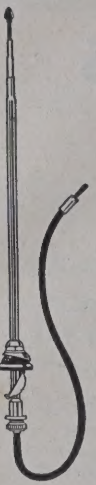
WRITE FOR COMPLETE SPECIFICATIONS AND LIST PRICES. ORDER THROUGH YOUR REGULAR JOBBER OR DISTRIBUTOR.

"Conical-V-Beams" are produced under Re-issue Patent No. 23,346

AMERICA'S LARGEST MANUFACTURER OF "CONICAL-V-BEAMS"

SINCE 1921 **insuline** *Corporation of America*
OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

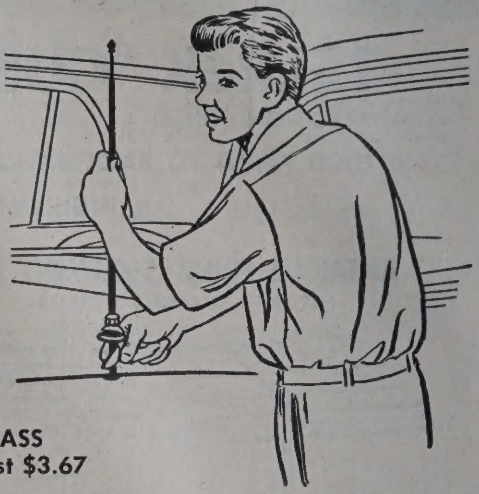
Insuline's Latest Improved Auto Radio Antennas



"Solo-mount" TOP Fender and Cowl

Mounted entirely from the outside!

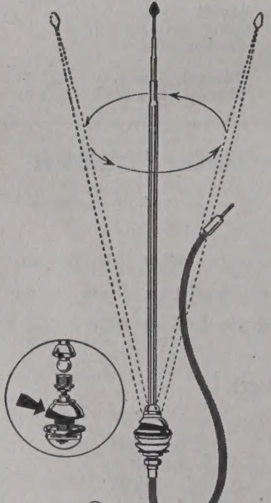
Here's the antenna that takes time-consuming drudgery out of antenna installation. One man, in no time at all, inserts the antenna lead and special rocker into the hole, pulls up against the rocker and tightens the top nut — ALL FROM THE OUTSIDE!

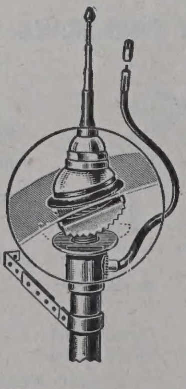


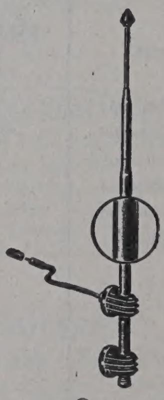
Gleaming chrome-plated ADMIRALTY BRASS
No. 4583B—3 Sec. Extends to 60"....Dealer Cost $3.67

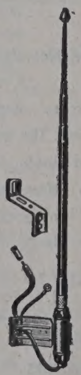
Popularly Priced Auto Radio Antennas for All Types of Cars

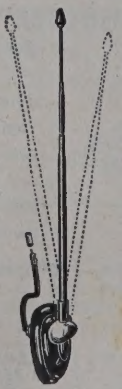
All Insuline Antennas are precision made of chrome-plated Admiralty BRASS tubing. Include HI-Q Lo-Loss shielded leads. Rattleproof. Equipped with both DELCO and MOTOROLA fittings.

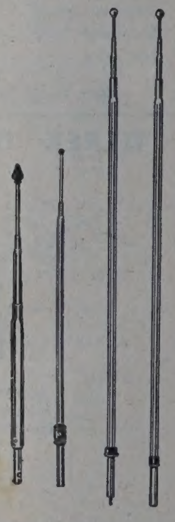

Ⓐ


Ⓑ


Ⓒ


Ⓓ


Ⓔ


Ⓕ

Ⓐ **FENDER AND COWL MT. TYPE**—Features special variable angle mount to match car contours.

No.		Dealer Cost
4588	3 Sec. Extends to 62"	$3.30
4589	2 Sec. Extends to 49"	2.67

Ⓑ **DISAPPEARING TYPE**—Collapses to 6½". Does not obstruct vision.

No.		Dealer Cost
4571B	3 Sec. Extends to 56"	$4.50
4584	4 Sec. Extends to 76"	5.41

Ⓒ **SIDE COWL TYPE—Standard Models**

No.		Dealer Cost
4567	3 Sec. Extends to 63"	$2.25
4566	3 Sec. Extends to 63"	2.72
4553	3 Sec. Extends to 93"	3.57

Ⓒ **SIDE COWL TYPE—Heavy Duty Models**

No.		Dealer Cost
4568	3 Eec Extends to 68"	$3.15
4569	4 Sec. Extends to 78"	3.33
4559	4 Sec. Extends to 100"	4.17

Ⓓ **"UNI-MOUNT"**—For underhood mounting. No drilling of holes in car body necessary.

No.		Dealer Cost
4801	3 Sec. Extends to 63"	$3.08
4803	3 Sec. Extends to 96"	3.57

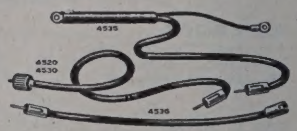
Ⓔ **"ROCKER" TYPE**—Swivel antenna for flat or convex surfaces.

No.		Dealer Cost
4541	3 Sec. Extends to 62"	$3.57

Ⓕ **REPLACEMENT ANTENNA ASSEMBLIES**

No.		Dealer Cost
4545	For Buick, Hudson, Packard	$1.83
4546	For Ford Cars	1.67
4560	For Oldsmobile Cars	2.37
4561	For Pontiac Cars	2.37

REPLACEMENT ANTENNA LEADS



Various lengths and types of shielded Hi-Q Lo-Loss cable for auto radio antennas. Inner polyethylene insulation with vinylite jacket.

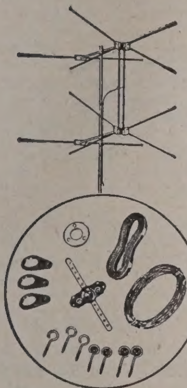
Send for latest catalog which fully describes Insuline's complete line of antennas, leads, and auto radio accessories

SINCE 1921

insuline *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

COMPLETE PACKAGED ANTENNA INSTALLATION KITS



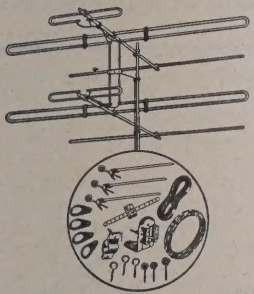
STACKED CONICAL KIT

Includes:

- Stacked Conical Antenna with straight line reflector
- 10 ft. Steel Mast
- 50 ft. 300 ohm wire
- 100 ft. 7 Strand No. 26 Guy Wire
- 3 Guy Wire Screw Eyes
- 1 Guy Wire Ring
- 3 Rubber Stand-off Insulators
- 4 Insulated Stand-offs
- Lightning Arrester

No.	Dealer Cost
6608	$16.20

CHALLENGER KIT



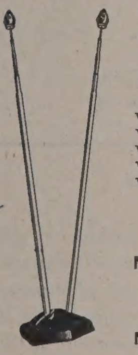
Includes:

- Stacked Folded Dipole Array Antenna
- 10 ft. Steel Mast
- Tri-position base mount
- 50 ft. 300 ohm wire
- 100 ft. Guy Wire
- High Band-Low Band Connecting Leads
- 3 Insulated Stand-offs
- 4 Rubber Stand-off Insulators
- 3 Insulated Stand-offs with Strap
- Lightning Arrester
- 3 Guy Wire Screw Eyes
- Guy Wire Clamp

No. 6353..........Dealer Cost $21.60

INDOOR PORTABLE ANTENNA

(Patent No. 158679)



ALL-CHANNEL RECEPTION

For All Television Receivers

Features

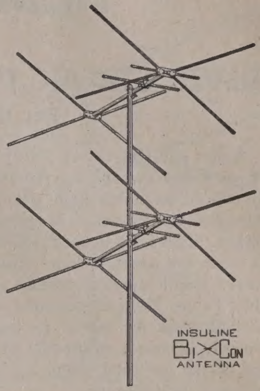
- √ BRASS DIPOLES
- √ Complete adjustability
- √ Tilt-free Base
- √ Quick Installation
- √ Include 300 ohm connecting lead and open end mounting lugs.

THE "METEOR"
3 Section
No. 6470..........Dealer Cost $2.50

THE "METEOR UTILITY"
2 Section
No. 6474..........Dealer Cost $2.08

"BI-CON" TELEVISION ANTENNAS

Conical Type Antennas for Exceptional Performance



Features:

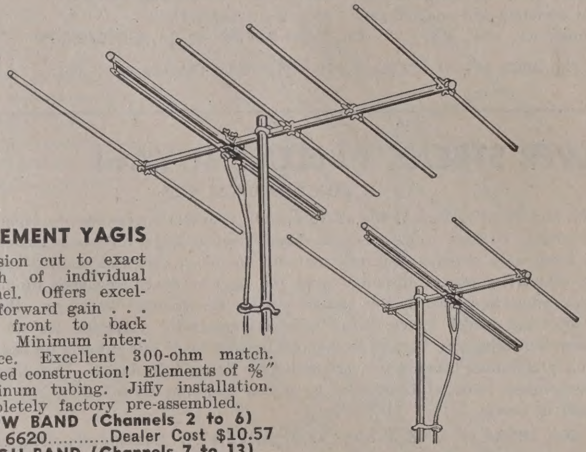
- √ Heavy duty ½″ closed end aluminum elements with wooden dowel inserts.
- √ DUAL REFLECTORS . . . separate high frequency and low frequency dipole reflector elements for better performance.
- √ All Aluminum rigid castings.
- √ Pre-assembled for easy installation.
- √ Individually packaged.

The "BI-CON" Single
for All-Channel Reception
No. 6472 (Less Mast)......Dealer Cost $9.59

The Stacked "BI-CON"
for Fringe Area Reception
No. 6481 (Less Mast)....Dealer Cost $21.25

The "QUAD BI-CON"
for Long Distance Reception
No 6484 (Less Mast)....Dealer Cost $45.00

INSULINE "UNI-CHANNEL" YAGI ANTENNAS



5-ELEMENT YAGIS

Precision cut to exact length of individual channel. Offers excellent forward gain . . . high front to back ratio. Minimum interference. Excellent 300-ohm match. Rugged construction! Elements of ⅜″ aluminum tubing. Jiffy installation. Completely factory pre-assembled.

LOW BAND (Channels 2 to 6)
*No. 6620..........Dealer Cost $10.57

HIGH BAND (Channels 7 to 13)
*No. 6630..........Dealer Cost $5.73

YAGI STACKING KITS

****LOW BAND (Channels 2 to 6)**
*No. 6625..........Dealer Cost $3.50

HIGH BAND (Channels 7 to 13)
*No. 6635..........Dealer Cost $1.00

*Designate desired channel.
**Includes special center harness assembly for rigid support.

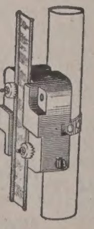
3-ELEMENT YAGIS

Three Element Design • Elements made of ⅜″ aluminum tubing • Completely pre-assembled for quick installation.

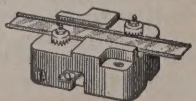
LOW BAND
*No. 6580..........Dealer Cost $7.20
*Designate desired channel

TELEVISION LIGHTNING ARRESTERS

U. L. Approved



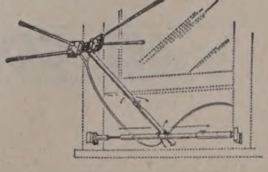
Improved type molded phenolic lightning arrester designed especially for television installations. Simply and quickly installed. Sure grip binding washer eliminates necessity of stripping insulation and assures good electrical contact. A precision arrester designed to accepted standards offering adequate receiver protection. Supplied with or without grounding strap. With grounding strap, may be attached to metal pipe or mast; without strap, may be screwed to any wooden base. Complete with weatherproof hardware.



No.	Dealer Cost
6113	$0.75
6114—With Grounding Strap	.90

Shown on this page are but a few of the wide variety of television antennas and accessories that comprise the Insuline line. "There's an Insuline Antenna for every requirement." Send for latest complete television catalogue.

INSULINE WINDOW ANTENNA



Latest conical type. Made of sturdy steel and ⅜″ aluminum; sealed ends. Provides horizontal or vertical positioning. Steel mast measures 2½ feet in length. 1 inch in diameter. Window clamp (1″ diam.) is adjustable . . . spans 30 to 50 inches for almost any wood or casement window frame. Easily installed.

No.	Dealer Cost
6451	$6.66

Net

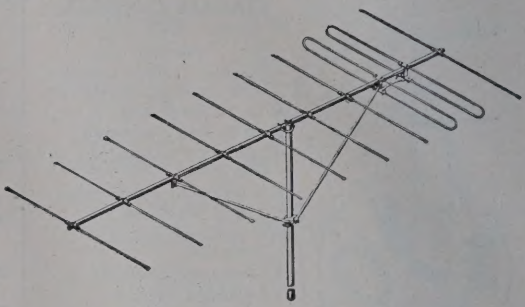
TACO NOISE-REDUCING ANTENNA SYSTEMS

HIGH-GAIN TELEVISION ANTENNAS

SILVER STREAK TWIN-DRIVEN 10-ELEMENT YAGI

For Channels 2-6

A new addition to the TACO line of fringe-area antennas. The TACO Silver Streak antenna incorporates 10 elements properly spaced and cut to obtain maximum gain without narrowing 6 mc bandwidth. Seven directors, two driven elements, and a reflector make up this super gain design. High front-to-back ratio overcomes co-channel interference as well as noise and ghost pickup. Available as a single antenna, or a stacked array. Single antenna provides a gain of 11 db, while stacked array provides 14 db. Twin elements driven in parallel provide terminal impedance of 300 ohms for match to transmission line. All-metal construction, properly designed, withstands adverse weather conditions. Tuned for any one of the low-band channels. Especially adaptable for use with TACO Antenna Supercharger.



Cat. No. 1800-(*) SINGLE-BAY TWIN-DRIVEN YAGI ANTENNA. Consists of: 1 crossarm assembly supporting two antenna elements; seven directors and one reflector. Jiffy-Rig construction. Shipping wt. 14½ lbs. **Ch. 2-3-4 $35.00 — Ch. 5-6 $31.00**

Cat. No. 1801-(*) STACKED YAGI ANTENNA. Consists of: 2 Cat. No. 1800-(*) assemblies with stacking lines. Shipping wt. 29 lbs. **Ch. 2-3-4 $71.00 — Ch. 5-6 $63.00**

Cat. No. 1802-(*) STACKING LINES FOR TWO-BAY YAGI ANTENNA. Converts 2 one-bay Cat. No. 1800-(*) antennas to a two-bay stacked antenna. Shipping wt. 2 lbs. **List Price $5.25**

SILVER STREAK 10-ELEMENT YAGI

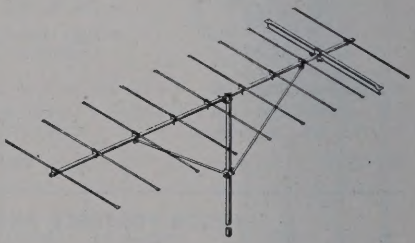
FOR CHANNELS 7-13

The high-band version of the above model. Provides approximately same gain as low-band model. Utilizes 8 directors, one driven element and a reflector. Designed primarily as a fringe-area antenna, but may be used in noisy, or ghost-haunted areas where its sharp directivity rejects unwanted noise and signals. Sharp frequency tuning of all Yagi designs minimizes reception of signals outside the channel frequency. Both high-band and low-band model Silver Streak antennas especially adaptable for use with TACO Antenna Supercharger. Perfect mechanical balance lends this antenna for use with rotator. All TACO antennas come factory-assembled for fastest installation. Two-diameter antenna element raises terminal impedance to match 300-ohm transmission line for maximum transfer of energy.

Cat. No. 1850-(†) SINGLE-BAY YAGI ANTENNA. Consists of: One crossarm with U-Bolt and saddle; One two-diameter driven antenna; One reflector and eight directors mounted on crossarm. Click-Rig construction. Shipping wt. 6½ lbs. **List Price $13.75**

Cat. No. 1851-(†) STACKED YAGI ANTENNA. Consists of: 2 Cat. No. 1850-(†) assemblies with stacking line. Shipping wt. 14 lbs. **List Price $27.75**

Cat. No. 1852-(†) STACKING LINES FOR TWO-BAY YAGI ANTENNA. Converts 2 one-bay Cat. 1850-(†) antennas to a two-bay stacked antenna. Shipping wt. 1 lb. **List Price $2.50**



*Specify low-band channel desired.
†Specify high-band channel desired.

UHF RECEIVING ANTENNAS

TACO has a complete lines of UHF antennas ready for the trade. These antennas have been thoroughly tested and proved under actual operating conditions.

As in the case of VHF, TACO will present antennas designed to meet the varying conditions of different areas where UHF will be operating, as to gain, directivity, and bandwidth. A complete, fully detailed description of UHF antennas will be available shortly through TACO distributors.

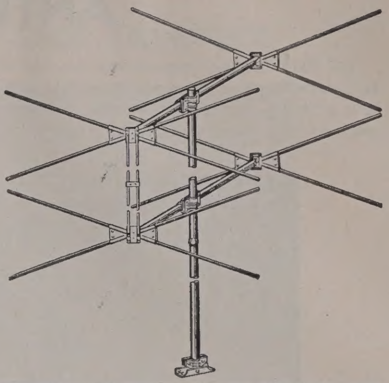
TACO enters the UHF field with a definite advantage over other antenna equipment manufacturers. During World War II and again in the present rearming program, TACO has played an important role in the development and manufacture of UHF equipment for our armed forces. This experience in the reception and handling of UHF is clearly shown in the performance of the present commercial TACO UHF antennas.

SEE COMPLETE ANTENNA LINE IN TACO GENERAL CATALOG

Technical Appliance Corporation, Sherburne, N. Y.

HIGH-GAIN TELEVISION ANTENNAS

LAZY-X ALL-CHANNEL ANTENNA



The most popular all-channel antenna for average to strong signal areas. Provides a relatively flat gain over all 12 channels. Extremely rugged construction due to exclusive TACO apex design with bell-mouth channels for element rods. Readied for installation in a matter of minutes with TACO Jiffy-Rig design. An excellent antenna for weak signal areas where noise level is low. Directivity and noise rejection not as good as TACO Yagi designs. Available as a stacked array or a single antenna, depending upon signal strength available at installation.

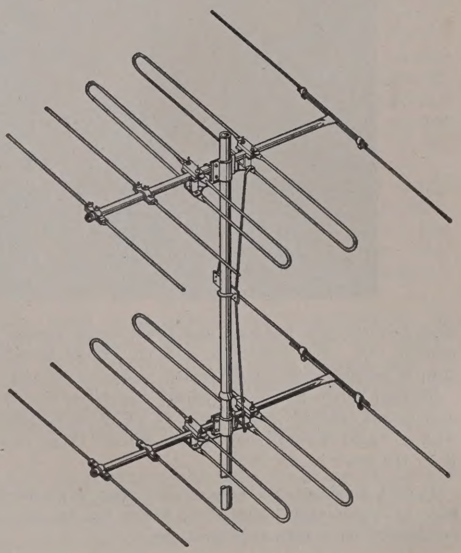
Cat. No. 950AL. STACKED LAZY-X ANTENNA for Channels 2-13. Consists of: 2 single X antennas with crossarms and X-type reflectors; stacking lines and terminal panel for connecting antennas; mast swivel bracket; 3 screw-eyes; 1 guy anchor, 2 mast insulators; complete instructions. Shipping Weight 12 lbs. **List Price $31.00**

Cat. No. 953A. SINGLE LAZY-X ANTENNA. Consists of: Single X antenna with crossarm and X reflector; all elements and crossarm of hard drawn aluminum tubing; Universal U-bolt and saddle bracket mount; complete instructions. Shipping Weight 5 lbs. **List Price $14.00**

Cat. No. 954A. STACKING LINES for stacking two single-bay antennas. Shipping Weight ¾ lb. **List Price $2.50**

Cat. No. 949A STACKING LINES for stacking two 2-bay antennas. Complete with terminal panel on mast and four stacking lines. Shipping Weight 1½ lbs. **List Price $4.75**

5-ELEMENT TWIN-DRIVEN YAGI



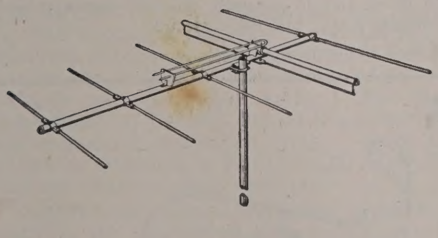
An exclusive TACO design. Never successfully duplicated. Used more widely than any other fringe area design. Comes tuned for any one of the low-band channels, or in a combination model for channels 4 and 5. Incorporates two directors, two driven elements, and a reflector. Very good directivity and front-to-back ratio. Highly recommended for areas affected by co-channel, or adjacent channel interference. Folded-dipole driven elements fed in parallel, raises terminal impedance to match 300-ohm line. Mechanically, the Twin-Driven Yagi has proved itself in more installations than all other fringe area designs combined. Available as a stacked array or a single antenna, depending upon gain required. Single antenna unit suited for use with rotator. Both models designed for use with TACO Antenna Supercharger.

Cat. No. Super 980-(*) STACKED TWO-BAY TWIN-DRIVEN 5-ELEMENT YAGI. Consists of: 2 crossarm assemblies, each supporting two folded dipole antennas, two directors, one reflector; transmission line for stacking the two bays; tie wire; complete instructions. Shipping Weight 14 lbs. **List Price $47.00**

Cat. No. Super 981-(*) SINGLE BAY TWIN-DRIVEN 5-ELEMENT YAGI. Consists of: one crossarm assembly supporting two folded dipoles, two directors, one reflector; complete instructions. Shipping Weight 8 lbs. **List Price $23.00**

Cat. No. 989-(*) STACKING LINES for Two-Bay Twin-Driven Yagi antennas. Consists of all parts necessary to convert two Super 981-(*) antennas into one Super 980-(*) antenna. Shipping Weight 2 lbs. **List Price $5.25**

DUAL-CHANNEL YAGI



Another new fringe area design by TACO. Provides all the desirable features of the Yagi design for a combination of two channels, with a single antenna. Tuning element adjusted at factory for desired channel combination. Combinations available as listed below. Antenna incorporates three directors, driven element with tuning bazooka, and reflector. Excellent front-to-back ratio. Low wind resistance makes this antenna especially adapted for use with a rotator. Sharp tuning and directivity minimize noise and ghost pickup. Terminal impedance matches 300-ohm line. Available as stacked array or single antenna. Completely factory-assembled for easiest, best installation.

Cat. No. 1410-(*-*) SINGLE-BAY DUAL-CHANNEL LOW-BAND YAGI. Consists of: 1 crossarm assembly with U-Bolt and saddle; One driven element with factory-tuned bazooka; One reflector and three directors. Shipping Weight 7 lbs. **List Price $22.50**

Cat. No. 1411-(*-*) STACKED DUAL-CHANNEL LOW-BAND YAGI. Consists of: Two Cat. No. 1410-(*) assemblies with special stacking lines. Shipping Weight 15 lbs. **List Price $46.00**

Cat. No. 1412-(*-*) STACKING LINES FOR TWO-BAY YAGI ANTENNA. Converts 2 one-bay Cat. No. 1410-(*-*) antennas to a two-bay stacked antenna. (*-*) Available combinations 3-6; 4-5. Shipping Weight 2 lbs. **List Price $5.25**

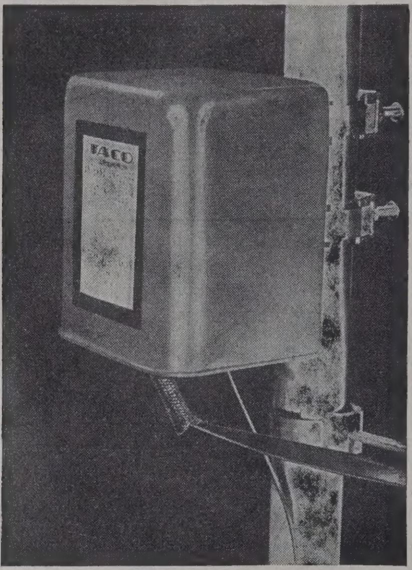
*Specify low-band channel desired.
**Specify dual low-band channels desired.

FOR COMPLETE ANTENNA AND ACCESSORY LINE SEE TACO CATALOG

Technical Appliance Corporation, Sherburne, N. Y.

ANTENNA SUPERCHARGER

The TACO Antenna Supercharger has proved itself the most successful television signal preamplifier on the market. It is unique in that it is a high-gain, dependable power amplifier located on the antenna mast, at the antenna. As such, it amplifies the signal before it is weakened through line-loss, and before noise pickup in the transmission line. This results in a much higher signal-to-noise ratio than is possible with old-fashioned boosters located at the receiver.



Through sharp frequency tuning, signals outside the desired frequency are rejected, and a gain of 14 db is realized. When used with a TACO Twin-Driven "Silver Streak" Yagi, the overall gain is in the order of 28 db.

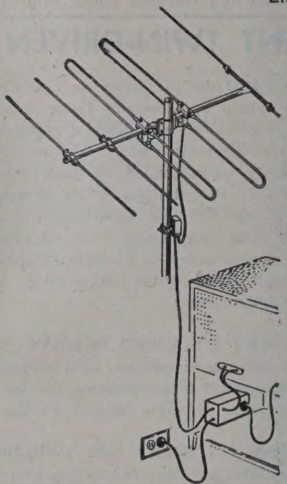
Special emphasis has been placed upon dependability so necessary in fringe area installations where the antenna and amplifier are located on a high mast or tower.

The amplifier unit is powered by means of a transformer, located at the receiver, that provides 24 volts through the transmission line up to the amplifier. The same transmission line is used to carry the signal down to the power unit. From the power unit, the signal is fed into the receiver antenna terminals. The receiver power cord is plugged into the power unit for operation of the automatic relay switch. This provides automatic operation when the receiver is turned on.

This type of signal amplification is very necessary with today's receivers incorporating the cascode-type front-end. Signals amplified through boosters located at the receiver have a far greater noise level than the front-end itself, thus defeating the purpose of this high-gain receiver design.

The Antenna Supercharger comes tuned for any one of the low-band or high-band channels or for the combined channel 4 and 5 setup. They are recommended for use with any high-gain, sharply tuned antenna such as the TACO Twin-Driven Yagi, the Silver Streak antenna or the TACO Yagis listed in the general catalog.

Cat. No. 1625-(*) SINGLE CHANNEL COAXIAL CABLE ANTENNA SUPERCHARGER. Consists of amplifier, coaxial fittings, mounting brackets, necessary hardware. Shipping Weight. 2½ lbs. **List Price $27.50**



Cat. No. 1626 24 VOLT TRANSFORMER to supply power to No. 1625 Antenna Supercharger. In attractive housing.

Cat. No. 1628-(*) SINGLE CHANNEL ANTENNA SUPERCHARGER WITH MIXER. Consists of amplifier, power mixer, mounting brackets, necessary hardware. Shipping Weight 4½ lbs. **List Price $37.95**

Cat. No. 1629-(*) SINGLE CHANNEL ANTENNA SUPERCHARGER. Consists of amplifier, mounting brackets, necessary hardware. Shipping Weight 2½ lbs. **List Price $23.95**

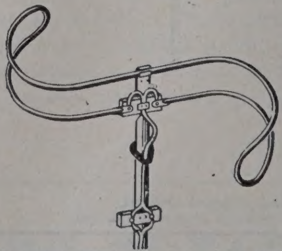
Cat. No. 1631 AUTOMATIC POWER MIXER. Consists of power supply relay and mixer unit in attractive housing, necessary hardware. Shipping Weight 3 lbs. **List Price $15.00**

*Specify desired high or low band channel.

CAT. NO. 624 FM OMNIDIRECTIONAL ANTENNA

The most popular of the many TACO FM antenna designs. The folded dipole provides a flat response over the entire FM band, while the S-shape provides a directivity pattern practically circular in shape. Ideal for use in installations where signals are received from several directions. Extremely sturdy. Available as a stacked, or single antenna. Terminal impedance of 300-ohms.

Cat. No. 624 OMNIDIRECTIONAL ANTENNA. Consists of: 1 S-type folded dipole with terminal panel; 1 five-foot aluminum mast, 1¼" dia.; 2 mast insulators, 60 foot transmission line; 2 ribbon type standoff insulators; 2 mast clamps with mounting screws; complete instructions. Shipping Weight 4¾ lbs. **List Price $12.00**



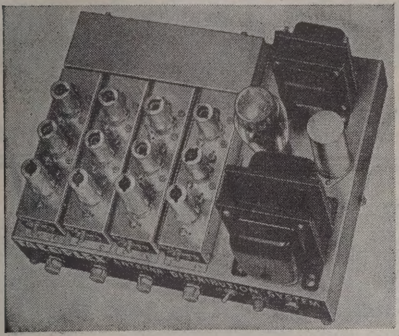
COMPLETE FM-AM ANTENNA CATALOG ON REQUEST

Technical Appliance Corporation, Sherburne, N. Y.

TACO NOISE-REDUCING ANTENNA SYSTEMS

MASTER TV ANTENNA SYSTEMS

SERIES 1500 TACOPLEX



The Series 1500 Master TV Antenna Distribution System is in wide use for apartments, hotels, stores and community antenna systems. All units making up the system are designed and manufactured to provide the utmost in dependable and economical operation.

The Series 1500 TACOPLEX System consists of the antenna installation, the Master Chassis with Amplifier Strips, Mixer Unit, Electronic Multi-Line Units, and Isolation Units. Detailed information on all units and their functions is available from your TACOPLEX distributor.

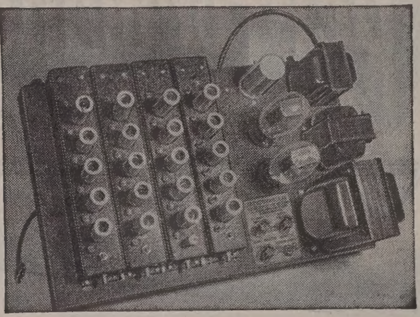
The signal is captured by sharply-tuned, high-gain antennas for each channel. If signal strength is not up to the desired 500 microvolt strength, a TACO Antenna Supercharger is employed at the antenna to boost the signal. The signal is then transmitted to the Master Chassis and through an Amplifier Strip. The TACOPLEX Amplifier Strips are available in two types — one incorporating three tubes and the other four tubes. Depending upon the requirements of the individual system, the correct type is selected. After amplification in the Amplifier Strips, the individual channels are mixed by means of the Mixer Unit.

The TACOPLEX Mixer Units are available for various system requirements. It is possible to provide isolation for several receivers directly from the Mixer outputs. Other models provide high-strength outputs for long transmission line runs.

After combining the channels in the Mixer, the TACOPLEX System utilizes coaxial transmission line for distribution of the signals. If runs are in excess of 2500 feet, it is necessary to reamplify the signals. This is done by means of additional TACOPLEX Master Chassis and Amplifier Strips. The signal is fed through a TACOPLEX Signal Separator and then into the respective Amplifier Strips. Again the signal is mixed by means of a TACOPLEX Mixer Unit and fed into the transmission line.

TACOPLEX Multi-Line Units provide a means of splitting the transmission lines into several separate lines with minimum loss of energy. Isolation Units of selective attenuation are available for use at receiver take-offs. These units provide a minimum of 30 db isolation between receivers. TACOPLEX Termination Units provide a constant level of signal throughout the system.

SERIES 2500 TACOPLEX



Designed for master antenna systems requiring more RF power than provided in the 1500 Series. The TACOPLEX 2500 Series Master Antenna Distribution System provides several times more power than any other master antenna system ever offered. The output is 6 volts, peak-to-peak, as compared to 1 volt, or less, provided by most systems. This power has been found necessary not only in systems where long runs of transmission line are used, but also in areas of high signal strength. In strong signal areas it has been found that ghosts are caused by the pick-up of signals through the transmission line at the receiver, or in some cases within the receiver. The super power of this system overcomes this signal, and thus eliminates the ghosting effect.

The Series 2500 represents the culmination of several years of research and engineering. In operation principle, it is similar to the 1500 Series, but incorporates Mixer Units as integrated parts of the Master Chassis. Amplifier Strips are of greater gain, utilizing four tubes in low-band and five tubes in high-band.

Other advanced features include superior rectification by means of tubes in place of selinium rectifiers, and test jack points for fast, easy checking. Automatic attenuation provides positive control of overloading in the amplifier strips.

The Series 2500 provides a far higher signal level throughout than any master antenna system previously available. It is recommended for apartments, stores and community systems where the finest performance is desired. Complete specifications and details are available from your TACOPLEX distributor in the form of engineering bulletins and a fully illustrated catalog.

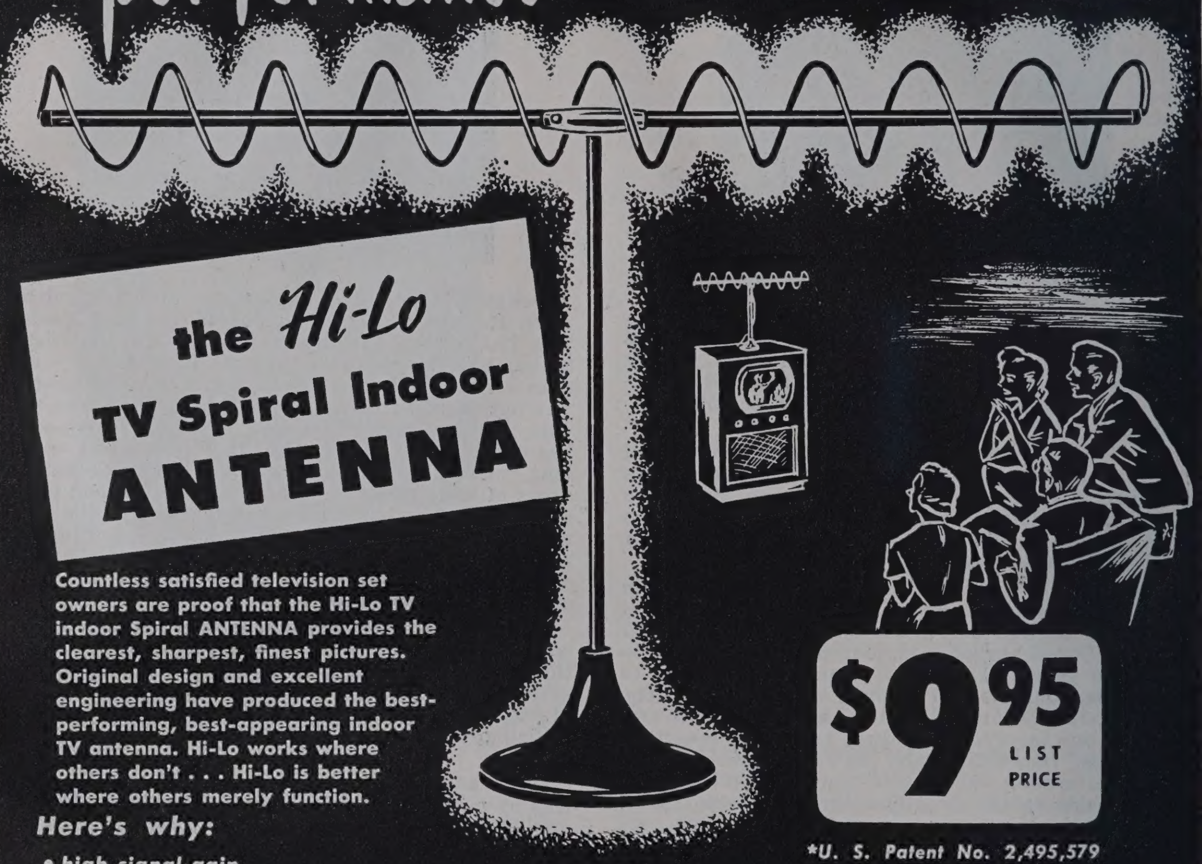
In addition to the higher output, the Series 2500 TACOPLEX System also incorporates several new type transmission line splitters of exceptionally low loss.

In selecting any master antenna system, one important point must be remembered. The signal captured by the antenna must be sufficient to provide a good picture. The function of the system is to maintain as nearly as possible this same quality signal throughout the entire system. The last receiver should have as good a picture as the one nearest the antenna location. TACOPLEX systems meet this requirement.

COMPLETE DETAILS IN TACOPLEX CATALOG

Technical Appliance Corporation, Sherburne, N. Y.

peak performance for indoor TV reception!



the *Hi-Lo* TV Spiral Indoor ANTENNA

Countless satisfied television set owners are proof that the Hi-Lo TV indoor Spiral ANTENNA provides the clearest, sharpest, finest pictures. Original design and excellent engineering have produced the best-performing, best-appearing indoor TV antenna. Hi-Lo works where others don't . . . Hi-Lo is better where others merely function.

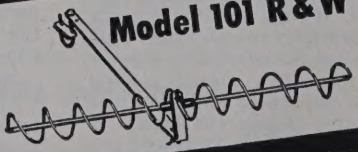
Here's why:

- ***high signal gain***
- ***tuned to high and low TV channels***
- ***no switches or rods to adjust***
- ***receives clear picture immediately***
- ***screwdriver only necessary for rapid installation***
- ***gleaming gold appearance***
- ***height 20″ — width 32″***
- ***bakelite base***
- ***aluminum bars***
- ***modern design to blend with any furniture***

$9.95 LIST PRICE

Model 101*

****U. S. Patent No. 2,495,579***
Canadian patents 1951



Model 101 R&W* for Outdoor Use

- **Window Installation**
- **Roof Installation**
- **Attic Installation**

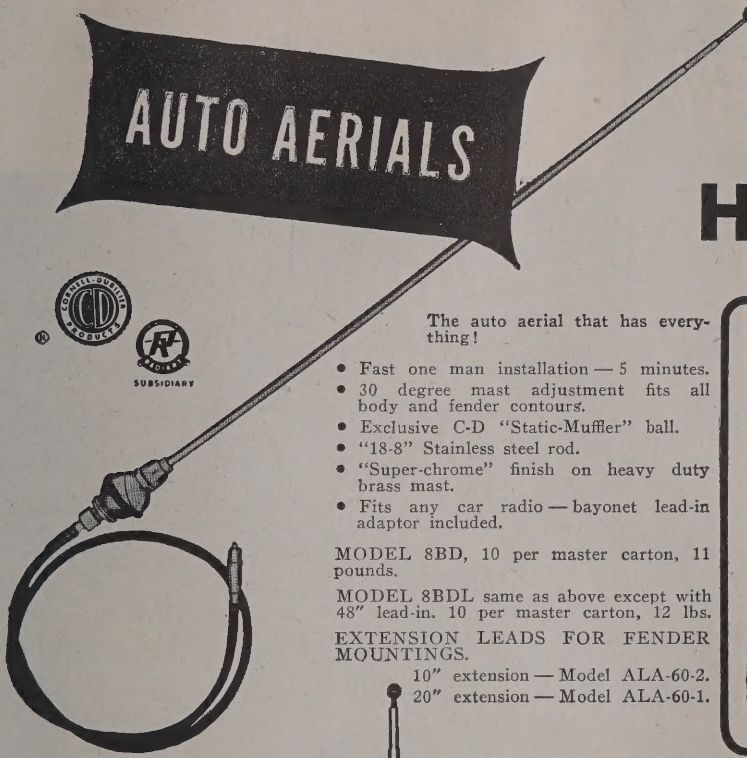
ORDER Hi-lo TV Spiral ANTENNAS today!

HI-LO TV Spiral Indoor and Outdoor antennas are sold through recognized jobbers. ORDER NOW for assured delivery.

***Hi-Lo* TV ANTENNA CORP.**
3540 N. Ravenswood • Chicago 13, Illinois

CORNELL DUBILIER

CAPACITORS—ROTATORS—VIBRATORS—AUTO, TV & FM ANTENNAS—CONVERTORS



Model 8BD

List $4.95

HI•BALL

The auto aerial that has everything!

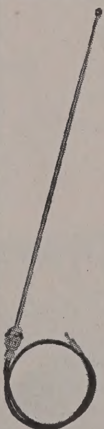
- Fast one man installation — 5 minutes.
- 30 degree mast adjustment fits all body and fender contours.
- Exclusive C-D "Static-Muffler" ball.
- "18-8" Stainless steel rod.
- "Super-chrome" finish on heavy duty brass mast.
- Fits any car radio — bayonet lead-in adaptor included.

MODEL 8BD, 10 per master carton, 11 pounds.

MODEL 8BDL same as above except with 48" lead-in. 10 per master carton, 12 lbs.

EXTENSION LEADS FOR FENDER MOUNTINGS.

10" extension — Model ALA-60-2.
20" extension — Model ALA-60-1.



DELUXE MODEL 4BX3

Three section design extends to 59½" **List $3.95**

SUPERIOR STANDARD MODEL 4BX2

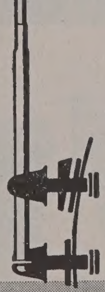
Two section design extends to 43".

- Brilliant long lasting chrome finished mast and spacer cap
- Full length quality 36" polyethylene waterproof lead-in
- Only one half inch mounting hole required **List $2.95**

TWO INSULATOR SIDE MOUNT TYPES

Sturdy high quality construction throughout. Brilliant chromed brass masts with stainless steel rods. Wedge type adaptor furnished, with 36" polyethylene lead-in.

MODEL 2S, 43" extended, 2 sections. 10 per master carton, 9 pounds — **List $3.25**
MODEL 3S. 63" extended, 3 sections. 10 per master carton, 13¼ pounds — **List $4.25**
MODEL 4S, 92" extended, 3 sections. 10 per master carton, 17½ pounds — **List $5.25**

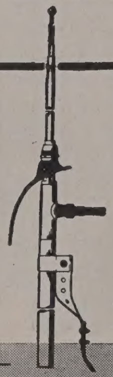


DISAPPEARING MOUNT

A handsome addition to any car . . . collapses to 6 inches and extends to 60 inches. Fits either fender or cowl and features the exclusive "O" ring seal around the mast that prevents water from entering inside the aerial. Only one $\frac{7}{8}$" mounting hole required.

MODEL 3D, 60" extended. 3 sections, 2 pounds each — **List $6.75**

10 per master carton weighing 19 pounds.

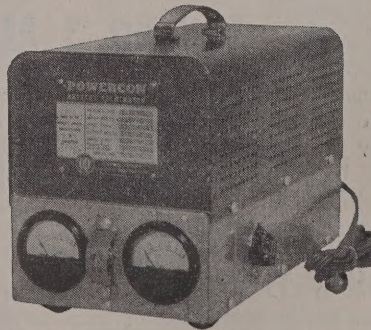


BATTERY ELIMINATOR "POWERCON" BATTERY CHARGER

Here is the ideal, compact, efficient unit for testing or demonstrating auto radios. SMOOTH DC POWER, 6 or 12 volts from the 110 volt 60 cycle AC line.

Model No.	Output	Watts	Size	Wt. Lbs.
110BA6	6V DC @ 10A	60	7⅝ x 12¼ x 8½	16
110BA12	6V DC @ 20A or 12V DC @ 10A	120	7⅝ x 13 x 8½	24½

Model 110BA6 — List Price $63.20 **Model 110BA12 — List Price $98.35**

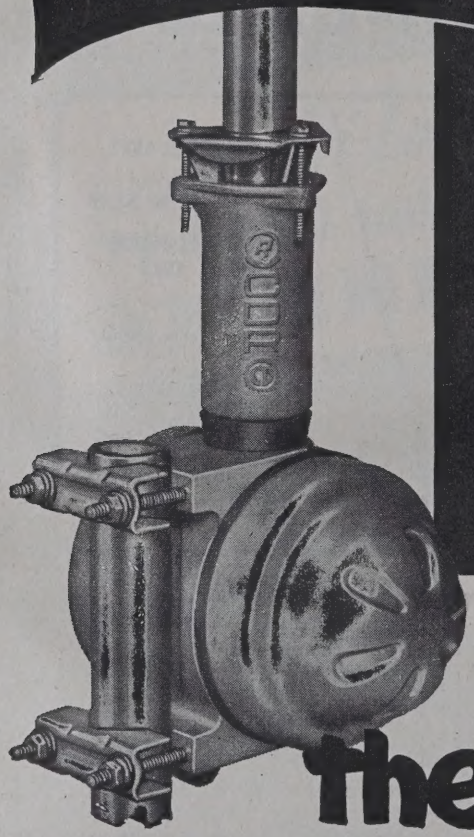


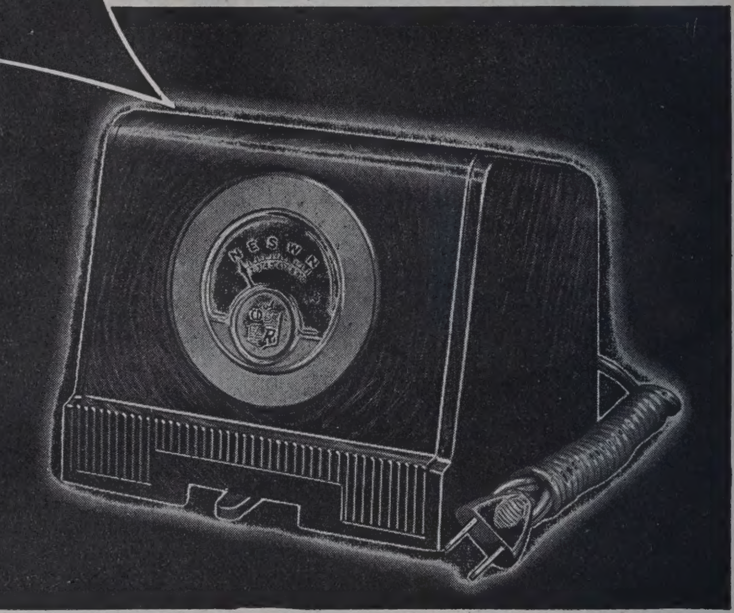
PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

CORNELL DUBILIER

IT'S ALL NEW

the Rotor of Tomorrow HERE TODAY!





the CD R Rotor

The NO. 1 ALL-PURPOSE ROTOR *That Has Everything!*

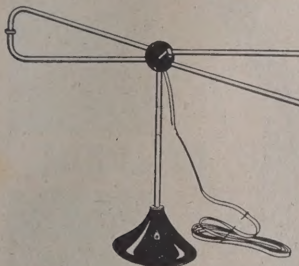
Designed to give the trade everything they've asked for. To do this, it's taken time . . . lots of time and money and engineering skill . . . and NOW WE HAVE IT . . . . the best possible ALL-PURPOSE ROTOR! It's TOPS! Order them at your jobber NOW . . . be the FIRST with the BEST in your area!

MODEL TR-11 Complete rotor with handsome modern design plastic cabinet and illuminated meter control dial . . . fingertip lever . . . using 4-wire cable $44.95

★ Quick Mounting Antenna Mast Collet
★ Speedy Installation — No Loose Parts to Assemble
★ Takes Antenna Masts up to 1½" OD
★ High Torque
★ Instant Locking — will not drift
★ Instantly Reversible — makes complete revolution in 45 seconds
★ Completely Weather-proofed — Thoroughly Water-proofed
★ Less wind resistance
★ High strength with low weight
★ Fits standard towers

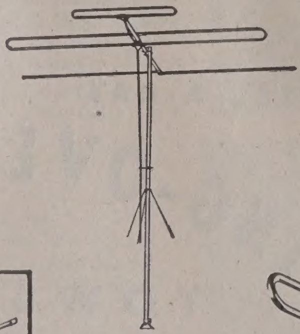
CORNELL DUBILIER

CAPACITORS—ROTATORS—VIBRATORS—AUTO, TV & FM ANTENNAS—CONVERTORS



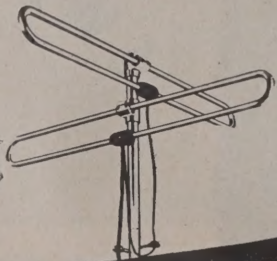
THE "LOADED X" INDOOR

The highest rated indoor antenna. This unusual CORNELL-DUBILIER design delivers peak performance comparing favorably with many outdoor installations.



"STRATE-LINE" ANTENNAS

Another feature in the complete CORNELL-DUBILIER line, this STRATE-LINE array is designed for both high and low band uni-directional reception.

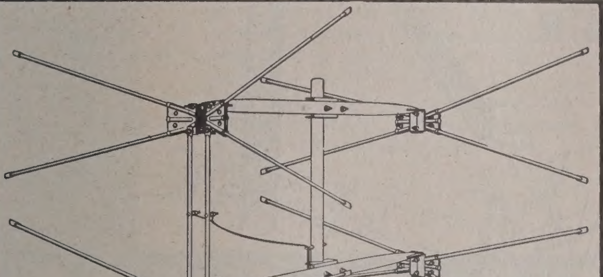


FM ANTENNAS

High quality FM antennas for peak performance under all conditions. Well designed . . . sturdy . . . easy to install.

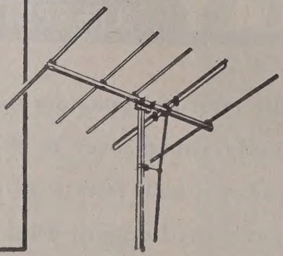
C-D TV ANTENNAS

SUPERIOR DESIGN · QUICKLY INSTALLED · TROUBLE-FREE PERFORMANCE



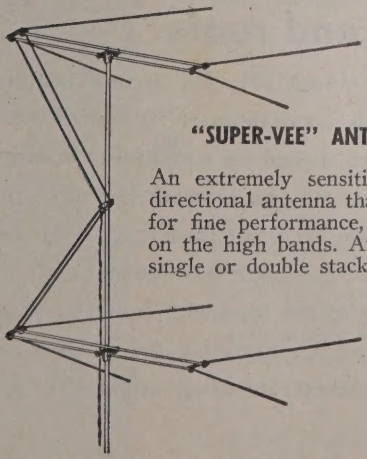
"LAZY X" CONICALS

A complete group of conical-type antennas in assortments for single bays, double-stacked and quadruple-stacked arrays. The ideal "all-channel" antenna. Also available in ALL ALUMINUM construction.



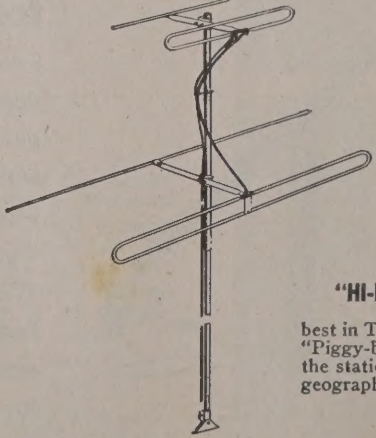
"YAGI" TV ANTENNAS

The perfect answer to the demand for maximum signal pick-up in FRINGE areas. Each YAGI is cut for a specific channel . . . in pre-assembled QUICK-FOLD-OUT design for fast installations.



"SUPER-VEE" ANTENNAS

An extremely sensitive, highly directional antenna that is noted for fine performance, especially on the high bands. Available in single or double stacked arrays.

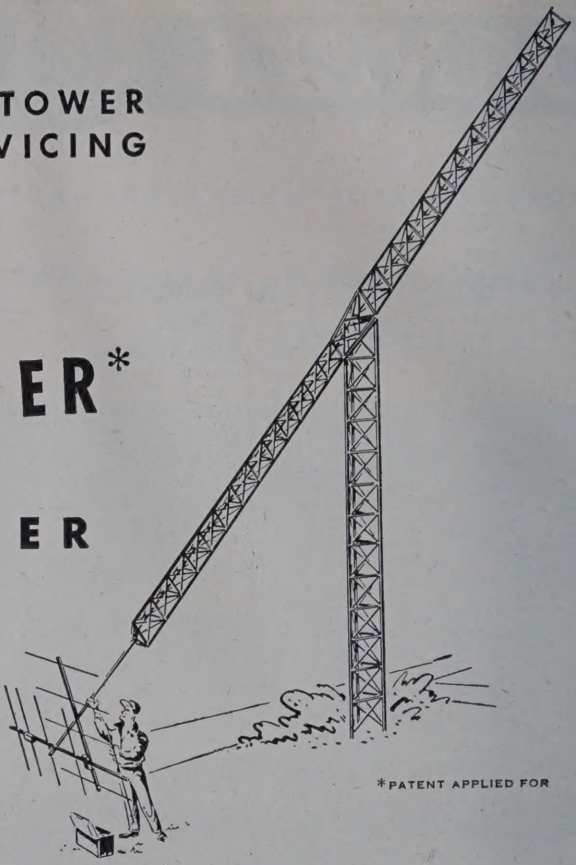


"HI-lo" ANTENNAS

best in TV reception, where "Piggy-back" style for the the stations are in different geographical locations.

THE EASIEST ANTENNA TOWER IN THE WORLD FOR SERVICING

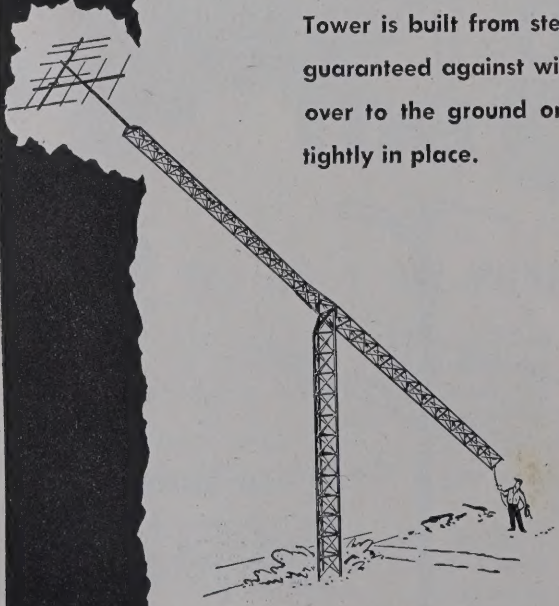
THE TEL-A-RAY SWING-OVER* TOWER



*PATENT APPLIED FOR

TEL-A-RAY ENTERPRISES, INC. TEL-A-RAY TRADE MARK **HENDERSON, KY.**

The most revolutionary item since the birth of television — a tower that actually swings over to the ground for servicing! The Tel-a-Ray Swing-Over Tower is built from steel angles with all-welded construction. It is completely guaranteed against wind and weather damage. Yet, one person can swing it over to the ground or raise it in just three minutes. When erected, it locks tightly in place.



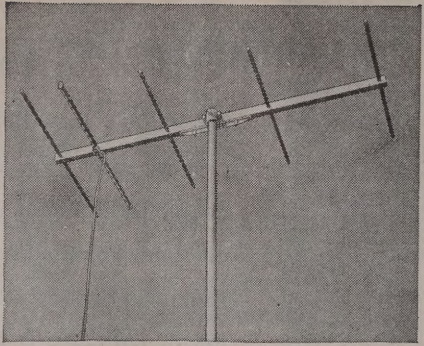
for ground and roofs

Swing-Over Tower Model TT1, for ground installations, is 40 feet high; an additional 10 feet of water pipe is recommended. It can be mounted in concrete with no guy wires, or may be erected with three guy wires only. The Model TT2, for roof tops, is 16 feet high and 8 feet of water pipe is recommended. The TT2 mounts directly to the roof with four guy wires. Both models feature the exclusive Swing-Over design. Individually packed. Shipping weights: TT1 210 lbs.; TT2 50 lbs.

MODEL T

A high-gain array with razor-sharp directivity that gives wonderful reception in fringe areas. Expressly designed to receive good images under most adverse conditions, Tel-a-Ray Model T reduces intrachannel interference to a minimum. Gain is 15 times over dipole, with 12 db power gain, high forward gain, lower angle radiation and a wider band pass. Peaked at factory to single channel for best results. Wind and weather guaranteed, available in 72 or 300 ohm impedances. Individually packed. Shipping weight:

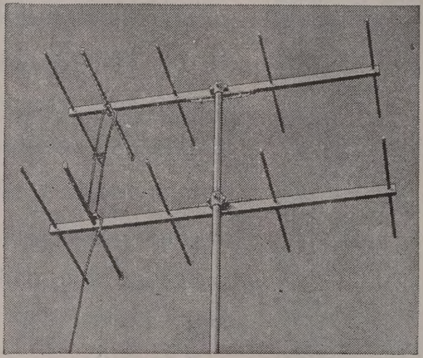
7 lbs. Lo.
5 lbs. Hi.



MODEL TD

For extraordinary sensitivity in picking up and strengthening television signals, the model TD can't be beat. Documented evidence proves the consistently good performance of the TD as much as 200 miles from the station. The same high 7.25 db front-to-back ratio as the Model T, this antenna gives 25 times gain over the dipole and a 14 db power gain! Factory peaked to a single channel, wind and weather guaranteed. 72 or 300 ohm impedances available. Individually packed. Shipping weight:

14 lbs. Lo.
10 lbs. Hi.



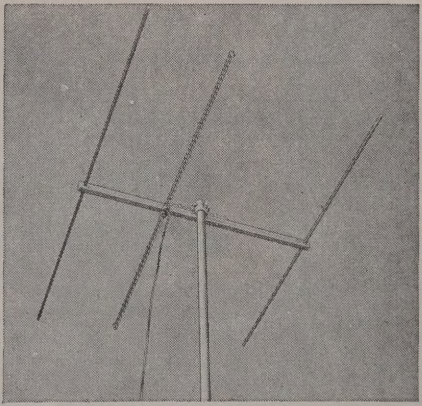
TEL-A-RAY PRODUCTS

"First--Because They Last"

MODEL R

Offering all the quality construction features of the Tel-a-Ray line, the Model R gives perfect results in outer service areas. It is high-gain array designed for reducing snow and improving image definition and clarity. Used with or without the Pre-Amplifier, the Model R will normally provide sufficient signal gain to eliminate the need for a booster. Simple to install and operate. Nine times gain over dipole, 9.5 db power gain, this antenna is also available with 72 to 300 ohm impedances. Wind and weather guaranteed. Individually packed. Shipping weight:

5 lbs. Lo.
4 lbs. Hi.

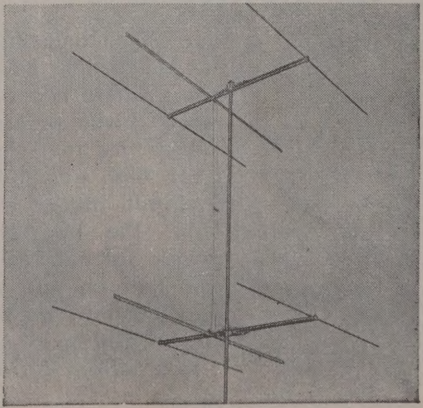


MODEL RD

Here are the advantages of the Model R, expanded into a champion middle-distance performer. Model RD offers a 13 times gain over the dipole and a power gain to 11.5 db. It increases signal strength and improves image definition on the primary service area edges. Quickly and easily installed, completely guaranteed against weather damage. 72 or 300 ohm impedances. Individually packed. Shipping weight:

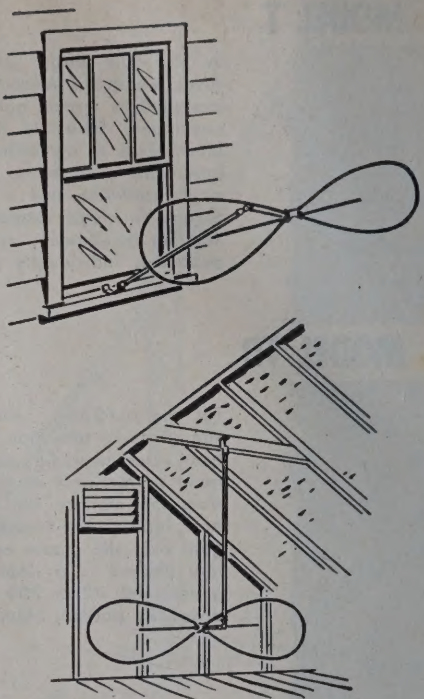
10 lbs. Lo.
8 lbs. Hi.

NOTE: The two bays on Models TD and RD come assembled as a single unit with the stacking bars ready for connection with the lead line.



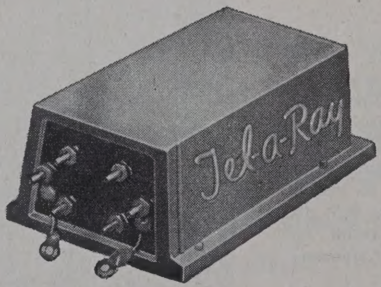
THE BUTTERFLY

Tel-a-Ray's new Butterfly has everything a primary service antenna needs — serves all channels, high gain, low price, is easily erected and completely guaranteed. The performance of the Butterfly — on any TV channel or FM radio is outstanding; it eliminates or reduces ghosts and furnishes a high gain to all signals, giving clear, bright, interference-free reception. The new swivel-positioned Butterfly can be mounted on the roof, outside a window, or hung in the attic. It can be erected in five minutes and is guaranteed to withstand wind and weather damage. Packed 12 to a bundle. Shipping weight 8 lbs.



TEL-A-RAY PRODUCTS

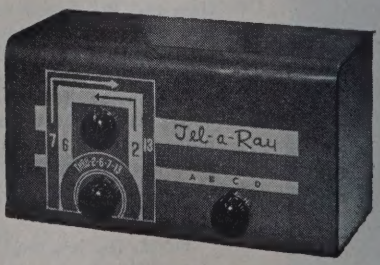
THE PRE-AMPLIFIER



For strong signal amplification without noise, Tel-a-Ray offers their exclusive pre-amplifier — the only low-cost, antenna-mounted pre-amplifier on the market. Used with Tel-a-Ray antennas, it gives up to 300 times gain over dipole, compensates for lead-line loss, makes signals stronger and holds noise to a minimum. A neutralized push-pull triode circuit with an 18 db gain, each Pre-Amp is peaked at the factory for a single channel. Sturdily built and guaranteed against wind or weather damage. Individually packed, 1 to a carton. Carton shipping weight: 2 lbs.

THE BOOSTER

Here is an amazing new Tel-a-Ray product — a Switching Booster. Designed for fringe areas where two or more channels may be received with separate antennas, the Booster will service four channels. It is a low noise level, high gain booster with a neutralized push-pull triode circuit supplying an 18 db gain. The booster controls and supplies power for the Tel-a-Ray antenna system. Channels can be switched by turning one or two knobs on the front of the beautiful streamlined metal case. Individually packed, 1 to a carton. Carton shipping weight: 6 lbs.



mobile antenna...

now . . . the Shakespeare "Wonderod"

New "Wonderod" is a Fiberglas reinforced antennae for mobile radio equipment . . . made by the pioneer manufacturer of Fiberglas fishing rods. Thoroughly tested under extreme conditions, for commercial and private installations. STOCK SIZES READILY AVAILABLE.

NOTE THESE "WONDEROD" ADVANTAGES:

- **Will not corrode — excellent weathering properties**
- **Will not take a set**
- **Light weight, reduces bumping on spring-mount**
- **Exceptionally high flexual strength**
- **High impact strength**
- **Excellent insulation even at high frequencies**
  Reduces hazard of operating under live wires, around sub-stations, etc.

PAT. APPLIED FOR

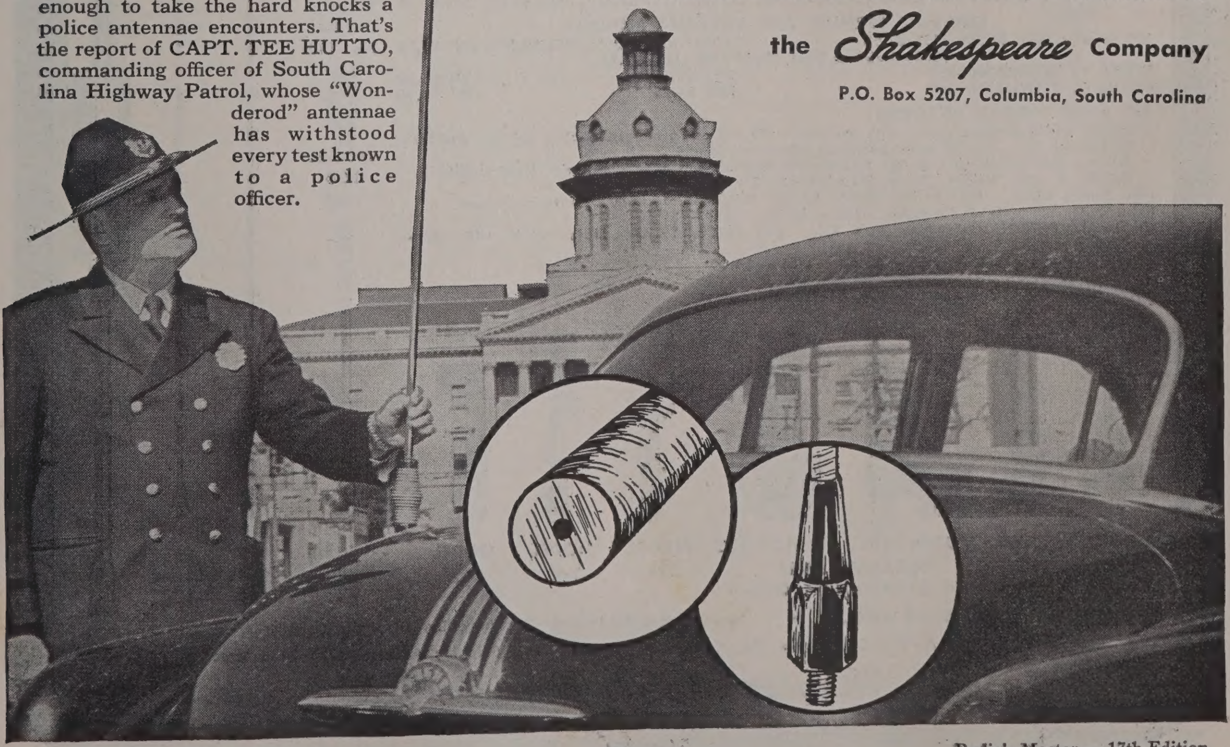
Length	**Retail List Price**
60" to 90"	**$12.90**

— price includes ⅜" — 24 chrome-plated brass fitting at base and smooth, rounded tip. Larger ball at tip and special base fittings available on request. Rods are white Fiberglas. Special colors available on quantity orders.

NOTE: The best impedance match requires a somewhat shorter "Wonderod" antennae than is required with solid steel.

. . . Excellent performance . . . excellent weathering . . . tough enough to take the hard knocks a police antennae encounters. That's the report of CAPT. TEE HUTTO, commanding officer of South Carolina Highway Patrol, whose "Wonderod" antennae has withstood every test known to a police officer.

COLUMBIA PRODUCTS COMPANY, a division of
the Shakespeare Company
P.O. Box 5207, Columbia, South Carolina



ANTENNAS *Master Mobile* MOUNTS

All the prime requisites of a reliable, long lasting mobile antenna system are incorporated into MASTER MOBILE MOUNTS through scientific engineering, high quality of materials and workmanship...AND THE PRICES ARE RIGHT.

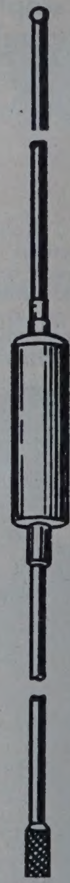
MOUNT SPECIFICATIONS: Packaged and sealed at factory. Ship. wt. Approx. 3 lbs.

Model	TYPE (All types are tapped for ⅜", 24 thread stud fitting on Antenna end)	Net Price	List Price
126	Body Mount—Straight Spring—Swivel Base	$ 8.75	$14.60
126X	Body Mount—Heavy Duty—Straight Spring—Swivel Base	9.40	15.67
126C	Body Mount—Straight Spring—Swivel Base—With Coaxial Connector	8.75	14.60
126XC	Body Mount—Heavy Duty—Straight Spring—Swivel Base—With Coaxial Connector	9.40	15.67
132	Body Mount—Double Tapered—Spring Swivel Base	8.75	14.60
132X	Body Mount—Heavy Duty—Double Tapered—Spring Swivel Base	9.85	16.42
132C	Body Mount—Double Tapered Spring—Swivel Base—With Coaxial Connector	8.75	14.60
132XC	Body Mount—Heavy Duty—Double Tapered Spring—Swivel Base—With Coaxial Connector	9.85	16.42
132S	Body Mount—Stainless Steel—Double Tapered—Spring Swivel Base	10.75	17.92
132XS	Body Mount—Heavy Duty Stainless Steel—Double Tapered—Spring Swivel Base	11.85	19.75
132SC	Body Mount—Stainless Steel—Double Tapered Spring—Swivel Base With Coaxial Connector	10.75	17.92
132XSC	Body Mount—Heavy Duty Stainless Steel—Double Tapered Spring—Swivel Base—With Coaxial Connector	10.75	17.92
138	Bumper Mount—Straight Spring	6.55	10.92
138X	Bumper Mount—Heavy Duty—Straight Spring	7.65	12.75
140	Bumper Mount—Double Tapered Spring	6.55	10.92
140X	Bumper Mount—Heavy Duty—Double Tapered Spring	7.65	12.75
140S	Bumper Mount—Stainless Steel—Double Tapered Spring	8.65	14.42
140XS	Bumper Mount—Heavy Duty Stainless Steel—Double Tapered Spring	9.65	16.10
142	Bumper Mount—Less Spring, with Insulators for Direct Mounting by Series Bumper Mount—100 Antennas or 92 Extension and 106 Antennas	3.25	5.42

WHIP ANTENNA SPECIFICATIONS: Postage rate 10 lbs. minimum. 3 lbs. on all other whip antennas.

MODEL Stainless Steel	Overall Length	Base Specifications	Net Price	List Price
100-60S	60"	Threaded 3/8" Stud to fit all Mounts	$4.95	$8.25
100-72S	72"	Threaded 3/8" Stud to fit all Mounts	4.95	8.25
100-78S	78"	Threaded 3/8" Stud to fit all Mounts	5.00	8.35
100-86S	86"	Threaded 3/8" Stud to fit all Mounts	5.15	8.58
100-90S	90"	Threaded 3/8" Stud to fit all Mounts	5.20	8.67
100-96S	96"	Threaded 3/8" Stud to fit all Mounts	5.25	8.75
106-60S	60"	Plain End 3/16" Dia. (Fits Model 92 Ext.)	4.15	6.92
106-72S	72"	Plain End 3/16" Dia. (Fits Model 92 Ext.)	4.15	6.92
106-78S	78"	Plain End 3/16" Dia. (Fits Model 92 Ext.)	4.20	7.00
106-86S	86"	Plain End 3/16" Dia. (Fits Model 92 Ext.)	4.35	7.25
106-90S	90"	Plain End 3/16" Dia. (Fits Model 92 Ext.)	4.40	7.34
106-96S	96"	Plain End 3/16" Dia. (Fits Model 92 Ext.)	4.50	7.50

ALL BAND MOBILE ANTENNA



COAXIAL CONVERSION KIT

No. 118 Master Coaxial Conversion Kit. Fits all No. 132 and 132J Models. Net $1.00 List $1.67

No. 118

SEPARATE SPRINGS FOR ANTENNA MOUNTS

100 Regular, NET $4.50 LIST $7.50

100X—Heavy Duty, NET $5.50 LIST $9.15

100S—Stainless Steel, NET $5.50 LIST $9.15

MODEL 92 EXTENSION—18"	NET $3.25	LIST $5.42
MODEL 94 EXTENSION—36"	NET $4.25	LIST $7.10

MODEL 100 100X

ALL BAND MOBILE ANTENNA

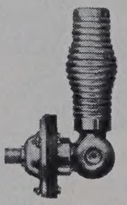
- Center-loaded antenna comes with one coil — 20, 40 or 75 meters. Change coils to any band 80 through 20...For 10 meter operation, short coil in use.
- Fits any MASTER MOUNT or ⅜" SAE thread, Hammertone or Chrome finish (if available)
- Height: 8' 10" Weight: 28 oz. Shipping wt.: 3 lbs.

NET PRICE: $8.75 LIST PRICE: $14.60 Specify freq. coil desired. Less spring mount.
Extra coils — 20, 40 or 75 meters: NET — $3.30 LIST — $5.50
CIVIL AIR PATROL ANTENNA: 2374 KC. NET PRICE: $9.95 LIST: $16.60 with coil — less mount.
Extra Coils — 2374 KC: NET — $3.60 LIST — $6.00

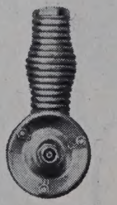
* X - Heavy Duty, C — Coaxial Type, S — Stainless Steel

MODEL 126

MODEL 132



MODEL 132C (COAXIAL TYPE)



MODEL 132C

(Coaxial Type Body Mounts Optional)

MODEL 138

MODEL 140

MODEL 142

Extension Model 92

Series 106

Series 100

ORDER FROM YOUR DEALER OR WRITE. • Dealer Inquiries Invited • Prevailing Discounts to Distributors and Amateurs.

P. O. Box 1817 • Los Angeles 36, California • Warehouse & Shipping Address: 1306 Bond Street

Master Mobile Mounts, Inc.

ANTENNAS *Master Mobile* MOUNTS

Master Mobile's SENSATIONAL...

New! JUNIOR LINE

Always ahead, Master Mobile Mounts, Inc., announce new advanced line of Mobile Mounts and Antennas manufactured to same high quality and specifications as regular Master Mobile line....The new JUNIOR LINE meets every need for competitive light weight mobile mounts and antennas.

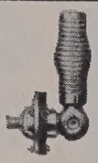
JUNIOR—BODY MOUNTS

No. 132J—Swivel base, mounted with double tapered spring, is actually a junior model of our standard No. 132 which is accepted as "tops with the trade." The 132J is the same quality double tapered spring as the standard No. 132, but of slightly less size—Built to fill the bill where price counts. It is a mount which provides high operational performance.

Price: **Net $4.17** **List $6.95**

No. 132JC—Same as No. 132J with coaxial connection.

Price: **Net $5.17** **List $7.95**



MODEL 132JC

MODEL 132JC

MODEL 132J

JUNIOR—BUMPER MOUNTS

No. 140J—Double tapered spring bumper mount—same high quality spring construction and finish as No. 132J. Installation can be quickly made so antenna stands truly vertical for top reception.

Price: **Net $4.17** **List $6.95**

JUNIOR—SWIVEL BASE

No. 101—Light weight swivel base body mount only—(No. 101 is a No. 132J without spring). A high quality cadmium plated adjustable split ball with positive locking—will maintain angular adjustment at all times.

Price: **Net $2.97** **List $4.95**

MODEL 101

MODEL 99

MODEL 140J

JUNIOR SPRING

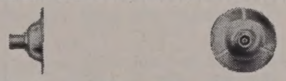
No. 99—Light type, double tapered spring only.
(Dimensions: 4" x 1⅛" spring ends tapped for 3/8", 24 thread studs—cadmium plated).

Price: **Net $3.25** **List $5.42**

JUNIOR COAXIAL CONVERSION KIT

No. 121—Jr. Coaxial Conversion Kit—fits No. 132J body mount only.

Price: **Net $ .90** **List $1.50**



SIDE — MODEL 121 — FRONT
COAXIAL KIT—FITS JR. MOUNTS ONLY

TWO METER ANTENNAS

No. 113—Master VHF Roof Top Antenna—designed for police, fire service, taxi cabs, and amateurs using 140 MC to 165 MC. Antenna constructed of stainless steel wire with threaded fitting—easily replaced or changed without disturbing mounting. Comes with 10' coaxial cable.

Price: **Net $3.96** **List $6.60**

No. 114—Master Coaxial VHF Antenna, an efficient antenna for open type vehicles, convertibles, station wagons, fire trucks, taxi cabs, and amateurs using 140 MC to 165 MC frequencies. Design permits mounting on any convenient place by use of any of the Master Standard Mounts. Supplied with 18" adjustable section and 10' of coaxial cable.

Price: **Net $9.95** **List $16.60**

No. 115—Adjustable 36" section for use with No. 114.

Price: **Net $4.25** **List $7.10**

SILICON-CHROME WHIP ANTENNAS

Fit all Master Mounts, finest cadmium plated.

SERIES 9 with 3/8" 24 thread studs.

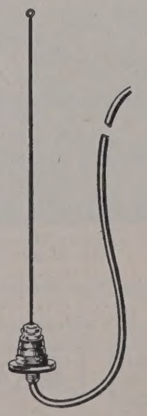
Model No.	Length	Net Price	List Price
9-60T	60"	$2.97	$4.95
9-72T	72"	3.24	5.40
9-84T	84"	3.30	5.50
9-86T	86"	3.60	6.00
9-96T	96"	3.75	6.25

SERIES 8 without studs

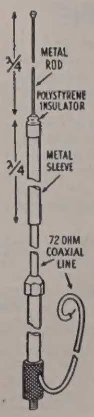
Model No.	Length	Net Price	List Price
8-60	60"	$2.82	$4.70
8-72	72"	3.08	5.13
8-84	84"	3.13	5.22
8-86	86"	3.42	5.70
8-96	96"	3.56	5.93

*J-Junior Models

Order from your dealer or write. Dealer Inquiries Invited.
Prevailing Discounts to Distributors and Amateurs.



MODEL 113



MODEL 114
(COAXIAL TYPE)

Master Mobile Mounts, Inc.

P O BOX 1817 • LOS ANGELES 36, CALIFORNIA
WAREHOUSE AND SHIPPING ADDRESS: 1306 BOND STREET

OUTDOOR *Tricraft* ANTENNAS INDOOR

INDOOR Antenna

List Price
$9.95

(Licensed by Hi-Lo TV Antenna Corp. U. S. Pat. No. 2,495,579 Canadian Pats. 1951)

Model T-52

- Tops in indoor performance
- Low loss due to excellent impedance matching
- Highly directional characteristics reject noise and ghosts
- No dangling, unsightly wires (Lead wire is concealed)
- Two-toned mahogany leatherette cover blends with any TV set.
- Simple to orient for better picture on both high or low bands.
- Sturdy construction

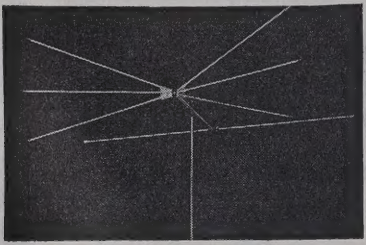
"TENNA-BOAT" INDOOR Antenna

Model TB 400

Pats. App. For

- BEAUTIFUL CERAMIC — Available in Dark Green, Crimson and Harvest Moon. Sails of Plastic in Pastel Shades to match.
- EXCELLENT PERFORMANCE.
- EASE OF OPERATION — Move boom of boat to orient for peak reception.
- TUNING CONDENSER — Assures perfect impedance match.

List Price **$12.95**



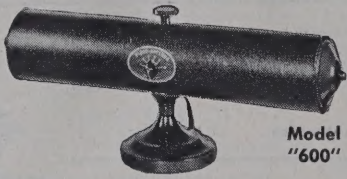
Model 6000

TRICRAFT "High Quality"

"Bi-Ex" Conical type

Extra High Gain — All elements ½" seamless hardened aluminum tubing with wood dowels — cross arm ¾" thin wall steel tubing — completely pre-assembled.

Model 6000—Single Unit — List Price	$13.85
Model 6200—Two stacked unit with aluminum stacking bars — List Price	$27.95
Model 6400—Four stacked unit with aluminum stacking bars — List Price	$58.25



Model "600"

INDOOR Antenna

TRICRAFT Model 600

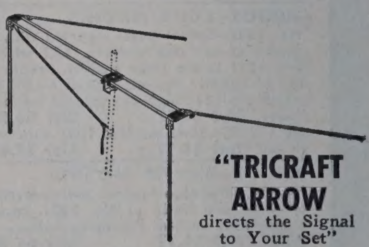
(Patent No. 2,563,243)

ELECTRICALLY ADJUSTED INDOOR ANTENNA

- The "Only" pretuned frequency Indoor Antenna
- Turn switch to channel and Antenna is electrically tuned to station
- Receives on all channels
- Signal gain never before achieved on indoor Antenna
- Two-toned Mahogany leatherette cover blends with any TV set
- Consumer tested and approved

Model 600
List Price
$14.95

ORDER TODAY!



"TRICRAFT ARROW

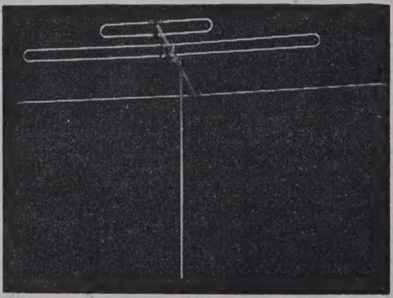
directs the Signal to Your Set"

- All Wave — High Gain — Very Directional
- Low Front to Back ratio
- All riveted construction
- Cross pieces: ½" round seamless hard aluminum tubing re-enforced with wood dowels
- Elements ⅜" round butt seam hard aluminum tubing re-enforced with wood dowels
- All insulators made from laminated Phenolic, high impact strength
- Pre-assembled

Model 4000—single unit — less Mast — List Price	$7.95
Model 4200 — two-stacked with aluminum stacking bars — less Mast — List Price	$17.80

Model 2650

TRICRAFT "IN-LINE"



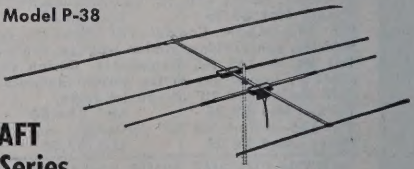
Well matched in all channels — Highly directional —All elements ½" seamless hardened aluminum tubing—Cross arm ¾" thin wall steel tubing—Completely preassembled — "can be set up in one minute".

Model 2650 — Less Mast — List Price	$12.80
Model 2650-5M with 5 ft. 1" OD Heavy Steel zinc coated Mast — List Price	$13.95
Model 2750 — two stacked — complete with stacking bars (No Mast)	$26.10

(Can also furnish complete kits with standoffs and 300 ohm wire)

Completely re-engineered for better performance and many mechanical improvements.

Model P-38



TRICRAFT "P-38" Series

ALL WAVE YAGI TYPE
Patents applied for

- Peak reception on all channels
- Single and stacked arrays engineered to perfect impedance match to 300 ohm
- Designed for maximum strength — sturdy construction — completely pre-assembled
- 23 degree beam width rejects ghosts, interference and noise
- Two and four stacked arrays giving phenomenal fringe-area results all over the country.

Model P-38—single unit—less mast—List Price	$15.85
Model P-238—Two stacked with stacking bars—List Price	$31.80
Model P-438—Four stacked with stacking bars—List Price	$61.50

All Antennas can be furnished in kits with masts, 300 ohm wire and standoffs.

MASTS 1" O.D. Heavy steel zinc coated masts.

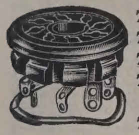
5 Ft. — Upper Section — List Price	$1.15
5 Ft. — Lower Section — List Price	$1.20

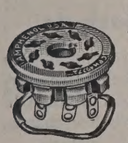
T *Tricraft Products Co.* CHICAGO 22, ILL.

Manufacturers of complete line of Television, FM and AM antennas and accessories

Retainer Ring "S" Type Sockets

Extremely compact sockets, furnished complete with retainer rings. Mount in 1-11/64″ keyed hole. Use Amphenol No. 25-LD-1 Punch and Die.


Black Bakelite


Steatite

Black Bakelite	List	Contacts	Steatite	List
78-S4	$ .13	4 Contacts	49-SS4	$ .47
78-S5	.13	5 Contacts	49-SS5	.47
78-S6	.13	6 Contacts	49-SS6	.47
78-S7C*	.17	7 Comb. for 7L, 7S	....	....
78-S7L*	.13	7 Large	49-SS7L*	.59
78-S7S	.13	7 Small	49-SS7S	.47
78-S8	.17	8 Octal	49-SS8	.47
78-S8L	.21	8 Loktal	....	....
78-S9	.21	9 Octal Style	....	....
78-S11	.29	11 Octal Style	....	....
78-A7P†	.30	7 for Miniatures	.....	....
78-A9P†	.45	9 for Miniatures	.....	....
78-B	.07	Blank	....	....

* Mounts in 1-21/64″ keyed hole. Use 25-LD-2 Punch and Die.

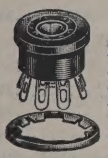
† Mounts in standard socket hole. Has miniature socket in center.

Magnal Socket Has 1-1/16″ pin circle for cathode ray and television tubes. Mounts in 1-5/8″ hole. Steatite.

No. 49-SS11L 11 Contact, Magnal....................List $1.21

Miniature Retainer Ring Type Sockets

Mount in 5/8″ round or "D" shaped hole with No. 2-9 retainer rings.



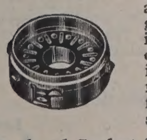
Black Bakelite

Number	Description	List
78-S3S	For 3 prong min. photo cells............	$ .17
78-S4S	4 Contact............................	.17
78-S5S	5 Contact............................	.21
78-S6S	6 Contact............................	.21
78-7P	7 Contact. Miniature.................	.21

Mica-Filled Bakelite

78-7PT	7 Contact. Miniature............................	.28

Duodecal and Diheptal Tube Sockets



Designed for television viewing tubes, oscilloscopes and other cathode-ray tubes. Provides means of grouping leads within the socket housing and bringing them out radially. Grouping of the wires in the enclosed raceway eliminates flexing at solder terminals, minimizing breakage. Socket cap and body molded from high quality electrical bakelite. Designed for easy assembly and dis-assembly . . . requires no special tools.

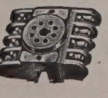
Duodecal Socket for a maximum of 12 equally spaced pins on a circle diameter of 1.063″.

No. 59-402..List $1.56

Diheptal Sockets for a maximum of 14 equally spaced pins on a circle diameter of 1.750″.

No. 59-415	Small—for 2.050″ D. Tube base..............	List $1.67
No. 59-417	Medium—for 2.250″ D. Tube base...........	1.67

Barrier Type Industrial Octal Socket

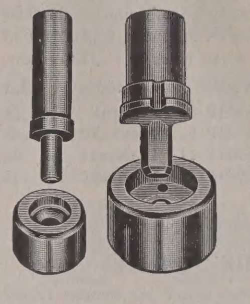


Molded in one piece of Melamine. Contacts are removable. R.M.A. numbered reversible screw type terminals.

No. 146-103	Standard Socket without Tie Point Inserts—Top Mounted....	List $1.58
No. 146-104	Socket with Four Molded-in Threaded Inserts for Tie Points—Top Mounted....	List $2.16

Laboratory Punch and Dies

For punching mounting holes for Amphenol connectors, plugs and receptacles. Made of tool steel, properly hardened.



For Amphenol Retainer Ring Mounting Tube Sockets, Radio Plugs, etc.

Drill 1/2″ hole for pilot punch.

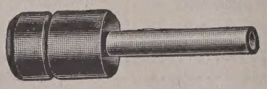
No.	Size of Hole	List
25-LD-1	1-11/64″ keyed......	$12.00
25-LD-2	1-21/64″ keyed......	12.00

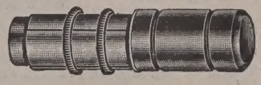
For Miniature Sockets and Microphone Connectors

Drill 3/8″ pilot hole for 25-LD-3, 5 and 6 and 1/4″ hole for 25-LD-4.

25-LD-3	13/16″ round.........	$3 60
25-LD-4	5/8″ round............	3 60
25-LD-5	5/8″ "D" hole........	6 00
25-LD-6	1/2″ "D" hole........	6.00

Retainer Ring Hand Tools

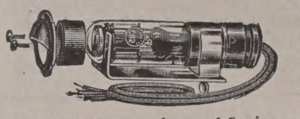

51-5


51-1

Convenient for assembling miniature sockets, plugs and tip jacks to panels or chassis. Designed for hand operation.

Number	Description	List
51-5	For No. 2-9 Rings.....................................	$1.20
51-6	For No. 2-11 Rings....................................	1.20
51-7	For No. 2-10 Rings....................................	1.20
51-1	For "S" type sockets and "CP" type plugs except 7C and 7L sizes. Required where socket spacing is very close.	6.66
51-2	For "S" type sockets 7-large and 7-combination	6.66
51-3	For "SS" steatite sockets and "60" and "61" receptacles. Of two-piece construction . . . somewhat easier but slower to use than 51-1 (above) for "S" sockets and "CP" plugs	6.66

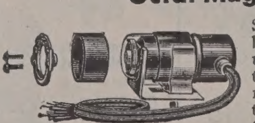
Magic Eye Assembly



For easily adapting or replacing a 6 prong magic eye tube in any radio having automatic volume control. Also for FM receivers, test instruments, signal tracers, and as volume level and modulation indicators. Includes 1 megohm target plate resistor wired into socket and 5 wire, color coded cable 22″ long. Mounting bracket is slotted for tube adjustment. Complete as illustrated, with escutcheon and hardware for assembly. Tube not included.

No. 58-MEA6 Complete Magic Eye Assembly...........**List $1.51**

Octal Magic Eye Assembly

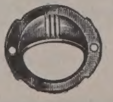


Similar to No. 58-MEA6 shown above, but for octal type magic eye tubes. New universal short bracket for the smaller tube sizes permits use of any of the octal magic eye tubes including the dual pattern and the new multi-pattern types. Complete with 8 wire, color coded cable, 22″ long, full vision escutcheon and hardware for assembly. Tube not included.

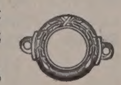
No. 58-MEA8 Complete Octal Magic Eye Assembly......**List $1.51**

Magic Eye Escutcheons

Hood type is of sturdy plastic with beautiful antique bronze finish. Full vision type for octal dual-pattern and new octal multi-pattern types is brass with antique bronze finish.



Number	Description	List
10-102	Hood Type. For 6 prong tubes.	$ .15
10-2	Full Vision Type. For octal tubes....................	.36

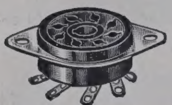


AMPHENOL

AMERICAN PHENOLIC CORPORATION

1830 SOUTH 54TH AVENUE, CHICAGO 50, ILLINOIS

MIP Molded-In-Plate Sockets

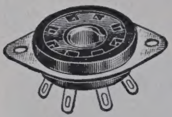


Molded of high dielectric black Bakelite, sturdy, steel mounting plate molded directly into the solid body, cannot come loose or vibrate. Contacts grip tube prongs firmly and retain their resiliency indefinitely. Mount in 1-5/32″ round hole. Two 5/32″ screw holes on 1-1/2″ centers.

Number	Contacts	List
77-MIP-4	4 Contacts	$ .12
77-MIP-5	5 Contacts	.12
77-MIP-6	6 Contacts	.12
77-MIP-7L*	7 Large	.14
77-MIP-7S	7 Small	.12
77-MIP-8	8, Octal	$ .14
77-MIP-9	9, Octal style	.18
77-MIP-11	11,Octal style	.24
77-MIP-12	12,Octal style	.30

* 77-MIP-7L mounts in 1-9/32″ D. round hole.

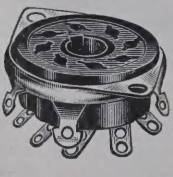
Compact MIP Sockets



Same as MIP series above but smaller in diameter. Mount in 1-1/8″ round hole. Two 5/32″ diameter mounting holes on 1-5/16″ centers. Black Bakelite dielectric.

Number	Contacts	List
88-8	8 Contacts	$ .14
88-8X	8, Loktal	.21

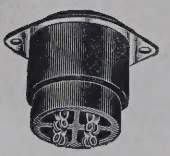
Saddle Type Octal Sockets



An economical socket for below chassis mounting. 74-8 mounts in a 1⅛″ hole with two ⁵⁄₃₂″ diameter mounting holes on 1½″ centers. 168-150 mounts in 1″ hole with two .140″ diameter mounting holes on 1⁵⁄₁₆″ centers. Both with 4 grounding lugs, tuning fork contacts, black bakelite.

No. 74-8..........................List $ .14
No. 168-015.......................List .13

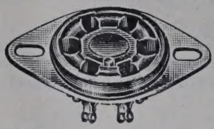
High Voltage Safety Sockets



For rectifier and other tubes with base diameter of 1.156″. Socket is set at the bottom of a deep molded Bakelite shell. Heavy steel mounting plate molded into shell has 5/32″ diam. mounting holes on 1-7/8″ centers. Socket mounts from above or below in 1-1/2″ round hole.

		List
77A-4T	4 Contacts. Mica-filled	$1.51

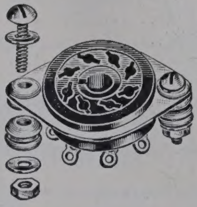
Replacement Sockets



Regular "S" sockets, assembled with No. 4 retainer ring to steel mounting plate with slotted holes to fit mounting centers from 1-1/2″ to 1-7/8″.

Black Bakelite	List	Contacts	Steatite	List
78-RS4	$ .14	4 Contacts	49-RSS4	$ .48
78-RS5	.14	5 Contacts	49-RSS5	.48
78-RS6	.14	6 Contacts	49-RSS6	.48
78-RS7C	.18	7 Comb.	....	....
78-RS7L	.14	7 Large	49-RSS7L	.61
78-RS7S	.14	7 Small	49-RSS7S	.48
78-RS8	.18	8 Octal	49-RSS8	.48
78-RS8L	.22	8 Loktal	....	....
78-RS9	.22	9 Octal style	....	....
78-RS11	.30	11 Octal style	....	....

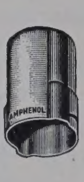
Floating Octal Sockets



Live rubber grommets fit into mounting holes to cushion this socket for vibration-free operation. Black bakelite dielectric. Mounts in 1-3/16″ round hole above or below chassis. Two 1/4″ screw holes on 1-1/2″ centers.

Number	Description	List
77-MIP-8FK	Octal. Complete with 4 rubber grommets, 2 mounting screws, nuts and washers	$ .39
11-3K	Kit for making floating connections using Amphenol MIP Sockets. 4 grommets, 2 mounting screws, nuts and washers only	.24

Tube Shield and Spring Assemblies



Number	Height	Description	List
5-401	1-3/8"	For 7 Pin Miniature Sockets	$ .14
5-402	1-3/4"	For 7 Pin Miniature Sockets	.14

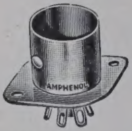
Tube Shields No. 5-401 and 5-402 are used with Sockets No. 59-367, 147-905, 147-913, 147-925, 147-955 and 147-963.

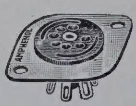
Number	Height	Description	List
5-405	1-1/2"	For Noval Sockets	.20
5-408	1-15/16"	For Noval Sockets	.24
5-409	2-3/8"	For Noval Sockets	.24

Tube Shields No. 5-405, 5-408 and 5-409 are used with Sockets No. 59-369, 59-406 and 59-407.

MINIATURE 7 AND 9 PIN SOCKETS

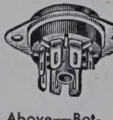
ZIP-IN, Ethylon-A

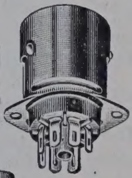




Molded of Ethylon-A with high "Q" factor. Mounting plate has .136″ diameter holes on 1-5/16″ centers. Round chassis holes are 27/32″ for 7 pin and 15/16″ for 9 pin.

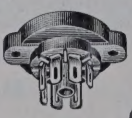
Number	Description	List
59-357	7 Pin. Without tube shield base	$ .21
59-367	7 Pin. With tube shield base	.27
59-359	9 Pin. Without tube shield base	.51
59-369	9 Pin. With tube shield base	.61

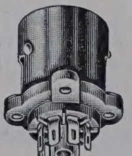




Above—Bottom Mounted

Right—Top Mounted with Tube Shield Base





Above—Rubber Mounted

Right—Rubber Mounted with Tube Shield Base

Bakelite and Steatite Sockets

Used for television, FM, auto radios, portables, etc. 147 Series mount in 5/8″ chassis hole; mounting centers 7/8″; screw holes 1/8″. 59 Series mount in 3/4″ chassis hole; mounting centers 1-1/8″; rivet holes .095″.

Bottom Mounting—No Tube Shield Base

Number	Contacts	Dielectric	List
147-500	7	Black Bakelite	$ .24
147-501	7	Steatite	.51
59-409	9	Black Bakelite	.39
59-410	9	Mica-Filled Bakelite	.40

Top Mounting—With Tube Shield Base

Number	Contacts	Dielectric	List
147-905	7	Black Bakelite	.39
147-913	7	Mica-Filled Bakelite	.40
147-925	7	Steatite	.63
59-406	9	Black Bakelite	.56
59-407	9	Mica-Filled Bakelite	.57

Rubber Mounted—No Tube Shield Base

Number	Contacts	Dielectric	List
147-502	7	Black Bakelite	.25

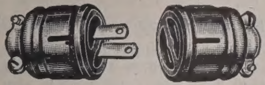
Rubber Mounted—With Tube Shield Base

Number	Contacts	Dielectric	List
147-955	7	Black Bakelite	.50
147-963	7	Mica-Filled Bakelite	.51

COAXIAL CABLES AND CONNECTORS • INDUSTRIAL CONNECTORS, FITTINGS AND CONDUIT • ANTENNAS • RADIO COMPONENTS • PLASTICS FOR ELECTRONICS **AMPHENOL**

AMPHENOL AMERICAN PHENOLIC CORPORATION
1830 SOUTH 54TH AVENUE, CHICAGO 50, ILLINOIS

Shielded Cable Connectors, 110—250 Volt
End Cable Outlet—For cables up to ½" diameter



Fully shielded cable terminals with black Bakelite connector units encased in a tight cap that fits securely and is easily removed. Available with cable clamp that relieves soldered connections of strain, or with rubber grommets for protection against abrasion.

With Cable Clamp	List	Description	With Grommet	List
60-F11	$ .66	3 Pole Receptacle	60-F4	$ .60
60-M11	.66	3 Pole Polarized Plug	60-M4	.60
61-F11	.54	2 Pole Universal Receptacle	61-F4	.48
61-M11	.54	2 Pole Standard Plug	61-M4	.48
61-MP11	.54	2 Pole Polarized Plug	61-MP4	.48

Flush Motor Plug, 110—250 Volt

Neat, compact plug or receptacle set in type 61-61 steel shell for below surface mounting. Room for insertion of Amphenol End Cable Outlet Plugs.

Number	Description	List
61-F10	2 Pole Universal Receptacle	$ .48
61-M10	2 Pole Standard Plug	.48
61-MP10	2 Pole Polarized Plug	.48

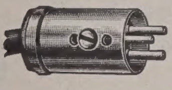
Molded-In-Plate Receptacle

Same as 61-F Receptacle with standard steel mounting plate molded into the Bakelite body. Mounts in 1-3/16" chassis hole; two 5/32" screw holes on 1-1/2" centers.

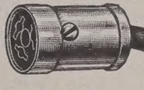
No. 61-MIP-61F 2 Pole Universal Receptacle...... **List**..... **$ .30**

Miniature Cable Connectors

Short



Long



Flared

For shielded or unshielded cables having up to 6 conductors. Black Bakelite elements are housed in cadmium plated brass shells and are held in place by side set screws. Polarized contact spacing makes incorrect insertions impossible. Accommodates cable up to 1/4" diameter.

Short Shell—13/16" Long

Male	List	Description	Female	List
91-MPM3S	$ .36	3 Contact	91-MPF3S	$ .36
91-MPM4S	.40	4 Contact	91-MPF4S	.40

Long Shell—1-3/16" Long

Also use with shielded chassis units shown below.

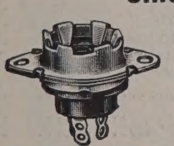
Male	List	Description	Female	List
91-MPM3L	$ .36	3 Contact	91-MPF3L	$ .36
91-MPM4L	.40	4 Contact	91-MPF4L	.40
91-MPM5L	.45			
91-MPM6L	.45			

Note: Use long shell type with shielded chassis units; use either long or short shells with unshielded types such as 78-S3S and 86-CP-3S.

Flared Shell—1-3/16" Long

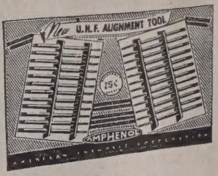
Description	Number	List
3 Contact	91-MPF3	$ .36
4 Contact	91-MPF4	.40

Shielded Chassis Units

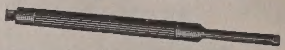


Economical chassis receptacles for connecting shielded or unshielded cables having from 2 to 6 conductors (for 2 wire cable use 3 contact unit and leave 1 contact unwired). Black Bakelite element; steel mounting plate. Can be mounted on surface or behind chassis or panel in 7/8" D. hole; 5/32" screw holes on 1-1/4" centers. Use with long shell cable connector above for a fully shielded connection.

Female	Description	List
78-PCG3	3 Contact	$ .36
78-PCG4	4 Contact	.36
78-PCG5	5 Contact	.41
78-PCG6	6 Contact	.41



Alignment Tool



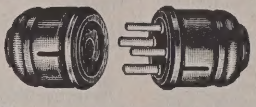
Made of Amphenol 912-A polystyrene. Has no capacity effect when aligning critical circuits. A necessary tool for anyone who must make adjustments on high frequency circuits.

No. 55 U.H.F. Alignment Tool (minimum order 24)..... **List $ .25**

Illustrated above is the colorful sales card on which are mounted 24 Amphenol Alignment Tools.

No. 55-024 Sales Card with 24 Alignment Tools......... **List $6.00**

Shielded Multi-Wire Cable Connectors



Multi-wire cable connectors consist of Amphenol "S" type tube sockets and "CP" plugs. Metal cap shields connections and provides an unbreakable cover for cable termination. Cap may be removed with an ordinary screwdriver. Accommodates cable up to 7/16" diameter. Female chassis receptacles or sockets 78-S, 78-RS and 77-MIP; male receptacles are listed below.

With Rubber Grommets

With Rubber Grommet Type Plug Cap 3-13.

Female	List	Contacts	Male	List
78-PF4	$ .31	4 Contact	86-PM4	$ .31
78-PF5	.31	5 Contact	86-PM5	.31
78-PF6	.31	6 Contact	86-PM6	.31
78-PF7L	.31	7 Large	86-PM7L	.31
78-PF7S	.31	7 Small	86-PM7S	.31
78-PF8	.35	8 Octal	86-PM8	.35
78-PF9	.39	9 Octal Style	86-PM9	.39
78-PF11	.47	11 Octal Style	86-PM11	.47

With Cable Clamps

With positive grip Cable Clamp Type Plug Cap 3-24.

				List
78-PF4-11	$ .37	4 Contact	86-PM4-11	$ .37
78-PF5-11	.37	5 Contact	86-PM5-11	.37
78-PF6-11	.37	6 Contact	86-PM6-11	.37
78-PF7L-11	.37	7 Large	86-PM7L-11	.37
78-PF7S-11	.37	7 Small	86-PM7S-11	.37
78-PF8-11	.41	8 Octal	86-PM8-11	.41
78-PF9-11	.45	9 Octal Style	86-PM9-11	.45
78-PF11-11	.53	11 Octal Style	86-PM11-11	.53

155 Series Miniature 7-Contact Connector

For use in the interconnection of miniature electronic equipment. Over-all diameter including the retaining flange is only ⅝". Bodies are threaded to mount without external shells. Contacts are for No. 20 wire.

No. 155-352 Male Connector.......................... **List $3.00**
No. 155-353 Female Connector........................ **List 4.50**

26 Series Rack and Panel Connectors

Eyelets for added strength in mounting, male contacts molded into the inserts. Female contacts of beryllium copper. High quality mica-filled phenolic inserts. Aluminum housing has cable clamp. Voltage rating 500 volts RMS, 60 CPS at sea level.

Insert Only	List	Description	With Housing	List
26-804	$2.00	Male, 11 Contacts	26-809	$3.20
26-805	1.45	Female, 11 Contacts	26-808	2.65
26-151	2.30	Male, 15 Contacts	26-152	3.60
26-150	1.60	Female, 15 Contacts	26-153	2.90
26-806	2.75	Male, 20 Contacts	26-811	4.15
26-807	2.00	Female, 20 Contacts	26-810	3.40

COAXIAL CABLES AND CONNECTORS • INDUSTRIAL CONNECTORS, FITTINGS AND CONDUIT • ANTENNAS • RADIO COMPONENTS • PLASTICS FOR ELECTRONICS AMPHENOL

COAXIAL CABLES AND CONNECTORS • INDUSTRIAL CONNECTORS. FITTINGS AND CONDUIT • ANTENNAS • RADIO COMPONENTS • PLASTICS FOR ELECTRONICS

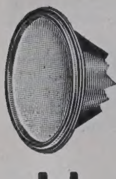
AMPHENOL

TV TUBE MOUNTING ACCESSORIES

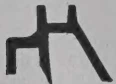
For metal and glass tubes

Tube mounting bracket for tube protection in shipping and vibration-free reception — live rubber cushions. Base is molded of polystyrene and holding straps are of fibre laminated phenolic. Easily attached to chassis or cabinet.

155-360 16″ Tube Mtg. Bracket **List $7.30 ea.**



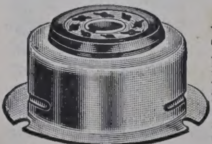
Molded Polyethylene Rim provides a superior mounting using conventional methods. Better protection for tubes and adequate insulation especially where the rim is joined. The unique overlapping provides long creepage paths. Outer groove provides for safety or masking glass.



Cross-section

Number	Description	List
187-072	Rim for 16″ TV Tube	$3.65
187-079	Same less groove....	3.35
187-098	Rim for 19″ TV Tube	4.63
187-095	Same less groove....	4.08
187-108	Rim for 17″ Rectangular Tube, top break..	2.96
187-109	Same with side break	2.96

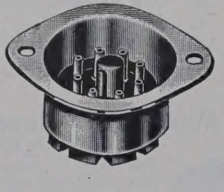
Receptacle Shells



ACS Shell extends "CP" or "S" type sockets or plugs 13/16″ above or below surface. 4 knockouts in sides. Mounts in 1-3/4″ hole; has 3 notched holes for No. 6 screws.

Number	Description	List
23-1S	For small "S" Sockets............	$ .12
23-1L	For large "S" Sockets............	.12

61-61 Shell. Nickel plated steel shell, lowers bottom of "CP" and "S" type plugs and sockets and 60 and 61 connectors 1-3/16″ below surface. Mounts in 1-7/16″ hole; two 5/32″ screw holes on 1-3/4″ centers.



No. 61-61 Shell only...............**List $ .18**

Tip Jacks

Molded of Bakelite in black or red. Mount in 3/8″ hole with retainer ring included. Use standard phone tips for 78-1P1, and 78-1 Contacts recessed 1/8″. The body may be used as a feed-thru.

Number	Description	List
78-1S	For 3/32″ Plug.........	$ .09
78-1L	For 5/32″ Plug.........	.09
78-1M	For 1/8″ Plug..........	.09
78-1P	For .080 Phone Tip......	.09
78-1P1	High Voltage for .080 Phone Tip. Mounts in 1/2″ hole....................	.12

Single Prong Plugs

Bakelite Plugs, black or red, for use with Tip Jacks above.

Number	Description	List
71-1S	For 3/32″ Socket........	$ .06
71-1M	For 1/8″ Socket.........	.06
71-1L	For 5/32″ Socket........	.06

Inserts and Shells for Cable Plugs, Connectors and Receptacles. For Assembly into Type Required

AMPHENOL
10A 250V
UL
15A-125V
CAT-No. 61F
10A250V
AMPH
125V

For 110-250 Volt Plugs and Receptacles

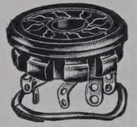
Compact in design, molded from high dielectric black Bakelite. Rated at 15 amp., 110 v. or 10 amp., 250 v. Two-pole type accepts any standard electric plug. Retainer ring type mounts in 1-11/64″ keyed hole as punched by Tools 25-LD-1 Mounting plate type requires 1-9/32″ D. chassis hole; has slotted screw holes on 1-1/2 to 1-7/8″ centers—Mounting plate type is similar to Type "RS" Replacement Sockets.

Receptacles

Retainer Ring Type Number	List	Description	With Mounting Plate Number	List
61-F	$ .30	2 Pole, Universal	61-F1	$ .34
60-F	.42	3 Pole, Polarized	60-F1	.46

Plugs

Retainer Ring Type Number	List	Description	With Mounting Plate Number	List
61-M	$ .30	2 Pole, Standard	61-M1	$ .34
61-MP	.30	2 Pole, Polarized	61-MP1	.34
60-M	.42	3 Pole, Polarized	60-M1	.46



"S" Socket (Listings on page 4).

"CP" Plug

For Multi-Wire Plugs and Receptacles

For quick, easy assembly to chassis or panels from 19 to 16 gage (.044 to .062″) using Amphenol retainer ring. Black Bakelite or steatite. Cadmium plated socket contacts for easy soldering; plug prongs are nickel plated brass; rotation feature for lining up contacts. Complete with retainer ring.

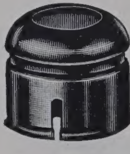
Can be assembled in any of the plug caps or receptacle shells below. For chassis mounting in 1-11/64″ keyed hole as punched by Tools 25-LD-1.

"CP" Plugs

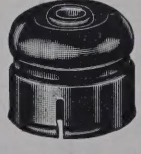
Black Bakelite	List	Contacts	Steatite	List
86-CP4	$ .13	4 Prong	49-245-00	$ .49
86-CP5	.13	5 Prong	49-255-00	.49
86-CP6	.13	6 Prong	49-265-00	.49
86-CP7L*	.13	7 Large	....	....
86-CP7S	.13	7 Small	....	....
86-CP8	.17	8 Prong, Octal	49-285-00	.49
86-CP9	.21	9 Prong, Octal Style	....	....
86-CP11	.29	11 Prong, Octal Style	....	....

* Mounts in 1-21/64″ keyed hole. Use 25-LD-2.

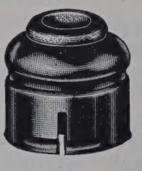
Plug Caps for Every Purpose



3-10

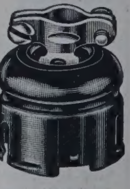


3-12



3-13

3-17

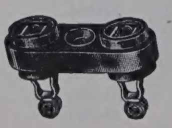


3-24

Cable terminals can be assembled with these plug caps, using retainer ring type plugs, sockets and 60 and 61 series shown above. Plug caps are designed to fit all but the 7-large and 7-combination sizes. For 7-large and 7-comb. use Plug Cap 3-13L shown below.

Number	Length	End Hole	Side Hole	Grommet	List
3-10	1″	None	None	None	$ .18
3-12	1″	5/16″	None	Metal	.18
3-13	1″.	7/16″	None	Rubber	.18
3-17	1″	None	7/16″	Rubber	.18
3-24	Cap with Cable Clamp attached. Accommodates cables to 1/2″ diameter..				.24
79-CC4	Cable Clamp only. Same as used on Cap 3-24........................				.12
3-13L	Cap for large 7 Socket and Plugs, end rubber grommet 7/16″ ID...........				.24

Crystal Holder Socket



Molded of mica-filled Bakelite... for crystal holders having 2 prongs on 3/4″ centers. Easily mounted. May be used as dual tip jacks on test panels.

Number	Description	List
33-2T	For 1/8″ Prongs...	$ .17
33-3T	For 5/32″ Prongs..	.17

AMERICAN PHENOLIC CORPORATION

1830 SOUTH 54TH AVENUE,
CHICAGO 50, ILLINOIS

AMPHENOL

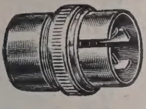
AMERICAN PHENOLIC CORPORATION

1830 SOUTH 54TH AVENUE, CHICAGO 50, ILLINOIS

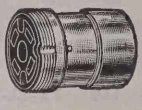
Heavy Duty Power Plugs

Male unit has four heavy brass blades; female has heavy phosphor bronze contacts. For use with current loads up to 15 amperes at 125 volts or 10 amperes at 250 volts. Molded black Bakelite unit is enclosed in tight, heavy brass shell . . . bright cadmium plated. Polarized with shell keys and keyways. Strain is taken up by concealed cable clamp. Grounding screw in body for safe wiring. Threaded locking ring keeps shells tight.

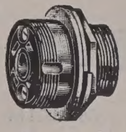
Chassis or panel receptacle mounts in 1¼" hole in any material up to ½" thick. Complete with lock washer, spacer washer and nut.



Plug



Jack



Receptacle

Mating parts are arranged in same horizontal line below.

Number	Contacts	List	Number	Contacts	List	Number	Contacts	List
92-M	Male	$3.01	92-F	Female	$3.01	92-C	Female	$3.01
92-F1	Female	3.01	92-M1	Male	3.01	92-C1	Male	3.01

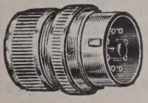
Cap and Chain

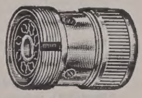
For sealing power plugs and radio connectors against dirt and moisture. Can be used with connectors listed above and below having male threads. Heavy brass cap, chrome plated. Nickel silver bead chain.

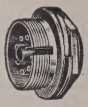
No. 79-CCC8 Cap and Chain.............................List $ .61

Heavy Duty Radio Connectors

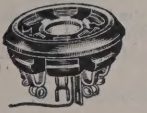
The plugs shown in bold face type mate with jacks and receptacles listed in bold type **in the same horizontal line.** For numbers in light faced type follow the same procedure . . . plugs mate with jacks and receptacles in the same horizontal line. Bold type also designates the most popular units.







Contacts	Plug		Jack		Receptacle		List
	Male	Female	Female	Male	Female	Male	
4	**79-04M**	79-04F1	**79-04F**	79-04M1	**79-P04F**	79-P04M	$1.51
5	**79-05M**	79-05F1	**79-05F**	79-05M1	**79-P05F**	79-P05M	1.51
6	**79-06M**	79-06F1	**79-06F**	79-06M1	**79-P06F**	79-P06M	1.51
8	**79-08M**	79-08F1	**79-08F**	79-08M1	**79-P08F**	79-P08M	1.51
12	**79-012M**	79-012F1	**79-012F**	79-012M1	**79-P012F**	79-P012M	2.41

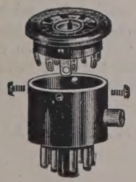


Bulb Tester and Tube Socket

Standard 7 contact combination socket for large and small 7 prong tubes. For testing miniature bulbs, either screw or bayonet types.

Number	Description	List
78-7CD	With retainer ring..............................	$ .53

Adapters



A simple way to make adapter units which may be used for modernizing tube checkers and analyzers, adapting new tubes to old circuits and for connections to output meter, phonograph pickup, etc.

Socket Tops Only

Number	Contacts	List
44-8	8 Octal	.24

For testing new 9 pin miniature tubes.

Number	Contacts	List
44-9	9 Noval	.45

Bases Only

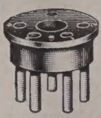
With side stud accommodating a metal tube grid cap clip. Both tops (left) and bases are drilled for self-tapping screws which are supplied with bases.

Number	Prongs	List
50-8SG	8 Octal	.36

Shell Only

Of metal tubing for snap-in connection on either end of Amphenol "S" type sockets or "CP" plugs. Combinations possible from 4 to 11 prongs or contacts.

No. 3-14D With side hole, rubber grommet..........................List $ .24

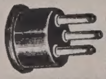


Molded Speaker Plugs

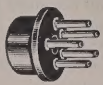
Prongs are securely molded into one-piece black bakelite body. Each prong is deeply set into individually molded pocket, eliminating the possibility of shorts in case of pull-back of wire insulation.

With Finger Grip	Prongs	List	With Straight Sides	Prongs	List
71-4	4	$ .13	70-8	8	$ .17
71-5	5	.13	70-9	9	.21
71-6	6	.13	70-12	12	.30
71-7	7	.13	70-20	20	.61

Miniature Plugs



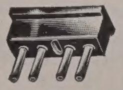
Cable Type used extensively for speaker connections in compact midgets. Ideal for all plug-in connections where space is limited. Brass prongs are deeply recessed in molded pockets preventing shorts due to insulation pulling back. With molded finger grip. Use with miniature sockets.



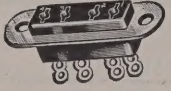
Chassis Type mounts in plain round 5/8" hole. No screws or rivets required. Held firmly by retainer ring included. Use with female miniature connectors (MPF type).

Cable Type	List Price	Description	Chassis Type	List
71-3S	$ .15	3 Prong	86-CP-3S	$ .15
71-4S	.15	4 Prong	86-CP-4S	.15
71-5S	.21	5 Prong		
71-6S	.21	6 Prong		

Rectangular Plugs and Sockets



Style B

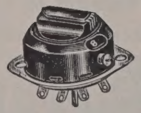


Style C

For compact apparatus. Plugs are often used as a supported type self-sustaining coil form.

Number	Style	Prongs or Contacts	List
Plugs			
70-25	B	3	.15
70-26	B	4	.18
Sockets			
77-26	C	4	.30

Tap Change Switch



An 8-position single pole continuous switch with white markings clearly visible in window cap. Side set screw locks switch arm in position preventing accidental tap changes.

Number	Description	List
36-1	With numerals 1 to 8..............	$ .90
36-2	With impedance markings 0—2—4—8—16—250—500.............	.90

Universal Grid Cap

A grid cap of improved design for universal use with tube grid caps from ¼ to ⅜" diameter including standard glass and metal tubes. Spring brass contacts in phenolic body.

63-1 Unwired Grid Cap......List Price $ .18

COAXIAL CABLES AND CONNECTORS • INDUSTRIAL CONNECTORS, FITTINGS AND CONDUIT • ANTENNAS • RADIO COMPONENTS • PLASTICS FOR ELECTRONICS AMPHENOL

AMPHENOL

AMERICAN PHENOLIC CORPORATION

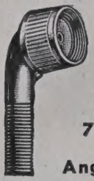
1830 SOUTH 54TH AVENUE, CHICAGO 50, ILLINOIS

Series 75 Microphone Connectors—Single Contact

Fit almost every microphone. Standard with leading manufacturers for many years. Compact, rugged, neat. Chassis receptacles are integral parts of microphones using single conductor cable. Widely used in amplifiers, transmitters, phonoelectric devices, home recorders and similar equipment. They are also suitable for connecting various units such as PM speakers, headphones, and for theft alarms or wall type coin operated devices, etc.

In the 75 Series, plugs mate with all cable jacks and receptacles. Circuit closing contacts are the same except that they close the circuit when plug is disengaged, eliminating open circuit grid howls.

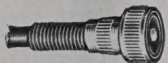
Locknut Receptacles mount in .385″ holes when grounding to chassis and ½″ holes for ungrounded 2 circuit applications.



75-MC1FA

Angle Plug

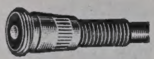
	Contact	List
75-MC1F-A	Flush	$1.00



75-MC1F

Straight Plug

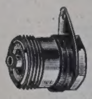
	Contact	List
75-MC1F	Flush	$.45



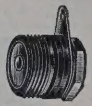
75-MC1M

Cable Jack

	Contact	List
75-MC1M	Flush	$.35



75-PC1M

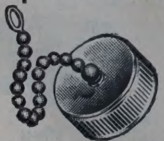


75-CL-PC1M

Locknut Receptacles

	Contact	List
75-PC1M	Flush	$.30
75-CL-PC1M	Cl. Cr.	.45

Cap and Chain

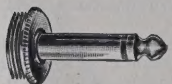


Seals open chassis units against dirt and dust. Also used with 80 Series Connectors.

75-CCC1. . List $.55

Cl.Cr. Closed Circuit.

Phone Plug Adapter



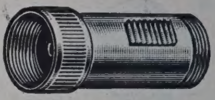
Screws into coupling ring of 75-MC1F and 75-MC1F-A plugs, permitting the cable to be plugged into any standard phone jack. No soldering or wiring.

75-MC1P. . . . . List $.50

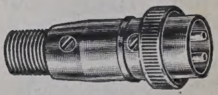
Microphone Switch

Threaded on one end, coupling ring on the other end. For 75 Series Connectors. May be connected directly to any mike equipped with 75-PC1M or simliar receptacle. Push-to-talk or slide button for permanent connection.

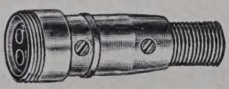
75-MC1S. . . . . List $1.40



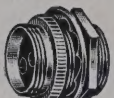
Series 80 Microphone Connectors—Single and Double Contacts



80-MC2M



80-MC2F



80-PC2F

Plugs			Cable Jacks			Locknut Receptacles		
	Contacts	List		Contacts	List		Contacts	List
SINGLE CONTACT								
80-M	**M**	**$.71**	**80-F**	**F**	**$.71**	**80-C**	**F**	**$.44**
80-F1	F	.71	80-M1	M	.71	80-C1	M	.44
TWO CONTACTS								
80-MC2M	**M**	**.88**	**80-MC2F**	**F**	**.88**	**80-PC2F**	**F**	**.49**
80-MC2F1	F	.88	80-MC2M1	M	.88	80-PC2M	M	.49

Series 80 Cable Connectors are designed for shielded cables; for single and two conductor coaxial cables, microphone cables; for twisted pairs, concentric lines, photo cell leads, patch cords and similar uses. Suitable for connecting model railroad equipment, pin ball games and other small electrical apparatus. Elements are high dielectric black Bakelite. Receptacles mount in 5/8″ chassis holes. Maximum chassis thickness for locknut type receptacles is 11/32″.

Mating families of connectors are listed in horizontal lines.

The most popular connectors are shown in bold face type.

Cap and Chain required is **75-CCC1.**

M Male. F Female.

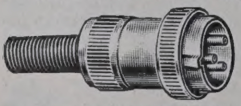
Series 91 Microphone Connectors—3 and 4 Contacts

Extensively used on all types of portable apparatus, these connectors were designed primarily to use with microphones. Some of the advantages of Amphenol Microphone Connectors . . .

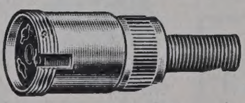
- Accidental disconnections are eliminated by a positive screw-type connection.
- Incorrect insertions are impossible because connectors are polarized.
- Pulling and twisting strain on soldered contacts is eliminated because a squeeze-type clamp grips cable securely after assembly.

Chassis receptacles mount in 27/32″ chassis holes. Maximum chassis thickness for chassis receptacle is 1/8″.

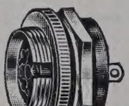
Mating families of connectors are listed in horizontal lines.



91-MC3M



91-MC3F

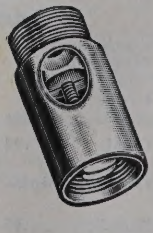


91-PC3F

Plugs			Cable Jacks			Chassis Receptacles		
	Contacts	List		Contacts	List		Contacts	List
THREE CONTACTS								
91-MC3M	**M**	**$1.10**	**91-MC3F**	**F**	**$1.10**	**91-PC3F**	**F**	**$ .55**
91-MC3F1	F	1.10	91-MC3M1	M	1.10	91-PC3M	M	.55
FOUR CONTACTS								
91-MC4M1	**M**	**1.20**	**91-MC4F**	**F**	**1.20**	**91-PC4F**	**F**	**.60**
91-MC4F1	F	1.20	91-MC4M1	M	1.20	91-PC4M	M	.60

M Male. F Female. The most popular connectors are shown in bold face type.

Side Cable Outlet



Provide an outlet for microphone cable where it is not practical to run the cable thru the stand. For use between microphones and stands having 5/8-27 threads.

91-SCO3. . . . . List $. 82

Cap and Chain

For 91 Series Connectors. Same construction and material as No. 75-CCC1.

No. 91-CCC3. . . . . List $ .55

COAXIAL CABLES AND CONNECTORS • INDUSTRIAL CONNECTORS, FITTINGS AND CONDUIT • ANTENNAS • RADIO COMPONENTS • PLASTICS FOR ELECTRONICS

AMPHENOL

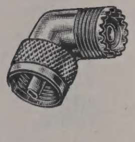
COAXIAL CABLES AND CONNECTORS • INDUSTRIAL CONNECTORS. FITTINGS AND CONDUIT • ANTENNAS • RADIO COMPONENTS • PLASTICS FOR ELECTRONICS

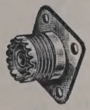
AMPHENOL

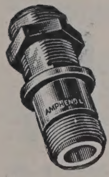
Amphenol Radio Frequency Connectors

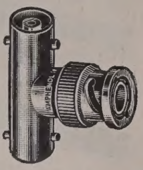
Amphenol low-loss RF Connectors, Adapters and Terminations have been especially designed for use with RG/U type Coax and Twinax. There is an Amphenol connector for every RF application. This list does not represent the entire line of Amphenol RF Connectors. For complete information on additional types and sizes refer to Amphenol Cable and Connector Catalog or General Catalog No. B-2 at your distributor.

83-1SP

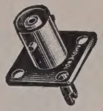

83-1AP

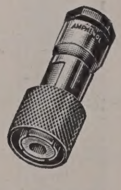

83-1R


82-66


31-008

82-61


31-003


82-38

Army-Navy No.	Am-phenol No.	Description	Class	List Each
UG-21B/U	82-61	Plug	N	$3.00
UG-22B/U	82-62	Panel Jack	N	3.50
UG-23B/U	82-63	Jack	N	3.00
UG-27A/U	82-64	Angle Adapter	N	7.00
UG-29A/U	82-65	Str. Adapter	N	3.25
UG-30/U	82-66	Press. Feed-Through	N	4.00
UG-58/U	82-24	Receptacle	N	2.25
UG-59A/U	82-38	Plug	HN	5.50
UG-60A/U	82-39	Jack	HN	3.75
UG-61A/U	82-40	Jack M. P.	HN	4.25
UG-88/U	31-002	Plug	BNC	3.25
UG-89/U	31-005	Jack	BNC	3.00
UG-102/U	83-22SP	Plug Sm. Twin	UHF	1.50
UG-103/U	83-22R	Recep. Sm. Twin	UHF	1.50
UG-104/U	83-22AP	Angle Adapter Sm. Twin	UHF	3.00
UG-105/U	83-22J	Junction Sm. Twin	UHF	2.50
UG-106/U	83-1H	Hood Sm. Coax	UHF	.25
UG-107A/U	82-36	Tee	N	7.50
UG-154/U	82-59	Plug	LC	15.00
UG-160A/U	82-67	Jack—Bulkhead	N	3.25
UG-175/U	83-185	Reducing Adapter	UHF	.25
UG-176/U	83-168	Reducing Adapter	UHF	.25
UG-177/U	83-765	Hood Sm. Coax	UHF	.40
UG-196/U	83-22T	Tee Sm. Twin	UHF	3.25
UG-203/U	83-776	Plug Sm. Coax	UHF	1.75
UG-274/U	31-008	Tee	BNC	7.50
UG-290/U	31-003	Receptacle	BNC	3.00
UG-291/U	31-001	Jack M. P.	BNC	3.50
UG-306/U	31-009	Angle Adapter	BNC	7.25
UG-333/U	82-56	Adapter	H.V.	8.50
UG-334/U	82-57	Adapter M. P.	H.V.	9.75
UG-352/U	82-80	Receptacle	LC	12.00

Army-Navy No.	Am-phenol No.	Description	Class Class	List Eacn
CW-123/U	31-006	Cap & Chain	BNC	1.15
MX-103/U	103-301	Tapering Tool	HN	16.50
MX-564/U	82-48	Armor Clamp	N	.75
Navy No.				
49190	83-1SP	Plug Sm. Coax	UHF	1.00
49191	83-1J	Junction Sm. Coax	UHF	1.50
49192	83-1AP	Angle Adapter Sm. Coax	UHF	2.00
49193	83-1H	Hood Sm. Coax	UHF	.25
49194	83-1R	Receptacle Sm. Coax	UHF	1.10
49195	83-1SPN	Plug Sm. Coax	UHF	1.50
49199	83-1T	Tee Sm. Coax	UHF	2.70
49482	83-776	Plug Sm. Coax	UHF	1.75
Signal Corps No.				
PL-258	83-1J	Junction Sm. Coax	UHF	1.50
PL-259	83-1SP	Plug Sm. Coax	UHF	1.00
PL-259A	83-1SPN	Plug Sm. Coax	WHF	1.50
PL-274	83-1F	Feed-Thru Sm. Coax	UHF	2.50
PL-275	83-22F	Feed-Thru Sm. Twin	UHF	3.50
PL-284	83-22SP	Plug Sm. Twin	UHF	1.50
PL-285	83-22J	Junction Sm. Twin	UHF	2.50
PL-293	83-22AP	Angle Adapter Sm. Twin	UHF	3.00
SO-239	83-1R	Receptacle Sm. Coax	UHF	1.10
SO-264	83-22R	Receptacle Sm. Twin	UHF	1.50
M-358	83-1T	Tee Adapter Sm. Coax	UHF	2.70
M-359	83-1AP	Angle Adapter Sm. Coax	UHF	2.00
M-360	83-1H	Hood Sm. Coax	UHF	.25

NEW "AN" CONNECTOR CATALOG

Amphenol also makes a complete range of AN approved connectors for power, signal and control circuits in aircraft and electronic equipment. The new A-2 Catalog is designed as a tool for the use of purchasing agents, engineers and executives in the field of electronics. It can be used effectively by manufacturers of aircraft and accessories, marine craft, instrument manufacturers and designers, laboratories and government procurement agencies. The A-2 catalog will be sent upon receipt of a request on company or government agency letterhead, or may be requested directly from the nearest Amphenol Representative.

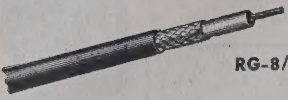
"AN" CONNECTORS
A2
AMPHENOL
AMERICAN PHENOLIC CORPORATION

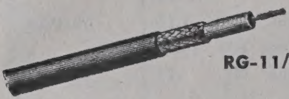
AMERICAN PHENOLIC CORPORATION 1830 SOUTH 54TH AVENUE, CHICAGO 50, ILLINOIS

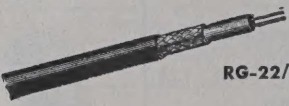
COAXIAL CABLES AND CONNECTORS • INDUSTRIAL CONNECTORS. FITTINGS AND CONDUIT • ANTENNAS • RADIO COMPONENTS • PLASTICS FOR ELECTRONICS

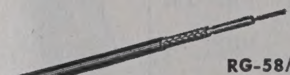
AMPHENOL

RG-5/U


RG-8/U


RG-11/U


RG-22/U


RG-58/U

RG-57/U

Amphenol Coax and Twinax RG Cables

Amphenol Coaxial and Twinax RG Cables are produced to standards surpassing military specifications for electrical performance and mechanical excellence. Conductors are centered 20% closer for Coax and 50% closer for Twinax Cables than required by "AN" specifications.

Most cables utilize the exceptional dielectric properties of polyethylene—low loss, flexibility, mechanical stability. The outer jacket in the majority of approved types is a tough, highly resistant vinyl jacket which is non-hygroscopic and impervious to most acids, alkalies, oils and gasoline. Other types are armored for still greater mechanical protection.

Amphenol has cables that are designed to operate efficiently at temperatures as high as 500° Fahrenheit. Teflon is used as the dielectric because of its low loss, high voltage breakdown and its ability to withstand heat.

Characteristics

	Polyethylene	Teflon
Specific Gravity	.92	2.2
Water Absorption	.005%	0.00%
Cold-Brittleness	-94°F.	-100°F.
Dielectric Constant 60 cycles to 100 mc	2.29	2.0
Power Factor 60 cycles to 100 mc	.0004	.0002
Volume Resistivity, ohm-cm	1013	1016
Softening Temperature	220°F.	500°F.

Write Your Distributor For Prices Which Are Based On Reel Lengths

STANDARD JACKET		LOW TEMP. BLACK JACKET		NOM. IMP. OHMS	NOM. CAP. MMF/FT	INNER CONDUCTOR	DIELECTRIC NOM. O. D.	DIELECTRIC MATERIAL	INNER SHIELD	OUTER SHIELD	STANDARD VINYL	NOM. O. D.
A-N NUMBER RG-/U	AMPHENOL NUMBER	A-N NUMBER RG-/U	AMPHENOL NUMBER									
5	21-001			52.5	28.5	16	.185	Poly	C	C	Black	.332
5A	21-271	5B	21-294	50	29	16S	.181	Poly	S	S	Grey	.328
6	21-002	6A	21-330	76	20	21CW	.185	Poly	S	C	Grey	.332
7	21-003			97	12.5	19	.250	Poly	C	—	Black	.370
8	21-004	8A	21-290	52	29.5	7/21	.285	Poly	C	—	Black	.405
9	21-005			51	30	7/21S	.280	Poly	S	C	Grey	.420
9A	21-231	9B	21-332	51	30	7/21S	.280	Poly	S	S	Grey	.420
10	21-006	10A	21-338	52	29.5	7/21	.285	Poly	C	—	Grey	.475
11	21-007	11A	21-296	75	20.5	7/26T	.285	Poly	C	—	Black	.405
12	21-008	12A	21-340	75	20.5	7/26T	.285	Poly	C	—	Grey	.475
13	21-009	13A	21-334	74	20.5	7/26T	.280	Poly	C	C	Black	.420
14	21-010	14A	21-336	52	29.5	10	.370	Poly	C	C	Grey	.545
15	21-011			76	20	15CW	.370	Poly	C	C	Black	.545
17	21-013	17A	21-298	52	29.5	.188	.680	Poly	C	—	Grey	.870
18	21-014	18A	21-300	52	29.5	.188	.680	Poly	C	—	Grey	.945
19	21-015	19A	21-303	52	29.5	.250	.910	Poly	C	—	Grey	1.120
20	21-016	20A	21-305	52	29.5	.250	.910	Poly	C	—	Grey	1.195
21	21-017	21A	21-308	53	29	16N	.185	Poly	S	S	Grey	.332
22	21-038			95	16	Two 7/.0152	.285	Poly	T	—	Black	.405
22A	21-148	22B	21-310	95	16	Two 7/.0152	.285	Poly	T	T	Grey	.420
29	21-018			53.5	28.5	20	.116	Poly	T	—	Poly	.184
34	21-019	34A	21-429	71	21.5	7/21	.455	Poly	C	—	Black	.625
35	21-020	35A	21-311	71	21.5	9	.680	Poly	C	—	Grey	.945
42	21-021			78	20	21N	.196	Poly	S	S	Grey	.342
54A	21-022			58	26.5	7/.0152	.178	Poly	T	—	Poly	.250
55	21-023			53.5	28.5	20	.116	Poly	T	T	Poly	.206
57	21-039	57A	21-313	95	17	Two 7/21	.472	Poly	T	—	Black	.625
58	21-024			53.5	28.5	20	.116	Poly	T	—	Black	.195
58A	21-199	58C	21-316	50	29	19/.0068	.116	Poly	T	—	Black	.195
59	21-025	59A	21-291	73	21	22CW	.146	Poly	C	—	Black	.242
62	21-026	62A	21-318	93	13.5	22CW	.146	SS Poly	C	—	Black	.242
63	21-027	63B	21-320	125	10	22CW	.285	SS Poly	C	—	Black	.405
71	21-029			93	13.5	22CW	.146	SS Poly	T	T	Poly	.250
74	21-041	74A	21-321	52	29.5	10	.370	Poly	C	C	Grey	.615
79	21-070	79B	21-325	125	10	22CW	.285	SS Poly	C	—	Black	.475
83	21-180			35	44	10	.240	Poly	C	—	Black	.405
87A	21-250			50	29.5	7/20S	.280	Teflon	S	S	Fiberglas	.425
89	21-253			125	10	22CW	.285	SS Poly	C	—	Black	.632
108	21-261	108A	21-327	76		Two 7/28	.073 Ea.	Poly	T	—	Black	.230
111	21-255	111A	21-329	95	16	Two 7/.0152	.285	Poly	T	T	Grey	.490
116	21-378			50	30	7/20S	.280	Teflon	S	S	Fiberglas	.475
117	21-377			50	29	.188	.620	Teflon	C	—	Fiberglas	.730
118	21-374			50	29	.188	.620	Teflon	C	—	Fiberglas	.780
119	21-398			50	29	10	.328	Teflon	C	C	Fiberglas	.465
120	21-399			50	29	10	.328	Teflon	C	C	Fiberglas	.515
	21-125			71	21.5	9	.680	Poly	C	—	Grey	.870
	21-388			50	29	15S	.185	Teflon	S	S	Fiberglas	.332
	21-391			72	21	7/25S	.280	Teflon	S	—	Fiberglas	.405
	21-385			50	29	19S	.116	Teflon	S	S	Fiberglas	.206
	21-382			50	29	19S	.116	Teflon	S	—	Fiberglas	.195
	21-379			73	21	21S	.146	Teflon	S	—	Fiberglas	.241

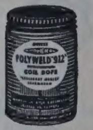
Legend

CW—Copperweld
S—Silvered Copper
T—Tinned Copper
C—Copper
Poly—Polyethylene
SS Poly—Semi-solid Polyethylene
Armor—Armored Cable

Velocity of Propagation

Dielectric Material	
Solid Polyethylene	65.9%
Semi-Solid Polyethylene	84.0%
Teflon	69.5%

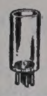
LOW LOSS PLASTICS



Amphenol Polyweld "912" is pure polystyrene in solution. Use as coil dope or to weld polystyrene pieces together. Will not disturb circuit constants.

No. 53-912-2	2-oz. bottle	List	$ .50
No. 53-912-4	4-oz. bottle	List	.65
No. 53-916-2T	2-oz. bottle Thinner	List	.25
No. 53-916-4T	4-oz. bottle Thinner	List	.35

24-5P


24-6H

24

Coil Forms for receivers and low powered transmitters in the RF and UHF range.

No.	Description	List
24-4P	1¼" OD, 2¼" long, fits standard tube sockets, 4 prong	$ .40
24-5P	Same except 5 prong	.40
24-6P	Same except 6 prong	.40
24-6H	Use with 78S6S socket, ¾" OD, 6 prong	.40
24-5H	Same except 5 prong	.40
24	Miniature, ¾" OD, 1⁹⁄₁₆" long, raised hole in center of base for self-tapping screw	.15

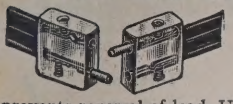
AMERICAN PHENOLIC CORPORATION
1830 SOUTH 54TH AVENUE,
CHICAGO 50, ILLINOIS

AMPHENOL

AMERICAN PHENOLIC CORPORATION

1830 SOUTH 54TH AVENUE, CHICAGO 50, ILLINOIS

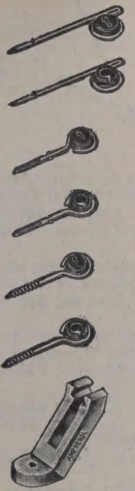
Twin-Lead Connector



Solderless, low-loss twin-lead splice without impedance change. Design prevents reversal of lead. Use in pairs.

80-850.................... **List Each $ .25**

Stand-Off Insulators



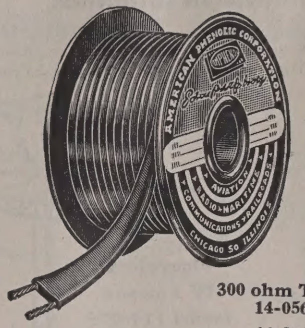
Polyethylene Inserts

Twin-Lead Types for 14-056, 14-079 and 14-080

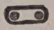
		List per 100
Wood Screws No. 14 Thd.		
66-202	3″ length.....	**$4.45**
66-209	7½″ length...	**7.64**
Mach. Screws No. 10-32 Thd.		
66-204	3″ length.....	**$6.11**
66-210	7½″ length...	**8.35**
Nail-in		
66-211	3½″ length...	**$6.25**
Coax Types, ½″ Max. Cable O. D.		
Wood Screws No. 14 Thd.		
66-201	3″ length.....	**$5.44**
66-208	7½″ length...	**7.94**
Mach. Screws No. 10-32 Thd.		
66-203	3″ length.....	**$6.42**
Nail-in		
66-212	3½″ length...	**$7.11**

Polystyrene Stand-off Insulator for 14-358 Twin-Lead

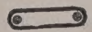
66-909 1⁵⁄₁₆″ length............... **List Each $.0750**



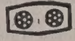
14-080



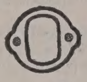
14-079



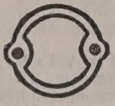
14-056



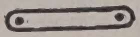
14-023



14-271



14-076



14-022

Twin-Lead Transmission Lines

The use of brown pigmented polyethylene dielectric assures minimum RF loss and a more constant impedance over the exceptionally long life of Amphenol Twin-Lead. This remarkable material remains flexible at —70°C., repels water and is unaffected by acids, alkalies and oils.

Receiving Twin-Lead

	List Per 1000 ft.
300 ohm Twin-Lead for FM and TV Antennas	
14-056 (500) & (1000) Brown polyethylene.............	**$43.00**
14-271* Tubular for deluxe FM and TV. Reels of 1000 feet..	
150 ohm Twin-Lead for experimental work	
14-079* Reels of 1000 feet...........................	
75 ohm Twin-Lead for lower impedance applications	
14-080* Reels of 1000 feet...........................	

Amateur Transmitting and Copper Clad Types of Twin-Lead

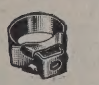
75 ohm Twin-Lead for transmitting, rated 1 KW RF power
14-023* Reels of 1000 feet...........................

300 ohm Tubular Twin-Lead rated 1 KW RF power
14-076* Reels of 1000 feet...........................

300 ohm Extra-Strength Twin-Lead with copper clad conductors
14-022* Reels of 1000 feet...........................

*Temporarily Withdrawn from Production

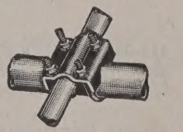
Universal Mast Clamp



Wrap-around mast clamp for Stand-off Insulator. Will fit any mast with O.D. from .900″ to 1.660″. Complete with 66-204 Screw-Eye Insulator for Twin-Lead Transmission Lines.

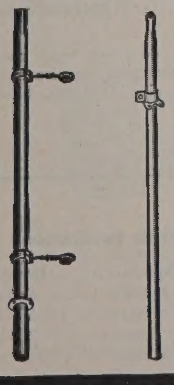
No. 114-490.......................... **List $ .30**
No. 114-492 Same less insulator........ **List .20**

Universal Mounting Clamp



Will accommodate mast sizes of 1″ to 1½″ O.D. which includes 1″ water pipe as well as ¾″ to 1¼″ electrical conduit. Two U bolts and channeled plate establish and maintain perfect right angle alignment. Stress to horizontal member is spread over entire length of clamp, thus preventing distortion and buckling.

No. 114-500...................... **List $ .55**



Antenna Mast Extensions

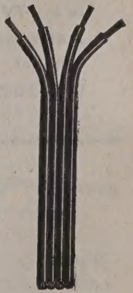
Television Mast Extension for 114-302 two bay television antenna and other 1-1/4″ diameter antenna masts. Consists of 5 foot length of 1-1/4″ diameter alloy steel tubing, guy ring and two clamp type stand-off insulators.

114-291................. **List ea. $3.00**

FM and Television Mast Extension for all Amphenol FM and Television antennas except the two bay antenna which requires the mast extension listed above. Consists of 5 foot length 3/4″ steel conduit and guy wire clamp.

114-300................. **List ea. $3.00**

Remote Control Wire

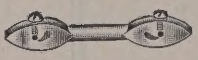


For wiring antenna rotators and other low voltage remote controls such as miniature electric trains. Recommended for circuits up to 28 volts. For easy wiring, each conductor with its insulation may be ripped apart without exposing the conductor. Conductors are 7/28 copper wire with one conductor tinned to facilitate tracing. High dielectric polyethylene insulation is weatherproof.

		List per 1000 ft.
14-316		
3 conductor	Reels of 1000 feet..........	**$44.50**
14-298*		
4 conductor	Reels of 1000 feet..........	
14-317*		
5 conductor	Reels of 1000 feet..........	

*Temporarily Withdrawn from Production

Polystyrene Line Spreaders

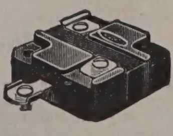


For separating feeder lines and construction of folded dipole antenna from wire. Wire holes .085″ diameter.

2″ spacing	4″ spacing	6″ spacing
66-205..**List ea. $.15**	**66-206**.**List ea. $.20**	**66-207**.**List ea. $.25**

Lightning Arrestor For Antennas

Attaches to 14-056 300 ohm Twin-Lead without cutting the conductors. Designed to meet the requirements of the Underwriters' Laboratories. Molded of high grade electrical phenolic with conducting plate and gap molded in. Precise gap spacing is maintained. Self contained also is a high resistance shunt permanently sealed aginst moisture. Overall dimension 1-7/8″x2″x3/4″.



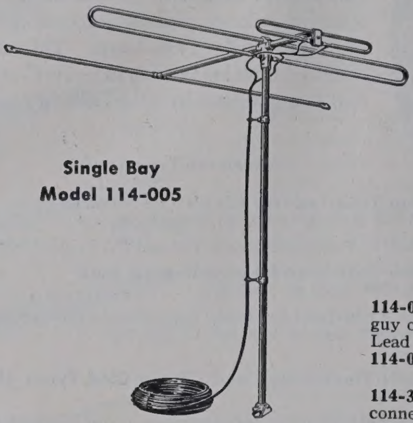
155-338................. **List ea. $1.50**

COAXIAL CABLES AND CONNECTORS • INDUSTRIAL CONNECTORS, FITTINGS AND CONDUIT • ANTENNAS • RADIO COMPONENTS • PLASTICS FOR ELECTRONICS

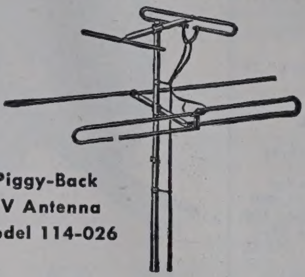
AMPHENOL

Television Antennas

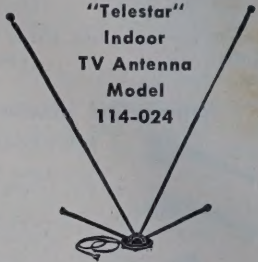
Engineered and perfected in the Amphenol Antenna Development Laboratories, the antennas illustrated and described on this page will provide unsurpassed reception of FM and TV signals. Top-quality materials, rugged construction and the latest in design are incorporated into each Amphenol antenna to provide perfect performance. Each antenna packaged complete with instructions for easy installation.



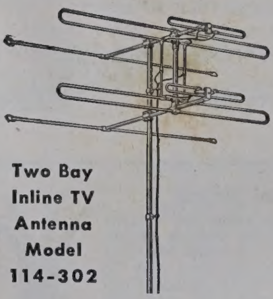
Single Bay Model 114-005



Piggy-Back TV Antenna Model 114-026



"Telestar" Indoor TV Antenna Model 114-024



Two Bay Inline TV Antenna Model 114-302

114-005 TELEVISION ANTENNA ARRAY, complete with mast, swivel mounting plate, guy clamp, necessary hardware, stand-off insulators and 75 ft. Amphenol 300 ohm Twin-Lead...**List ea. $19.50**
114-009 Same less transmission line.......................................**List ea. 17.00**

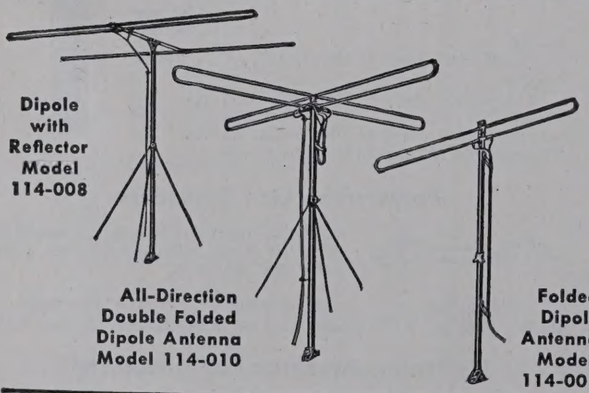
114-301 ADAPTOR KIT for building 114-005 into a Stacked Array includes single bay, connecting rods for symmetrical feed, two box brackets, two 5-foot lengths of 1-1/4" Mast, guy ring and stand-off insulators...............................**List ea. $20.50**

114-302 TWO BAY TV STACKED ARRAY consists of a top and bottom bay, connecting rods, two box brackets, two 5-foot lengths of 1-1/4" mast, guy ring and stand-off insulators. Twin-Lead transmission line is not included..........................**List ea. $35.00**

114-322 Same as 114-302 except has 100 ft. 300 ohm Twin-Lead...........**List $38.50**
114-314 Same as 114-302 except has no mast...............................**List 29.00**
114-324 Same as 114-302 except has 100 ft. 300 ohm Twin-Lead and has no mast...**List 32.50**

114-026 PIGGY-BACK TV ANTENNA consists of one folded dipole and reflector for each band which may be oriented individually, phasing leads, guy clamp, stand-off insulators and 75 ft. Amphenol Twin-Lead.............................**List ea. $19.50**
114-029 Same less transmission line.......................................**List ea. 17.00**

114-024 INDOOR TV ANTENNA "TELESTAR" has low-loss polystyrene base with rubber feet to protect furniture. Light weight aluminum rods are pre-tuned for receiving all channels. Five-foot natural color polyethylene 300 ohm Twin-Lead is included.
List ea. $4.95



Dipole with Reflector Model 114-008

All-Direction Double Folded Dipole Antenna Model 114-010

Folded Dipole Antenna Model 114-001

FM Antennas

114-008 DELUXE FM FOLDED DIPOLE WITH REFLECTOR, complete with mast, mounting plate, insulators, guy clamp, hardware and 75 ft. Amphenol 300 ohm Twin-Lead................**List ea. $16.25**

114-010 DELUXE FM ALL-DIRECTION DOUBLE FOLDED DIPOLE ANTENNA, complete with quarter-wave phasing stub, mast, mounting plate, guy clamp, hardware, insulators, and 75 ft. Amphenol 300 ohm Twin-Lead.................................**List ea. $16.25**

114-001 FM FOLDED DIPOLE ANTENNA, complete with mast, swivel mounting plate, insulators, guy clamp, necessary hardware and 75 ft. Amphenol 300 ohm Twin-Lead.................**List ea. $12.25**

Twin-lead Folded

Ready-cut to the four most popular bands. Broadband characteristics. Use as a transmitting, auxiliary or portable antenna. Flat top portion is Amphenol 14-022 with copper clad steel conductors, 75 foot lead-in is Amphenol 14-056 joined to top with molded "T" junction.

Temporarily Withdrawn From Production

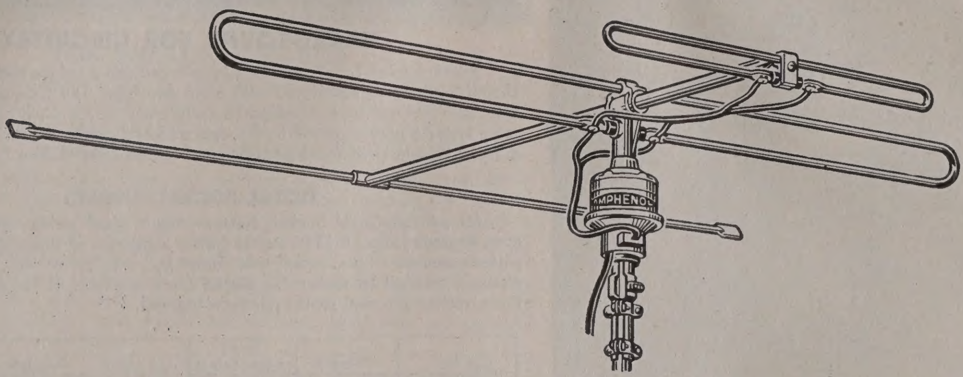
Number	Frequency	Band	Length
139-813	28 mc	10 Meters	18 feet
139-815	14 mc	20 Meters	35 feet
139-816	7 mc	40 Meters	70 feet
139-817	3.5 mc	80 Meters	135 feet

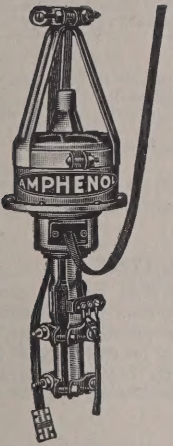
AMERICAN PHENOLIC CORPORATION 1830 SOUTH 54TH AVENUE, CHICAGO 50, ILLINOIS

COAXIAL CABLES AND CONNECTORS • INDUSTRIAL CONNECTORS, FITTINGS AND CONDUIT • ANTENNAS • RADIO COMPONENTS • PLASTICS FOR ELECTRONICS

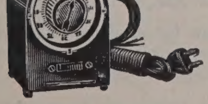
AMPHENOL

THE NEW AMPHENOL "AUTO-DIAL" ROTATOR





- Mast support included for two bay stacked array!
- Heavy-duty motor!
- In-line mast mounting!
- Cone adapter included—accommodates mast sizes from ¾" to 2"!
- Lifetime lubricated!
- Neoprene sealed against dirt and moisture!



- Attractive "Walnut" finish plastic housing!
- Two 2.5 volt pilot lamps!
- Rubber feet on the base protect furniture!
- White plastic card insert for logging stations!

MODEL No. 509

Designed to rotate in one direction only, the Amphenol "Auto-Dial TV Antenna Rotator utilizes a single directional motor, permitting greater power and higher torque than usually available in reversible motors. The antenna rotates rapidly—only 22 seconds required for a complete revolution. Positive braking action prevents coasting or backlash.

The "Auto-Dial" permits axis or "in-line" mounting of antenna and supporting mast, allowing equal weight distribution on the steel bearings and gears of the rotator. There are no fiber or laminated gears to fail—all gears are steel.

The attractive control unit houses the relay, automatic step gears with nylon insulation, contact breakers, and sturdy transformer that reduces 115 volt A.C. to 24 volt A.C. required by the rotator motor.

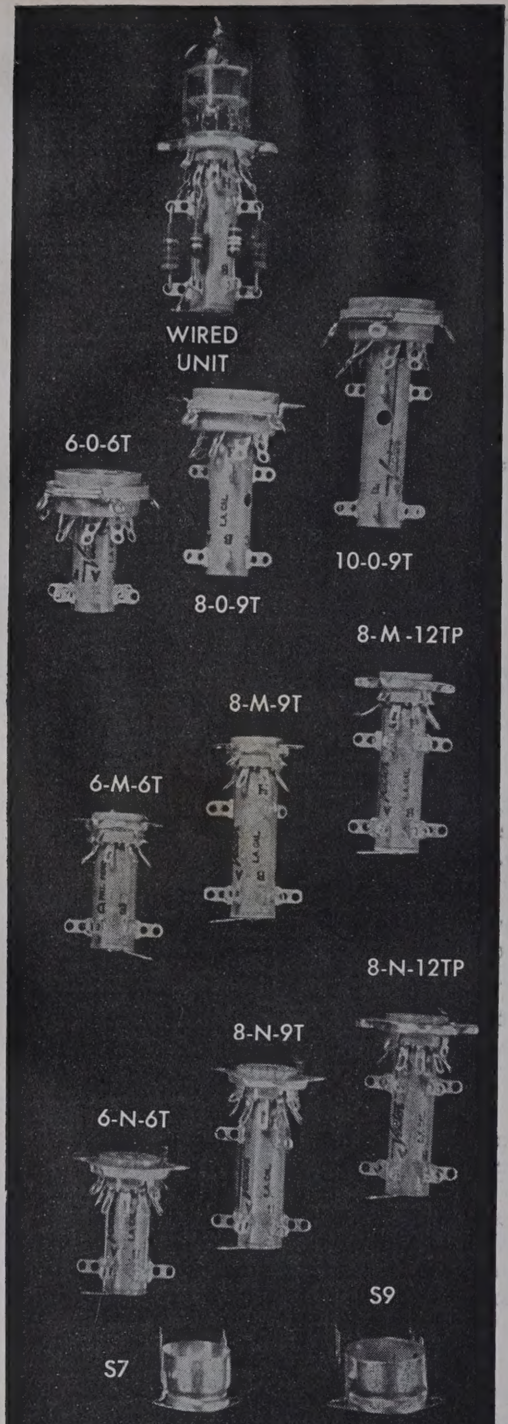
The new "Auto-Dial" Rotator for the first time permits accurate antenna field strength measurements because it can always be brought back to exactly the same direction. This is possible because rotation is in steps of 6 degrees, accurately calibrated on the direction indicator. With "Auto-Dial," servicemen are now able to determine whether the antenna is functioning properly, has the best front-to-back ratio and if it is located properly for the best possible picture.

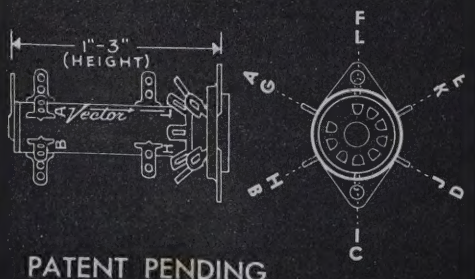
Operating the rotator is as simple as ABC. (A) Turn switch under dial to "On" position; (B) if necessary, refer to log card for dial number indicating desired antenna direction; (C) turn knob until pointer lies over proper number. Then, automatically, the inside knob, which rotates in synchronism with the antenna and which has an arrow—turns to line up with the pointer. This indicates that the antenna is rotating. When the desired direction is reached, rotation stops automatically.

MODEL No. 509 "AUTO-DIAL" TV ANTENNA ROTATOR, including 100 ft. conductor cable, Auto-Dial Control Unit, Complete Rotator with mast support for stacked array and cone adaptor..List

AMERICAN PHENOLIC CORPORATION

1830 SOUTH 54TH AVENUE,
CHICAGO 50, ILLINOIS





PATENT PENDING

Vector SOCKET-TURRETS

BACKGROUND FOR CIRCUITRY

Vector Socket-Turrets and Plug-In units provide a unique method for mounting circuit components associated with a vacuum tube. The tube socket is joined to a tubular terminal post designed to carry most of the usual circuit elements. In some types a plug is joined to the opposite end of the terminal post to provide a useful Plug-In Unit. Most popular numbers are in bold face type.

OCTAL SOCKET-TURRETS

Mica-Filled Octal Socket, bottom mount steel saddle with 1-5/16" mtg. ctrs., 4 ground lugs, 0.134" saddle holes; wrap-around brass contacts, cadmium plated; requires 1" dia. socket hole. Turret ½" dia., 1/16" wall, Grade XXXP tan phenolic bonded to socket. Six plated brass terminals at far end of turret plus three, six or none near socket per type ordered.

Cat. No.	*Height	Turret Terminals	Description
10-O-9T	2½"	9	Turret Terminals in 2 rings spaced 1⅜"
8-0-9T	2"	9	Turret Terminals in 2 rings spaced 1"
6-0-6T	1½"	6	Turret Terminals in 1 ring only.

*Height measured from chassis to far end of turret.
For variations not usually available from distributors but obtainable at the factory:
Add "A" to No. for large octal socket (1½" mtg. ctrs., 1⅛" hole).
Add "J" to No. for "MFE" socket casting, beryllium contacts, silver plated, tin dipped.
Add "P" to No. for nuts fastened to saddle.
Add "G" to No. for impregnation of turret for moisture and fungus protection.

LOCTAL Socket-Turrets similar to the above are available. These require 1-1/16" hole and 1-5/16" mounting centers. To order these substitute letter "L" for "O" in above catalog numbers.

MINIATURE AND NOVAL TYPES

Mica-Filled Sockets with bottom mounting steel saddles, carrying four ground lugs, ⅛" saddle holes. Brass contacts, cadmium plated. Terminal turret ½" dia., 1/16" wall, Grade XXXP tan phenolic joined to socket with rivet through center of socket and turret. Six terminals at far end of turret plus three, six or none near socket end. 7 Pin Socket requires ⅝" hole, ⅞" mtg. ctrs., 9 Pin Socket requires ¾" hole, 1⅛" mtg. ctrs. Order shield bases, S7 or S9 separately if shields are to be used.

7 PIN Cat. No.	9 PIN Cat: No.	*Hght.	Turret Terminals	Description
8-M-12T	8-N-12T	2"	12	Terminals in 2 rings spaced 1"
8-M-9T	**8-N-9T**	2"	9	Terminals in 2 rings spaced 1"
6-M-6T	6-N-6T	1½"	6	Turret terminals at far end only
S7	S9			Shield Base (for attaching shield)

*Height measured from chassis to far end of turret.
For variations not usually available from distributors but obtainable at the factory:
Add "J" to No. for "MFE" socket casting, beryllium contacts, silver plated, tin dipped.
Add "P" to No. for 4-40 nuts fastened to saddle.
Add "G" to No. for impregnation of turret for moisture and fungus protection.

NOTE: Letters are printed on all above turrets to indicate terminal positions. A-F inclusive appear on remote end, G-L inclusive on row near socket (H, J, L for 3 terminal rows). "A" & "G" over "I" of socket.

EXPERIMENTAL KIT NO. 1

Comprises an assortment of 20 socket-turrets for octal, loctal, miniature and noval tubes in various sizes and styles. Provides first aid to experimenters and designers in solving a multitude of mounting problems. Samples of both standard and special types are included.

Vector SOCKET-TURRETS

Vector Electronic Company
1101 RIVERSIDE DRIVE LOS ANGELES 31, CALIF.

Vector PLUG-IN UNITS

FOR UNITIZED CIRCUITS

Amplifiers, counters, oscillators and the like can be readily assembled completely on Plug-Ins, permitting quick changes of circuits. Making a Plug-In unit involves little more than soldering in a few capacitors and resistors.

ECONOMICAL AND CONVENIENT

Plugs are standard mica-filled, ring mounted octal style with 8 prongs as standard. (9 or 11 prong plugs also available—see below). Sockets are standard mica-filled phenolic in octal, 7 Pin miniature or 9 Pin noval as ordered. Contacts are cadmium plated brass. Terminal turrets are Grade XXXP phenolic tubing 1/2" O.D. with 1/16" wall, carrying 12 plated brass terminals. Aluminum covers may be quickly detached by removing screws at base, making inside completely accessible. Miniature and noval types carry military type tube shield base. Main tube shield not furnished. Types in bold face are most widely used and generally preferred for distributor stock.

SINGLE TUBE TYPES

CATALOG NUMBERS			CAN SIZE		TERM. SPACE
Octal	7 Pin	9 Pin	A	B	C
	B8 -M	B8 -N	1.37"	2.0"	0.87"
B10-0	**B10-M**	**B10-N**	1.37"	2.5"	1.37"
B12-0	B12-M	B12-N	1.37"	3.0"	1.87"
C8 -0	C8 -M	C8 -N	2.0"	2.0"	0.87"
C10-O	C10-M	C10-N	2.0"	2.5"	1.37"
C12-0	**C12-M**	**C12-N**	2.0"	3.0"	1.87"
A8 -0	A8 -M	A8 -N	No Can		0.87"
A10-0	A10-M	A10-N	No Can		1.37"
A12-0	A12-M	A12-N	No Can		1.87"

TWO TUBE TYPES

....	C8 -MM	C8 -NN	2.0"	2.0"	0.62"
....	C10-MM	C10-NN	2.0"	2.5"	0.87"
....	**C-12-MM**	**C12-NN**	2.0"	3.0"	1.37"

TYPES WITHOUT SOCKETS

Any of the types tabulated may be obtained less sockets but with terminal turrets and plugs. These are useful for a multitude of PLUG-IN applications where tubes are not involved.

CAT. NO.	CAN SIZE		CAT. NO.	CAN SIZE	
	A	B		A	B
B- 8T	1-3/8"	2"	C- 8T	2"	2"
B-10T	1-3/8"	2-1/2"	C-10T	2"	2-1/2"
B-12T	1-3/8"	3"	C-12T	2"	3"

TYPES WITH CAN AND PLUG ONLY

CAT. NO.	CAN SIZE		CAT. NO.	CAN SIZE	
	A	B		A	B
B- 8	1-3/8"	2"	C- 8	2"	2"
B-10	1-3/8"	2-1/2"	C-12	2"	2-1/2"
B-12	1-3/8"	3"	**C-12**	2"	3"

SPECIAL FEATURES. Variations obtainable at the factory:
Add "H" to No. for 9 prong octal type plug.
Add "K" to No. for 11 prong octal style plug.
Add "J" to No. for "MFE" socket casting, beryllium contacts, silver plated, tin dipped.
Add "G" to No. for impregnation of turret for moisture and fungus protection.
Add "P" to No. for perforation of covers for ventilation.
Anodized finishes, natural or in color to order.
Studs to lock 2" sq. units firmly in sockets are available.

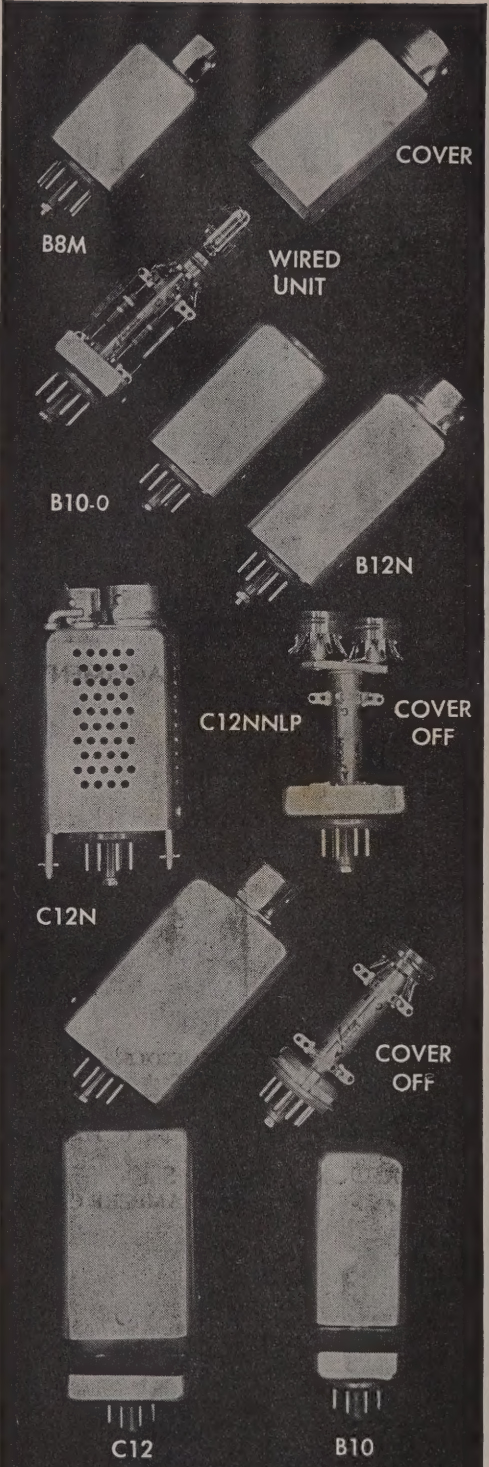
NOTE: Letters are printed on turrets to indicate terminal positions. A-F inclusive appear on 6 terminals at plug end, G-L inclusive on socket end, "A" & "G" in line with "I" of socket and "I" of plug. Key of 8 prong plug points toward corner of can but key of 9 & 11 prong plug points to side of can.

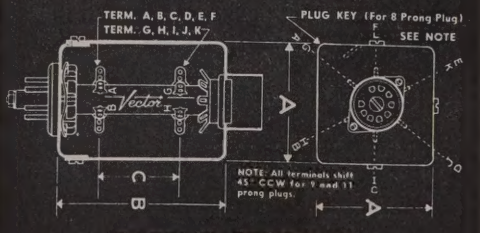
EXPERIMENTAL PLUG-IN KIT NO. 2

Comprises an assortment of 7 plug in units in several sizes, with octal, miniature and noval sockets, 8 and 11 prong plugs. Many combinations can be quickly assembled.

Vector Electronic Company

1101 RIVERSIDE DRIVE LOS ANGELES 31, CALIF.




TERM. A, B, C, D, E, F
TERM. G, H, I, J, K
PLUG KEY (For 8 Prong Plug)
SEE NOTE
A
B
C
Vector
NOTE: All terminals shift 45° CCW for 9 and 11 prong plugs.

PATENT PENDING

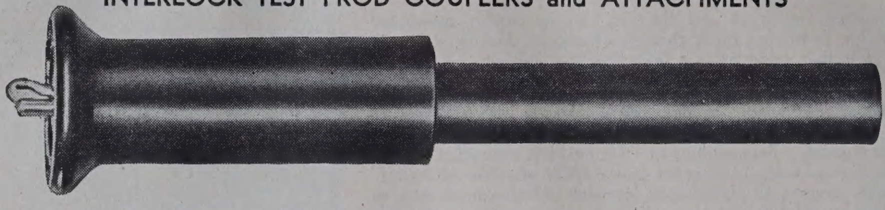
HUBBELL SELF-LOCKING CONNECTORS *Interlock* TRADE-MARK

A *NEW* SELF-LOCKING ELECTRICAL CONNECTOR

"As reliable as an unbroken wire"

LOCK AUTOMATICALLY — VIBRATION and PULL PROOF — CONSTANT LOW RESISTANCE

INTERLOCK TEST PROD COUPLERS and ATTACHMENTS



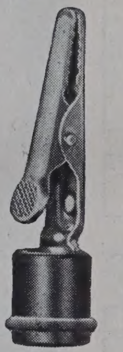
702S11—BLACK TEST PROD COUPLER (less wires)	PRICE — $140.00 per C
703S11—RED TEST PROD COUPLER (less wires)	PRICE — $140.00 per C

Hubbell Interlock Test Prod Couplers and Attachments with new locking action — permit an easy and simple change from one type of attachment to another. Automatically locked — instantly released. As quick as a snap of your fingers. Parts sold separately or as a unit.

ATTACHMENTS

PHONE TIP
704S29—Black
Price, $55.00 per C
705S29—Red
Price, $55.00 per C

PHONO NEEDLE
706S29—Black
Price, $66.00 per C
707S29—Red
Price, $66.00 per C



ALLIGATOR CLIP
708S29—Black
Price, $80.00 per C
709S29—Red
Price, $80.00 per C

SPADE TERMINAL
710S29—Black
Price, $78.00 per C
711S29—Red
Price, $78.00 per C

TEST PROD KIT
5000 VOLTS

The complete Test Prod Kit includes one red and one black set of the following attachments:

- Phone Tip
- Phono Needle
- Alligator Clip
- Spade Terminal

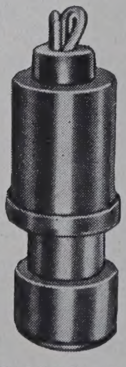
Also included in the Kit is one Test Prod Coupler in red and one in black each wired with four feet of test lead wire. Each kit individually packed.

700S90 (one complete kit)
Price $10.00 ea. List

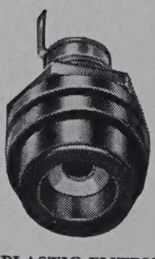
INTERLOCK TYPE "S" SLIDE STANDARD PLUGS and JACKS
15 AMPERE CAPACITY

CONTACT PRESSURE 28 OZ.—PULL OUT 150 LBS.—CONTACT POINTS SILVER PLATED

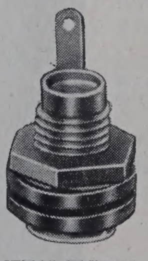
For additional infomation or assistance from Hubbell Representatives in your area write to Harvey Hubbell, Inc., Interlock Department, Bridgeport 2, Connecticut.



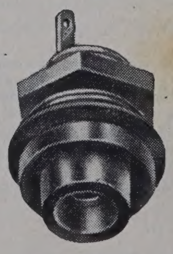
PLASTIC PLUG
(With spring terminal wire connection)
716S19—Black
Price, $90.00 per C
717S19—Red
Price, $90.00 per C



PLASTIC ENTRY JACK
712S21—Black
Price, $76.00 per C
713S21—Red
Price, $76.00 per C



METAL ENTRY JACK
(Insulating washers)
714S21—Black
Price, $74.00 per C
715S21—Red
Price, $74.00 per C



PLASTIC JACK
(Waterproof)
718S21—Black
Price, $90.00 per C
719S21—Red
Price, $90.00 per C

Terminal strips are available for Type "A" Hook Standard and Type "B" Hook Miniature lines listed on the opposite page.

HARVEY HUBBELL, INC. BRIDGEPORT, CONN., U.S.A.

THE ABOVE PROVISIONAL LIST PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

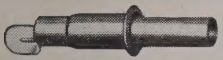
HUBBELL *Interlock*

SELF-LOCKING CONNECTORS

TRADE-MARK

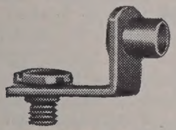
INTERLOCK TYPE "A" HOOK STANDARD CONNECTORS and ACCESSORIES

10 AMPERE CAPACITY — CONTACT PRESSURE 24 OZ.

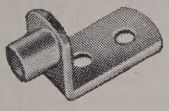


101A30 STRAIGHT PLUG
(Crimping terminal)
PRICE .... $22.50 per C

124A31 STRAIGHT PLUG
(Solder terminal)
PRICE .... $22.50 per C

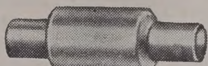


116A43 JACK
(Screw terminal)
PRICE .... $21.50 per C

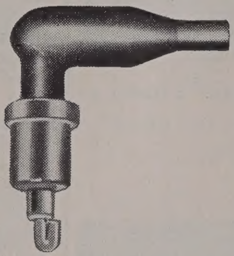


117A49 JACK
(Terminal Post adaptor)
PRICE .... $19.00 per C

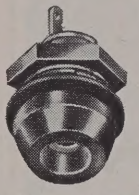
109A40 CONNECTOR
(Crimping terminal)
PRICE .... $21.00 per C



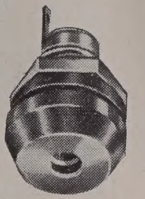
110A49 SPLICING LINK
PRICE .... $21.00 per C



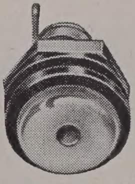
102A19—BLACK
103A19—RED
Plastic and Rubber angle plug, with 4 ft. rubber covered wire.
PRICE .... **$170.00 per C**



126A21—BLACK
127A21—RED
PLASTIC JACK
(Waterproof, solder terminal)
PRICE .... $90.00 per C

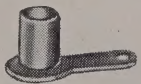


112A21—BLACK
113A21—RED
PLASTIC ENTRY JACK
(Solder terminal)
PRICE .... $76.00 per C



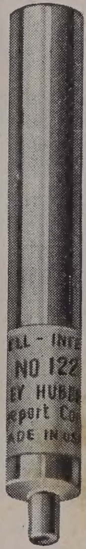
114A21 BLACK
115A21 RED
Metal
ENTRY JACK
$74.00 per C

118A41
Metal
ENTRY JACK
(no insulating washers)
$74.00 per C



111A41
EYELET
PANEL JACK
(Solder terminal)
$3.55 per C

123A99
Eyelet Spacing
WASHER
(For eyelet Jack)
$1.05 per C



122A91
EYELET SETTING PUNCH

PRICE $1.25 ea. Net

This punch may be used in a press or with a hammer, to mount 111A41 Jacks in insulated boards or strips.

Instructions:

1. Prepare insulated panel with .200 inch dia. holes. Normally use 7/16 inch center to center. For higher voltage increase spacing center to center.

2. Assemble correct number of washers to Jack. See chart below.

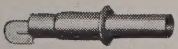
3. Insert assembly through hole with lug on underside.

4. "Set" Jack with punch.

Panel Thickness	Washers Needed
.218	None
.187	1
.156	2
.125	3
.093	4
.062	5

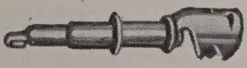
INTERLOCK TYPE "B" HOOK MINIATURE CONNECTORS and ACCESSORIES

5 AMPERE CAPACITY — CONTACT PRESSURE 10 OZ.

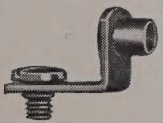


401B30 STRAIGHT PLUG
(Crimping terminal)
PRICE .... $19.00 per C

424B31 STRAIGHT PLUG
(Solder terminal)
PRICE .... $19.00 per C



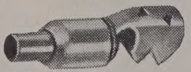
408B32 STRAIGHT PLUG
(Piercing terminal)
PRICE .... $22.50 per C



409B43 JACK
(Screw terminal)
PRICE .... $16.00 per C

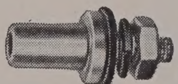
410B41 JACK
(Solder terminal)
PRICE .... $14.50 per C

411B40 CONNECTOR
(Crimping terminal)
PRICE .... $12.00 per C



412B42 CONNECTOR
(Piercing terminal)
PRICE .... $14.00 per C

413B49—SPLICING LINK
PRICE .... $19.00 per C

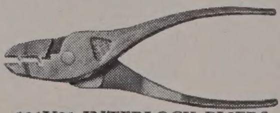


415B49 METAL PANEL JACK
PRICE .... $47.00 per C

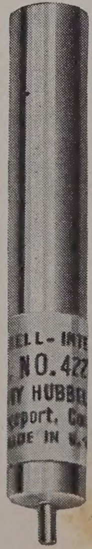
414B41
Eyelet Panel
JACK
$3.35 per C

423B99
EYELET
(spacing washer)
$.90 per C

416B93 RUBBER COVER
For use with type B Plugs.
PRICE .... $20.00 per C



121Y91 INTERLOCK PLIERS
For use on crimping terminals of "A" and "B" Plugs.
PRICE .... $3.00 ea. Net



422B91
EYELET SETTING PUNCH

PRICE $1.25 ea. Net

This punch may be used in a press or with a hammer, to mount 414B41 Jacks in insulated boards or strips.

Instructions:

1. Prepare insulated panel with .120 inch dia. holes. Normally use 5/16 inch center to center. For higher voltage increase spacing center to center.

2. Assemble correct number of washers to Jack. See chart below.

3. Insert assembly through hole with lug on underside.

4.. "Set" Jack with punch.

Panel Thickness	Washers Needed
.187	None
.171	1
.156	2
.140	3
.125	4
.109	5
.093	6
.078	7
.062	8

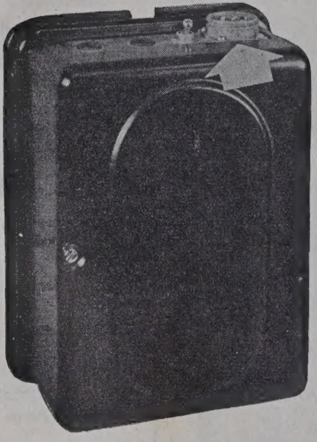
HARVEY HUBBELL, INC BRIDGEPORT, CONN., U.S.A.

THE ABOVE PROVISIONAL LIST PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

CANNON ELECTRIC COMPANY

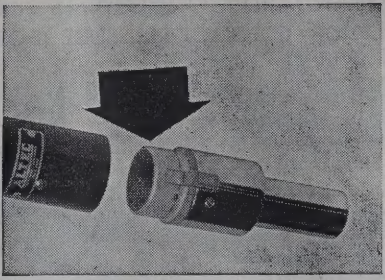
CANNON PLUGS

APPLICATIONS

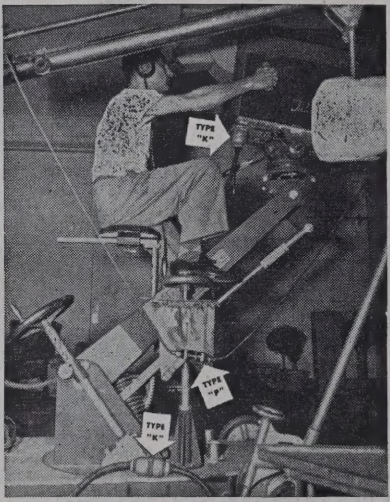


Type "K" Receptacle on Automatic Electric's Recorder Connector

Type "XL" Plug on Electro-Voice's #731 Microphone



Type "P" insert and barrel assembly on Altec-Lansing mike



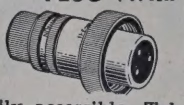
Types "K" and "P" Plugs on television camera

Type "X" Plug and Receptacle on intercom telephone

TYPE XK FITTINGS

CANNON "TYPE XK" PLUGS AND RECEPTACLES — A quality line of Connectors, same inserts and similar in design to the "Type X" Series, but equipped with the fast-acting, sturdy Acme Threaded Coupling Ring and therefore, ideal for use on equipment which is subjected to considerable vibration and tension on cables, such as on sound trucks and other portable units. XK-1 500v; XK-3 200v; XK-4, 133v Service.

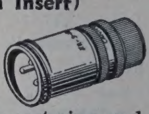
TYPE "XK-11" STRAIGHT CORD PLUG (With Socket Insert)



Shell is of die-cast zinc, cad. plated finish. Equipped with quick-acting coupling ring. Solder pot connections are easily accessible. Takes 3/16" to 9/32" cable. Built for long, dependable service. Mates with -12, -14.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.081	XK-1-11	$5.50
3	15-amp.	0.083	XK-3-11	5.50
4	3-10-amp. 1-15-amp.	0.085	XK-4-11	7.80

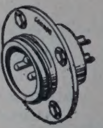
TYPE "XK-12" STRAIGHT CORD PLUG (With Pin Insert)



For use in conjunction with Straight Cord Plug (Socket Insert) or Wall Receptacle (Socket Insert) with coupling nut. Shell is made of die-cast zinc, cad. plated finish. Takes 3/16" to 9/32" cable.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.081	XK-1-12	$3.15
3	15-amp.	0.083	XK-3-12	3.15
4	3-10-amp. 1-15-amp.	0.085	XK-4-12	4.75

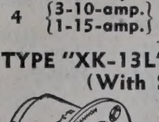
TYPE "XK-14" WALL RECEPTACLE (With Pin Insert)



Body fits in a ¾" hole and extends 13/32" behind a 1/16" flange. Flange is 1½" in diameter, drilled for four #4-40 oval-head mounting screws on a ⅝" radius, 90° apart. Shell is made of brass, nickel finish. Solder pots extend 9/32" beyond body. Has external acme thread on shell and mates with straight cord plug XK-11.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.045	XK-1-14	$3.15
3	15-amp.	0.047	XK-3-14	3.15
4	3-10-amp. 1-15-amp.	0.049	XK-4-14	4.75

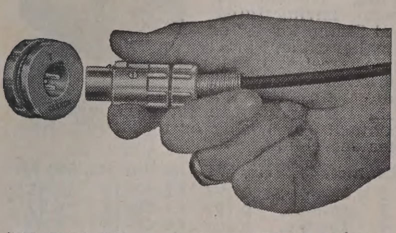
TYPE "XK-13L" WALL RECEPTACLE (With Socket Insert)



Body fits in 1 1/64" hole and extends 1 1/16" behind flange. Flange is 1½" in diameter and drilled for four #4-40 oval-head mounting screws on a ⅝" radius, 90° apart. Shell is made of brass, nickel finish. Solder pots on contacts extend ⅛" beyond body. Mates with a straight cord plug (Pin Insert) XK-12.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.144	XK-1-13L	$5.90
3	15-amp.	0.146	XK-3-13L	6.05
4	3-10-amp. 1-15-amp.	0.148	XK-4-13L	7.60

TYPE XL FITTINGS

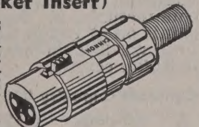


"XL-3-14N" Receptacle and "XL-3-11" Plug in engaging position. Compare small size of plug with hand.

The Cannon Electric Type "XL" Connector combines various features found in other Cannon types into a small fitting comparable only in size to the Type "X" for low level sound transmission circuits. Among the leading features are the following: (1) convenient latchlock device to hold connector tight. (2) lightweight. (3) polarizing means (4) compression gland with relief spring or integral clamp, if desired. (5) streamlined design. (6) tapped metal for insert retaining screw. (7) provision for special grounding contact and grounding to shell. Contacts are 15-amp. for No. 14 B&S stranded wire in 3 contact insert; 10-amp. in 4 contact insert. Shell is zinc or steel, with various finishes available, bright nickle being standard. Satin-chrome finish available on steel shells. Flashover Voltage 1400-1600v.

ZINC SHELL TYPES

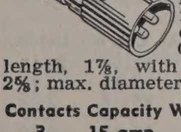
TYPE "XL-11" STRAIGHT CORD PLUG (Socket Insert)



Type XL-3-11 is equipped with latch lock device and has raised polarizing boss. No. 1 contact engages before Nos. 2 and 3, and may be used for grounding purposes, if desired. $\frac{9}{32}$ cable accommodation. Overall dimensions: length, 2 $\frac{3}{32}$, with relief spring, 2 $\frac{27}{32}$ approx.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.0992	XL-3-11	1.55
4	10-amp.	.0992	XL-4-11	2.15

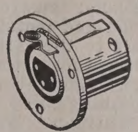
TYPE "XL-12" STRAIGHT CORD PLUG (Pin Insert)



Type XL-12 plug has alignment rib in addition to polarizing groove. Cable accommodation is $\frac{9}{32}$. Insert is removable for soldering or inspection. Overall dimensions: length, 1⅞, with cable relief spring, 2⅝; max. diameter ¾. Insert dia. ⅝".

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.0792	XL-3-12	1.50
4	10-amp.	.0792	XL-4-12	2.00

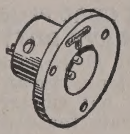
TYPE "XL-13" RECEPTACLE (Socket Insert)



A wall mounting receptacle similar to XL-14 except that it has socket insert assembly and latch locking device. Overall Dimensions: flange diameter, $1\frac{7}{16}$; flange thickness $\frac{3}{32}$; rear of flange to solder pot extension 1 $\frac{9}{16}$; dia. barrel, $\frac{15}{16}$; three mounting holes drilled .136

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.132	XL-3-13	1.55
4	10-amp.	.132	XL-4-13	2.15

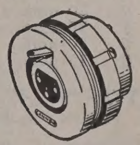
TYPE "XL-14" RECEPTACLE (Pin Insert)



This wall mounting receptacle has three mounting holes having .136 diameter. Overall dimensions: flange diameter, 1 $\frac{7}{16}$; width flange, $\frac{3}{32}$; length behind flange to solder pot extension, 1 $\frac{1}{64}$; barrel diameter, ¾. Material zinc, bright nickel finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.0592	XL-3-14	1.20
4	10-amp.	.0592	XL-4-14	1.70

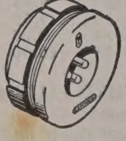
TYPE "XL-13N" RECEPTACLE (Socket Insert)



Similar to XL-14N except has socket insert assembly, with latch-lock device, and polarizing boss on insert barrel. No. 1 contact engages before Nos. 2 and 3 and may be used for grounding circuit, if desired. Overall dimensions: flange and barrel and nut are identical to XL-14N, length from face of flange including solder pot extension, 1 $\frac{17}{64}$.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.2112	XL-3-13N	1.55
4	10-amp.	.2112	XL-4-13N	2.15

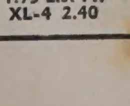
TYPE "XL-14N" RECEPTACLE (Pin Insert)



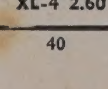
Designed to be mounted in a panel and has lock nut, accommodating up to $\frac{5}{16}$ inch panel. Two fittings may be mounted on a single gang plate. Overall Dimensions: flange diameter, 1 $\frac{7}{16}$; barrel diameter, 1; width flange to barrel, $\frac{27}{32}$, with $\frac{15}{64}$ max. solder pot extension; flange thickness, $\frac{5}{32}$.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.2048	XL-3-14N	1.45
4	10-amp.	.2048	XL-4-14N	1.95

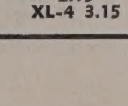
TYPE "XL" ADAPTER RECEPTACLES



XL-3-50
1.75 List Pr.
XL-4 2.40

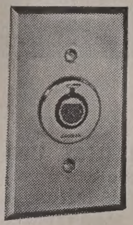


XL-3-50T
1.90 List Pr.
XL-4 2.60



XL-3-50N
2.15
XL-4 3.15

SINGLE GANG WALL RECEPTACLES

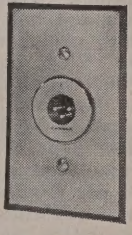


Type XL-3-35 (Socket Insert)

Face plate similar to type used in P-35. Takes an XL-3-13N Receptacle. Wt. 0.3479.

Cat. No.	List Price
XL-3-35	4.40
XL-4-35	4.85

TWO-GANG TYPES ALSO AVAILABLE



Type XL-3-36 (Pin Insert)

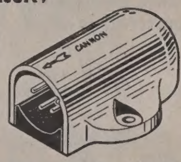
Takes an XL-3-14N Receptacle. Bright nickel finish.

Cat. No.	List Price
XL-3-36	4.45
XL-4-36	4.95

TWO GANG WALL RECEPTACLES

	List
XL-3-35-2G (2 socket inserts)	9.35
XL-4-35-2G (2 socket inserts)	10.55
XL-3-36-2G (2 pin inserts)	9.30
XL-4-36-2G (2 pin inserts)	10.25

TYPE XL-42 RECEPTACLE (Pin Insert)

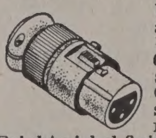


The -42 Receptacle is similar to the X-42 shown under "X" Fittings, except that it has the XL type insert. For special mounting purposes.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.063	XL-3-42	1.50
4	10-amp.	0.063	XL-4-42	1.65

STEEL SHELL PLUGS INTEGRAL CLAMP TYPES

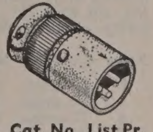
TYPE XL-3-11SC PLUG (Socket Insert)



The steel shell type is built for rugged service and has cable entry of ¼" min., 5/16" max. 6/32" shorter overall shell than zinc type. Otherwise same construction, mating with regular XL receptacle. Bright nickel finish standard.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.1333	XL-3-11SC	3.40
4	10-amp.	.1333	XL-4-11SC	4.00

TYPE XL-3-12SC PLUG (Pin Insert)



Corresponds to XL-3-12 except that shell is steel with integral clamp. For 5/16" max. entry. Shell is 7/32" shorter in overall length than corresponding zinc shell.

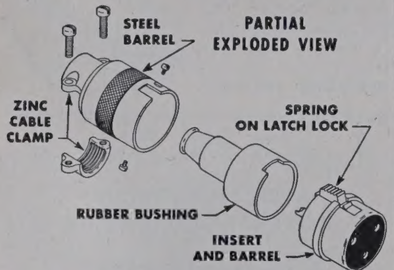
Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	.1250	XL-3-12SC	3.35
4	10-amp.	.1250	XL-4-12SC	3.85

CANNON ELECTRIC COMPANY

TYPE P FITTINGS

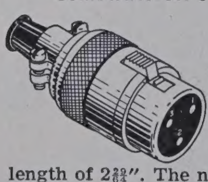
CANNON "TYPE P" FITTINGS. Universally used in sound and allied applications. "Type P" Fittings include a size and type for every requirement, with a high standard of quality. All 90° Plugs have split-shell construction for quick, easy access for wiring or inspection. Splash-proof but not weather-proof. Plug and receptacle dust caps are available. Laboratory tests show an average voltage-drop of not more than 10 millivolts, with current flowing at the rated capacity. Insulating material is black phenolic which has a 0.7% absorption in 24 hours of immersion in water and a dielectric strength of 550 volts per mil at 60 cycles. Two to 6 contact inserts accommodate No. 10 B&S stranded wire; 8 contact insert No. 14 wire.

New shell designs of the P-CG-11S and P-CG-12S, cord plugs, replace both old type shells of zinc and steel, and such improvements as shorter length, new rubber bushing, improved latch and spring, integral clamp. Shell material is steel, integral clamp zinc.



NEW TYPES WILL MATE WITH CORRESPONDING FITTINGS, SAME AS OLD DESIGN

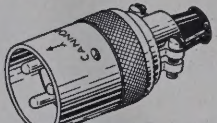
TYPE P-CG-11S CORD PLUG
COMBINATION STEEL & ZINC
(With Socket Insert)



This new type plug with steel shell and integral zinc clamp is 11/64" shorter than the old type and has an overall length of 2 29/64". The new rubber bushing allows a 5/16" D. cable entry, and on P4, P5, P6 and P8 ½" D. max. cable entry. Satin chrome finish.

Poles	Capacity	Wt. Lbs.	Cat. No.	List Price
2	30-amp.	0.202	P2-CG-11S	$6.15
3	30-amp.	0.202	P3-CG-11S	6.30
4	30-amp.	0.202	P4-CG-11S	6.65
5	30-amp.	0.206	P5-CG-11S	7.00
6	30-amp.	0.208	P6-CG-11S	7.20
8	15-amp.	0.208	P8-CG-11S	7.70

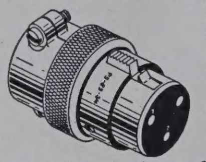
TYPE P-CG-12S CORD PLUG
COMBINATION STEEL & ZINC
(With Pin Insert)



Similar construction and materials to the -11S, except for pin insert. New rubber bushing on P4 to P8 fittings is contained within the shell and lines the solder pot cavity. Same cable entry sizes as -11S. Satin chrome finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.163	P2-CG-12S	$5.00
3	30-amp.	0.159	P3-CG-12S	5.15
4	30-amp.	0.159	P4-CG-12S	5.30
5	30-amp.	0.163	P5-CG-12S	5.40
6	30-amp.	0.167	P6-CG-12S	5.65
8	15-amp.	0.163	P8-CG-12S	6.00

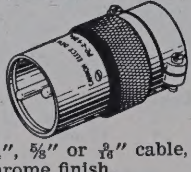
TYPE "P-23" STRAIGHT CORD PLUG
(With Socket Insert), HEAVY DUTY



Shell is die-cast zinc for severe service, but employing all features such as the latch type locking device which is standard on "Type P." It has integral clamp for ¾" cable. Also made for 9/16" & ⅝" cable if specified. Satin chrome finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.166	P2-23	$8.90
3	30-amp.	0.170	P3-23	9.20
4	30-amp.	0.174	P4-23	9.65
5	30-amp.	0.178	P5-23	10.10
6	30-amp.	0.182	P6-23	10.40
8	15-amp.	0.178	P8-23	11.05

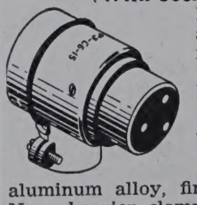
TYPE "P-24" STRAIGHT CORD PLUG
(With Pin Insert), HEAVY DUTY



Corresponds with "Type P-23" Plug (Socket insert). Built for hard service. The skirt is of steel, body die-cast zinc. Has Integral Clamp, for ¾", ⅝" or 9/16" cable, if specified. Satin chrome finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.170	P2-24	$9.00
3	30-amp.	0.173	P3-24	9.20
4	30-amp.	0.176	P4-24	9.35
5	30-amp.	0.179	P5-24	9.55
6	30-amp.	0.182	P6-24	9.95
8	15-amp.	0.179	P8-24	10.40

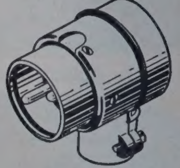
TYPE "P-CG-15" 90° CORD PLUG
(With Socket Insert)



Has Split Shell and all other "Type P" features found in "Type P-15, 90° Plug" except cable connection, which is an Integral Clamp for ½" or smaller cable. Made of cast aluminum alloy, finished in tin plate. New, heavier clamp.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.220	P2-CG-15	$6.90
3	30-amp.	0.224	P3-CG-15	7.15
4	30-amp.	0.228	P4-CG-12	7.50
5	30-amp.	0.232	P5-CG-15	7.80
6	30-amp.	0.236	P6-CG-15	8.00
8	15-amp.	0.232	P8-CG-15	8.50

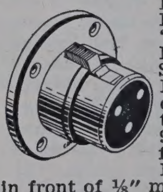
TYPE "P-CG-16" 90° CORD PLUG
(With Pin Insert)



Corresponds with Type P-CG-15 90° Plug. (Socket insert), having Integral Clamp for ½" or smaller cable. Barrel is of steel and shell of cast aluminum alloy, tin plate finish. Removable cap for easy access to contacts for wiring or inspection. New heavier clamp.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.195	P2-CG-16	$6.45
3	30-amp.	0.198	P3-CG-16	6.55
4	30-amp.	0.201	P4-CG-16	6.65
5	30-amp.	0.204	P5-CG-16	6.80
6	30-amp.	0.207	P6-CG-16	7.10
8	15-amp.	0.204	P8-CG-16	7.40

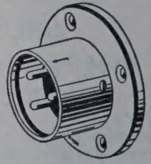
TYPE "P-17" PANEL RECEPTACLE
(With Socket Insert)
Surface Mounting



P-17 has Latch Locking Device and all other "Type P" features. Made of die-cast zinc. Satin chrome finish. Flange is 2" in diameter, drilled and countersunk at four points 90° apart on 13/16 radius for four #4-40 oval head M.S. Body extends 1" in front of ⅛" mounting flange.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.125	P2-17	$7.70
3	30-amp.	0.129	P3-17	8.00
4	30-amp.	0.133	P4-17	8.40
5	30-amp.	0.137	P5-17	8.90
6	30-amp.	0.141	P6-17	9.20
8	15-amp.	0.137	P8-17	9.85

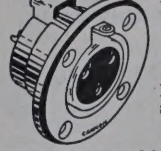
TYPE "P-18" PANEL RECEPTACLE
(with Pin Insert) Surface Mounting



Corresponds to "Type P-17", Panel Receptacle. Shell is made of brass, satin chrome finish. Flange is 2" in diameter, drilled and countersunk at four points on 13/16 radius for four #4-40 oval head machine screws.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.156	P2-18	$4.15
3	30-amp.	0.159	P3-18	4.35
4	30-amp.	0.162	P4-18	4.50
5	30-amp.	0.165	P5-18	4.70
6	30-amp.	0.168	P6-18	5.05
8	15-amp.	0.165	P8-18	5.55

TYPE "P-13" PANEL RECEPTACLE
(with Socket Insert) Flush Mounting



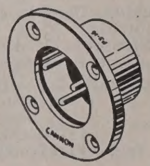
Has Latch Locking Device which operates from front of panel. Made of die-cast zinc, satin chrome finish. Flange is 2" in diameter and drilled and countersunk at four points on 13/16 radius for four #4-40 oval head machine screws.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.202	P2-13	$5.15
3	30-amp.	0.206	P3-13	5.35
4	30-amp.	0.210	P4-13	5.65
5	30-amp.	0.214	P5-13	6.00
6	30-amp.	0.218	P6-13	6.20
8	15-amp.	0.214	P8-13	6.65

CANNON ELECTRIC COMPANY

TYPE P FITTINGS

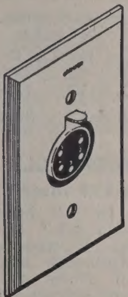
TYPE "P-14" RECEPTACLE (Pin Insert), FLUSH MOUNTING



Flange is 2" in diameter, drilled with four .120" diameter holes to take four #4-40 oval-head mounting screws, arranged 90° apart on a radius of $\frac{13}{16}$". Shell is die-cast zinc, satin chrome finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.104	P2-14	$2.70
3	30-amp.	0.107	P3-14	2.80
4	30-amp.	0.110	P4-14	3.00
5	30-amp.	0.113	P5-14	3.10
6	30-amp.	0.116	P6-14	3.35
8	15-amp.	0.113	P8-14	3.70

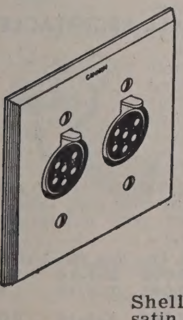
TYPE "P-35" SINGLE GANG WALL RECEPTACLE (With Socket Insert)



Furnished with brackets for standard switch box. Shell is die-cast zinc, satin chrome finish. Plate is 4½" high and 2¾" wide. Latch Locking Device operates from front of panel.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.341	P2-35	$8.95
3	30-amp.	0.345	P3-35	9.15
4	30-amp.	0.349	P4-35	9.45
5	30-amp.	0.353	P5-35	9.80
6	30-amp.	0.357	P6-35	10.00
8	15-amp.	0.353	P8-35	10.45

TYPE "P-35-2G" TWO-GANG WALL RECEPTACLE (With Socket Inserts)



Furnished with brackets for standard switch box. Plate is 4½" high and 4$\frac{9}{16}$" wide. Both receptables have Latch Locking Device, operated from front of panel. Shell is die-cast zinc, satin chrome finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.448	P2-35-2G	$18.00
3	30-amp.	0.456	P3-35-2G	18.55
4	30-amp.	0.464	P4-35-2G	19.50
5	30-amp.	0.472	P5-35-2G	20.40
6	30-amp.	0.480	P6-35-2G	20.95
8	15-amp.	0.472	P8-35-2G	22.25

MINIMUM FLASHOVER VOLTAGES ON P INSERTS

P-8 1300V—P-2 1600V—P-3 1600V

(All others more than 1600 volts.)

TYPE "P-36" SINGLE GANG WALL RECEPTACLE (With Pin Insert)

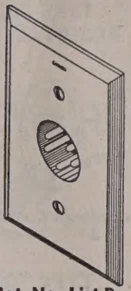


Plate is 4½" high and 2¾" wide. Furnished with brackets for standard switch box. Made of die-cast zinc, satin chrome finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.277	P2-36	$6.95
3	30-amp.	0.280	P3-36	7.10
4	30-amp.	0.283	P4-36	7.20
5	30-amp.	0.286	P5-36	7.40
6	30-amp.	0.289	P6-36	7.60
8	15-amp.	0.286	P8-36	7.90

TYPE "P-36-2G" TWO-GANG WALL RECEPTACLE (With Pin Insert)

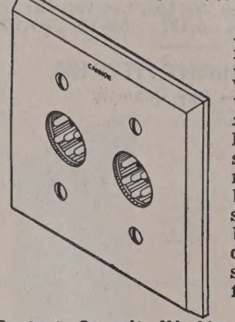
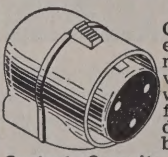


Plate is 4½" high and 4$\frac{9}{16}$" wide. Drilled to take four #6-32 oval-head mounting screws. Furnished with brackets for standard switch box. Made of die-cast zinc, satin chrome finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.554	P2-36-2G	$14.25
3	30-amp.	0.563	P3-36-2G	14.65
4	30-amp.	0.572	P4-36-2G	14.95
5	30-amp.	0.579	P5-36-2G	15.35
6	30-amp.	0.588	P6-36-2G	16.10
8	15-amp.	0.579	P8-36-2G	17.05

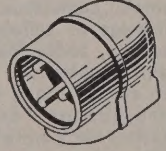
TYPE "P-41" 90° MICROPHONE OR PANEL RECEPTACLE (With Socket Insert)



Can be mounted in equipment or instrument panel. Equipped with Latch Locking Device. Cap is removable for easy wiring. Shell is die-cast zinc, finished in black wrinkle enamel.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.249	P2-41	$11.55
3	30-amp.	0.253	P3-41	11.80
4	30-amp.	0.257	P4-41	12.25
5	30-amp.	0.261	P5-41	12.75
6	30-amp.	0.265	P6-41	13.05
8	15-amp.	0.261	P8-41	13.70

TYPE "P-42" 90° MICROPHONE OR PANEL RECEPTACLE (With Pin Insert)

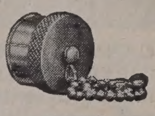


For mounting on equipment or instrument panel. Cap is removable for easy wiring. Shell is made of die-cast zinc with black wrinkle enamel finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.176	P2-42	$8.40
3	30-amp.	0.179	P3-42	8.65
4	30-amp.	0.182	P4-42	8.80
5	30-amp.	0.185	P5-42	9.00
6	30-amp.	0.188	P6-42	9.35
8	15-amp.	0.185	P8-42	9.85

ACCESSORY ITEMS

DUST CAPS



ONE-THIRD ACTUAL SIZE

Fits all "Type P" fittings with pin inserts. Made of brass, cadmium plated, with nickel silver bead chain.

Lbs.	Cat. No	List
0.081	PPC	$2.80
0.082	PCI*	3.30

*Type PCI is insulated inside for application where contacts are "hot."

TYPE PRC DUST CAP

ONE-THIRD ACTUAL SIZE

Fits all "Type P" fittings with socket inserts. Made of brass, cadmium plated with nickel silver bead chain.

Lbs.	Cat. No	List
0.095	PRC	$2.37

REPLACEMENT ITEMS

A number of Type P and Type O Connectors formerly catalogued have been omitted from the list. These include various Special Items. It is the policy of the company at the present time to list such items as obsolete or replacement fittings, which are available only upon special request. If, however, they are required for replacement purposes, write for Type P & O Replacement Page for listing and catalog number.

Net List

TYPE "PCG" CLAMP GLAND NUT

ONE-THIRD ACTUAL SIZE

Made of die-cast zinc, cadmium plated. Complete with gasket.

Wt. Lbs	Cat. No.	List Price
0.037	PCG	$1.45

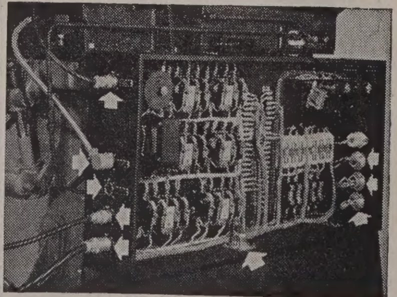
TYPE "P" GLAND GASKET

ONE-THIRD ACTUAL SIZE

As used in Straight Glands and Clamp Glands. Made of soft white rubber.

Cat. No.	List Price
P Gasket	$ .22

APPLICATION

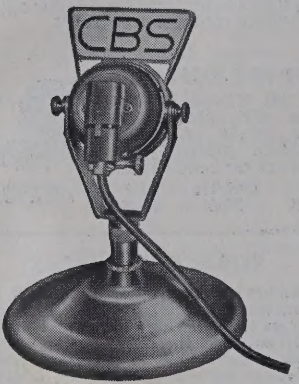


Type "P" CONNECTORS on Mitchell Camera Background Projector

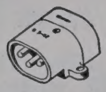
CANNON ELECTRIC COMPANY

TYPE O FITTINGS

CANNON "TYPE O" PLUGS AND RECEPTACLES. This series consists of a line of 3-contact oval-shaped plugs and receptacles, equiped with Latch Locking Device. Contacts are silver-plated, full-floating, non-twisting, carry 30-amp. capacity. Solder terminals are tinned for ease of wiring. 30-amp. contacts accommodate No. 30-amp. contacts accommodate No. 10 B&S stranded wire. 2400v flashover.



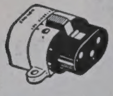
TYPE "03-42" MICROPHONE OR PANEL RECEPTACLE (With Pin Insert)



Has flat base, with two lugs for mounting with #4-40 oval-head screws. Made of die-cast zinc, and cadmium plated.

Contact	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	30-amp.	0.271	03-42	$8.65

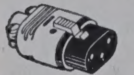
TYPE "03-41" 90° MICROPHONE OR PANEL RECEPTACLE (Socket Insert)



Flat base is flanged and is attached to microphone or panel by means of two #4-40 oval-head mounting screws. Made of die-cast zinc, cad. plated.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	30-amp.	0.274	03-41	$8.65

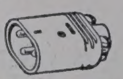
TYPE "03-11" STRAIGHT CORD PLUG (With Socket Insert)



Has Integral Clamp for 9/32" or smaller cable. Made of die-cast zinc, cadmium plated.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	30-amp.	0.113	03-11	$6.10

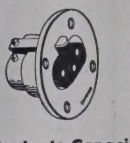
TYPE "03-12" STRAIGHT CORD PLUG (With Pin Insert)



Corresponds with No. 03-11 "Type O" Straight Cord Plug (Socket Insert). Has integral cable clamp, for 9/32" or smaller cable. Made of die-cast zinc, cadmium plated.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	30-amp.	0.104	03-12	$6.10

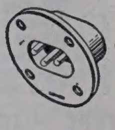
TYPE "03-13" FLUSH WALL RECEPTACLE (With Socket Insert)



Flange is 2" in diameter, drilled with four holes to take #4-40 oval-head mounting screws, 90° apart on a radius of 13/16". Made of die-cast zinc, cadmium plated. Latch Locking Device is operated from panel front.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	30-amp.	0.148	03-13	$7.15

TYPE "03-14" FLUSH WALL RECEPTACLE (With Pin Insert)

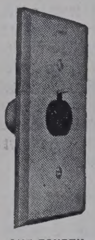


The flange is 2" in diameter, drilled with four holes to take #4-40 oval-head mounting screws, 90° apart, on a radius of 13/16". Made of die-cast zinc, cadmium plated.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	30-amp.	0.107	03-14	$7.15

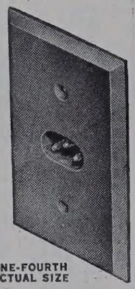
REPLACEMENT FITTINGS

List — Any Quantity



ONE-FOURTH ACTUAL SIZE

03-35
$8.75 List

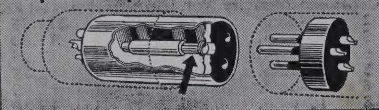


ONE-FOURTH ACTUAL SIZE

03-36
$8.75 List

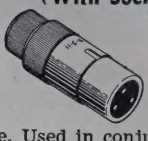
TYPE X FITTINGS

The arrow shows spring clip on full-floating socket contact which gives a positive pressure fit connection.



CANNON "TYPE X" PLUGS AND RECEPTACLES—The "Type X" Series of small connectors offers inexpensive fittings of reliable quality for sound service, radio, public address systems and geophysical research. In addition to compactness, many exclusive Cannon features are embodied in this series, such as full floating contacts in all socket inserts. Solder pot cable connections are easily accessible. Cable glands are removable. Contacts are so positive that no latching device is needed for ordinary uses. Operating voltage X-4, 500V, X-2, X-3, 100V.

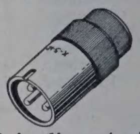
TYPE "X-11" CORD PLUG (With Socket Insert)



Sturdily built for dependable service. Light in weight. Shell is diecast zinc, nickel finish. Will take 3/16" to 9/32" cable. Used in conjunction with the following: X-14 Wall Receptacle, X-12 Straight Cord Plug, and X-42 Microphone Receptacle X-44L Receptacle.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.081	X-1-11	2.30
3	15-amp.	0.083	X-3-11	2.30
4 4	3-10-amp. 1-15-amp.	0.085	X-4-11	4.25

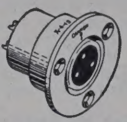
TYPE "X-12" CORD PLUG (With Pin Insert)



For use in conjunction with X-11 Straight Cord Plug (Socket Insert) or X-13 Wall Receptacle (Socket Insert). Shell is die-cast zinc, nickel finish. Will take 3/16" to 9/32" cable.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.061	X-1-12	2.05
3	15-amp.	0.063	X-3-12	1.65
4 4	3-10-amp. 1-15-amp.	0.065	X-4-12	3.00

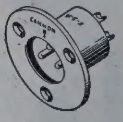
TYPE "X-13" WALL RECEPTACLE (With Socket Insert)



Body fits in 7/8" hole and extends 1 3/16" behind flange. Flange is 1⅜" in diameter and drilled for three #4-40 oval-head screws on 17/32" radius 120° apart. Shell is die-cast zinc, nickel finish. To be used in conjunction with the following X-12.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.081	X-1-13	2.30
3	15-amp.	0.083	X-3-13	2.30
4 4	3-10-amp. 1-15-amp.	0.085	X-4-13	4.25

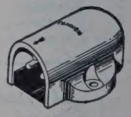
TYPE "X-14" WALL RECEPTACLE (With Pin Insert)



Body fits in ¾" hole and extends 23/32" behind the flange, which is 1⅜" in diameter and drilled for three #4-40 oval-head screws on 17/32 radius, 120° apart. Shell is zinc, nickel plated finish. Used in conjunction with straight cord plug (Socket Insert) X-11. Solder pots extend ¼" beyond rear of body.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
1	15-amp.	0.040	X-1-14	1.65
3	15-amp.	0.042	X-3-14	1.65
4 4	3-10-amp. 1-15-amp.	0.044	X-4-14	3.00

TYPE "X-42" MICROPHONE RECEPTACLE (With Pin Insert)



Has all the features of "Type X" Straight Cord Plugs and Wall Receptacles but it is mounted on a flat base. Shell is die-cast zinc, nickel finish. Use with X-11 straight Cord Plug (Socket Insert) Mounting holes are .144" in diameter and 1" apart.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.063	X-3-42	1.65
4	15-amp.	0.063	X-4-42	3.65

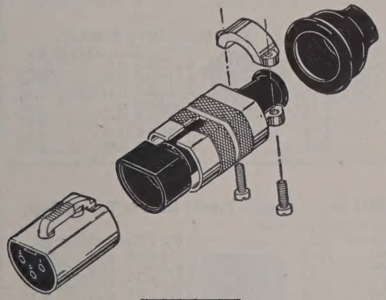
CANNON ELECTRIC COMPANY

UA FITTINGS

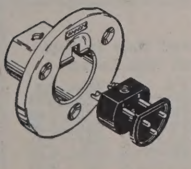
The UA Series of audio connectors designed in cooperation with the RMA Committee has all the features of Type P, O and XL and, in addition, the following: (1) gold-plated contacts for long life and "no noise" (2) double protection rubber relief collar and rubber bushings (3) flat-top polarization for finger-touch action (4) stronger and better latch lock (5) steel plug shells and insert barrel (6) spring-action insert removal — no screws.

Insulators are high dielectric, molded general-purpose Durez. 15-amp. contacts with 2400 v. minimum flash-over; for No. 14 B&S stranded wire. Max. cable entry is ½". Write for special UA Bulletin for complete details.

SEMI-EXPLODED VIEW UA-11

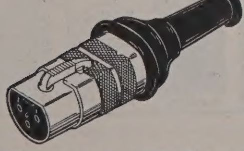


SEMI-EXPLODED VIEW UA-14



showing rubber cushion that fits over pin contacts to avoid shocks, provide protection from moisture, improve insulation factors.

TYPE UA-3-11 PLUG
(Socket Insert)

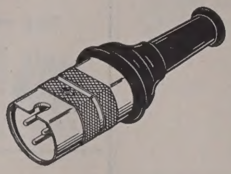


The UA-11 plug is approximately 3½" long, including rubber bushing; 1 3/16" maximum width and 1 11/32" thickness. Steel shell and barrel. Mates with UA-12, UA-32 and UA-42.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.15	UA-3-11	5.35

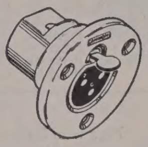
TYPE UA-3-12 PLUG
(Pin Insert)

The UA-12 plug is approximately 3¼" long, including rubber relief collar. Steel shell. Mates with UA-3-11, UA-3-13, UA-3-31.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.11	UA-3-12	4.40

TYPE UA-3-13 RECEPTACLE
(Socket Insert)

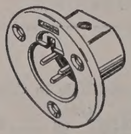


The UA-13 Receptacle has a round flange compared to the rectangular flange of the UA-31. Three mounting holes are provided, .120 dia. countersunk for #4 flat head machine screws. Mates with UA-3-12.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.14	UA-3-13	4.10

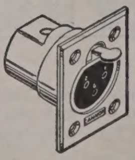
TYPE UA-3-14 RECEPTACLE
(Pin Insert)

The UA-14 Receptacle has a similar flange construction as the UA-13. Barrel extends 23/32" behind flange with 15/64" solder pot extension. A 63/64" dia. (1") hole is required to mount. Mates with UA-3-11.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.08	UA-3-14	2.50

TYPE UA-3-31 RECEPTACLE
(Socket Insert)

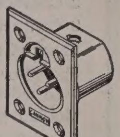


The UA-31 Receptacle has a rectangular flange construction, and extends 1 3/32" behind flange plus 3/16" max. solder pot extension and requires a 1" hole for 63/64" dia., barrel. Mates with UA-3-12.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.13	UA-3-31	4.10

TYPE UA-3-32 RECEPTACLE
(Pin Insert)

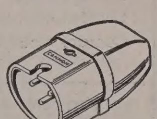
The UA-3-32 Receptacle is similar to UA-31. Barrel extends 25/32" plus 15/64" max. solder pot extension behind flange, and requires a 1" hole for 63/64" dia. barrel. Mates with XL-3-11.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.07	UA-3-32	2.50

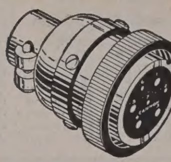
TYPE UA-3-42 RECEPTACLE
(Pin Insert)

The UA-42 is a special mounting receptacle adaptable to microphones and other applications where it is advisable to mount receptacle parallel to the equipment, etc. Similar to XL-42 and X-42 types.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
3	15-amp.	0.08	UA-3-42	4.95

MISCELLANEOUS



Used on telephone recorder connectors made by Western Electric, Automatic Electric, etc.

BP-M7-21C-½ Plug (CA16881)	**$4.86 List**
BP-M7-32S Receptacle (CA4128)	**$1.97 List**

TELEVISION CAMERA PLUG

Used on Dumont, G.E. and other television cameras.

TV-R24C-22-⅞ Plug (CA17898)	**$24.96 List**

CINCH-JONES SALES ★ ELECTRICAL CONNECTING DEVICES

"300" SERIES PLUGS AND SOCKETS
General Specifications

2 Contacts to 33 Contacts. All plugs and sockets are polarized.

2 Contact Plugs and Sockets are round, others rectangular.

Plugs of one size cannot fit into sockets of another size.

Phosphor bronze "knife-switch" type socket contacts engage both sides of flat plug contacts—double contact area.

Molded Bakelite insulation.

Formed metal caps. Formed fibre linings in caps.

Small size, with good separation between contacts.

Plug or socket for panel mounting.

Plug or socket with cap.

Simple, fool-proof assembly.

Finish on caps—Black Crystal.

Plug prongs—$\frac{5}{32}$" wide by $\frac{3}{64}$" thick.

Rated voltage—730 volts RMS.

Current capacity—10 amperes.

Contact resistance—.002 ohms average.

Plug with Angle Brackets

P304AB

No.	Contacts	Ea.
P-302-AB	(2)	$ .25
P-303-AB	(3)	.31
P-304-AB	(4)	.35
P-306-AB	(6)	.43
P-308-AB	(8)	.50
P-310-AB	(10)	.57
P-312-AB	(12)	.64

Socket with Angle Brackets

S304AB

No.	Contacts	Ea.
S-302-AB	(2)	$ .28
S-303-AB	(3)	.33
S-304-AB	(4)	.37
S-306-AB	(6)	.46
S-308-AB	(8)	.57
S-310-AB	(10)	.68
S-312-AB	(12)	.79

Plug with Flush Plate

P304FP

No.	Contacts	Ea.
P-302-FP	(2)	$ .44
P-303-FP	(3)	.48
P-304-FP	(4)	.53
P-306-FP	(6)	.59
P-308-FP	(8)	.67
P-310-FP	(10)	.74
P-312-FP	(12)	.81

Socket with Flush Plate

S304FP

No.	Contacts	Ea.
S-302-FP	(2)	$ .45
S-303-FP	(3)	.50
S-304-FP	(4)	.55
S-306-FP	(6)	.63
S-308-FP	(8)	.74
S-310-FP	(10)	.85
S-312-FP	(12)	.96

Plug with Recessed Plate

P304RP

No.	Contacts	Ea.
P-302-RP	(2)	$ .51
P-303-RP	(3)	.56
P-304-RP	(4)	.61
P-306-RP	(6)	.69
P-308-RP	(8)	.80
P-310-RP	(10)	.91
P-312-RP	(12)	1.01

Socket with Recessed Plate

S304RP

No.	Contacts	Ea.
S-302-RP	(2)	$ .53
S-303-RP	(3)	.58
S-304-RP	(4)	.63
S-306-RP	(6)	.75
S-308-RP	(8)	.88
S-310-RP	(10)	1.01
S-312-RP	(12)	1.16

Plug, Flared Hole in Cap

P304FHT

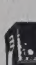
No.	Contacts	Ea.
P-302-FHT	(2)	$ .43
P-303-FHT	(3)	.47
P-304-FHT	(4)	.52
P-306-FHT	(6)	.59
P-308-FHT	(8)	.67
P-310-FHT	(10)	.76
P-312-FHT	(12)	.86

Socket, Flared Hole in Cap

S304FHT

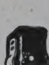
No.	Contacts	Ea.
S-302-FHT	(2)	$ .44
S-303-FHT	(3)	.48
S-304-FHT	(4)	.53
S-306-FHT	(6)	.63
S-308-FHT	(8)	.75
S-310-FHT	(10)	.87
S-312-FHT	(12)	.99

Plug, Flared Hole in Cap and with Latches


P304FHT-L

No.	Contacts	Ea.
P-302-FHT-L	(2)	$ .58
P-303-FHT-L	(3)	.63
P-304-FHT-L	(4)	.68
P-306-FHT-L	(6)	.75
P-308-FHT-L	(8)	.83
P-310-FHT-L	(10)	.92
P-312-FHT-L	(12)	1.01

Socket, Flared Hole in Cap and with Keepers


S304FHT-K

No.	Contacts	Ea.
S-302-FHT-K	(2)	$ .59
S-303-FHT-K	(3)	.64
S-304-FHT-K	(4)	.69
S-306-FHT-K	(6)	.79
S-308-FHT-K	(8)	.91
S-310-FHT-K	(10)	1.03
S-312-FHT-K	(12)	1.16

Plug, Cable Clamp in Cap

P304CCT

No.	Contacts	Ea.
P-302-CCT	(2)	$ .58
P-303-CCT	(3)	.63
P-304-CCT	(4)	.68
P-306-CCT	(6)	.75
P-308-CCT	(8)	.83
P-310-CCT	(10)	.92
P-312-CCT	(12)	1.01

Socket, Cable Clamp in Cap

S304CCT

No.	Contacts	Ea.
S-302-CCT	(2)	$ .59
S-303-CCT	(3)	.64
S-304-CCT	(4)	.69
S-306-CCT	(6)	.79
S-308-CCT	(8)	.91
S-310-CCT	(10)	1.03
S-312-CCT	(12)	1.16

Plug, Cable Clamp in Cap and with Latches

P304CCT-L

No.	Contacts	Ea.
P-302-CCT-L	(2)	$ .74
P-303-CCT-L	(3)	.78
P-304-CCT-L	(4)	.84
P-306-CCT-L	(6)	.91
P-308-CCT-L	(8)	.98
P-310-CCT-L	(10)	1.08
P-312-CCT-L	(12)	1.18

Socket, Cable Clamp in Cap and with Keepers

S304CCT-K

No.	Contacts	Ea.
S-302-CCT-K	(2)	$ .75
S-303-CCT-K	(3)	.80
S-304-CCT-K	(4)	.85
S-306-CCT-K	(6)	.95
S-308-CCT-K	(8)	1.07
S-310-CCT-K	(10)	1.19
S-312-CCT-K	(12)	1.31

Plug with Angle Brackets

P315AB

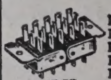
No.	Contacts	Ea.
P-315-AB	(15)	$ .84
P-318-AB	(18)	1.05
P-321-AB	(21)	1.32
P-324-AB	(24)	1.60
P-327-AB	(27)	1.88
P-330-AB	(30)	2.16
P-333-AB	(33)	2.43

Socket with Angle Brackets

S315AB

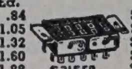
No.	Contacts	Ea.
S-315-AB	(15)	$ .98
S-318-AB	(18)	1.18
S-321-AB	(21)	1.46
S-324-AB	(24)	1.74
S-327-AB	(27)	2.02
S-330-AB	(30)	2.30
S-333-AB	(33)	2.57

Plug with End Brackets


P315EB

No.	Contacts	Ea.
P-315-EB	(15)	$ .84
P-318-EB	(18)	1.05
P-321-EB	(21)	1.32
P-324-EB	(24)	1.60
P-327-EB	(27)	1.88
P-330-EB	(30)	2.16
P-333-EB	(33)	2.43

Sockets with End Brackets


S315EB

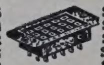
No.	Contacts	Ea.
S-315-EB	(15)	$ .98
S-318-EB	(18)	1.18
S-321-EB	(21)	1.46
S-324-EB	(24)	1.74
S-327-EB	(27)	2.02
S-330-EB.	(30)	2.30
S-333-EB	(33)	2.57

Plug with Shallow Brackets

P315SB

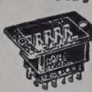
No.	Contacts	Ea.
P-315-SB	(15)	$1.25
P-318-SB	(18)	1.54
P-321-SB	(21)	1.82
P-324-SB	(24)	2.16
P-327-SB	(27)	2.43
P-330-SB	(30)	2.78
P-333-SB	(33)	3.06

Sockets with Shallow Brackets


S315SB

No.	Contacts	Ea.
S-315-SB	(15)	$1.41
S-318-SB	(18)	1.68
S-321-SB	(21)	1.96
S-324-SB	(24)	2.30
S-327-SB	(27)	2.57
S-330-SB	(30)	2.93
S-333-SB	(33)	3.21

Plug with Deep Bracket


P315DB

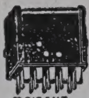
No.	Contacts	Ea.
P-315-DB	(15)	$1.25
P-318-DB	(18)	1.54
P-321-DB	(21)	1.82
P-324-DB	(24)	2.16
P-327-DB	(27)	2.43
P-330-DB	(30)	2.78
P-333-DB	(33)	3.06

Socket with Deep Bracket

S315DB

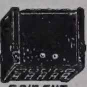
No.	Contacts	Ea.
S-315-DB	(15)	$1.41
S-318-DB	(18)	1.68
S-321-DB	(21)	1.96
S-324-DB	(24)	2.30
S-327-DB	(27)	2.57
S-330-DB	(30)	2.93
S-333-DB	(33)	3.21

Plug with Flared Hole in Top of Cap


P315FHT

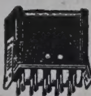
No.	Contacts	Ea.
P-315-FHT	(15)	$1.11
P-318-FHT	(18)	1.40
P-321-FHT	(21)	1.67
P-324-FHT	(24)	2.02
P-327-FHT	(27)	2.30
P-330-FHT	(30)	2.65
P-333-FHT	(33)	2.93

Socket, Flared Hole in Top of Cap


S315FHT

No.	Contacts	Ea.
S-315-FHT	(15)	$1.25
S-318-FHT	(18)	1.54
S-321-FHT	(21)	1.82
S-3?4-FHT	(24)	2.17
S-327-FHT	(27)	2.44
S-330-FHT	(30)	2.79
S-333-FHT	(33)	3.07

Plug, Flared Hole in Top of Cap and with Latches


P315FHT-L

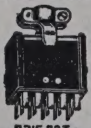
No.	Contacts	Ea.
P-315-FHT-L	(15)	$1.25
P-318-FHT-L	(18)	1.54
P-321-FHT-L	(21)	1.82
P-324-FHT-L	(24)	2.17
P-327-FHT-L	(27)	2.44
P-330-FHT-L	(30)	2.79
P-333-FHT-L	(33)	3.07

Socket, Flared Hole in Top of Cap and with Keepers

S315FHT-K

No.	Contacts	Ea.
S-315-FHT-K	(15)	$1.41
S-318-FHT-K	(18)	1.68
S-321-FHT-K	(21)	1.96
S-324-FHT-K	(24)	2.31
S-327-FHT-K	(27)	2.59
S-330-FHT-K	(30)	2.94
S-333-FHT-K	(33)	3.22

Plug, Cable Clamp in Top of Cap


P315CCT-

No.	Contacts	Ea.
P-315-CCT	(15)	$1.32
P-318-CCT	(18)	1.60
P-321-CCT	(21)	1.88
P-324-CCT	(24)	2.22
P-327-CCT	(27)	2.51
P-330-CCT	(30)	2.93
P-333-CCT	(33)	3.14

Socket, Cable Clamp in Top of Cap

S 315 CCT

No.	Contacts	Ea.
S-315-CCT	(15)	$1.46
S-318-CCT	(18)	1.74
S-321-CCT	(21)	2.02
S-324-CCT	(24)	2.38
S-327-CCT	(27)	2.65
S-330-CCT	(30)	3.07
S-333-CCT	(33)	3.28

Plug, Cable Clamp in Top of Cap and with Latches

P315CCT-L

No.	Contacts	Ea.
P-315-CCT-L	(15)	$1.46
P-318-CCT-L	(18)	1.74
P-321-CCT-L	(21)	2.02
P-324-CCT-L	(24)	2.38
P-327-CCT-L	(27)	2.65
P-330-CCT-L	(30)	3.07
P-333-CCT-L	(33)	3.28

Socket, Cable Clamp in Top of Cap and with Keepers

S315CCT-K

No.	Contacts	Ea.
S-315-CCT-K	(15)	$1.61
S-318-CCT-K	(18)	1.89
S-321-CCT-K	(21)	2.17
S-324-CCT-K	(24)	2.52
S-327-CCT-K	(27)	2.79
S-330-CCT-K	(30)	3.22
S-333-CCT-K	(33)	3.42

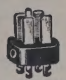
PRICES SUBJECT TO CHANGE WITHOUT NOTICE

"400" SERIES PLUGS AND SOCKETS (Formerly "Heavy Duty")

General Specifications

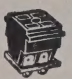
2, 4, 6, 8, 10 and 12 Contacts.
All plugs and sockets are polarized.
Phosphor bronze "knife-switch" type socket contacts engage both sides of flat plug contacts—double contact area.
Molded Bakelite insulation.
Fibre linings in caps.
Plug or socket for panel mounting.
Plug or socket with caps.
Finish on caps—Black Crystal.
Plug prong cross section 1/4" x 1/16".
Locking fittings available for panel types or extension cables as shown.
Rated voltage—1100 volts RMS.
Current capacity—15 amperes.
Contact resistance—.001 ohms average.

PLUG—Less Angle Brackets not Drilled or Tapped Unless Specified


P-404-LAB

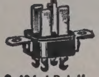
No.	Contacts	Ea.
P-402-LAB	(2)	$ .35
P-404-LAB	(4)	.48
P-406-LAB	(6)	.63
P-408-LAB	(8)	.76
P-410-LAB	(10)	.91
P-412-LAB	(12)	1.05

SOCKET—Less Angle Brackets. Not Drilled or Tapped Unless Specified


S-404-LAB

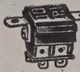
No.	Contacts	Ea.
S-402-LAB	(2)	$ .43
S-404-LAB	(4)	.63
S-406-LAB	(6)	.84
S-408-LAB	(8)	1.05
S-410-LAB	(10)	1.25
S-412-LAB	(12)	1.46

PLUG—with Angle Brackets for 1/16" Panel


P-404-AB 1/16"

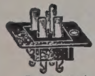
No.		Contacts	Ea.
P-402-AB	1/16"	(2)	$ .63
P-404-AB	1/16"	(4)	.76
P-406-AB	1/16"	(6)	.91
P-408-AB	1/16"	(8)	1.05
P-410-AB	1/16"	(10)	1.19
P-412-AB	1/16"	(12)	1.32

SOCKET—with Angle Brackets


S-404-AB

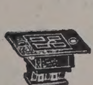
No	Contacts	Ea.
S-402-AB	(2)	$ .70
S-404-AB	(4)	.91
S-406-AB	(6)	1.11
S-408-AB	(8)	1.32
S-410-AB	(10)	1.54
S-412-AB	(12)	1.74

PLUG—with Shallow Brackets


P 404 SB

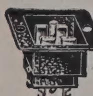
No.	Contacts	Ea.
P-402-SB	(2)	$ .76
P-404-SB	(4)	.98
P-406-SB	(6)	1.19
P-408-SB	(8)	1.40
P-410-SB	(10)	1.61
P-412-SB	(12)	1.82

SOCKET—with Shallow Brackets


S 404 SB

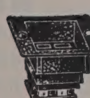
No.	Contacts	Ea.
S-402-SB	(2)	$ .84
S-404-SB	(4)	1.11
S-406-SB	(6)	1.40
S-408-SB	(8)	1.67
S-410-SB	(10)	1.95
S-412-SB	(12)	2.22

PLUG—with Deep Bracket


P-404-DB

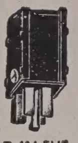
No.	Contacts	Ea.
P-402-DB	(2)	$ .76
P-404-DB	(4)	.98
P-406-DB	(6)	1.19
P-408-DB	(8)	1.40
P-410-DB	(10)	1.61
P-412-DB	(12)	1.82

SOCKET—with Deep Brackets


S 404 DB

No.	Contacts	Ea.
S-402-DB	(2)	$ .84
S-404-DB	(4)	1.11
S-406-DB	(6)	1.40
S-408-DB	(8)	1.67
S-410-DB	(10)	1.95
S-412-DB	(12)	2.22

PLUGS


P-404-FHT

PLUG—Flared Hole in Top

No.	Contacts	Ea.
P-402-FHT	(2)	$ .70
P-404-FHT	(4)	.91
P-406-FHT	(6)	1.11
P-408-FHT	(8)	1.32
P-410-FHT	(10)	1.53
P-412-FHT	(12)	1.73

PLUG—Flared Hole in End

No.	Contacts	Ea.
P-402-FHE	(2)	$ .70
P-404-FHE	(4)	.91
P-406-FHE	(6)	1.11
P-408-FHE	(8)	1.32
P-410-FHE	(10)	1.53
P-412-FHE	(12)	1.73

SOCKETS

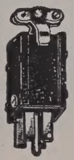
SOCKET—Flared Hole in Top

No.	Contacts	Ea.
S-402-FHT	(2)	$ .77
S-404-FHT	(4)	1.06
S-406-FHT	(6)	1.33
S-408-FHT	(8)	1.61
S-410-FHT	(10)	1.89
S-412-FHT	(12)	2.17

SOCKET—Flared Hole in End

No.	Contacts	Ea.
S-402-FHE	(2)	$ .77
S-404-FHE	(4)	1.06
S-406-FHE	(6)	1.33
S-408-FHE	(8)	1.61
S-410-FHE	(10)	1.89
S-412-FHE	(12)	2.17

PLUGS


P-404-CCT

PLUG—Cable Clamp in Top

No.	Contacts	Ea.
P-402-CCT	(2)	$ .98
P-404-CCT	(4)	1.19
P-406-CCT	(6)	1.40
P-408-CCT	(8)	1.60
P-410-CCT	(10)	1.80
P-412-CCT	(12)	2.01

PLUG—Cable Clamp in End

No.	Contacts	Ea.
P-402-CCE	(2)	$ .98
P-404-CCE	(4)	1.19
P-406-CCE	(6)	1.40
P-408-CCE	(8)	1.60
P-410-CCE	(10)	1.80
P-412-CCE	(12)	2.01

SOCKETS

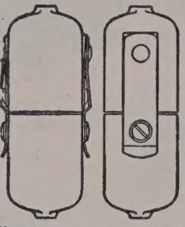
SOCKET—Cable Clamp in Top

No.	Contacts	Ea.
S-402-CCT	(2)	$1.06
S-404-CCT	(4)	1.33
S-406-CCT	(6)	1.61
S-408-CCT	(8)	1.89
S-410-CCT	(10)	2.17
S-412-CCT	(12)	2.44

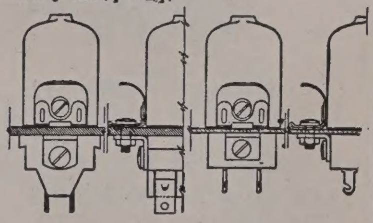
SOCKET—Cable Clamp in End

No.	Contacts	Ea.
S-402-CCE	(2)	$1.06
S-404-CCE	(4)	1.33
S-406-CCE	(6)	1.61
S-408-CCE	(8)	1.89
S-410-CCE	(10)	2.17
S-412-CCE	(12)	2.44

LOCKS FOR 400 SERIES PLUGS AND SOCKETS
(Formerly Heavy Duty)

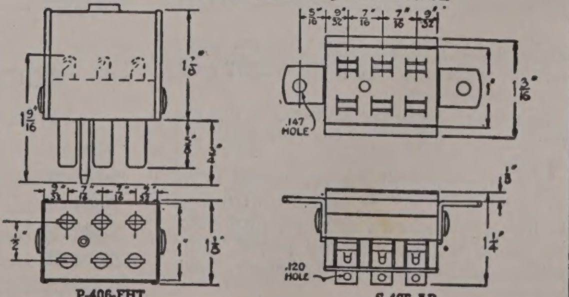

ILLUSTRATING No. 93 LOCK. May be attached to any 400 Series plug for extension cables. If plugs are ordered with this lock, specify "with No. 93 locks."

	Ea.
No. 93 Lock when attached to plug, add to list per pair	**$ .43**
No. 93 Locks ONLY per pair	**.43**


ILLUSTRATING No. 63 LOCK. May be used on all panel mount 400 Series plugs and sockets when surface is flush with top of panel. Cannot be used on type DB plugs.

	Ea.
No. 63 Locks ONLY, per pair	**$ .43**

Dimensions of 400 Series Plugs and Sockets



P-406-FHT S-406-AB

CINCH-JONES SALES ★ ELECTRICAL CONNECTING DEVICES

"500" SERIES PLUGS AND SOCKETS

For Complete Listing of 500 SERIES, Write for No. 500 Catalog

Designed for 5,000 volts and 25 amperes per contact. Circuit characteristics, however, may alter this rating one way or the other.

Long leakage path from terminal to terminal, and terminal to ground. Contacts are brass and phosphor bronze, silver plated. Metal parts of caps and brackets are steel, parkerized (rust-proofed). Plug and socket blocks are interchangeable in caps and brackets.

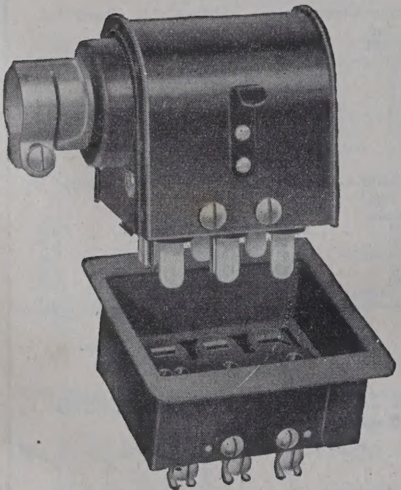
All sizes are polarized in a manner to prevent a smaller plug being inserted in a larger socket. Thus different sizes may be used on one installation without danger of making wrong connections.

Extreme care has been taken to make terminal connections under cap very accessible both for original wiring and subsequent inspection. The cap is insulated with canvas bakelite. Plug prong cross section $\frac{5}{16}$" x $\frac{3}{32}$".

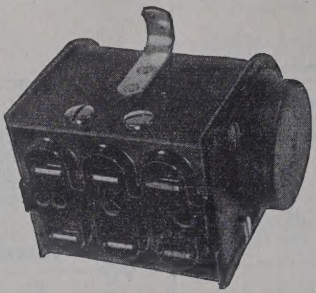
IMPORTANT: For safety with high voltages DEEP BRACKETS should always be used on one plug or socket, when the other plug or socket has a CAP. SHALLOW BRACKETS are for use only in connecting two units, each unit having plug or socket with SHALLOW BRACKET.

Cable entrance: Because of the great variation in type and size of cables, we have considered it best not to supply cable clamps of any kind. The cap end is made to accommodate standard BX clamps which may be obtained at any electrical jobbing house. The cap end will be furnished with round hole from ½" diameter and 1¼" diameter in steps of ⅛", if the size required is given on order. If no size is given, plain cap end with center punch locating center will be shipped.

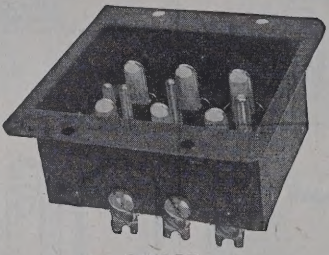
P-506-CE
(Plug with Cap)
(BX Clamp shown but not furnished)



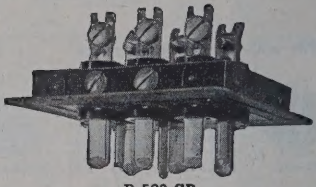
S-506-DB
(Socket with Deep Bracket)



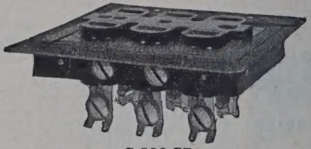
S-506-CE
(Socket with Cap)



P-506-DB
(Plug with Deep Bracket)

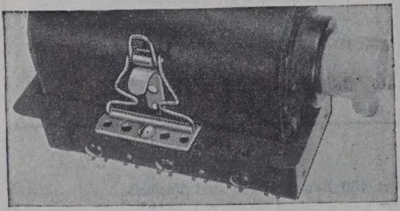


P-506-SB
(Plug with Shallow Bracket)



S-506-SB
(Socket with Shallow Bracket)

LOCKS FOR 500 SERIES PLUGS AND SOCKETS



Locks shown above are used in connection with any DEEP BRACKET and cap combination.

The locks securely hold the units together, but they can be released instantly.

The mounting plates are made to fit all DEEP BRACKETS, and are fastened by the same screws or rivets that hold the deep brackets to the panel. Can not be used on shallow brackets. Sold in pairs only.

No. 500-L Locks..............Per pair $0.99

PLUG

With Cap

Code	Price Ea.
P-502-CE	**$3.03**
P-504-CE	**4.36**
P-506-CE	**5.69**
P-508-CE	**7.02**
P-510-CE	**8.35**
P-512-CE	**9.68**

PLUG

With Deep Bracket

Code	Price Ea.
P-502-DB	**$2.66**
P-504-DB	**3.82**
P-506-DB	**4.96**
P-508-DB	**6.12**
P-510-DB	**7.26**
P-512-DB	**8.42**

PLUG

With Shallow Bracket

Code	Price Ea.
P-502-SB	**$2.66**
P-504-SB	**3.82**
P-506-SB	**4.96**
P-508-SB	**6.12**
P-510-SB	**7.26**
P-512-SB	**8.42**

SOCKET

With Cap

Code	Price Ea.
S-502-CE	**$3.03**
S-504-CE	**4.36**
S-506-CE	**5.69**
S-508-CE	**7.02**
S-510-CE	**8.35**
S-512-CE	**9.68**

SOCKET

With Deep Bracket

Code	Price Ea.
S-502-DB	**$2.66**
S-504-DB	**3.82**
S-506-DB	**4.96**
S-508-DB	**6.12**
S-510-DB	**7.26**
S-512-DB	**8.42**

SOCKET

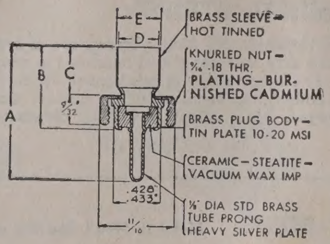
With Shallow Bracket

Code	Price Ea.
S-502-SB	**$2.66**
S-504-SB	**3.82**
S-506-SB	**4.96**
S-508-SB	**6.12**
S-510-SB	**7.26**
S-512-SB	**8.42**

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

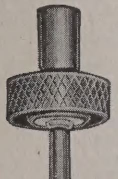
CINCH-JONES SALES ★ ELECTRICAL CONNECTING DEVICES

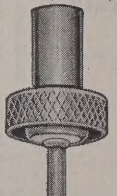
SERIES 101 PLUGS

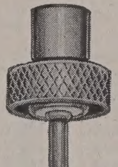

E
D
B
C
A
9/32"
.428"
.433"
11/16
BRASS SLEEVE HOT TINNED
KNURLED NUT— 9/16"-18 THR. PLATING—BURNISHED CADMIUM
BRASS PLUG BODY— TIN PLATE 10-20 MSI
CERAMIC—STEATITE— VACUUM WAX IMP
1/8" DIA STD BRASS TUBE PRONG HEAVY SILVER PLATE

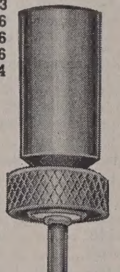
The entire No. 101 Series of Plugs are identical with the exception of the cable ferrule which is furnished in four sizes as listed below. All metal parts are of brass. These Plugs fit all of the No. 101 Series Sockets. Assembly meets Navy Specifications. A low loss Plug and Socket ideal for high frequency connections.

Code No.	A	B	C	D	E	Ea.
P-101-1/4"	1-1/4"	3/4"	7/16"	1/4"	9/32"	**$0.63**
P-101-.290	1-1/4"	3/4"	7/16"	.290	.319	**.76**
P-101-5/16"	1-3/8"	7/8"	9/16"	5/16"	11/32"	**.76**
P-101-3/8"	1-3/16"	11/16"	3/8"	3/8"	13/32"	**.76**
P-101-1/2"	1-7/8"	1-3/8"	1-1/16"	1/2"	9/16"	**.84**


P-101-1/4"

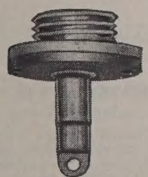

P-101-5/16"

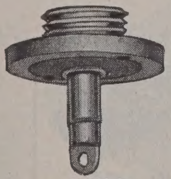

P-101-3/8"

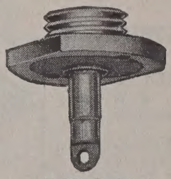

P-101-1/2"

SERIES 101 SOCKETS

The No. 101 Series Sockets are furnished in three types as shown below. Base is of Brass, Nickel Plated with Chrome Flash. Brass contact is Silver Plated. Insulation of low loss natural color XXX Bakelite. Meets Navy Specifications. The S-101-D is similar to the S-101 except that the Bakelite is recessed in the base. S-101-D Mod. is the same as S-101-D except that two sides of the base are milled as shown. Mounting Holes No. 101—No. 41 drill on $\frac{11}{16}$'' centers. Mounting holes No. 101-D and 101-D Mod. No. 30 drill on $\frac{13}{16}$'' centers.


S-101
Price Each—$0.56


S-101-D
Price Each—$0.84


S-101-D Mod
Price Each—$0.84

SERIES 201

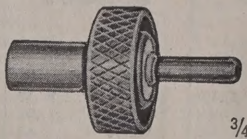
PLUGS

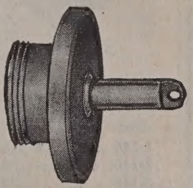
The No. 201 Series Plugs are of the same design as the No. 101 but are of heavier stock and larger. Made in one size only with 3/8'' ferrule. All metal parts are of Brass, same finish as No. 101 Series and Wax Impregnated Ceramic insulation. Overall length 1$\frac{9}{16}$''. Prong diameter $\frac{5}{32}$''. Fits only the 201 Socket.

SOCKETS

The 201 Socket is similar to the S-101-D except larger. Brass base is nickel plated with Chrome Flash. Brass contact is Silver Plated. Insulation is of low loss natural color XXX Bakelite. Both Plug and Socket meet Navy Specifications.

Mounting holes—No. 30 drill on 1'' centers.





3/4''—27 thread.

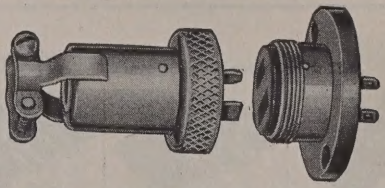
Code	Ea.	Code	Ea.
P-201-3/8	**$0.98**	**S-201**	**$1.05**

SERIES 202

PLUGS SOCKETS

The 202 Series Plugs and Sockets are made in two contacts only. Metal parts are of Brass with burnished Cadmium Plate. Insulation is of Molded Bakelite. Phosphor Bronze "Knife Switch" type Socket Contacts engage both sides of flat Plug Contacts—double contact area. Formed Fibre linings in caps. Polarized. Knurled nut has 3/4''—27 thread.

Socket Mounting Holes. No. 30 drill on 1'' centers.



P-202-CCT—$0.77 (as shown above)
S-202-CCT—$0.79

P-202-FHT—$0.63 (without Cable Clamps)
S-202-FHT—$0.64

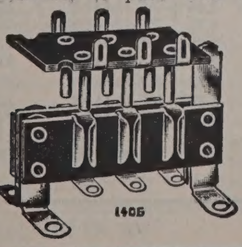
S-202-B—$0.91
P-202-B—$0.89

1400 SERIES PLUGS AND SOCKETS

This series of "disconnect" plugs and sockets has the distinct advantage of low cost for a separate unit handling many circuits. Due to exposed metal parts, it is recommended for use when the complete unit is within a housing.

Reduces costs of servicing units. Advantageous in shipping when it is desirable to pack units separately. Polarized—assures correct coupling. Spring temper brass sockets assure perfect contact. Standard units are listed below from 5 to 16 contacts. However we can supply units having as many as 30 or more contacts.

On No. 1420 or larger we recommend the plug be divided into two or more units, as a single long plug is not mechanically strong. The socket will be made in one assembly.



No. 1405	(5 Contacts)	**Ea. $0.39**	**No. 1411**	(11 Contacts)	**Ea. $0.75**
No. 1406	(6 Contacts)	**Ea. .45**	**No. 1412**	(12 Contacts)	**Ea. .81**
No. 1407	(7 Contacts)	**Ea. .51**	**No. 1413**	(13 Contacts)	**Ea. .87**
No. 1408	(8 Contacts)	**Ea. .57**	**No. 1414**	(14 Contacts)	**Ea. .94**
No. 1409	(9 Contacts)	**Ea. .63**	**No. 1415**	(15 Contacts)	**Ea. .99**
No. 1410	(10 Contacts)	**Ea. .69**	**No. 1416**	(16 Contacts)	**Ea. 1.06**

For units with more than 16 contacts, add 7c to the No. 1416 price for each additional contact.

BARRIER TYPE TERMINAL STRIPS

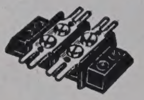
Increased insulation is provided by having Barriers placed between each Terminal. These Barriers follow around the edge of the Strips and terminate at the base. They not only make a long leakage path but prevent direct shorts from frayed wires at the terminals. Mounting holes are at the ends as illustrated. The base is molded Bakelite. The Terminals and Binder Screws are of brass, nickel plated. **Marker Strips** may be ordered and imprinted to supply terminal designations. These Marker Strips mount beneath Terminal Strips and also afford insulation from metal mounting surface. **See page 21 for imprinting charges.** See pages 24 and 25 for dimensions.

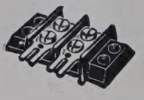
5-40 x 3/16 Binder Head Screws

No. 140 TERMINAL STRIPS

Metal to Metal Spacing over Bakelite ¼"

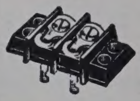
No. 2-140


No. 2-140-W


No. 2-140-¾ W

MARKER STRIPS for 140, 140-W and 140-¾ W

The standard Marker Strips are of black fibre 1/32" thick and character designations are imprinted in white.
Bakelite Marker Strips can be supplied at an increase in price, and are designated by code MSX instead of MS. Prices on application.


No. 2-140-Y

MARKER STRIPS for 140-Y

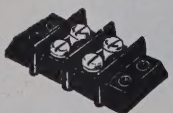
The standard Marker Strips are of black fibre 1/32" thick and character designations are imprinted in white.
Bakelite Marker Strips can be supplied at an increase in price, and are designated by code MSX instead of MS. Prices on application.

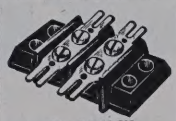
No. 140		No. 140-W		No. 140-¾ W		Marker Strips for 140, 140-W and 140-¾ W		No. 140-Y		Marker Strips for 140-Y	
Code	Ea.	Code	Ea.	Code	Ea.	Code	Per 100	Code	Ea.	Code	Per 100
1-140	$ .15	1-140-W	$ .19	1-140-¾ W	$ .19	MS-1-140	$ 2.48	1-140-Y	$ .19	MS-1-140-Y	$ 5.78
2-140	.24	2-140-W	.32	2-140-¾ W	.32	MS-2-140	3.30	2-140-Y	.32	MS-2-140-Y	6.60
3-140	.33	3-140-W	.44	3-140-¾ W	.44	MS-3-140	4.13	3-140-Y	.44	MS-3-140-Y	7.43
4-140	.42	4-140-W	.57	4-140-¾ W	.57	MS-4-140	4.95	4-140-Y	.57	MS-4-140-Y	8.25
5-140	.51	5-140-W	.69	5-140-¾ W	.69	MS-5-140	5.78	5-140-Y	.69	MS-5-140-Y	9.08
6-140	.59	6-140-W	.83	6-140-¾ W	.83	MS-6-140	6.60	6-140-Y	.83	MS-6-140-Y	9.90
7-140	.68	7-140-W	.95	7-140-¾ W	.95	MS-7-140	7.43	7-140-Y	.95	MS-7-140-Y	10.73
8-140	.77	8-140-W	1.08	8-140-¾ W	1.08	MS-8-140	8.25	8-140-Y	1.08	MS-8-140-Y	11.55
9-140	.86	9-140-W	1.21	9-140-¾ W	1.21	MS-9-140	9.08	9-140-Y	1.21	MS-9-140-Y	12.38
10-140	.95	10-140-W	1.33	10-140-¾ W	1.33	MS-10-140	9.90	10-140-Y	1.33	MS-10-140-Y	13.20
11-140	1.03	11-140-W	1.45	11-140-¾ W	1.45	MS-11-140	10.73	11-140-Y	1.45	MS-11-140-Y	14.03
12-140	1.12	12-140-W	1.58	12-140-¾ W	1.58	MS-12-140	11.55	12-140-Y	1.58	MS-12-140-Y	14.85
13-140	1.21	13-140-W	1.71	13-140-¾ W	1.71	MS-13-140	12.38	13-140-Y	1.71	MS-13-140-Y	15.68
14-140	1.31	14-140-W	1.84	14-140-¾ W	1.84	MS-14-140	13.20	14-140-Y	1.84	MS-14-140-Y	16.50
15-140	1.40	15-140-W	1.96	15-140-¾ W	1.96	MS-15-140	14.03	15-140-Y	1.96	MS-15-140-Y	17.33
16-140	1.49	16-140-W	2.09	16-140-¾ W	2.09	MS-16-140	14.85	16-140-Y	2.09	MS-16-140-Y	18.15
17-140	1.57	17-140-W	2.21	17-140-¾ W	2.21	MS-17-140	15.68	17-140-Y	2.21	MS-17-140-Y	18.98
18-140	1.66	18-140-W	2.34	18-140-¾ W	2.34	MS-18-140	16.50	18-140-Y	2.34	MS-18-140-Y	19.80
19-140	1.75	19-140-W	2.46	19-140-¾ W	2.46	MS-19-140	17.33	19-140-Y	2.46	MS-19-140-Y	20.63
20-140	1.84	20-140-W	2.60	20-140-¾ W	2.60	MS-20-140	18.15	20-140-Y	2.60	MS-20-140-Y	21.45
21-140	1.93	21-140-W	2.72	21-140-¾ W	2.72	MS-21-140	18.98	21-140-Y	2.72	MS-21-140-Y	22.28

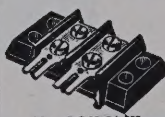
6-32 x ¼ Binder Head Screws

No. 141 TERMINAL STRIPS

Metal to Metal Spacing over Bakelite ⅜"

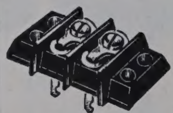

No. 2-141


No. 2-141-W


No. 2-141-¾-W

MARKER STRIPS for 141, 141-W and 141-¾ W

Standard Marker Strips are of black fibre 1/32" thick. See column above for designation for Bakelite Marker Strips.


No. 2-141-Y

MARKER STRIPS for 141-Y

Standard Marker Strips are of black fibre 1/32" thick. See column above for designation for Bakelite Marker Strips.

No. 141		No. 141-W		No. 141-¾ W		Marker Strips for 141, 141-W and 141-¾ W		No. 141-Y		Marker Strips for 141-Y	
Code	Ea.	Code	Ea.	Code	Ea.	Code	Per 100	Code	Ea.	Code	Per 100
1-141	$ .20	1-141-W	$ .24	1-141-¾ W	$ .24	MS-1-141	$ 2.75	1-141-Y	$ .24	MS-1-141-Y	$ 6.05
2-141	.31	2-141-W	.41	2-141-¾ W	.41	MS-2-141	3.85	2-141-Y	.41	MS-2-141-Y	7.15
3-141	.42	3-141-W	.57	3-141-¾ W	.57	MS-3-141	4.95	3-141-Y	.57	MS-3-141-Y	8.25
4-141	.54	4-141-W	.74	4-141-¾ W	.74	MS-4-141	6.05	4-141-Y	.74	MS-4-141-Y	9.35
5-141	.65	5-141-W	.90	5-141-¾ W	.90	MS-5-141	7.15	5-141-Y	.90	MS-5-141-Y	10.45
6-141	.75	6-141-W	1.07	6-141-¾ W	1.07	MS-6-141	8.25	6-141-Y	1.07	MS-6-141-Y	11.55
7-141	.88	7-141-W	1.23	7-141-¾ W	1.23	MS-7-141	9.35	7-141-Y	1.23	MS-7-141-Y	12.65
8-141	.99	8-141-W	1.40	8-141-¾ W	1.40	MS-8-141	10.45	8-141-Y	1.40	MS-8-141-Y	13.75
9-141	1.10	9-141-W	1.56	9-141-¾ W	1.56	MS-9-141	11.55	9-141-Y	1.56	MS-9-141-Y	14.85
10-141	1.22	10-141-W	1.73	10-141-¾ W	1.73	MS-10-141	12.65	10-141-Y	1.73	MS-10-141-Y	15.95
11-141	1.33	11-141-W	1.89	11-141-¾ W	1.89	MS-11-141	13.75	11-141-Y	1.89	MS-11-141-Y	17.05
12-141	1.44	12-141-W	2.06	12-141-¾ W	2.06	MS-12-141	14.85	12-141-Y	2.06	MS-12-141-Y	18.15
13-141	1.56	13-141-W	2.22	13-141-¾ W	2.22	MS-13-141	15.95	13-141-Y	2.22	MS-13-141-Y	19.25
14-141	1.67	14-141-W	2.39	14-141-¾ W	2.39	MS-14-141	17.05	14-141-Y	2.39	MS-14-141-Y	20.35
15-141	1.78	15-141-W	2.55	15-141-¾ W	2.55	MS-15-141	18.15	15-141-Y	2.55	MS-15-141-Y	21.45
16-141	1.90	16-141-W	2.72	16-141-¾ W	2.72	MS-16-141	19.25	16-141-Y	2.72	MS-16-141-Y	22.55
17-141	2.01	17-141-W	2.88	17-141-¾ W	2.88	MS-17-141	20.35	17-141-Y	2.88	MS-17-141-Y	23.65
18-141	2.12	18-141-W	3.05	18-141-¾ W	3.05	MS-18-141	21.45	18-141-Y	3.05	MS-18-141-Y	24.75
19-141	2.24	19-141-W	3.21	19-141-¾ W	3.21	MS-19-141	22.55	19-141-Y	3.21	MS-19-141-Y	25.85
20-141	2.35	20-141-W	3.38	20-141-¾ W	3.38	MS-20-141	23.65	20-141-Y	3.38	MS-20-141-Y	26.95

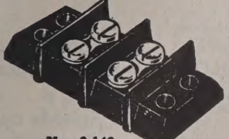
CINCH-JONES SALES ★ ELECTRICAL CONNECTING DEVICES

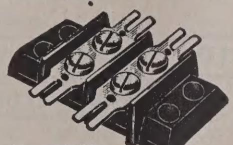
BARRIER TYPE TERMINAL STRIPS

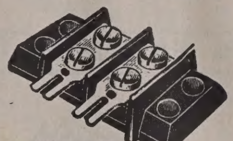
8-32 x $\frac{5}{16}$" Binder Head Screws

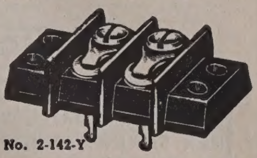
No. 142 TERMINAL STRIPS

Metal to Metal Spacing over Bakelite $\frac{9}{16}$"


No. 2-142


No. 2-142-W

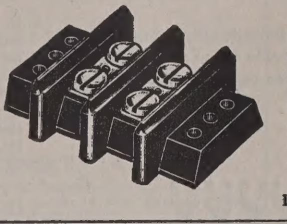

No. 2-142-¾ W


No. 2-142-Y

No. 142		No. 142-W		No. 142-¾ W		MARKER STRIPS for 142, 142-W, 142-¾ W		No. 142-Y		MARKER STRIPS for 142-Y	
Code	Ea.	Code	Ea.	Code	Ea.	Code	Per 100	Code	Ea.	Code	Per 100
1-142	$ .23	1-142-W	$ .30	1-142-¾ W	$ .30	MS-1-142	$ 3.03	1-142-Y	$ .30	MS-1-142-Y	$ 6.33
2-142	.36	2-142-W	.50	2-142-¾ W	.50	MS-2-142	4.40	2-142-Y	.50	MS-2-142-Y	7.70
3-142	.51	3-142-W	.70	3-142-¾ W	.70	MS-3-142	5.78	3-142-Y	.70	MS-3-142-Y	9.08
4-142	.65	4-142-W	.90	4-142-¾ W	.90	MS-4-142	7.15	4-142-Y	.90	MS-4-142-Y	10.45
5-142	.78	5-142-W	1.11	5-142-¾ W	1.11	MS-5-142	8.53	5-142-Y	1.11	MS-5-142-Y	11.83
6-142	.92	6-142-W	1.31	6-142-¾ W	1.31	MS-6-142	9.90	6-142-Y	1.31	MS-6-142-Y	13.20
7-142	1.07	7-142-W	1.52	7-142-¾ W	1.52	MS-7-142	11.28	7-142-Y	1.52	MS-7-142-Y	14.58
8-142	1.20	8-142-W	1.72	8-142-¾ W	1.72	MS-8-142	12.65	8-142-Y	1.72	MS-8-142-Y	15.95
9-142	1.34	9-142-W	1.93	9-142-¾ W	1.93	MS-9-142	14.03	9-142-Y	1.93	MS-9-142-Y	17.33
10-142	1.49	10-142-W	2.12	10-142-¾ W	2.12	MS-10-142	15.40	10-142-Y	2.12	MS-10-142-Y	18.70
11-142	1.62	11-142-W	2.33	11-142-¾ W	2.33	MS-11-142	16.78	11-142-Y	2.33	MS-11-142-Y	20.08
12-142	1.76	12-142-W	2.53	12-142-¾ W	2.53	MS-12-142	18.15	12-142-Y	2.53	MS-12-142-Y	21.45
13-142	1.90	13-142-W	2.74	13-142-¾ W	2.74	MS-13-142	19.53	13-142-Y	2.74	MS-13-142-Y	22.83
14-142	2.04	14-142-W	2.94	14-142-¾ W	2.94	MS-14-142	20.90	14-142-Y	2.94	MS-14-142-Y	24.20
15-142	2.18	15-142-W	3.15	15-142-¾ W	3.15	MS-15-142	22.28	15-142-Y	3.15	MS-15-142-Y	25.58
16-142	2.32	16-142-W	3.34	16-142-¾ W	3.34	MS-16-142	23.65	16-142-Y	3.34	MS-16-142-Y	26.95
17-142	2.45	17-142-W	3.54	17-142-¾ W	3.54	MS-17-142	25.03	17-142-Y	3.54	MS-17-142-Y	28.33

No. 150 TERMINAL STRIPS

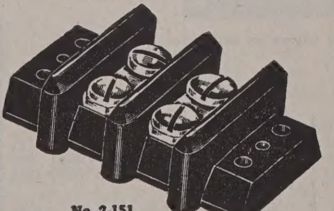
1$\frac{13}{16}$" wide by $\frac{25}{32}$" high. Terminals are mounted on $\frac{11}{16}$" centers. Screws: 10-32 x $\frac{5}{16}$" brass, burnished nickel plate. Fits standard 50 Amp. solder lug for 6 Ga. stranded wire. Metal to metal spacing over bakelite ⅝"



No. 150		No. 150-W		No. 150-¾ W		MARKER STRIPS For 150 Series	
Code	Ea.	Code	Ea.	Code	Ea.	Code	Per 100
1-150	$ .55	1-150-W	$ .66	1-150-¾ W	$ .66	MS-1-150	$ 6.60
2-150	.94	2-150-W	1.13	2-150-¾ W	1.13	MS-2-150	8.14
3-150	1.32	3-150-W	1.60	3-150-¾ W	1.60	MS-3-150	9.68
4-150	1.71	4-150-W	2.07	4-150-¾W	2.07	MS-4-150	11.22
5-150	2.09	5-150-W	2.53	5-150-¾ W	2.53	MS-5-150	12.76
6-150	2.48	6-150-W	3.00	6-150-¾ W	3.00	MS-6-150	14.30
7-150	2.86	7-150-W	3.46	7-150-¾ W	3.46	MS-7-150	15.84
8-150	3.25	8-150-W	3.92	8-150-¾W	3.92	MS-8-150	17.38
9-150	3.63	9-150-W	4.40	9-150-¾ W	4.40	MS-9-150	18.92
10-150	4.02	10-150-W	4.87	10-150-¾ W	4.87	MS-10-150	20.46

No. 151 TERMINAL STRIPS

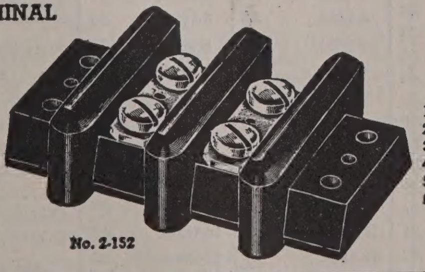
2" wide by $\frac{15}{16}$" high. Terminals are mounted on ⅞" centers. Screws: 12-32 x ⅜" brass, burnished nickel plate. Fits standard 70 Amp. solder lug for 4 Ga. stranded wire. Metal to metal spacing over bakelite ¾".


No. 2-151

No. 151		No. 151-W		No. 151-¾ W		MARKER STRIPS for 151 Series	
Code	Ea.	Code	Ea.	Code	Ea.	Code	Per 100
1-151	$ .94	1-151-W	$1.10	1-151-¾ W	$1.10	MS-1-151	$ 6.68
2-151	1.71	2-151-W	2.04	2-151-¾ W	2.04	MS-2-151	10.18
3-151	2.48	3-151-W	2.97	3-151-¾ W	2.97	MS-3-151	13.48
4-151	3.25	4-151-W	3.91	4-151-¾ W	3.91	MS-4-151	16.78
5-151	4.02	5-151-W	4.84	5-151-¾ W	4.84	MS-5-151	20.08
6-151	4.79	6-151-W	5.78	6-151-¾ W	5.78	MS-6-151	23.38
7-151	5.56	7-151-W	6.71	7-151-¾ W	6.71	MS-7-151	26.68
8-151	6.33	8-151-W	7.65	8-151-¾ W	7.65	MS-8-151	29.98

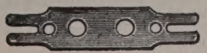
No. 152 TERMINAL STRIPS

2½" wide by 1⅛" high. Terminals are mounted on 1⅛" centers. Screws: ¼"-28 x ½" brass, burnished nickel plate. Fits standard 90 Amp. solder lug for 2 Ga. stranded wire. Metal to metal spacing over bakelite 1".

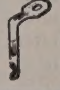

No. 2-152

No. 152		No. 152-W		No. 152¾ W		MARKER STRIPS for 152 Series	
Code	Ea.	Code	Ea.	Code	Ea.	Code	Per 100
1-152	$1.27	1-152-W	$1.49	1-152-¾ W	$1.49	MS-1-152	$ 7.15
2-152	2.42	2-152-W	2.86	2-152-¾ W	2.86	MS-2-152	12.65
3-152	3.58	3-152-W	4.24	3-152-¾ W	4.24	MS-3-152	18.15
4-152	4.73	4-152-W	5.61	4-152-¾ W	5.61	MS-4-152	23.65
5-152	5.89	5-152-W	6.99	5-152-¾ W	6.99	MS-5-152	29.15
6-152	7.04	6-152-W	8.36	6-152-¾ W	8.36	MS-6-152	34.65

"W" Solder Terminal for Barrier Strips



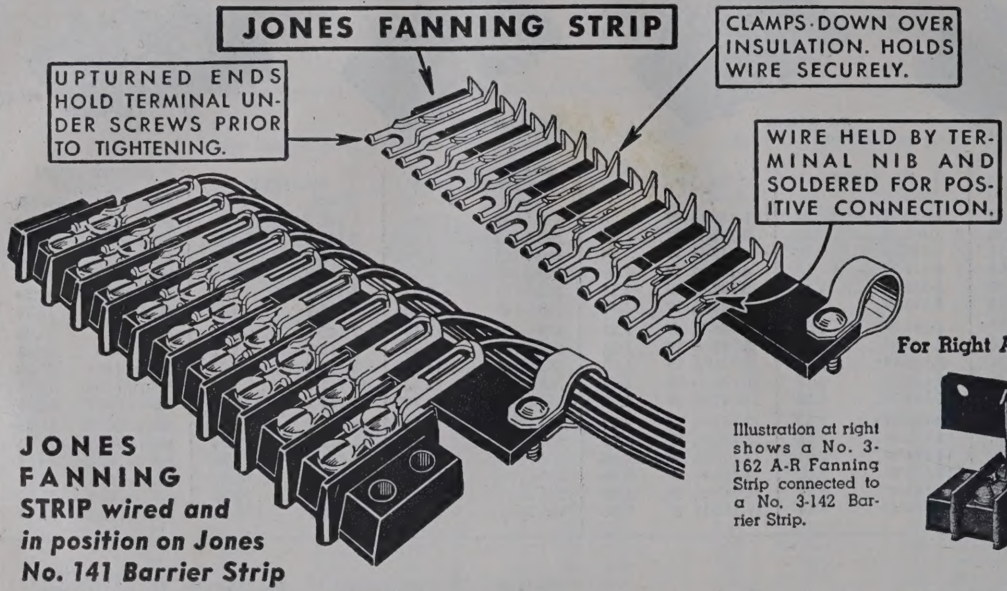
Code	For use with Barrier Strip	Per 100	Code	For use with Barrier Strip	Per 100
No. W-140	No. 140	$3.80	No. W-150	No. 150	$8.86
No. W-141	No. 141	5.06	No. W-151	No. 151	15.18
No. W-142	No. 142	6.33	No. W-152	No .152	22.77



"Y" Solder Terminal

Code	For use with Barrier Strip	Per 100
No. Y-140	No. 140	$3.80
No. Y-141	No. 141	5.06
No. Y-142	No. 142	6.33

FANNING STRIPS FOR CONNECTING TO BARRIER TERMINAL STRIPS


JONES FANNING STRIP
UPTURNED ENDS HOLD TERMINAL UNDER SCREWS PRIOR TO TIGHTENING.
CLAMPS DOWN OVER INSULATION. HOLDS WIRE SECURELY.
WIRE HELD BY TERMINAL NIB AND SOLDERED FOR POSITIVE CONNECTION.

JONES FANNING STRIP *wired and in position on Jones No. 141 Barrier Strip*

Eliminates Color Coding
•
Speeds up Assembly
•
Improves Appearance
•
Insures Correct Connections
•

For Right Angle Mounting

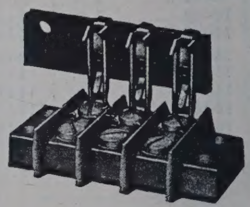
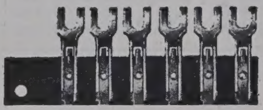


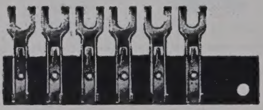
Illustration at right shows a No. 3-162 A-R Fanning Strip connected to a No. 3-142 Barrier Strip.

Jones Fanning Strip Terminals are of .032" Brass, Cadmium Plated. The Bakelite strips are furnished with a hole in either the right or left end for fastening the cable with a cable clamp or lacing twine. Simplifies cable or harness wiring, assuring positive connections. Makes replacement of units an easy matter and assures correct connections after servicing.

In many instances where there is not sufficient room for the standard Fanning Strips we can supply those listed formed for right angle mounting permitting use when Barrier mounts flush with the side of the chassis. Specify Series 160A, 161A and 162A instead of 160, 161 and 162. Prices slightly higher.



6-161-L (Cable Clamp on Left)



6-161-R (Cable Clamp on Right)

THE 160 SERIES

The following Fanning Strips fit the 140 Series Barrier Strips. Terminals are mounted on 3/32" Bakelite, ½" wide and on ⅜" centers.

Code	Ea.	Code	Ea.
2-160-L	$ .13	2-160-R	$ .13
3-160-L	.20	3-160-R	.20
4-160-L	.25	4-160-R	.25
5-160-L	.32	5-160-R	.32
6-160-L	.39	6-160-R	.39
7-160-L	.45	7-160-R	.45
8-160-L	.51	8-160-R	.51
9-160-L	.57	9-160-R	.57
10-160-L	.64	10-160-R	.64
11-160-L	.70	11-160-R	.70
12-160-L	.76	12-160-R	.76
13-160-L	.83	13-160-R	.83
14-160-L	.89	14-160-R	.89
15-160-L	.96	15-160-R	.96
16-160-L	1.01	16-160-R	1.01
17-160-L	1.08	17-160-R	1.08
18-160-L	1.16	18-160-R	1.16
19-160-L	1.21	19-160-R	1.21
20-160-L	1.28	20-160-R	1.28
21-160-L	1.33	21-160-R	1.33

THE 161 SERIES

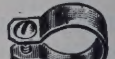
The following Fanning Strips fit the 141 Series Barrier Strips. Terminals are mounted on 3/32" Bakelite, ⅝" wide and on 7/16" centers.

Code	Ea.	Code	Ea.
2-161-L	$ .14	2-161-R	$ .14
3-161-L	.21	3-161-R	.21
4-161-L	.26	4-161-R	.26
5-161-L	.33	5-161-R	.33
6-161L-	.40	6-161-R	.40
7-161-L	.46	7-161-R	.46
8-161-L	.52	8-161-R	.52
9-161-L	.58	9-161-R	.58
10-161-L	.65	10-161-R	.65
11-161-L	.72	11-161-R	.72
12-161-L	.77	12-161-R	.77
13-161-L	.84	13-161-R	.84
14-161-L	.91	14-161-R	.91
15-161-L	.97	15-161-R	.97
16-161-L	1.03	16-161-R	1.03
17-161-L	1.09	17-161-R	1.09
18-161-L	1.17	18-161-R	1.17
19-161-L	1.22	19-161-R	1.22
20-161-L	1.29	20-161-R	1.29

THE 162 SERIES

The following Fanning Strips fit the 142 Series Barrier Strips. Terminals are mounted on 3/32" Bakelite, ⅝" wide and on 9/16" centers.

Code	Ea.	Code	Ea.
2-162-L	$ .17	2-162-R	$ .17
3-162-L	.23	3-162-R	.23
4-162-L	.29	4-162-R	.29
5-162-L	.35	5-162-R	.35
6-162-L	.43	6-162-R	.43
7-162-L	.48	7-162-R	.48
8-162-L	.55	8-162-R	.55
9-162-L	.61	9-162-R	.61
10-162-L	.68	10-162-R	.68
11-162-L	.74	11-162-R	.74
12-162-L	.80	12-162-R	.80
13-162-L	.86	13-162-R	.86
14-162-L	.94	14-162-R	.94
15-162-L	.99	15-162-R	.99
16-162-L	1.06	16-162-R	1.06
17-162-L	1.11	17-162-R	1.11



CABLE CLAMPS

Cable Clamps are available for the Fanning Strips listed at the left and are furnished in 6 different sizes as listed below. Cable Clamp is of Brass Nickle Plated, with 6-32 round head Nickle Plated Brass Screws. For convenience the Cable Clamps are furnished unassembled.

CABLE CLAMP SIZES AVAILABLE

No.	I. D.
CC-161-4	¼"
CC-161-6	⅜"
CC-161-8	½"
CC-161-10	⅝"
CC-161-12	¾"
CC-161-14	⅞"

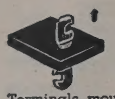
List price 12 c each.

Be sure to give code number when ordering.

On small sizes Lacing Twine can be used for anchoring cable to the Fanning Strip instead of Cable Clamp.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

CINCH-JONES SALES ★ ELECTRICAL CONNECTING DEVICES



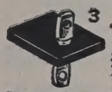
NO. 1 TERMINAL STRIPS

Terminal ⅛" Round Copper, Flattened at Ends, Tin Plated

A convenient and compact strip where solder connections are desired.

Insulation: Canvas Base Bakelite, ½" wide, 3/32" thick. Terminals mounted on ½" centers. Mounting holes ½" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-1	(2 Terminals)	$ .13	No. 6-1	(6 Terminals)	$ .19
No. 3-1	(3 Terminals)	.14	No. 7-1	(7 Terminals)	.20
No. 4-1	(4 Terminals)	.15	No. 8-1	(8 Terminals)	.21
No. 5-1	(5 Terminals)	.17	No. 9-1	(9 Terminals)	.22



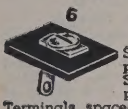
NO. 3 TERMINAL STRIPS

Terminal ⅛" Round Copper, Flattened at Each End, Tin Plated

Similar to No. 1, except closer spacing and furnished with holes instead of hooks.

Insulation: Canvas base Bakelite, ½" wide, 3/32" thick. Terminals mounted on ⅜" centers. Mounting holes ⅜" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-3	(2 Terminals)	$ .15	No. 6-3	(6 Terminals)	$ .21
No. 3-3	(3 Terminals)	.17	No. 7-3	(7 Terminals)	.22
No. 4-3	(4 Terminals)	.19	No. 8-3	(8 Terminals)	.23
No. 5-3	(5 Terminals)	.20	No. 9-3	(9 Terminals)	.24



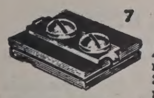
NO. 6 TERMINAL STRIPS

Terminal .046" Brass, Cadmium Plated

Screw and solder terminal. Substantial and reasonably priced.

Screw: 6-32 x 3/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, ¾" wide, 3/32" thick. Terminals spaced on ½" centers. Mounting holes ½" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-6	(2 Terminals)	$ .17	No. 6-6	(6 Terminals)	$ .36
No. 3-6	(3 Terminals)	.22	No. 7-6	(7 Terminals)	.41
No. 4-6	(4 Terminals)	.26	No. 8-6	(8 Terminals)	.46
No. 5-6	(5 Terminals)	.32	No. 9-6	(9 Terminals)	.51



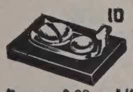
NO. 7 TERMINAL STRIPS

Terminal .046" Brass, Burnished Nickel Plate

A two screw insulated terminal strip that can be mounted directly on metal surface.

Screws: 6-32 x 3/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, ⅞" wide, 3/16" thick (total). Terminals mounted on ½" centers. Mounting holes ½" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-7	(2 Terminals)	$ .24	No. 6-7	(6 Terminals)	$ .68
No. 3-7	(3 Terminals)	.35	No. 7-7	(7 Terminals)	.79
No. 4-7	(4 Terminals)	.46	No. 8-7	(8 Terminals)	.89
No. 5-7	(5 Terminals)	.57	No. 9-7	(9 Terminals)	1.00



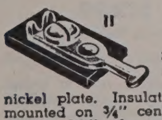
NO. 10 TERMINAL STRIPS

Terminal 1/16" Brass, Tin Plated

Sturdy screw and solder terminal with both screw and solder connections on top of bakelite panel. Solder terminal turned up.

Screw: 6-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, ⅝" wide, 3/32" thick. Terminals spaced on ⅝" centers. Mounting holes ⅝" from center of end terminals. Will take up to No. 15 B & S gauge wire (.057").

Code		Ea.	Code		Ea.
No. 2-10	(2 Terminals)	$ .25	No. 6-10	(6 Terminals)	$ .74
No. 3-10	(3 Terminals)	.37	No. 7-10	(7 Terminals)	.86
No. 4-10	(4 Terminals)	.50	No. 8-10	(8 Terminals)	.98
No. 5-10	(5 Terminals)	.62	No. 9-10	(9 Terminals)	1.10



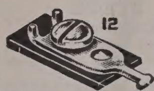
NO. 11 TERMINAL STRIPS

Terminal 1/16" Brass, Tin Plated

Similar to No. 10, except larger in size and the solder tab is flat, but will be bent up, if specified.

Screws: 8-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, ⅞" wide, ⅛" thick. Terminals mounted on ¾" centers. Mounting holes ¾" from center of end terminals. Will take up to No. 12 B & S gauge wire (.080").

Code		Ea.	Code		Ea.
No. 2-11	(2 Terminals)	$ .34	No. 6-11	(6 Terminals)	$ .87
No. 3-11	(3 Terminals)	.47	No. 7-11	(7 Terminals)	1.00
No. 4-11	(4 Terminals)	.61	No. 8-11	(8 Terminals)	1.13
No. 5-11	(5 Terminals)	.74	No. 9-11	(9 Terminals)	1.28



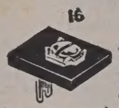
NO. 12 TERMINAL STRIPS

Terminal 1/16" Brass, Tin Plated

Similar to No. 11, except larger. Solder tab is flat; but will be bent up, if specified.

Screw: 10-32 x ⅜" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 1" wide, 3/16" thick. Terminals mounted on ⅞" centers. Mounting holes ⅞" from center of end terminals. Will take up to No. 9 B & S gauge wire (.114").

Code		Ea.	Code		Ea.
No. 2-12	(2 Terminals)	$ .48	No. 6-12	(6 Terminals)	$1.25
No. 3-12	(3 Terminals)	.67	No. 7-12	(7 Terminals)	1.45
No. 4-12	(4 Terminals)	.87	No. 8-12	(8 Terminals)	1.65
No. 5-12	(5 Terminals)	1.07	No. 9-12	(9 Terminals)	1.84



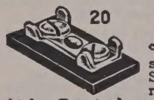
NO. 16 TERMINAL STRIPS

Terminal .028" Brass; Cadmium Plated

A popular priced screw and solder terminal with many desirable features.

Screw: 6-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, ¾" wide, 1/16" thick. Terminals spaced on ½" centers. Mounting holes ½" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-16	(2 Terminals)	$ .14	No. 6-16	(6 Terminals)	$ .34
No. 3-16	(3 Terminals)	.20	No. 7-16	(7 Terminals)	.39
No. 4-16	(4 Terminals)	.24	No. 8-16	(8 Terminals)	.44
No. 5-16	(5 Terminals)	.29	No. 9-16	(9 Terminals)	.48



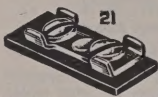
NO. 20 TERMINAL STRIPS

Terminal 1/16" Brass, Burnished Nickel Plate

Strong two screw terminal with ears to hold wire securely under screw.

Screws: 6-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, ⅞" wide, 3/32" thick. Terminals mounted on ⅝" centers. Mounting holes ⅝" from center of end terminals. Will take up to No. 13 B & S gauge wire (.071").

Code		Ea.	Code		Ea.
No. 2-20	(2 Terminals)	$ .34	No. 6-20	(6 Terminals	$1.01
No. 3-20	(3 Terminals)	.51	No. 7-20	(7 Terminals)	1.20
No. 4-20	(4 Terminals)	.68	No. 8-20	(8 Terminals)	1.35
No. 5-20	(5 Terminals)	.85	No. 9-20	(9 Terminals)	1.53



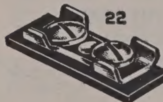
NO. 21 TERMINAL STRIPS

Terminal 1/16" Brass, Burnished Nickel Plate

Similar to No. 20, except larger.

Screw: 8-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 1⅛" wide, ⅛" thick. Terminals mounted on ¾" centers. Mounting holes ¾" from center of end terminals. Will take up to No. 11 B & S gauge wire (.090").

Code		Ea.	Code		Ea.
No. 2-21	(2 Terminals)	$ .48	No. 6-21	(6 Terminals)	$1.25
No. 3-21	(3 Terminals)	.68	No. 7-21	(7 Terminals)	1.45
No. 4-21	(4 Terminals)	.87	No. 8-21	(8 Terminals)	1.65
No. 5-21	(5 Terminals)	1.07	No. 9-21	(9 Terminals)	1.84



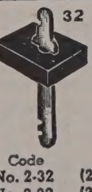
NO. 22 TERMINAL STRIPS

Terminal 1/16" Brass, Burnished Nickel Plate

Similar to No. 21, except larger.

Screws: 10-32 x ⅜" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 1¼" wide, 3/16" thick. Terminals mounted on ⅞" centers. Mounting holes ⅞" from center of end terminals. Will take up to No. 8 B & S gauge wire (.128").

Code		Ea.	Code		Ea.
No. 2-22	(2 Terminals)	$ .64	No. 6-22	(6 Terminals)	$1.61
No. 3-22	(3 Terminals)	.88	No. 7-22	(7 Terminals)	1.85
No. 4-22	(4 Terminals)	1.12	No. 8-22	(8 Terminals)	2.09
No. 5-22	(5 Terminals)	1.36	No. 9-22	(9 Terminals)	2.22



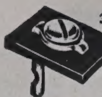
No. 32 TERMINAL STRIPS

Terminal .050" Brass, Tin Plated

An ideal terminal strip (solder type) for medium heavy wiring. One or more wires may be connected to this terminal.

Insulation: XX Bakelite, ⅝" wide, ¼" thick. Terminals mounted on 9/16" centers. Mounting holes 9/16" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-32	(2 Terminals)	$ .24	No. 6-32	(6 Terminals)	$ .68
No. 3-32	(3 Terminals)	.35	No. 7-32	(7 Terminals)	.79
No. 4-32	(4 Terminals)	.46	No. 8-32	(8 Terminals)	.89
No. 5-32	(5 Terminals)	.57	No. 9-32	(9 Terminals)	1.00

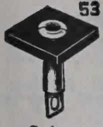


NO. 34 TERMINAL STRIPS

Terminal .062" Brass, Cadmium Plated

Very substantial and neat appearing terminal. Ample length solder terminal below panel, with screw connection above.
Screw: 8-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 7/8" wide, 1/8" thick. Terminals spaced on 1/2" centers. Mounting holes 1/2" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-34	**(2 Terminals)**	**$ .24**	**No. 6-34**	**(6 Terminals)**	**$ .48**
No. 3-34	**(3 Terminals)**	**.31**	**No. 7-34**	**(7 Terminals)**	**.55**
No. 4-34	**(4 Terminals)**	**.36**	**No. 8-34**	**(8 Terminals)**	**.61**
No. 5-34	**(5 Terminals)**	**.43**	**No. 9-34**	**(9 Terminals)**	**.67**

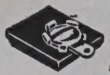


NO. 53 TERMINAL STRIPS

Terminal, Spring Temper Brass, Cadmium Plated

A reliable socket type contact for many uses. Takes 3/32" prongs. May be used with No. 98 terminal strips (same terminal spacing).
Insulation: XP Bakelite, 1/2" wide, 3/32" thick. Terminals mounted on 3/8" centers. Mounting holes 3/8" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-53	**(2 Terminals)**	**$ .21**	**No. 6-53**	**(6 Terminals)**	**$ .35**
No. 3-53	**(3 Terminals)**	**.24**	**No. 7-53**	**(7 Terminals)**	**.39**
No. 4-53	**(4 Terminals)**	**.28**	**No. 8-53**	**(8 Terminals)**	**.43**
No. 5-53	**(5 Terminals)**	**.32**	**No. 9-53**	**(9 Terminals)**	**.46**

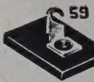


NO. 36A TERMINAL STRIPS

Terminal .031" Brass, Cadmium Plated

A popular priced screw and solder terminal with both screw and solder tab on same side of bakelite panel.
Screw: 6-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 5/8" wide, 3/16" thick. Terminals spaced on 1/2" centers. Mounting holes 1/2" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-36A	**(2 Terminals)**	**$ .14**	**No. 6-36A**	**(6 Terminals)**	**$ .34**
No. 3-36A	**(3 Terminals)**	**.20**	**No. 7-36A**	**(7 Terminals)**	**.39**
No. 4-36A	**(4 Terminals)**	**.24**	**No. 8-36A**	**(8 Terminals)**	**.44**
No. 5-36A	**(5 Terminals)**	**.29**	**No. 9-36A**	**(9 Terminals)**	**.48**

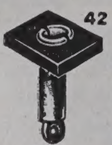


NO. 59 TERMINAL STRIPS

Terminal .028" Brass, Tin Plated

An inexpensive solder terminal. One wire may be brought up through hole and soldered, leaving vertical tab for other connection.
Insulation: XP Bakelite, 3/8" wide, 3/16" thick. Terminals mounted on 7/16" centers. Mounting holes 7/16" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-59	**(2 Terminals)**	**$ .09**	**No. 6-59**	**(6 Terminals)**	**$ .23**
No. 3-59	**(3 Terminals)**	**.12**	**No. 7-59**	**(7 Terminals)**	**.26**
No. 4-59	**(4 Terminals)**	**.15**	**No. 8-59**	**(8 Terminals)**	**.31**
No. 5-59	**(5 Terminals)**	**.20**	**No. 9-59**	**(9 Terminals)**	**.34**



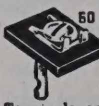
NO. 42 TERMINAL STRIPS

Terminal, Hard Brass, Cadmium Plated

Similar in construction to No. 53. Takes 1/8" prong. May be used with No. 99 terminal strips (same terminal spacing).

Insulation: XP Bakelite, 1/2" wide, 3/32" thick. Terminals mounted on 1/2" centers. Mounting holes 1/2" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-42	**(2 Terminals**	**$ .24**	**No. 6-42**	**(6 Terminals)**	**$ .44**
No. 3-42	**(3 Terminals)**	**.29**	**No. 7-42**	**(7 Terminals)**	**.48**
No. 4-42	**(4 Terminals)**	**.34**	**No. 8-42**	**(8 Terminals)**	**.53**
No. 5-42	**(5 Terminals)**	**.39**	**No. 9-42**	**(9 Terminals)**	**.58**

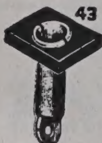


NO. 60 TERMINAL STRIPS

Terminal .050" Brass, Cadmium Plated

Screw terminal above panel—solder terminal below. Solder tab is notched.
Screw: 6-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 7/8" wide, 1/8" thick. Terminals spaced on 7/16" centers. Mounting holes 7/16" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-60	**(2 Terminals)**	**$ .20**	**No. 6-60**	**(6 Terminals)**	**$ .45**
No. 3-60	**(3 Terminals)**	**.26**	**No. 7-60**	**(7 Terminals)**	**.51**
No. 4-60	**(4 Terminals)**	**.33**	**No. 8-60**	**(8 Terminals)**	**.57**
No. 5-60	**(5 Terminals)**	**.39**	**No. 9-60**	**(9 Terminals)**	**.63**

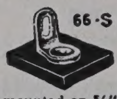


NO. 43 TERMINAL STRIPS

Terminal, Hard Brass, Cadmium Plated

Same as No. 42, except that it takes 5/32" prongs. May be used with No. 100 terminal strips.
Insulation: XP Bakelite, 5/8" wide, 3/32" thick. Terminals mounted on 5/8" centers. Mounting holes 5/8" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-43	**(2 Terminals)**	**$ .31**	**No. 6-43**	**(6 Terminals)**	**$ .55**
No. 3-43	**(3 Terminals)**	**.36**	**No. 7-43**	**(7 Terminals)**	**.61**
No. 4-43	**(4 Terminals)**	**.43**	**No. 8-43**	**(8 Terminals)**	**.67**
No. 5-43	**(5 Terminals)**	**.48**	**No. 9-43**	**(9 Terminals)**	**.73**

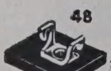


NO. 66-S TERMINAL STRIPS

Terminal .032" Hard Brass, Cadmium Plated

A heavy solder terminal with large oval hole for several wires.
Insulation: XP Bakelite, 3/4" wide, 3/32" thick. Terminals mounted on 5/8" centers. Mounting holes 5/8" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-66-S	**(2 Terminals)**	**$ .10**	**No. 6-66-S**	**(6 Terminals)**	**$ .24**
No. 3-66-S	**(3 Terminals)**	**.13**	**No. 7-66-S**	**(7 Terminals)**	**.28**
No. 4-66-S	**(4 Terminals)**	**.17**	**No. 8-66-S**	**(8 Terminals)**	**.32**
No. 5-66-S	**(5 Terminals)**	**.21**	**No. 9-66-S**	**(9 Terminals)**	**.35**

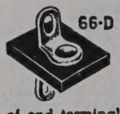


NO. 48 TERMINAL STRIPS

Terminal .028" Brass, Tin Plated

A low priced double solder terminal.
Insulation: XP Bakelite, 1/2" wide, 3/16" thick. Terminals mounted on 7/16" centers. Mounting holes 7/16" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-48	**(2 Terminals)**	**$ .09**	**No. 6-48**	**(6 Terminals)**	**$ .23**
No. 3-48	**(3 Terminals)**	**.12**	**No. 7-48**	**(7 Terminals)**	**.26**
No. 4-48	**(4 Terminals)**	**.15**	**No. 8-48**	**(8 Terminals)**	**.31**
No. 5-48	**(5 Terminals)**	**.20**	**No. 9-48**	**(9 Terminals)**	**.34**

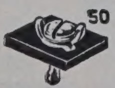


NO. 66-D TERMINAL STRIPS

Terminal .032" Hard Brass, Cadmium Plated

Two No. 66 terminals mounted on opposite sides of panel and riveted together by solid rivet. Ideal strip for heavy work.
Insulation: XP Bakelite, 3/4" wide, 3/32" thick. Terminals mounted on 5/8" centers. Mounting holes 5/8" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-66-D	**(2 Terminals)**	**$ .12**	**No. 6-66-D**	**(6 Terminals)**	**$ .32**
No. 3-66-D	**(3 Terminals)**	**.17**	**No. 7-66-D**	**(7 Terminals)**	**.36**
No. 4-66-D	**(4 Terminals)**	**.22**	**No. 8-66-D**	**(8 Terminals)**	**.41**
No. 5-66-D	**(5 Terminals)**	**.26**	**No. 9-66-D**	**(9 Terminals)**	**.46**

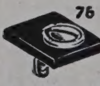


NO. 50 TERMINAL STRIPS

Terminal .062" Brass, Cadmium Plated

One of the most popular screw and solder terminals. Made of heavy stock with ears to firmly hold wires under screw.
Screw: 8-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite 7/8" wide, 1/8" thick. Terminals spaced on 1/2" centers. Mounting holes 1/2" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-50	**(2 Terminals)**	**$ .23**	**No. 6-50**	**(6 Terminals)**	**$ .47**
No 3-50	**(3 Terminals)**	**.29**	**No. 7-50**	**(7 Terminals)**	**.53**
No. 4-50	**(4 Terminals)**	**.35**	**No. 8-50**	**(8 Terminals)**	**.59**
No. 5-50	**(5 Terminals)**	**.41**	**No. 9-50**	**(9 Terminals)**	**.65**



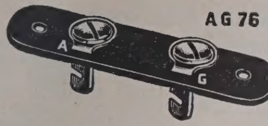
NO. 76 TERMINAL STRIPS

Terminal .028" Brass, Cadmium Plated

Cup shaped top holds wire securely under screw. A compact and good appearing terminal.
Screw: 6-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 3/4" wide, 3/16" thick. Terminals spaced on 1/2" centers. Mounting holes 1/2" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-76	**(2 Terminals)**	**$ .17**	**No. 6-76**	**(6 Terminals)**	**$ .36**
No. 3-76	**(3 Terminals)**	**.22**	**No. 7-76**	**(7 Terminals)**	**.41**
No. 4-76	**(4 Terminals)**	**.26**	**No. 8-76**	**(8 Terminals)**	**.46**
No. 5-76	**(5 Terminals)**	**.32**	**No. 9-76**	**(9 Terminals)**	**.51**

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

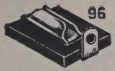


AG 76

AG-76

Standard Antenna-Ground strip using No. 76 terminals. Insulation: 1/16" Bakelite, 11/16" wide. Mounting centers 1 11/16". Ends rounded. Letters A and G are filled in white.

No. AG-76........................Ea. $ .14



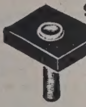
96

NO. 96 TERMINAL STRIPS

Terminal, Spring Temper Brass, Cadmium Plated

Perhaps the most popular socket terminal ever sold. Takes standard tube prongs (No. 99 or No. 100). Furnished for No. 99 prongs (1/8") unless otherwise specified. Insulation: XP Bakelite, 5/8" wide, 1/16" thick. Terminals mounted on 7/16" centers. Mounting holes 7/16" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-96	(2 Terminals)	$ .10	No. 6-96	(6 Terminals)	$ .24
No. 3-96	(3 Terminals)	.13	No. 7-96	(7 Terminals)	.28
No. 4-96	(4 Terminals)	.17	No. 8-96	(8 Terminals)	.32
No. 5-96	(5 Terminals)	.21	No. 9-96	(9 Terminals)	.35



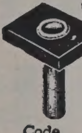
98

NO. 98 TERMINAL STRIPS

Terminal 3/32" Round, Brass, Cadmium Plated

Standard tube base prong of 3/32" diameter. To be used with No. 53 terminal strips.
Insulation: XP Bakelite, 1/2" wide, 3/32" thick. Terminals mounted on 3/8" centers.

Code		Ea.	Code		Ea.
No. 2-98	(2 Terminals)	$ .09	No. 6-98	(6 Terminals)	$ .23
No. 3-98	(3 Terminals)	.12	No. 7-98	(7 Terminals)	.26
No. 4-98	(4 Terminals)	.15	No. 8-98	(8 Terminals)	.31
No. 5-98	(5 Terminals)	.20	No. 9-98	(9 Terminals)	.34



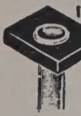
99

NO. 99 TERMINAL STRIPS

Terminal 1/8" Round, Brass, Cadmium Plated

Similar to No. 98, except that it is 1/8" in diameter. To be used with No. 42 terminal strips, and also with No. 96 terminal strips.
Insulation: XP Bakelite, 1/2" wide, 3/32" thick. Terminals mounted on 1/2" centers.

Code		Ea.	Code		Ea.
No. 2-99	(2 Terminals)	$ .12	No. 6-99	(6 Terminals)	$ .32
No. 3-99	(3 Terminals)	.17	No. 7-99	(7 Terminals)	.36
No. 4-99	(4 Terminals)	.22	No. 8-99	(8 Terminals)	.41
No. 5-99	(5 Terminals)	.26	No. 9-99	(9 Terminals)	.46



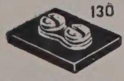
100

NO. 100 TERMINAL STRIPS

Terminal 5/32" Round, Brass, Cadmium Plated

Similar to No: 99, except 5/32" in diameter. To be used with No. 43 terminal strip, and No. 96 terminal strip.
Insulation: XP Bakelite, 5/8" wide, 3/32" thick. Terminals mounted on 5/8" centers.

Code		Ea.	Code		Ea.
No. 2-100	(2 Terminals)	$ .19	No. 6-100	(6 Terminals)	$ .44
No. 3-100	(3 Terminals)	.25	No. 7-100	(7 Terminals)	.50
No. 4-100	(4 Terminals)	.32	No. 8-100	(8 Terminals)	.56
No. 5-100	(5 Terminals)	.37	No. 9-100	(9 Terminals)	.62



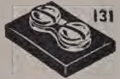
130

NO. 130 TERMINAL STRIPS

Terminals Brass, Burnished Nickel Plate

An inexpensive terminal strip with two screw terminals. Screws: 5-40 x 3/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 7/8" wide, 1/16" thick. Terminals mounted on 1/2" centers. Mounting holes 1/2" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-130	(2 Terminals)	$ .19	No. 6-130	(6 Terminals)	$ .57
No. 3-130	(3 Terminals)	.28	No. 7-130	(7 Terminals)	.67
No. 4-130	(4 Terminals)	.37	No. 8-130	(8 Terminals)	.76
No. 5-130	(5 Terminals)	.47	No. 9-130	(9 Terminals)	.86



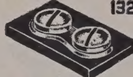
131

NO. 131 TERMINAL STRIPS

Terminals Brass, Burnished Nickel Plate

Similar to No. 130, except larger.
Screws: 6-32 x 1/4" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 1" wide, 3/16" thick. Terminals mounted on 5/8" centers. Mounting holes 5/8" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-131	(2 Terminals)	$ .23	No. 6-131	(6 Terminals)	$ .67
No. 3-131	(3 Terminals)	.34	No. 7-131	(7 Terminals)	.77
No. 4-131	(4 Terminals)	.45	No. 8-131	(8 Terminals)	.88
No. 5-131	(5 Terminals)	.56	No. 9-131	(9 Terminals)	.99



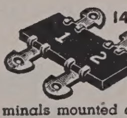
132

NO. 132 TERMINAL STRIPS

Terminals Brass, Burnished Nickel Plate

Similar to No. 131, except larger.
Screws 8-32 x 5/16" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 1 1/8" wide, 1/8" thick. Terminals mounted on 3/4" centers. Mounting holes 3/4" from center of end terminals.

Code		Ea.	Code		Ea.
No. 2-132	(2 Terminals)	$ .28	No. 6-132	(6 Terminals)	$ .76
No. 3-132	(3 Terminals)	.40	No. 7-132	(7 Terminals)	.88
No. 4-132	(4 Terminals)	.52	No. 8-132	(8 Terminals)	1.00
No. 5-132	(5 Terminals)	.64	No. 9-132	(9 Terminals)	1.12



143

No. 143 TERMINAL STRIPS

Terminal .040" Brass, Tin Plated

A strong two-way solder terminal. Solder tabs lie flat. Crimps securely around edges of panel.

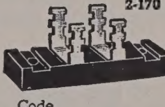
Special Strips

These strips can be made up special, with terminals mounted on any centers, from 3/8" up.

Standard Strips

Insulation: XP Bakelite, 3/8" wide, 3/32" thick. Terminals mounted on 1/2" centers. Mounting holes 1/2" from center of end terminals.
Terminals may be numbered or lettered in white, as illustrated. (See page 18 for imprinting cost.)

Code		Ea.	Code		Ea.
No. 2-143	(2 Terminals)	$ .12	No. 6-143	(6 Terminals)	$ .26
No. 3-143	(3 Terminals)	.15	No. 7-143	(7 Terminals)	.31
No. 4-143	(4 Terminals)	.20	No. 8-143	(8 Terminals)	.34
No. 5-143	(5 Terminals)	.23	No. 9-143	(9 Terminals)	.37



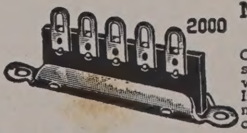
2-170

No. 170 TERMINAL STRIPS

Terminal .032" Brass, Tin Plated

A heavy solder Terminal.
Insulation: Black molded Bakelite, 5/16" wide, 1/4" thick. Terminals mounted on 3/8" centers. Mounting holes are 3/8" from center of end Terminals.

Code		Ea.	Code		Ea.
No. 1-170	(1 Terminal)	$ .20	No. 6-170	(6 Terminals)	$ .44
No. 2-170	(2 Terminals)	.24	No. 7-170	(7 Terminals)	.48
No. 3-170	(3 Terminals)	.29	No. 8-170	(8 Terminals)	.53
No. 4-170	(4 Terminals)	.34	No. 9-170	(9 Terminals)	.58
No. 5-170	(5 Terminals)	.39	No. 10-170	(10 Terminals)	.63



2000

NO. 2000 TERMINAL STRIPS

Terminals .019" Brass, Tin Plated

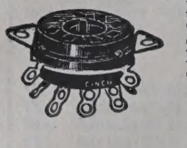
Compact and sturdy junction terminal strip. Useful in assembling radio chassis, wiring, etc.
Insulation: Bakelite. Brackets: Steel, cadmium plated. Terminals spaced on 5/16" centers.

Code		Mounting Hole Centers:	Per 100
No. 2002	(2 Terminals)	1"	$7.74
No. 2003	(3 Terminals)	1—5/16"	8.47
No. 2004	(4 Terminals)	1—5/8"	9.20
No. 2005	(5 Terminals)	1—15/16"	9.92
No. 2006	(6 Terminals)	2—1/4"	10.65
No. 2007	(7 Terminals)	2—9/16"	11.37
No. 2008	(8 Terminals)	2—7/8"	12.10
No. 2009	(9 Terminals)	3—3/16"	12.83
No. 2010	(10 Terminals)	3—1/2"	13.55
No. 2011	(11 Terminals)	3—13/16"	14.28
No. 2012	(12 Terminals)	4—1/8"	15.00
No. 2013	(13 Terminals)	4—7/16"	15.73

CINCH-JONES SALES ★

CINCH SOCKETS ARE STANDARD

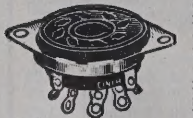
MOLDED OCTAL 1-5/16" MOUNTING CENTERS



Molded from high dielectric black bakelite or mica-filled low loss bakelite. Solder coated brass contacts and sturdy steel press-on type saddle with 4 ground lugs. Mounts in 1" chassis hole.

No.	Description	List Price
8AB	**Black**	**Each $ .15**
8AM	**Mica-Filled**	**Each .22**

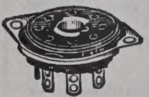
MOLDED OCTAL 1½" MOUNTING CENTERS



Same as 8A series molded octal above except has clinch-on type saddle with 4 ground lugs and mounts in 1⅛" chassis hole. Available in black, mica - filled bakelite, or ceramic.

No.	Description	List Price
8EB	**Black**	**Each $ .15**
8EM	**Mica-Filled**	**Each .22**
8EC	**Ceramic**	**Each .51**

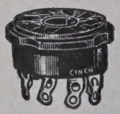
MOLDED LOKTAL

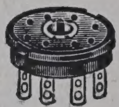


Steel mounting saddle with solder coated brass contacts and center guide clip with locking spring. 1$\frac{5}{16}$" mounting centers. Molded from high dielectric black bakelite or mica-filled low loss bakelite. Mounts in 1" chassis hole.

No.	Description	List Price
8LB	**Black**	**Each $ .22**
8LM	**Mica-Filled**	**Each .29**

CHASSIS CLINCH OCTAL AND LOKTAL

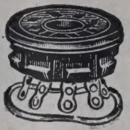




Designed to save valuable chassis space. Mounted in specially punched 1" chassis holes, and are rigidly fastened by lugs sheared from the chassis. No mounting plate or ring required. Molded from high dielectric black bakelite. Solder coated brass contacts and center guide clip.

No.	Description	List Price
8CC	**Octal**	**Each $ .13**
8CCL	**Loktal**	**Each .18**

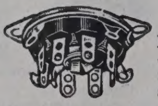
RING MOUNT OCTAL



Molded from high dielectric black bakelite. Solder coated brass contacts. Used extensively on test equipment, public address amplifiers and on other apparatus where sockets are exposed. Molded keyway in side engages key in chassis hole, preventing socket from turning. Mounts in 1$\frac{11}{64}$" chassis hole. Crimped retainer ring is furnished with these sockets.

No.	Description	List Price
8R1	**For $\frac{1}{16}$" thick chassis**	**Each $ .19**
8R2	**For ⅛" thick chassis**	**Each .19**

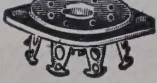
MOLDED LOKTAL



Has same characteristics as molded loktal shown in left column, except saddle has 4 ground lugs.

No.	Description	List Price
8LB1	**Black**	**Each $ .22**
8LM1	**Mica-Filled**	**Each .29**

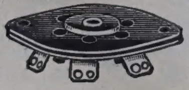
WAFER LOKTAL 1-5/16" MOUNTING CENTERS



Laminated bakelite socket. Sturdy and positive grip solder coated contacts and center guide clip with locking spring. Mounts in 1$\frac{1}{16}$" chassis hole. Has two .136 diameter mounting holes.

No.	List Price
8LWS	**Each $ .17**

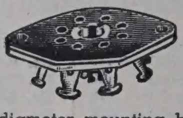
GLASS TUBE SOCKETS



Laminated bakelite sockets with solder coated positive grip brass contacts. 1½" mounting centers. .140 diameter mounting holes. Designed to fit four, five and seven prong tubes.

No.	Description	List Price
4WX	**4 Prong**	**Each $ .13**
5WY	**5 Prong**	**Each .13**
6WZ	**6 Prong**	**Each .14**
7WU	**7 Prong**	**Each .15**
7WA	**7 Prong (Large)**	**Each .15**

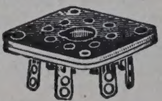
WAFER LOKTAL 1½" MOUNTING CENTERS



Laminated bakelite socket. Solder coated brass contacts and center guide clip with locking spring. Mounts in 1¼" diameter chassis hole. Two .136 diameter mounting holes.

No.	List Price
8LWL	**Each $ .17**

WAFER OCTAL

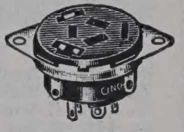


Laminated bakelite sockets with solder coated brass positive grip contacts. Designed to fit all standard eight prong tubes. Available with 1$\frac{5}{16}$" or 1½" mounting centers. Both styles have .136 diameter mounting holes.

No.	Description	List Price
8W1	**1$\frac{5}{16}$" Mounting Centers**	**Each $ .15**
8W2	**1½" Mounting Centers**	**Each .15**

CINCH CAPACITOR "PLUG-IN" SOCKETS

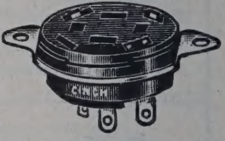
Motion picture, telephone, airborne radio, broadcasting equipment, electric organs, and other electrical equipment need instant replacement when failures in electronic circuits occur at the capacitor connections. Cinch "Know How" has solved this problem.



SMALL

Designed for use with Mallory and Magnavox 1" FP type condensers. Molded from high dielectric black bakelite. Sturdy steel mounting saddle has 4 ground lugs. 1½" mounting centers. 3 recessed center contacts for extended prongs of condenser and two outer contacts flush with surface for short prongs of condenser. All contacts are solder coated for fast, easy soldering.

No.	List Price
2C5	**Each $ .55**



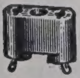
LARGE

Designed for use with Mallory and Magnavox 1⅜" FP type condensers. Molded from high dielectric black bakelite. Sturdy steel saddle has 1$\frac{27}{32}$" mounting centers. Four recessed center contacts for extended prongs of condenser and three outer contacts flush with surface for short prongs of condenser. All contacts are solder coated.

No.	List Price
2C7	**Each $ .68**

CRYSTAL SOCKETS

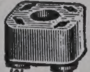
2 PRONG 31/64" CENTERS



Molded from high dielectric black bakelite or mica-filled low loss bakelite. Silver plated beryllium copper contacts on $\frac{31}{64}$" centers. .120" diameter recessed mounting hole. Socket body is $\frac{25}{32}$" long, $\frac{5}{16}$" thick, and $\frac{35}{64}$" high. For use with FT243 type crystal.

No.	Description	List Price
2KB	**Black**	**Each $ .33**
2KM	**Mica-Filled**	**Each .37**

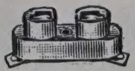
4 PRONG



Molded from mica-filled low loss bakelite. Silver plated beryllium copper contacts on $\frac{31}{64}$" centers. .140 diameter mounting hole recessed $\frac{9}{64}$" from surface in $\frac{5}{16}$" diameter hole. Socket body is $\frac{25}{32}$" long, $\frac{45}{64}$" wide, and ½" high. Designed for use with two No. FT243 type crystals.

No.	List Price
2K4	**Each $ .44**

2 PRONG ½' CENTERS



Molded from high dielectric black bakelite or mica-filled low loss bakelite. Silver plated phosphor bronze contacts on ½" centers. No. 4-40 tap mounting hole. 1⅛" long, ⅜" wide and $\frac{7}{16}$" high. For No. CR-1 and CR-7 type crystals.

No.	Description	List Price
2K1B	**Black**	**Each $ .44**
2K1M	**Mica-Filled**	**Each .50**

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

CINCH-JONES SALES ★

7 PIN MINIATURE SOCKETS AND SHIELDS

MOLDED SADDLE TYPE

Bottom Mount

Molded from high dielectric black bakelite or mica-filled low loss bakelite. Cadmium plated steel saddle with ⅞" mounting centers. .093 diameter mounting holes. Solder coated positive grip brass contacts. Designed for mounting through bottom of chassis in ⅝" diameter hole. For use with all standard seven pin miniature tubes.

No.	Description	List Price
7EB	**Black**	**Each $ .24**
7EM	**Mica-Filled**	**Each .31**

WAFER TYPE

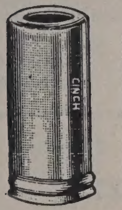
⅞" Mounting Centers

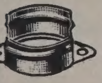
Laminations consists of 1/16" top plate and 3/64" bottom plate from high grade chocolate XP bakelite. .095 diameter mounting holes. Solder coated brass contacts. Available with or without solder center shield and ground strap.

No.	Description	List Price
7W1	**With center shield & ground strap**	**Each $ .23**
7W2	**With center shield only**	**Each .21**
7W3	**Without center shield & ground strap**	**Each .21**
7W4	**Same as 7W1 except has two (2) 1/16" Top Plates**	**Each .25**

TUBE SHIELD AND BASE

Snap-On Type





Shield fits over and outside of retaining spring. Indentation on shield locks into ridge on base. Spring steel shield is 1 53/64" long. Base is made of hardened carbon steel supplying adequate spring retentivity on shield. Base has ⅞" mounting centers with mounting holes that coincide with those for miniature 7 pin sockets as established by R.M.A. standards. For use with saddle type and wafer sockets with ⅞" mounting centers illustrated on this page.

No.	List Price
7S1	**Each $ .18**

TUBE SHIELDS

"J" Slot Type

Durable steel shields complete with tube securing spring. "J" slot feature designed to fit securely with Cinch shield base type sockets, such as 7X series shown in next column. Also fit 7SB type shield bases shown below. Available in three lengths:

No.	Description	List Price
7S2	**1⅜" Long**	**Each $ .18**
7S3	**1¾" Long**	**Each .19**
7S4	**2¼" Long**	**Each .28**

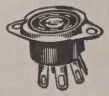
SHIELD BASES FOR ABOVE SHIELDS

Durable steel shield bases designed for use with "J" slot type shields illustrated above. Available in two sizes: 7/16" high or ¾" high. Both types have ⅞" mounting centers.

No.	Description	List Price
7SB	**7/16" High**	**Each $ .12**
7SB1	**¾" High**	**Each .19**

MOLDED SADDLE TYPE

Top Mount



Molded from high dielectric black bakelite, mica-filled low loss bakelite, or ceramic material. Cadmium plated steel saddle with ⅞" mounting centers and .093 diameter mounting holes. Solder coated brass contacts. Designed for mounting through top of chassis in ⅝" diameter hole. Will securely hold all standard seven pin miniature tubes.

No.	Description	List Price
7AB	**Black**	**Each $ .24**
7AM	**Mica-Filled**	**Each .31**
7AC	**Ceramic**	**Each .55**

RING MOUNT TYPE

Molded from high dielectric black bakelite or mica-filled low loss bakelite. Solder coated brass contacts and center shield. Mounts in ⅝" diameter round or "D" shaped hole. Complete with retainer ring.

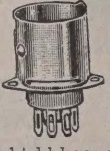
No.	Description	List Price
7RB	**Black**	**Each $ .23**
7RM	**Mica-Filled**	**Each .30**

CHASSIS CLINCH TYPE

Molded from high dielectric black bakelite or mica-filled low loss bakelite. Designed to save valuable chassis space. Mounted in specially punched ⅝" chassis hole and are rigidly fastened by lugs sheared from the chassis. No mounting plate or ring is required.

No.	Description	List Price
7CCB	**Black**	**Each $ .21**
7CCM	**Mica-Filled Bakelite**	**Each .26**

SHIELD BASE TYPE



Shield base is attached to socket body for mounting through top of chassis. Molded from high dielectric black bakelite, mica-filled low loss bakelite or ceramic material. Solder coated brass contacts and center shield. Cadmium plated steel shield base with ⅞" mounting centers. Use No. 7S2, 7S3, or 7S4 shields illustrated to left with these sockets.

No.	Description	List Price
7XB	**Black**	**Each $ .44**
7XM	**Mica-Filled Bakelite**	**Each .50**
7XC	**Ceramic**	**Each .72**

WAFER TYPE with 1" & 1-5/16" Mtg. Centers

Newly developed 7 pin miniatures to replace octal sockets for auto radios, television, and other sets. Newly designed contacts will hold tube firmly in place without using a tube shield despite constant vibration. Same pin circle as standard 7 pin miniature sockets with ⅞" mounting centers for all standard 7 pin miniature tubes. Available with or without center guide pin and ground strap.

1" Mounting Centers

No.	Description	List Price
7WL1	**With center pin and ground strap**	**Each $ .19**
7WL2	**With center pin only**	**Each .18**
7WL3	**Without center pin or ground strap**	**Each .17**

1-5/16" Mounting Centers

No.	Description	List Price
7WL4	**With center pin**	**Each .19**
7WL5	**Without center pin**	**Each .18**

9 PIN MINIATURE SOCKETS AND SHIELDS

MOLDED — SADDLE TYPE

Bottom Mount

Molded from high dielectric black bakelite or mica-filled low loss bakelite. Designed for mounting through bottom of chassis in ¾" diameter hole. 1⅛" mounting centers with .093 diameter mounting holes. Solder coated brass contacts and center shield.

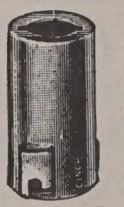
No.	Description	List Price
9EB	**Black**	**Each $ .36**
9EM	**Mica-Filled Bakelite**	**Each .42**

SHIELD BASE

Durable steel shield base designed for use with shields illustrated to right. 1⅛" mounting centers. May be used with any 9 pin wafer or saddle type sockets shown in right column.

No.	List Price
9SB	**Each $ .24**

TUBE SHIELDS

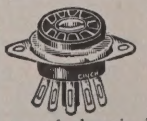


Made from durable steel. Complete with tube securing spring. "J" slot feature designed to fit securely with Cinch 9X series shield base type sockets illustrated to the right. Will also fit No. 9SB shield base shown at left. Available in three lengths.

No.	Description	List Price
9S1	**1½" Long**	**Each $ .29**
9S2	**1 15/16" Long**	**Each .31**
9S3	**2⅜" Long**	**Each .40**

MOLDED—SADDLE TYPE

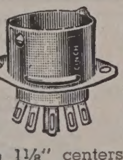
Top Mount



Molded from high dielectric black bakelite or mica-filled low loss bakelite. Designed for mounting through top of chassis in ¾" diameter hole. 1⅛" mounting centers with .093 diameter mounting holes. Solder coated brass contacts and center shield.

No.	Description	List Price
9AB	**Black**	**Each $ .36**
9AM	**Mica-Filled**	**Each .42**

SHIELD BASE TYPE



Molded from high dielectric black bakelite, mica-filled low loss bakelite, or ceramic material. One-piece cadmium plated steel shield base and saddle with .093 diameter mounting holes on 1⅛" centers. Solder coated brass contacts and center shield. Mounts through top of chassis in ¾" diameter hole. Use Cinch 9S type shields with these sockets.

No.	Description	List Price
9XB	**Black**	**Each $ .63**
9XM	**Mica**	**Each .68**
9XC	**Ceramic**	**Each .96**

WAFER TYPE

Has two laminations consisting of 1/16" top plate and 3/64" bottom plate made from 1⅛" mounting centers with .093 diameter holes. Solder coated brass contacts and center shield.

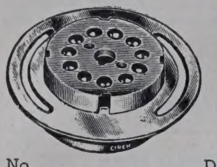
No.	List Price
9W	**Each $ .33**

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

CINCH-JONES SALES ★

CINCH SOCKETS ARE STANDARD FOR TELEVISION!

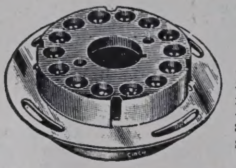
Television is growing by leaps and bounds. To meet the increasing demand Cinch "Know How" has engineered and perfected Magnal, Duodecal, and Diheptal sockets for cathode ray and television tubes. Other television products illustrated on this page include second anode connectors and Corona insulating shields.



MAGNAL—11 PRONG

Molded from mica-filled low loss bakelite. Socket is $1\frac{23}{32}$" wide and $1\frac{9}{64}$" high. Full floating silver plated beryllium copper contacts designed to insure easy insertion of tubes and yet provided excellent electrical connections. For use with 5BP1 and 2AP1 type cathode ray tubes.

No.	Description	List Price
3M11	**Mica Socket**	**Each $6.60**
3R11	**Steel Mounting Ring**	**Each .46**



DIHEPTAL 14 PRONG

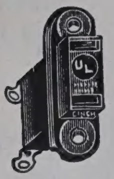
Molded from high dielectric black bakelite or mica-filled low loss bakelite. $2\frac{7}{32}$" wide and 1⅛" high. Possesses same features as Cinch Magnal socket shown above.

No.	Description	List Price
3B14	**Black Socket**	**Each $2.20**
3M14	**Mica Socket**	**Each 2.75**
3R14	**Steel Mounting Ring**	**Each .46**

CORONA SHIELDS

Specifically designed for Television and high voltage wiring. These cadmium plated brass shields will provide excellent protection at proper positions in electrical connections. Outside diameter .470. Hole diameter .136. Thickness .172.

No.	List Price
3C1	**Per C $3.03**

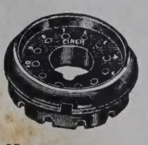


110-250 VOLT SOCKET

(Underwriters Listed)

When space is at a premium use this 110-250 volt 2 prong socket. Rated at 15 Amp., 110 V. or 10 Amp., 250 V. Molded from high dielectric black bakelite. Solder coated brass contacts on ½" centers designed to accept any 2 prong standard electric plug. Mounts in $\frac{25}{64}$" x $\frac{25}{32}$" hole. .144 diameter mounting holes on 1⅛" centers. Ideal for radio chassis and many other applications.

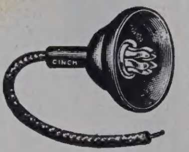
No.	List Price
2R2	**Each $ .22**



DUODECAL—12 PRONG

No larger in diameter than the tube base and only slightly longer than the tube pin. A new feature incorporates wire strain relief as an integral part of the contact. Molded from high dielectric black bakelite. For use with 10BP4, 2BP1, 5TP4, etc., type tubes.

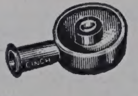
No.	List Price
3B12	**Each $ .88**



SECOND ANODE CONNECTORS

For television tubes—Silver plated snap button type plug well insulated by 1½" diameter rubber protective cap. Snaps into opening on side of tube. Available in three lengths wire leads.

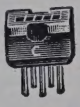
No.	Description	List Price
3A2	**12" Wire Lead**	**Each $ .99**
3A3	**15" Wire Lead**	**Each 1.16**
3A4	**18" Wire Lead**	**Each 1.38**



SECOND ANODE CONNECTOR

For diheptal based tubes. Cadmium plated brass contact surrounded by rubber insulator ¾" wide and $1\frac{3}{16}$" long. Snaps over .096 diameter prong on side of diheptal tubes.

No.	List Price
3A1	**Each $ .83**

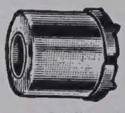


SUB-MINIATURE HEARING AID SOCKETS

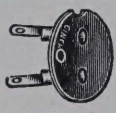
Used extensively for hearing aids, radio controlled model airplanes and numerous other applications which require sub-miniature tubes. Molded from mica-filled low loss bakelite with silver plated beryllium copper contacts. For Raytheon type CK series sub-miniature tubes. Available with 5, 6, or 7 contacts. Four prong tubes use No. 2H5 five prong socket.

No.	Description	List Price
2H5	**5 Prong**	**Each $ .41**
2H6	**6 Prong**	**Each .43**
2H7	**7 Prong**	**Each .45**

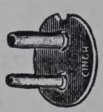
CONNECTOR PLUGS AND SOCKETS



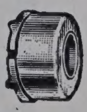
18G



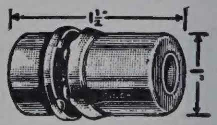
6K2



5K2



18E



Assembled

These low cost plugs and sockets are ideal for a multitude of applications. A "Cinch" where space is at a premium. Complete assembly of plug, socket, male and female shell will close to a compact unit of 1½" long. Polorized—Nickel plated brass tube pins—Solder coated brass contacts. Plugs, sockets and shells have lock feature which prevents turning in shells.

PLUGS

Part No.	No. Prongs	Use Skt. No.	Use Shell No.	List Price
5K2	2	6K2	18E	.08 ea.
5K3	3	6K3	18E	.09 ea.
5K4	4	6K4	18E	.10 ea.
5K5	5	6K5	18E	.11 ea.
5K6	6	6K6	18F	.13 ea.

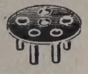
SOCKETS

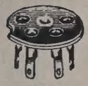
Part No.	No. Prongs	Use Skt. No.	Use Shell No.	List Price
6K2	2	5K2	18G	.07 ea.
6K3	3	5K3	18G	.08 ea.
6K4	4	5K4	18G	.09 ea.
6K5	5	5K5	18G	.10 ea.
6K6	6	5K6	18H	.11 ea.

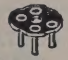
PRICES SUBJECT TO CHANGE WITHOUT NOTICE

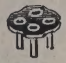
CINCH BATTERY PLUGS

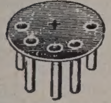
Cinch manufactures a complete line of dependable plugs to fit all types of batteries. Made with nickel plated brass tube pins mounted on high grade chocolate bakelite. The chart below indicates the correct plug for most popular batteries. In addition to the battery plugs illustrated in this catalogue, Cinch manufactures a complete line of wafer plugs for radio chassis, speakers, and numerous other electrical applications. Send us a sample or sketch of the plug you may require.

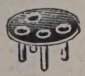

5AB1

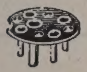

6K4

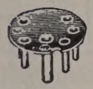

5AB2

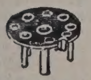

5AB3

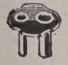

5AB4

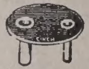

5AB5

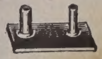

5AB6

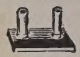

5AB7

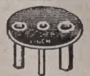

5AB8

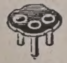

5A1

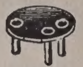

5A2

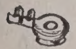

5A3

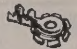

5A4

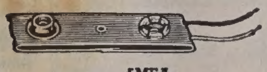

5A5

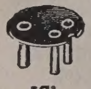

5B1

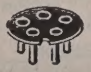

5B2


5M


5F


5MFA


5C1

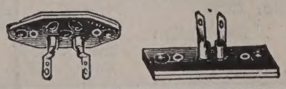

5C2

THIS REFERENCE CHART WILL ASSIST YOU IN SELECTING THE CORRECT PLUG FOR POPULAR BATTERIES

Part Number	Voltage	For Burgess No.	For Eveready No.	For R.C.A. No.	For Philco No.	For Ray-O-Vac No.	List Price
5A1	1½ "A"	4F, 4FL, 6F, 8F, 8FL, TE	741, 742 743, 1052P	VS004, VS005, VS007, VS008	P94, P96, P8F1	P94A, P94L, PX, P96A, P98A, P98L	Ea. $ .06
5A2	3 "A"	20F2	X125	VS025	P8024	P9403	Ea. .07
5A3	4½ "A"	G-3	746	VS002	P100	P-83A	Ea. .06
5A4	6 "A"	2F4, 2F4L, F4PI, T5	A509, 718, 744, 747	VS009, VS010, VS011	P4F4R	P684A, P696L, P698A, P698L	Ea. .08
5A5	7½ "A"	G-5	687	VS003		P85A	Ea. .09
5B1	45 "B" Small	A30, B30, M30, Z30	482, 738, 762	VS012, VS013, VS014, VS015	P210, P305	430P, P7830, P5303	Ea. .07
5B2	45 "B" Large	A30, B30, M30, Z30	482, 738, 762	VS012, VS013, VS014, VS015	P210, P305	430P, P7830, P5303	Ea. .08
5M	67½ "B"	XX30, XX45	455, 467	VS016, VS056		P4367	Per C 4.40
5F	67½ "B"	XX30, XX45	455, 467	VS016, VS056		P4367	Per C 5.50
5MFA	67½ "B"	XX30, XX45	455, 467	VS016, VS056		P4367	Ea. .30
5C1	4½ "C"	2370PI	X771	VS030	P3D	P231W	Ea. .10
5C2	22½ "C"	5156PI	768	VS031	P15B5	P5151	Ea. .11
5AB1	1½ "A"-90 "B"	17GD60, 5DA60, 6TA60	758	VS022, VS043	P60D11L	AB82, 10793	Ea. .10
6K4	9 "A"-90 "B"	G6B60	752	VS047			Ea. .09
5AB2	1½ "A"-63-90 "B"	6FA60, 4GA41, 4GA42		VS037	P60A-4L P41A4G	AB419	Ea. .08
5AB3	6 "A"-90 "B"	2F4A60		VS044	P60A8F4	AB694	Ea. .09
5AB4	6 "A"-90 "B"	F4B60		VS048			Ea. .13
5AB5	6 "A"-90 "B"	D4A60, 2F4B60, F4A41		VS046	P41AFL	10896, AB648	Ea. .10
5AB6	7½ "A"-90 "B"	G5A42, F5A60		VS038	P87, P841	AB794	Ea. .11
5AB7	9 "A"-90 "B"	F6A60, G6M60	753, 754	VS018, VS019	P841A	AB878, AB994	Ea. .13
5AB8	9 "A"-90 "B"	4FA60					Ea. .11

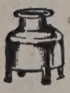
LAMINATED SOCKETS

Cinch also manufactures a complete line of wafer sockets, round or rectangular, for a variety of applications; for batteries, speakers, and various other radio connections. Let us know your requirements.



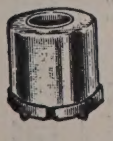
PLUG CAPS AND SHELLS

For above Battery Plugs and for Connector Plugs and Sockets on page T-34.



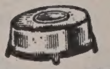
Cadmium plated brass shell with rolled edge on 5/16" diameter neck opening. Outside diameter at base .625. Four ⅛" prongs coincide with notches on plugs. Designed for use with Cinch No. 5A1, 5B1, 5AB2, and 5AB3 type battery plugs.

No.	List Price
18A	Each $ .03



Cadmium plated steel shells complete with fibre insulator. Available with ⅜" or ½" diameter hole with rolled edge. Inside diameter 31/32". 29/32" high. For use with Cinch No. 6K2, 6K3, 6K4, 6K5, and 6K6 type sockets.

No.	Description	List Price
18G	⅜" Diameter Hole	Each $ .07
18H	½" Diameter Hole	Each .07

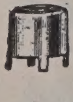


Brass shell with black nickel finish. ¼" hole on top. Complete with fibre insulator. For use with Cinch No. 5AB1, 5AB5, 5B2, 5A2, and 5A5 type battery plugs.

No.	List Price
18C	Each $ .06

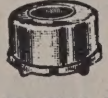
Part No. 18D same as 18C except has 5/32" diameter hole drilled between center hole and outside edge.

No.	List Price
18D	Each $ .07



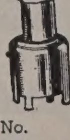
Cadmium plated brass shell with 33/64" diameter opening on top of shell. Outside diameter at base .625. Four ⅛" prongs coincide with notches on plugs. ½" high. Designed for use with Cinch No. 5A1, 5B1, 5AB2, and 5AB3 type battery plugs.

No.	List Price
18B	Each $ .04



Cadmium plated brass shells complete with fibre insulator. Available with ⅜" or ½" diameter hole with rolled edge. Inside diameter 31/32". ½" high. For use with Cinch No. 5C1, 5C2, 5AB6, 5AB7, 5AB8, 5K2, 5K3, 5K4, 5K5, and 5K6 type plugs.

No.	Description	List Price
18E	⅜" Diameter Hole	Each $ .08
18F	½" Diameter Hole	Each .08



Cadmium plated brass shell complete with fibre insulator. Same as Cinch No. 18B shell except has ½" neck with ⅜" hole riveted to base. For use with same plugs as No. 18B.

No.	List Price
18J	Each $ .11

CINCH-JONES SALES ★

PIN PLUGS — JACKS — CONNECTORS — STRIPS — TERMINALS

PHONO PLUGS

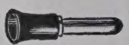
R.C.A. type. For a multitude of applications: record players, auto radios, receivers, recording and reproducing equipment, experimental units, etc. Nickel plated ⅛" diameter tube pin. Available in two lengths: $\frac{9}{16}$" and $\frac{11}{16}$". Use No. 13A with type 81A and 81B phono jacks. Use No. 13E with type 81E extension jack.

No.	Description	List Price
13A	**$\frac{9}{16}$" Pin**	**Each $ .09**
13E	**$\frac{11}{16}$" Pin**	**Each .09**

ANTENNA PLUG

Motorola type. Nickel plated ⅛" tube pin extends $\frac{17}{32}$" from cadmium plated split brass shall whose 8 cutting edges provide positive grounded connection when inserted into a Cinch No. 81C or 81F connector.

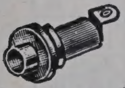
No.	List Price
13B	**Each $ .13**



INSULATED PIN PLUG

Nickel plated ⅛" brass tube pin $\frac{9}{16}$" long, assembled to $\frac{13}{32}$" long fibre insulator. May be used with Cinch No. 81A and 81B type phono jacks or with No. 49 series contact strips illustrated in right column.

No.	List Price
13C	**Each $ .10**



STAND-OFF TERMINALS

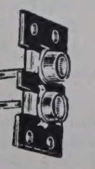
Insulated terminals for television and other high voltage electronic equipment. Provides excellent insulation for passing high voltages with through chassis. Molded from mica-filled low loss bakelite. Available in two lengths: $\frac{9}{32}$" or $\frac{13}{32}$". Diameter of cylinder is .110. Mounts in $\frac{5}{32}$" dia. hole. Actual size illustration of No. 16L.

No.	Description	List Price
16S	**9/32"**	**Each $ .83**
16L	**13/32"**	**Each .83**

SHIELDED EXTENSION JACK

Cadmium plated brass shell 2$\frac{7}{16}$" long with black bakelite insert providing insulation for solder coated brass positive grip contact. Use Cinch No. 13E Phono plug with this jack.

No.	List Price
81E	**Each $ .28**



DOUBLE PHONO JACK

Two positive grip phono jacks mounted on $\frac{1}{16}$" bakelite panel with 1$\frac{3}{16}$" mounting centers. Jacks are spaced on ½" centers. Panel is 1½" x ½". Used on recording units, receivers, etc. Use Cinch No. 13A phono plug with this jack.

No.	List Price
81B	**Each $ .18**

SINGLE PHONO JACK

Precision engineered for many uses, such as: R.C.A. type recording units, receivers, and auto sets. Single prong positive grip phono jack mounted on $\frac{1}{16}$" chocolate bakelite disc with $\frac{11}{16}$" mounting centers Use Cinch No. 13A phono plug with this jack.

No.	List Price
81A	**Each $ .13**

ANTENNA CONNECTOR

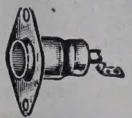
Shell Type

Same as No. 81F on right except without flange. This connector may be soldered in position. Use Cinch No. 13B antenna plug with this jack.

No.	List Price
81C	**Each $ .13**

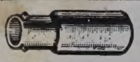
ANTENNA CONNECTOR

Flange Type



Motorola type shielded jack Sturdy steel flange with $\frac{15}{16}$" mtg. centers with .136 dia. mtg. holes. Solder coated shell, flange and contact. Can be mounted with screws or rivets. Used extensively on auto radios. Use Cinch No. 13B antenna plug with this jack.

No.	List Price
81F	**Each $ .20**



ADAPTER SHELL

Converts Motorola pin plug to Delco bayonet type receptacle. Cadmium plated brass shell 1$\frac{3}{32}$" long. Use with No. 13B Antenna plug.

No.	List Price
81K	**Each $ .15**

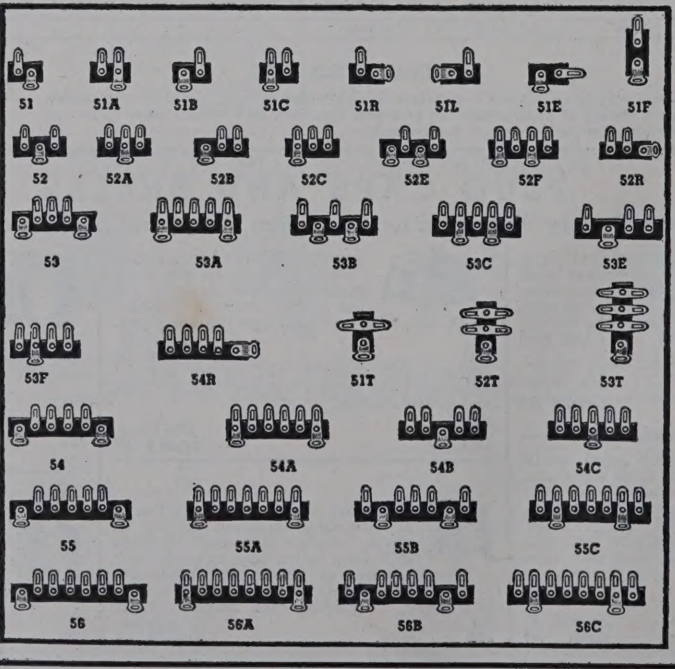
SCREW TYPE TERMINAL STRIPS

Ideal for chassis or breadboard layouts. Solder coated brass terminals. .136 diameter mounting holes. Strips with 1 to 6 lugs are of $\frac{1}{16}$" bakelite; 7 to 10 terminals mounted on $\frac{3}{32}$" bakelite. Ends of screws are captivated to prevent removal. Terminals are spaced on $\frac{7}{16}$" centers.

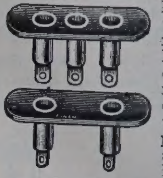
No.	Lugs	Mounting Centers	List Price
17- 1	**1**	**⅞"**	**Each $ .06**
17- 2	**2**	**1$\frac{5}{16}$"**	**Each .09**
17- 3	**3**	**1¾"**	**Each .13**
17- 4	**4**	**2$\frac{3}{16}$"**	**Each .17**
17- 5	**5**	**2⅝"**	**Each .20**
17- 6	**6**	**3$\frac{1}{16}$"**	**Each .24**
17- 7	**7**	**3½"**	**Each .30**
17- 8	**8**	**3$\frac{15}{16}$"**	**Each .34**
17- 9	**9**	**4⅜"**	**Each .39**
17-10	**10**	**4$\frac{13}{16}$"**	**Each .43**

LUG TYPE TERMINAL STRIPS

These bakelite strips are handy for neatly supporting resistors, condensers, etc., in circuit wiring. Solder coated brass lugs are spaced on ⅜" centers with .140 diameter mounting holes. Chocolate bakelite strips are $\frac{1}{16}$" thick and ⅜" wide.

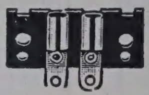


PHONO TIP JACKS



Double and triple tip jacks for speakers, headphones, etc. $\frac{9}{64}$" dia. mounting holes on 1$\frac{11}{16}$" centers. Nickel plated. Brass shells are $\frac{17}{32}$" long. Solder coated contact $\frac{25}{32}$" long. Contacts for double jack are on ⅞" centers. Triple jack contacts on $\frac{7}{16}$" centers. Mounted on $\frac{1}{16}$" chocolate XP grade bakelite.

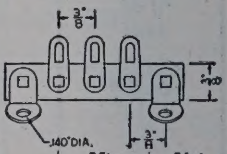
No.	Description	List Price
81D	**Double**	**Each $ .17**
81T	**Triple**	**Each .28**



CONTACT STRIPS

For connections which must be changed quickly and easily. Solder coated spring steel contacts spaced on ⅜" centers and mounted on $\frac{1}{16}$" bakelite. Contacts are sized for ⅛" diameter tube pins such as Cinch No. 13C illustrated in first column on this page.

No.	Contacts	Mounting Centers	List Price
49-1	**1**	**¾"**	**Ea. $ .06**
49-2	**2**	**1⅛"**	**Ea. .09**
49-3	**3**	**1½"**	**Ea. .11**
49-4	**4**	**1⅞"**	**Ea. .14**
49-5	**5**	**2¼"**	**Ea. .17**
49-6	**6**	**2⅝"**	**Ea. .20**



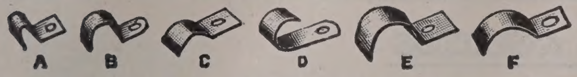
No.	Mtg. Centers	List Price
51		**$2.75 c**
51A		**2.86 c**
51B		**2.75 c**
51C		**2.86 c**
51R		**2.75 c**
51L		**2.75 c**
51E		**2.75 c**
51F		**2.75 c**
51T		**3.03 c**
52		**3.74 c**
52A		**3.85 c**
52B		**3.74 c**
52C		**3.85 c**
52E	**¾"**	**5.17 c**
52F	**¾"**	**5.39 c**
52R		**3.74 c**
52T		**4.18 c**
53	**1½"**	**6.27 c**
53A	**1½"**	**6.49 c**
53B	**¾"**	**6.27 c**
53C	**¾"**	**6.49 c**
53E		**4.84 c**
53F		**4.95 c**
53T		**5.61 c**
54	**1⅞"**	**7.48 c**
54A	**1⅞"**	**7.70 c**
54B		**6.05 c**
54C		**6.16 c**
54R		**6.05 c**
55	**2¼"**	**8.58 c**
55A	**2¼"**	**8.80 c**
55B	**1½"**	**8.58 c**
55C	**1½"**	**8.80 c**
56	**2⅝"**	**10.34 c**
56A	**2⅝"**	**10.56 c**
56B	**1⅞"**	**10.34 c**
56C	**1⅞"**	**10.56 c**

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

CINCH-JONES SALES ★

RADIO HARDWARE

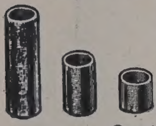
CABLE CLAMPS



Cadmium plated sturdy steel cable clamps designed for securing cables ranging from 1/16" diameter to 5/8" diameter. Illustrations are half size.

No.	Dia. of arc	Hole Dia.	Over-all Width	Over-all Length	Hole cent. to arc cent.	List Price	
85A	1/8"	.149	11/32"	15/32"	1/4"	$3.30 C	$28.60 M
85B	5/16"	.140	5/16"	23/32"	3/8"	2.31 C	20.35 M
85C	5/16"	.144	3/8"	21/32"	3/8"	2.09 C	16.50 M
85D	5/16"	.136	5/16"	27/32"	1/2"	1.49 C	12.65 M
85E	1/2"	.147	1/2"	15/16"	7/16"	2.86 C	25.85 M
85F	5/8"	.171	3/8"	1"	1/2"	1.54 C	13.20 M

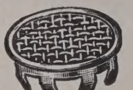
METAL SPACER SLEEVES



Zinc plated brass spacer sleeves. Six (6) popular sizes for spacing chassis, panels, etc. Illustrations are full size.

No.	Length	Outside Dia.	Inside Dia.	List Price
43A	3/16"	1/4"	3/16"	$1.65 C
43B	1/4"	1/4"	3/16"	1.93 C
43C	3/8"	1/4"	3/16"	1.93 C
43D	1/2"	1/4"	3/16"	1.93 C
43E	3/4"	1/4"	3/16"	2.20 C
43F	15/16"	1/4"	3/16"	2.48 C

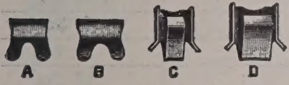
SCREEN TYPE PLUG BUTTON



For portable radios, transmitters, amplifiers, etc. Provides ventilation wherever required in radio, television and electronic equipment. Bright zinc plated steel button snaps in 1" diameter hole. Half size illustration.

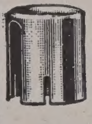
No.	Description	List Price
41V	for 1" Hole	$16.50 C

KNOB SPRINGS



For fastening knobs to shafts. Four (4) popular sizes. Fabricated from high grade spring steel. Heat treated to retain spring retentivity.

GRID CAP SHIELD



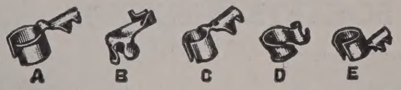
Fits firmly over the grid cap, completely shielding the tube. Cadmium plated shield is 1" high with 7/8" slot opening for grid leads.

No.	List Price
60S	Each $ .11

No.	Description	List Price	
83A		$ .88 C	$ 7.15 M
83B		1.10 C	9.35 M
83C	For 3/16" Shaft	1.21 C	10.45 M
83D	For 1/4" Shaft	1.60 C	13.20 M

GRID CAPS

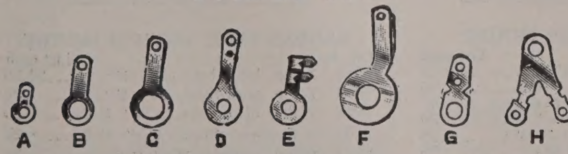
For glass or metal tubes. Made of heavy gage brass, solder coated for fast, easy soldering.



No. 60A is for 23/64" diameter tube caps. All others designed for 1/4" diameter tube caps.

	List Price	
60A	$1.27 C	$10.45 M
60B	1.16 C	9.35 M
60C	1.32 C	11.00 M
60D	1.27 C	10.45 M
60E	1.10 C	8.80 M

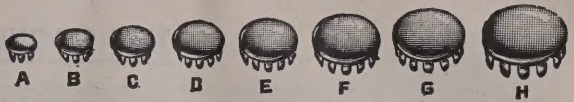
SOLDER LUGS



Popular flat type solder lugs for a multitude of wiring applications. Eight (8) different styles. All solder coated for fast, easy soldering. Illustrations are half size.

No.	Length	Diameter Large Hole	Diameter Small Hole	List Price	
14A	11/32"	.110	.078	$ .61 C	$ 4.95 M
14B	5/8"	.165	.093	.77 C	6.60 M
14C	41/64"	.250	.093	.66 C	5.50 M
14D	55/64"	.145	.093	.83 C	7.15 M
14E	11/16"	.125	None	1.43 C	12.10 M
14F	1 1/4"	.260	.093	2.26 C	19.25 M
14G	11/16"	.140	.093	.61 C	4.95 M
14H	53/64"	.141	.093	1.32 C	11.00 M

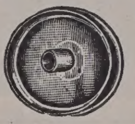
PLUG BUTTONS



Used to cover punched or drilled holes in metal, wood, fibre, tubes, plastic, cardboard, etc. Nickel plated steel plug buttons for eight popular size holes. Other sizes available, let us know your requirements. Spring tension prongs hold plug bottom firmly in position. Illustrations are 1/3 actual size.

No.	For hole Diameter	Cap Diameter	List Price
41A	1/4"	13/32"	$2.75 C
41B	3/8"	1/2"	2.75 C
41C	1/2"	21/32"	3.03 C
41D	5/8"	51/64"	3.85 C
41E	3/4"	15/16"	3.85 C
41F	7/8"	1 1/16"	4.68 C
41G	1"	1 5/32"	6.05 C
41H	1 1/4"	1 7/16"	6.60 C

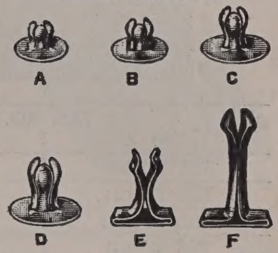
DIAL PULLEYS



Precision engineered aluminum idler dial pulleys. Five (5) popular sizes.

No.	Outside Dia.	String Dia.	Hub Dia.	List Price
70A	3/8"	5/16"	1/8"	$1.54 C
70B	17/32"	7/16"	1/8"	2.09 C
70C	39/64"	1/2"	1/8"	2.20 C
70D	3/4"	5/8"	3/16"	3.30 C
70E	1 1/8"	1"	3/16"	4.68 C

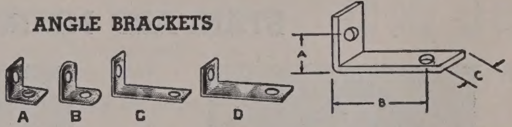
SNAP-IN TRIMOUNTS



For holding two or more thicknesses of material firmly together. Can easily be removed a multitude of applications such as fastening dials, built-in aerials, cabinet backs, etc. Actual size illustrations of six (6) popular types.

No.	For Hole Diameter	Cap Diameter	Length	List Price	
40A	.125	9/32"	13/64"	$ .99 C	$ 8.25 M
40B	.136	23/64"	9/32"	1.21 C	9.90 M
40C	.144	3/8"	17/64"	1.32 C	11.00 M
40D	.171	3/8"	17/64"	1.54 C	13.20 M
40E	.156	23/64"	13/32"	1.71 C	14.30 M
40F	.125	3/8"	5/8"	1.43 C	12.10 M

ANGLE BRACKETS

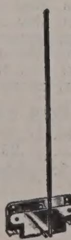


Cadmium plated brass and steel brackets for a variety of radio and other electronic applications. Illustrations are half size.

No.	"A" Dim.	"B"	"C"	"A" Hole	"B" Hole	list Price	
33A	7/32"	3/16"	9/32"	.136	6-32 Tap	$2.75 C	$23.10 M
33B	7/32"	7/32"	5/16"	.140	.140	1.65 C	13.75 M
33C	5/16"	3/4"	1/4"	.156	.140	1.32 C	11.00 M
33D	7/32"	25/32"	3/8"	.136	.187	2.09 C	17.60 M

DIAL POINTERS

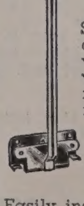
NEW! WIRE TYPE INDICATOR



Red enameled indicator 3½" long. May be cut to any length and curved or bent to any desired position. May be inserted from front or rear and projected upward or downward. Wire may then be tightly crimped into carriage. Aluminum carriage rides easily on rail. Simply installed by hooking dial cable over extrusions on rear of carriage.

No. 11A List Price Each $ .15

BROAD BAND TYPE INDICATOR

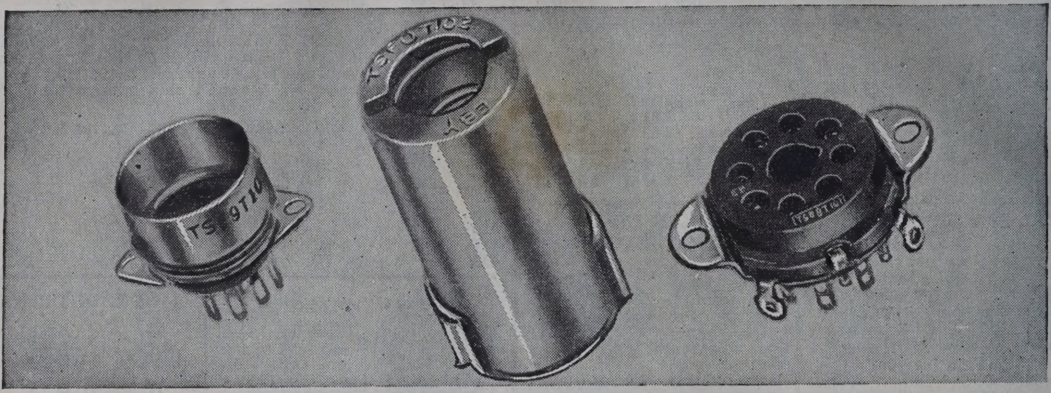


Similar to wire type indicator except has 1/4" wide aluminum band, white enameled with red center stripe. Band is 2¾" long and may be cut or bent as desired. Indicator band is welded to aluminum carriage which rides on dial rail. Easily installed by hooking dial cable over outside extrusions and under center extrusion on rear of carriage.

No. 11B List Price Each $ .26

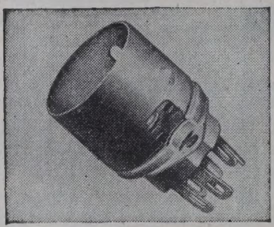
EBY SALES COMPANY

JAN SOCKETS & SHIELDS



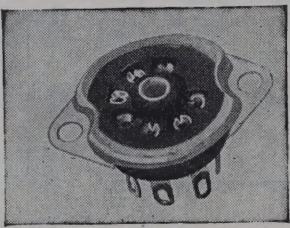
JAN NO.				
S-28 A	**S-28 A1**	**EBY NO.**	**DESCRIPTION**	**LIST PRICE**
TSE 7T 102	TS 102 C 01	9715	7 Pin Shield Base, Ceramic	**$1.05 Ea.**
TSE 7T 101	TS 102 P 01	9736	7 Pin Shield Base, Mica-filled	**.60 Ea.**
TSE 9T 102	TS 103 C 01	9717	9 Pin Shield Base, Ceramic	**1.30 Ea.**
TSE 9T 101	TS 103 P 01	9718	9 Pin Shield Base, Mica-filled	**.80 Ea.**
TSF 0T 101	TS 102 U 01	9700	7 Pin Tube Shield—1⅜"	**.25 Ea.**
TSF 0T 102	TS 102 U 02	9701	7 Pin Tube Shield—1¾"	**.25 Ea.**
TSF 0T 103	TS 102 U 03	9702	7 Pin Tube Shield—2¼"	**.31 Ea.**
TSF 0T 104	TS 103 U 01	9703	9 Pin Tube Shield—1½"	**.31 Ea.**
TSF 0T 105	TS 103 U 02	9704	9 Pin Tube Shield—1 15/16"	**.33 Ea.**
TSF 0T 106	TS 103 U 03	9710	9 Pin Tube Shield—2⅜"	**.40 Ea.**
TSB 8T 102	TS 101 C 01	9756	Octal, Saddle, Ceramic	**1.25 Ea.**
TSB 8T 101	TS 101 P 01	9753	Octal, Saddle, Mica-filled	**.80 Ea.**

STANDARD MINIATURE SOCKETS & SHIELDS



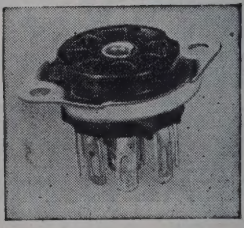
SHOCK SHIELD TYPE

Cat. No.		List each
8322	7 Pin, black bake., ⅞" M.C.	$0.30
8329	7 Pin, mica-filled, ⅞" M.C.	.35
8328	7 Pin, ceramic, ⅞" M.C.	.55
9723	9 Pin, black bake., 1⅛" M.C.	.45
9714	9 Pin, mica-filled, 1⅛" M.C.	.50
9716	9 Pin, ceramic, 1⅛" M.C.	.95



SADDLE TYPE, TOP MOUNT

Cat. No.		List each
8323	7 Pin, black bake., ⅞" M.C.	$0.15
8327	7 Pin, mica-filled, ⅞" M.C.	.20
8326	7 Pin, ceramic, ⅞" M.C.	.45
9001	9 Pin, black bake., 1⅛" M.C.	.20
9430	9 Pin, mica-filled, 1⅛" M.C.	.25
9735	9 Pin, ceramic, 1⅛" M.C.	.75



SADDLE TYPE, BOTTOM MOUNT

Cat. No.		List each
8578	7 Pin, black bake., ⅞" M.C.	$0.15
9064	7 Pin, mica-filled, ⅞" M.C.	.20
9012	9 Pin, black bake., 1⅛" M.C.	.20
9401	9 Pin, mica-filled, 1⅛" M.C.	.25
9713	9 Pin, ceramic, 1⅛" M.C.	.75

SHIELDS FOR SADDLE TYPE SOCKET

8757	Shield for 7 pin, 1¾" high	List Price, ea. $0.10
8758	Adaptor for above	.05
8759	Shield for 9 pin, 2-1/16" high	List Price, ea. $0.15
8760	Adaptor for above	.05

See JAN table above for shields for shock shield type sockets.

OCTAL SADDLE SOCKETS

No. 9067—Black bake., cadmium plated steel saddle, 4 gnd. lugs. Cadmium plated brass contacts. 1-15/16" M.C. ....List, ea. $0.14

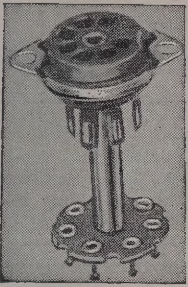
No. 8451—Loctal type, same specifications as above ....List, ea. .17

OCTAL ALL-MOLDED SOCKETS

No. 8490—Black bake., cadmium plated brass contacts. 1-15/16" mounting centers. List ea. $0.15

No. 8191—Loctal type, same specifications as above ....List, ea. .15

EBY SALES COMPANY



TURRET SOCKETS

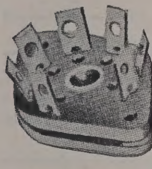
Widely recognized for their usefulness in simplifying wiring and sub-assembly work. Space-saving and economical, lead lengths are reduced to a minimum thereby reducing capacitance. Available with 7 and 9 pin mica-filled miniature sockets. Spacer is brass, cadmium plated; terminals are brass, silver plated; base is phenolic.

7 PIN

Cat. No.		List Price each
9801	Saddle Mt., 1⅛'' shaft	$1.40

9 PIN

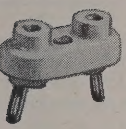
Cat. No.		List Price each
9809	Saddle Mt., 1⅛'' shaft	$1.65
9813	Shield Mt., 1⅛'' shaft	1.80



LAMINATED MINIATURE SOCKETS

Cat. No.		List Price each
49-1	7 Pin, ⅞'' M.C., 11/16'' wide	$0.10
49-2	W/center shield & ground strap	.11
49-21	9 Pin, 1⅛'' M.C., 1'' wide	.13
49-22	W/center shield & ground strap	.14

Additional sizes available.

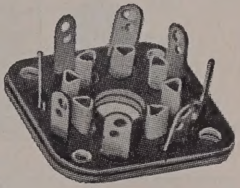


CRYSTAL SOCKET

CR-7 For crystals having .050 diameter pins and .486 spacing between pins. Steatite, grade L-5 JAN-1-10.

No. Cat.		List Price Each
8879	Phosphor bronze cadium plated contacts	$0.25
9006	Beryllium copper silver plated contacts	.35

LAMINATED OCTAL SOCKET



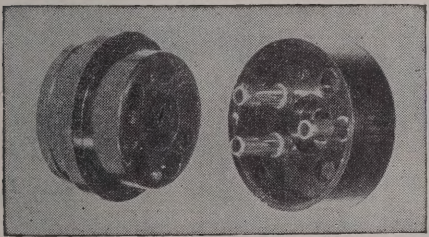
Cat. No. 46-5-E 8 prong:
Dimensions:
Mounting Centers 1-5/16''
Overall Width 1-13/32''
Overall Length 1⅝''
List Price $0.10 ea.

Cat No. 46-1-E 8 prong:
Dimensions:
Mounting Centers 1½''
Overall Width 1-13/32''
Overall Length 1-27/32''
List Price $0.10 ea.

GLASS TUBE TYPE:

Cat. No.		Mounting Centers	Width	Length	List Price each
34-1AA	4 prong	1½''	1⅜''	1⅞''	$0.12
34-1-B	5 prong	1½''	1½''	1⅞''	0.13
34-1-C	6 prong	1½''	1½''	1⅞''	0.14

SPEAKER CONNECTORS



Made of general purpose bakelite, plug is one piece construction, with protective flange that prevents touching of live contacts. Female is supplied with separate contacts for rapid assembly.

60-3M	3 Prong Male	List Price **$.11 Ea.**
60-4M	4 Prong Male	List Price **.12 Ea.**
60-5M	5 Prong Male	List Price **.13 Ea.**
60-5F	5 Contact Female for use with 3, 4, or 5 prong male	List Price **.12 Ea.**

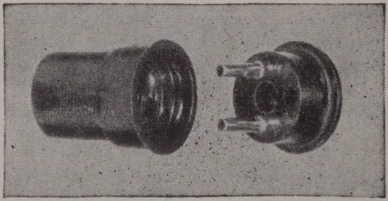
Above with wire leads available on request.

PHONO CONNECTORS

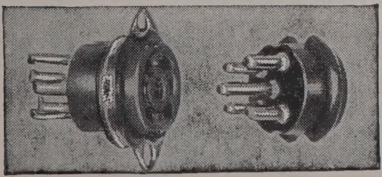
Designed for use in combining radio and phonograph sections of instrument, made of general purpose bakelite. Female is supplied with separate contacts, for use with 2, 3 or 4 prong male.

75-2M	2 Prong Male	List Price **$.10 Ea.**
75-3M	3 Pronge Male	List Price **.10 Ea.**
75-4M	4 Prong Male	List Price **.10 Ea.**
75-4F	4 Contact Female	List Price **.14 Ea.**

Above with wire leads available on request.



ALL-PURPOSE CONNECTOR



A new, compact connector made of general purpose bakelite for use where space is an important factor. Female, for use with 2, 3, 4 or 5 prong male, has saddle mount.

119-2M	2 Prong Male	List Price **$.10 Ea.**
119-3M	3 Prong Male	List Price **.10 Ea.**
119-4M	4 Prong Male	List Price **.10 Ea.**
119-5M	5 Prong Male	List Price **.10 Ea.**
119-5F	5 Contact Female	List Price **.15 Ea.**

TERMINAL STRIPS & SCREW TERMINALS

A complete selection of terminal lug strips and screw terminals are available on request. Write for our complete catalog.

EBY SALES COMPANY

INSULATED BINDING POSTS

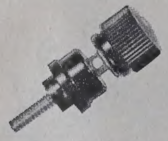
Knob and base are molded bakelite, with brass inserts and have non-removable tops.

Following have knurled base to prevent post twisting.

Spec's.	No. 30 Junior	No. 37 Ensign	No. 40 Commander	No. 43 Admiral	No. 48
Knob Diam.	½" x 7/16" H.	½" x 7/16" H.	9/16" x ½" H.	⅝" x 17/32" H.	Same as No. 43, with addition of brass bushing in knob head fitted to take any of the standard banana plugs.
Base Diam.	½" x ¼" H.	½" x ¼" H.	⅝" x ¼" H.	23/32" x ¼" H.	
Stem	6-32, ⅝"	6-32, ⅝"	8-32, ⅞"	8-32, ¾"	
Neck Diam.	3/16"	3/16"	13/64"	13/64"	
Neck Hole	3/32"	3/32"	3/32"	None	
List Price	$.35 Ea.	$.40 Ea.	$.55 Ea.	$.70 Ea.	$.75 Ea.

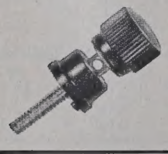
Following have boss on base to insulate stem from metal panel.

Boss is flat on two sides. Stem length is from bottom of boss.



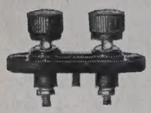
Spec's.	No. 38 Ensign	No. 41 Commander	No. 44 Admiral	No. 46 Admiral	No. 49
Knob Diam.	½" x 7/16" H.	9/16" x ½" H.	⅝" x 17/32" H.	11/16"x19/32"H.	Same as No. 44, with addition of brass bushing in knob head fitted to take any of the standard banana plugs.
Base Diam.	17/32"x¼"H.	⅝" x ¼" H.	23/32" x ¼" H.	23/32" x ¼" H.	
Stem	6-32, ½"	8-32, ⅝"	8-32, 9/16"	8-32, 9/16"	
Neck Diam.	3/16"	13/64"	13/64"	13/64"	
Neck Hole	3/32"	3/32"	None	None	
List Price	$.45 Ea.	$.60 Ea.	$.60 Ea.	$.75 Ea.	$.70 Ea.

Following have dowel pin on base.



Spec's.	No. 39 Ensign	No. 42 Commander	No. 45 Admiral	No. 47 Admiral	No. 50
Knob Diam.	½" x 7/16" H.	9/16" x ½" H.	⅝" x 17/32" H.	11/16"x19/32"H.	Same as No. 45, with addition of brass bushing in knob head fitted to take any of the standard banana plugs.
Base Diam.	½" x ¼" H.	⅝" x ¼" H.	23/32" x ¼" H.	23/32" x ¼" H.	
Stem	6-32, 9/16"	8-32, ¾"	8-32, ¾"	8-32, ¾"	
Neck Diam.	3/16"	13/64"	13/64"	13/64"	
Neck Hole	3/32"	3/32"	None	None	
List Price	$.45 Ea.	$.60 Ea.	$.60 Ea.	$.75 Ea.	$.70 Ea.

TWIN BINDING POSTS

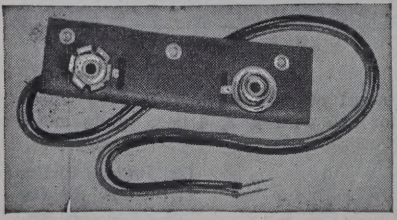


No. 21-R. All-molded Bakelite, non-removable tops. Both posts completely insulated. Center mounting screw 6/32" x ¼" long. Base is 2" long, 11/16" wide and 3/16" thick. Center distance between posts is ⅞". **List Price $0.85 Ea.**

No. 21-S. Same as above with one post insulated. One mounting screw at end of base, ground post is second mounting screw. **List Price $0.90 Ea.**

Individual metal and spring type binding posts are also available in a variety of sizes and styles. Write for our complete catalog.

BATTERY STRAPS



67-2 Battery snap fastener for 67½ volt B Battery. + and — terminal connections securely staked on tough fibreboard insulator. **List Price** ....**$0.28 Ea.**
69-2 Same as above for 90 volt battery.
List Price ....**$0.30 Ea.**

TIP JACKS

No. 49. Top diameter ½" x 5/32" thick. Threaded brass body 5/16" — 40 x ¾" long. One hexagon nut and two insulating washers furnished. Hole for washers is 19/64". Red or black bakelite top.

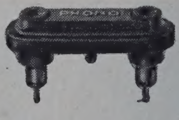
List Price: Red and Black..............**$0.20 Ea.**

No. 52. Top diameter ½" x ⅛" thick. Body is 5/16" x ¾" long. Special steel assembly washers, cadmium plated, are furnished. Red or black bakelite.

List Price: Red ....**$0.13 Ea.**
Black ...... **0.11 Ea.**

No. 76. Same style as No. 52. Top diam. ⅝" x 5/32" thick. Body is .500 x 27/32" long. **List Price: Red**....**$0.20** **Black**....**$0.17**

TWIN & TRIPLE JACKS



No. 17. One piece moulded bakelite base. Two terminals, 1⅜" apart. Has 6-32 x ¼" mounting screw at center.
List Price ....**$0.78 Ea.**

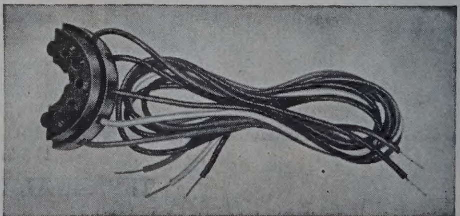
No. 18. Laminated Bakelite. Two terminals, ⅞" apart. 1-11/16" mounting centers. ⅝" wide x 2-1/16" long.
List Price ....**$0.15 Ea.**

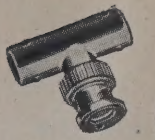
No. 18-T. Same as above with 3 terminals 9/16" apart. 1-15/16" M.C. 2⅜" long.
List Price ....**$0.23 Ea.**

WIRED TELEVISION SOCKET

Half Duo-Decal

9719 Five contact economy socket with 18" leads. Rear plate completely covers connections. Leads emerge from slots in side. Fits all standard duo-decal tube bases. **List Price** ....**$0.70 Ea.**





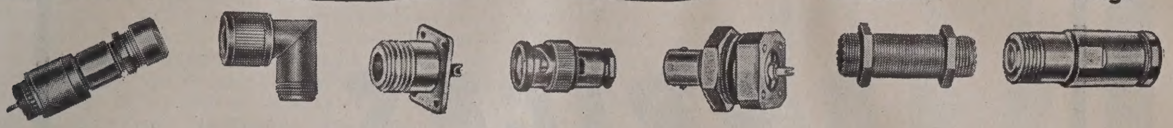
WALTHAM *CONNECTORS*

WALTHAM HOROLOGICAL CORPORATION

WALTHAM 54, MASSACHUSETTS

R. F. Connectors,

Telephone Plugs



Since it is impossible to show all of the various styles and types of connectors we manufacture we list below a few of the most popular numbers for reference purposes only. It is suggested that those interested send for our complete catalog.

ITEM NO.	TYPE - DESCRIPTION
1	UG 9/U PLUG (N)
2	UG 10/U PANEL JACK (N)
3	UG 11/U JACK (N)
4	UG 12/U PLUG (N)
5	UG 13/U PANEL JACK (N)
6	UG 14/U JACK (N)
7	UG 15/U PLUG (N)
8	UG 16/U PANEL JACK (N)
9	UG 18A/U PLUG (N)
10	UG 18B/U PLUG (N)
11	UG 19A/U PLUG (N)
12	UG 19B/U PLUG (N)
13	UG 20B/U PLUG (N)
14	UG 21/U PLUG (N)
15	UG 21A/U PLUG (N)
16	UG 21B/U PLUG (N)
17	UG 21C/U PLUG (N)
18	UG 21D/U PLUG (N)
19	UG 22B/U PANEL JACK (N)
20	UG 22C/U PANEL JACK (N)
21	UG 22D/U PANEL JACK (N)
22	UG 23/U JACK (N)
23	UG 23B/U JACK (N)
24	UG 23C/U JACK (N)
25	UG 27A/U RT. ANGLE ADAPTER (N)
26	UG 27B/U RT. ANGLE ADAPTER (N)
27	UG 28/U ADAPTER TEE (N)
28	UG 28A/U ADAPTER TEE (N)
29	UG 29/U ADAPTER STRAIGHT (N)
30	UG 29B/U ADAPTER STRAIGHT (N)
31	UG 30/U ADAPTER BULKHEAD PRESS (N)
32	UG 30B/U ADAPTER BULKHEAD PRESS (N)
33	UG 35/U RECEPTACLE
34	UG 39/U COVER FLANGE
35	UG 40/U CHOKE FLANGE
36	UG 53/U COVER FLANGE
37	UG 54/U CHOKE FLANGE
38	UG 57B/U ADAPTER, STRAIGHT (N)
39	UG 58/U RECEPTACLE (N)
40	UG 58A/U RECEPTACLE (N)
41	UG 59A/U PLUG (HN4)
42	UG 59B/U PLUG (HN4)
43	UG 60A/U JACK (HN4)
44	UG 61A/U PANEL JACK (HN4)
45	UG 83/U ADAPTER (N to UHF)
46	UG 85/U PLUG (BN)
47	UG 87/U RECEPTACLE (BN)
48	UG 88/U PLUG (BNC)
49	UG 89/U JACK (BNC)
50	UG 91A/U PLUG (N)
51	UG 92A/U JACK (N)
52	UG 93A/U PANEL JACK (N)
53	UG 94A/U PLUG (N)
54	UG 95A/U JACK (N)
55	UG 96A/U PANEL JACK (N)
56	UG 97A/U ADAPTER RT. ANGLE (LN)
57	UG 98A/U RECEPTACLE (LN)
58	UG 100A/U PLUG (LN)
59	UG 101A/U PANEL JACK (LN)
60	UG 102A/U PLUG (UHF)
61	UG 103A/U RECEPTACLE (UHF)
62	UG 104A/U ADAPTER RT. ANGLE (UHF)
63	UG 105A/U ADAPTER STRAIGHT (UHF)
64	UG 107B/U ADAPTER TEE (N)
65	UG 131/U ADAPTER (SKL to N)
66	UG 146/U ADAPTER (N to UHF)
67	UG 159A/U JACK BULKHEAD (N)
68	UG 160A/U JACK BULKHEAD (N)
69	UG 160B/U JACK BULKHEAD (N)
70	UG 173/U ADAPTER REDUCING (UHF)
71	UG 175/U ADAPTER REDUCING (UHF)
72	UG 176/U ADAPTER REDUCING (UHF)
73	UG 180A/U PLUG (PULSE)
74	UG 181A/U JACK BULKHEAD (PULSE)
75	UG 182A/U JACK (PULSE)
76	UG 185/U RECEPTACLE
77	UG 188/U PLUG (N)
78	UG 201/U ADAPTER (BNC to N)
79	UG 206/U RECEPTACLE (BN)
80	UG 212A/U ADAPTER RT. ANGLE (HN4)
81	UG 213/U ADAPTER (N to LN)
82	UG 213A/U ADAPTER (N to LN)
83	UG 224/U ADAPTER BULKHEAD (UHF)
84	UG 241/U PLUG TO RECEPTACLE
85	UG 242/U ADAPTER, TEE (BN)
86	UG 254A/U RECEPTACLE PRESS
87	UG 255/U ADAPTER (BNC to UHF)
88	UG 260/U PLUG (BNC)
89	UG 260A/U PLUG (BNC)
90	UG 261/U JACK (BNC)
91	UG 261A/U JACK (BNC)
92	UG 262/U PANEL JACK (BNC)
93	UG 273/U ADAPTER (BNC to UHF)
94	UG 274/U ADAPTER TEE
95	UG 290/U RECEPTACLE (BNC)
96	UG 291/U PANEL JACK (BNC)
97	UG 306/U ADAPTER RT. ANGLE (BNC)
98	UG 309/U ADAPTER (BNC to HN)
99	UG 342/U PLUG RT. ANGLE (BN)
100	UG 414/U ADAPTER STRAIGHT (BNC)
101	UG 421/U PLUG (UHF3)
102	UG 496/U
103	UG 516/U ADAPTER (LN to N)
104	UG 535/U RECEPTACLE RT. ANGLE (BNC)
105	UG 536/U PLUG (N)
106	UG 589/U
107	UG 625/U RECEPTACLE (BNC)
108	MX 913/U CAP & CHAIN (N)
109	CW 123/U CAP & CHAIN
110	CW 155/U CAP
111	SO 239 RECEPTACLE (UHF)
112	PL 258 ADAPTER STRAIGHT (UHF)
113	PL 259 PLUG (UHF)
114	PL 259A PLUG (UHF)
115	PL 274 PLUG (UHF)

SEND FOR THIS CATALOG

complete - illustrated - comprehensive listing all Waltham products.

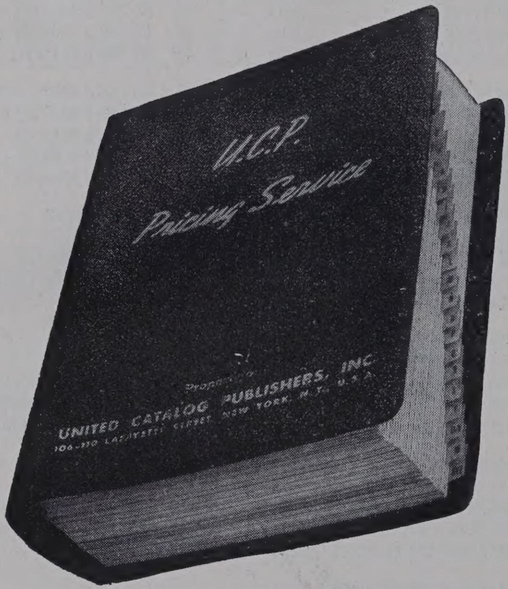
WALTHAM
Will meet your quality and time requirements

TELEPHONE PLUGS MADE IN ACCORDANCE WITH JAN-P-642 SPEC.
SCREWS, TERMINALS & SHELLS PACKED SEPARATELY
TYPE PJ 047B, PJ 051 (#310), PJ 054B, PJ 540B, PJ 055B, PJ 068

PRICES

Prices of manufacturers and suppliers' products listed in **RADIO'S MASTER** are subject at all times to change without notice — they should not be considered final.

Get quick on-the-spot quotations from your distributor who subscribes to our perpetual up-to-the-minute **PRICING SERVICE.**


U.C.P.
Pricing Service
UNITED CATALOG PUBLISHERS, INC
106-110 LAFAYETTE STREET NEW YORK N.Y. U.S.A.

Official Pricing System of radio - electronic - television parts and equipment. Supported by the industry: distributors, manufacturers, and their sales representatives.

•

Loose-leaf, flexible binder. Contains over 1100 pages.

•

Published by
UNITED CATALOG PUBLISHERS, INC.
106-110 Lafayette Street
New York 13, N. Y.

DELIVERY

Delivery is often dependent on the availability of raw **materials.** So check with your distributor for delivery information.

American Beauty

ELECTRIC SOLDERING IRONS

These electric soldering irons embody features of design and construction that specialized experience dating from 1894 in the exclusive manufacture of electric heating appliances has demonstrated to be desirable for efficient and lasting service. Hundreds of thousands are in use throughout the world in a wide variety of manufacturing plants; in service, maintenance and repair shops and in telephone, telegraph, radio and TV stations. Because of their proven dependability, durability and efficiency they are preferred by those who measure the value of a tool or mechanical device by the service rendered.

No. 3128—For servicing TV, electronic and radio equipment and similar light work.

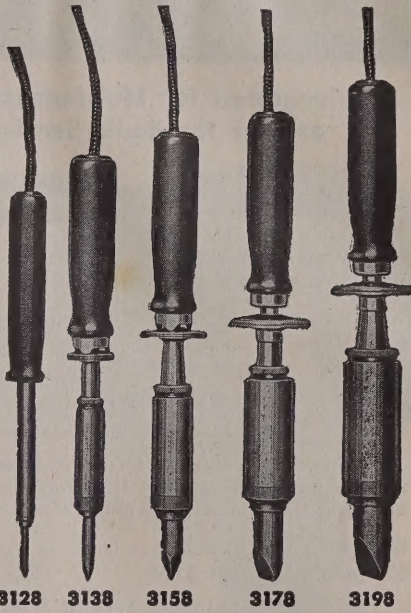
No. 3138—For TV, electronic and radio production; also for telephone, telegraph and similar work.

No. 3158—For the same purposes as the No. 3138 but for work requiring an iron of greater capacity.

No. 3178—For use on still heavier work than that for which the Nos. 3138 and 3158 irons are adapted.

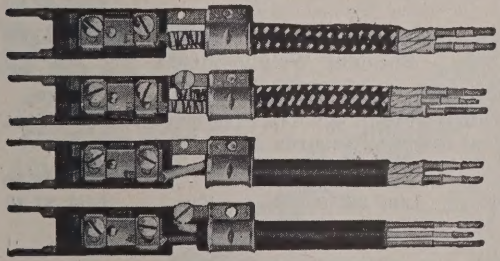
No. 3198—For use on very heavy soldering operations of all kinds.

Made in standard voltages and for 32 volts. No. 3138 also made for 6, 12, 24 and 55 volts. All sizes can be equipped with 3-conductor cord, one wire grounded, at slight additional charge. Separate heat-insulating stand supplied with each iron.



RELATIVE SIZES, SPECIFICATIONS AND PRICES

Cat. No.	Diameter of Tip	Watts	Net Weight	Length Over All	Casing Diameter	Approx. Ship. Wt.	List Price Each	Net Price Each (Less than 6)	Net Price Each (6 or more)
3128	¼″	60	7½ oz.	12¼″	9/16″	16 oz.	$ 5.50	$ 3.67	$ 3.51
3138	⅜″	100	16 oz.	12⅞″	⅞″	2 lbs.	8.75	5.83	5.58
3138 is made also in 130- and 150-watt inputs.)									
3158	⅝″	200	28 oz.	13⅝″	1¼″	3 lbs.	10.25	6.83	6.53
3178	⅞″	300	42 oz.	14⅜″	1 9/16″	4 lbs.	13.50	9.00	8.61
3198	1⅛″	550	60 oz.	15″	1¾″	5¾ lbs.	17.50	11.66	11.16



TERMINAL CONDUCTOR ASSEMBLY

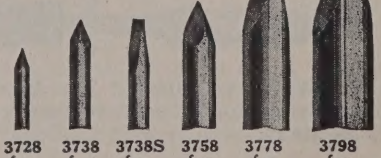
This illustration shows the Terminal Connector Assembly used in all American Beauty electric soldering irons. It is designed for use with either 2- or 3-conductor standard heater cord or rubber-covered cord—Types SJ, HSJ, etc.

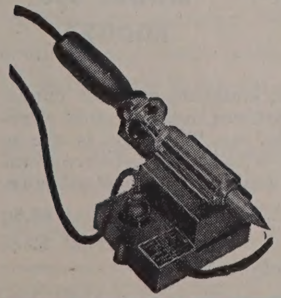
This assembly permits easy grounding for safety by a third conductor—particularly desirable when irons are used on 220-volt circuits or on metal benches accommodating groups of operators.

The cord is held firmly in place by a strain-clamp.

American Beauty COPPER TIPS

American Beauty Copper Tips are made from commercially pure, drawn bar copper rod and are heavily nickeled to resist corrosion and oxidation. Standard shaped tips with which various models are equipped are shown in illustration but pyramidal, instead of chisel type, and vice versa can be supplied when so specified without additional charge. For No. 3138 a special long, semi-chisel shaped tip (No. 3738-S) can be supplied for telephone, switchboard, television and radio work.





American Beauty TEMPERATURE REGULATING STAND

For use on (AC) Alternating Current Only

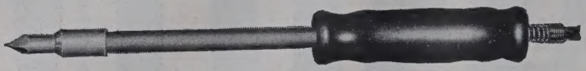
This is a thermostatically controlled device for the regulation of the temperature of an Electric Soldering Iron while at rest. Through an adjustment on bottom of stand the thermostat may be set for maintenance of any desired heat—from very low, or warm, to full working temperature. It is designed for use with Electric Soldering Irons up to 660 watts capacity and on circuits up to 240 volts.

Cat. No.	Net Weight	List Price	Net Price
475	27 oz.	$6.25	$4.41

Net

DRAKE RADIO IRONS

Suggested for Maintenance Work and for the Radio Service Man



60 Watt Iron with ⅜″ Tip. An excellent iron for light work. Porcelain element. Six ft. cord and small stand.

No. 315 .... List $2.50
Element............ List $1.00 Tip............ List $0.90
Shipping Weight 1 lb.

100 Watt Iron with ⅜″ Tip. An ideal iron for those who require a hotter iron than our No. 315. Porcelain element. Six ft. cord and small stand.

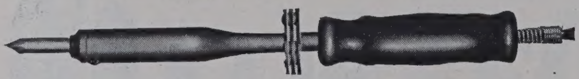
No. 316 .... List $3.40
Element............ List $1.50 Tip............ List $1.80
Shipping Weight 1 lb.

80 Watt Iron with ⅜″ Tip. Recommended for light radio work. Mica wound element. Six ft. cord and large stand.

No. 225 .... List $5.50
Element............ List $3.40 Tip............ List $1.25
Shipping Weight 1½ lbs.

100 Watt Iron with ⅜″ Tip. Recommended for general radio work. Mica wound element. Six ft. cord with large stand.

No. 325 .... List $6.00
Element............ List $4.00 Tip............ List $1.25
Shipping Weight 1½ lbs.



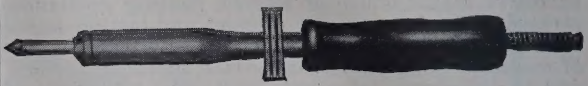
125 Watt Iron with ⅜″ Tip. An extra hot iron for the serviceman. Mica wound element. Six ft. cord and large stand.

No. 326 .... List $6.50
Element............ List $5.00 Tip............ List $1.25
Shipping Weight 2 lbs.

200 Watt Iron with ⅝″ Tip. Recommended for medium heavy work. Mica wound element. Six ft. cord and large stand.

No. 425 .... List $11.00
Element............ List $9.00 Tip............ List $ 2.00
Shipping Weight 2 lbs.

INDUSTRIAL IRONS



60 Watt Iron with ¼″ Tip. An extra small iron for midget sets. Only 9″ long.

No. 400 .... List $6.00
Element............ List $4.50 Tip............ List $0.60
Shipping Weight 1 lb.

100 Watt Iron with ⅜″ Tip. Only 10 inches over all. Ideal for close work on radio sets.

No. 600-10 .... List $9.00
Element............ List $7.00 Tip............ List $1.25
Shipping Weight 2 lbs.

140 Watt Iron with ⅜″ Tip. An extra hot iron for high speed work on production lines.

No. 600 Special .... List $9.50
Element............ List $7.50 Tip............ List $1.25
Shipping Weight 2 lbs.

80 Watt Iron with ⅜″ Tip. Recommended for fine instruments, light telephone and other light soldering.

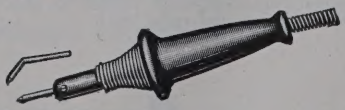
No. 450 .... List $7.00
Element............ List $5.00 Tip............ List $1.25
Shipping Weight 2 lbs.

100 Watt Iron with ⅜″ Tip. The standard 100 watt iron. Ideal for switchboards and radio sets.

No. 600 .... List $8.50
Element............ List $6.50 Tip............ List $1.25
Shipping Weight 2 lbs.

200 Watt Iron with ⅝″ Tip. For general factory work such as art glass, medium tin work.

No. 800 .... List $11.00
Element............ List $9.00 Tip............ List $ 2.00
Shipping Weight 3 lbs.



MODEL 350 MIDGET

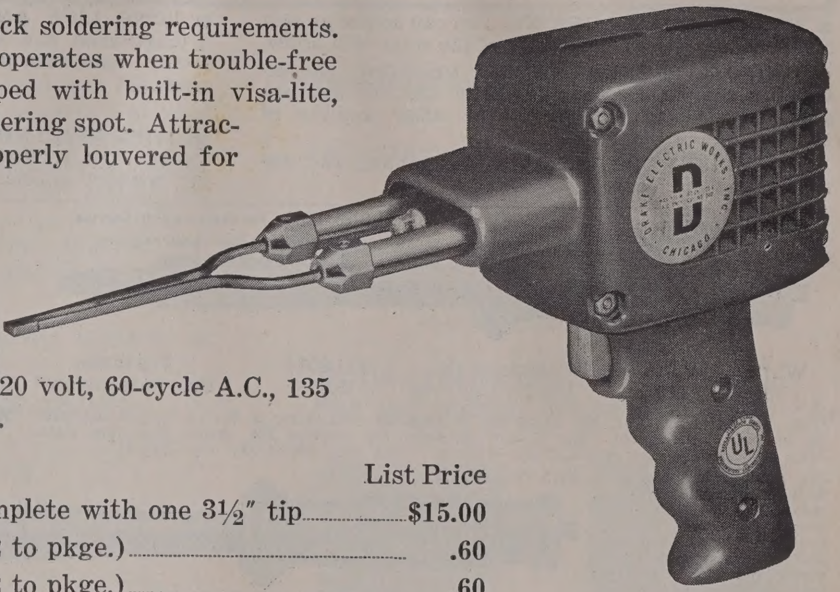
Recommended for voice coil leads on speaker cones, meter connections, test equipment, hearing aids, crystal pickups, headphone leads, etc. This iron is a continuous duty 35 watt iron with a nickel-chromium element wound over mica insulation on a steel core.

No. 350 .... List $5.50
Element............ List $4.00 Tips, ea............ List $0.25
Shipping Weight 1 lb.

DRAKE

SOLDER GUN
HEAT CONTROLS
SOLDER POTS

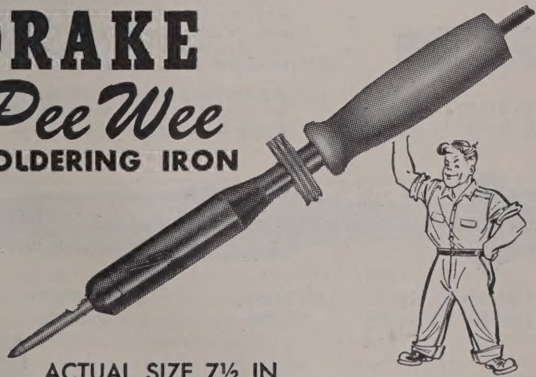
DRAKE "*insta-heat*" SOLDERING GUN



Always ready to use for quick soldering requirements. Saves power since gun only operates when trouble-free trigger is squeezed. Equipped with built-in visa-lite, properly focused to light soldering spot. Attractive maroon plastic case properly louvered for operation. Balance engineered by one of America's most famous industrial designers. Complete with easily removed tip, one 3½" tip for ordinary soldering. Operates on 110-120 volt, 60-cycle A.C., 135 watts. Shipping weight 3 lbs.

		List Price
No. 900	Soldering Gun, complete with one 3½" tip	$15.00
No. 901	Extra 3½" Tips (2 to pkge.)	.60
No. 902	Extra 6½" Tips (2 to pkge.)	.60

DRAKE *Pee Wee* SOLDERING IRON

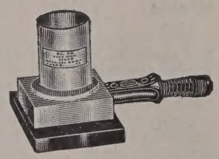


ACTUAL SIZE 7½ IN.

Designed specifically to be carried in a tool kit for "on the job" soldering. Excellent for all fine work—small, compact size makes it easy to handle. A full 35 watts with 3/16" tip. Operates on 110-120 volt, 60-cycle A. C. Baffle plates keep handle cool. Blued finish. Shipping weight, complete with stand, 1 lb.

Element............List $3.60 Tip............List $0.40
Shipping weight 1 lb.
No. 360 ....List Price **$4.50**

Drake Solder Pots For Production Lines



Model No. 200—300 Watt Unit

An ideal electric solder pot for production use. Used in factory production of tinned wire ends, terminal tinning and countless other volume tinning applications. Holds 2 lbs. of bar solder in 2½" diameter 2" deep cast iron well. Complete with detachable Underwriters' Approved cord and plug, and bale type carrying handle. Genuine nichrome element. Shipping weight 6 lbs.

No. 200 ....List Price **$7.50**

Model No. 100—150 Watt Unit

Designed for light tinning. Ideal for occasional jobs. Suited especially for tinning ends of stranded wires to prevent fraying. Can also be used for soldering cord tips to cables. One piece cast iron construction holds heat longer. Size of pot 1½" diameter 1" deep. Holds 1 lb. of bar solder. Complete with Underwriters' Approved cord and detachable plug. Shipping weight 3 lbs.

No. 100 ....List Price **$6.00**

SOLDERING IRONS

With Calrod* Heaters

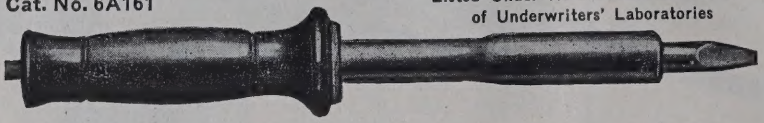
FOR EVERY RADIO REQUIREMENT MANUFACTURING — SERVICE

*Registered trade-mark

- **HIGH-SPEED SOLDERING.** You can solder as fast and continuously as the nature of the work will allow.
- **UNIFORM PERFORMANCE.** Operating characteristics remain constant day after day. No appreciable decrease in efficiency even after months of service.
- **EASY, LOW-COST REPAIR.** Assembling and disassembling are easy.
- **LONG LIFE AND LOW MAINTENANCE.** Life is lengthened, and over-all costs are kept low because sturdy construction eliminates need of frequent repairs.
- **THEY NEED NOT BE RETURNED TO THE FACTORY FOR REPAIR.** Irons can be repaired on the job without special tools or skill.

Cat. No. 6A161

Listed Under Re-examination Service of Underwriters' Laboratories



Watts	Volts
75	115

Calorized tip ....$11.80*†
IRONCLAD tip ...... 12.50*†

Tip diam.
See note below*

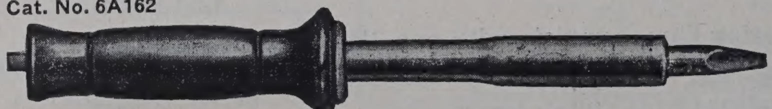
⅜-in. ½-in. ½-in.

For light, intermittent soldering such as radio assembly and repair and installation, switchboard, ignition, wiring devices, meters and instruments, or very light high-speed soldering of similar products

WEIGHTS: Less cord, 15 oz. With cord, 20 oz. Shipping, 26 oz.
Equal to old-style copper—1¼-lb.

*Cat. No. 6A161 and Cat. No. 6A162 can be supplied with either a ⅜- or ½-inch diameter tip at prices given. The long ½-inch diameter tip projects 3⅜ inches from the shell. Price of iron with long calorized tip—$12.30 with long IRONCLAD tip—$13.40.

Cat. No. 6A162



For light, high-speed soldering, such as assembly of radios, telephones, switchboards, appliances, meters, and instruments, and installation and repair of wiring and wiring devices, ignition. Excellent for service and repair men.
WEIGHTS: Less cord, 15 oz. With cord, 20 oz. Shipping, 26 oz.
Equal to old-style copper—1¾ lb.

Watts	Volts
100	115

Calorized tip ....$11.80*†
IRONCLAD tip ...... 12.50*†

Tip diam.
See note above*

⅜-in. ½-in. ½-in.

Cat. No. 6A200

Watts	Volts
100	115

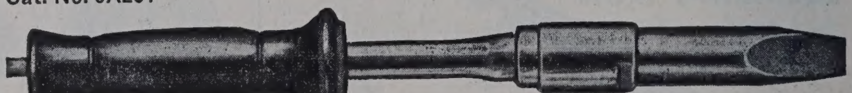
Calorized tip ....$13.30†
IRONCLAD tip .... 14.90†

Tip. diam.
¾ inch

For light, high-speed soldering, such as assembly of radios and switchboards, medium intermittent soldering on tinware, wiring, plumbing, and tinsmithing. Excellent general-purpose iron for shop and farm.

WEIGHTS: Less cord, 16 oz. With cord, 21 oz. Shipping, 27 oz. Equal to old-style copper—2-lb.

Cat. No. 6A201



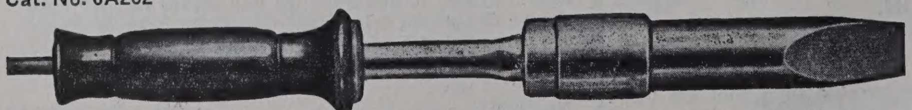
For medium, high-speed soldering of automobile and airplane assembly, electric equipment, light tanks and containers of copper and steel. Excellent general-purpose iron for manufacturing plant.
WEIGHTS: less cord, 24 oz. With cord, 29 oz. Shipping, 34 oz.
Equal to old-style copper—3-lb.

Watts	Volts
200	115

Calorized tip ....$16.60†
IRONCLAD tip ...... 18.60†

Tip. diam.
1 inch

Cat. No. 6A202



Watts	Volts
300	115

Calorized tip ....$20.10†
IRONCLAD tip........ 22.10†

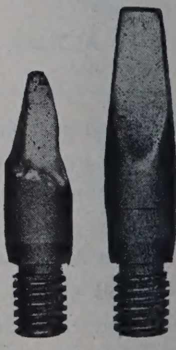
Tip. diam.
1¼ inch

For heavy work such as light commutators, large - diameter pipe, medium-gage copper or steel tank and container material, roofing, heavy tinware.
WEIGHTS: Less cord, 37 oz. With cord, 42 oz. Shipping, 48 oz.
Equal to old-style copper—4-lb.

ASK ABOUT IRONCLAD TIPS

IRONCLAD TIPS MEAN

- No Filing
- Lower Upkeep Cost
- Less Maintenance
- Longer Life



Effect of solder (250 C for 363.5 hours) on plain copper (left) and Ironclad copper (right) soldering tips.

Note—230-volt irons available on request. Same prices apply. Above prices include supporting stand.

† Mfgr's suggested retail price.

ASK YOUR DISTRIBUTOR FOR A COPY OF BULLETIN GEA-4519.

MIDGET SOLDERING IRONS

FOR MANUFACTURING AND SERVICE OF RADIO AND ELECTRONIC EQUIPMENT

APPLICATION

This 8-inch, 1¾-ounce featherweight iron for close-quarter soldering with pin-point precision is used where conventional irons might cause damage . . . be clumsy to handle . . . be more expensive to operate. The Midget literally goes places with greater efficiency and less power . . . with no sacrifice in heat or speed. With its fingertip operation, this iron will help make an expert out of any solderer in a short time.

The Midget has Ironclad copper tips either ⅛- or 3/16-inch diameter, as desired.

THIS MIDGET DOES A BIG JOB IN

- Boosting Production Rates
- Increasing Operator Efficiency
- Cutting Down Employee Fatigue
- Saving on Repair and Maintenance
- Reducing Rejects
- Manufacturing and Repairing:
    - Radios and other electronic equipment
    - Meters
    - Instruments
    - Jewelry
    - Appliances

. . . and many other products
requiring precision soldering

RATING: 6 VOLTS, 25 WATTS

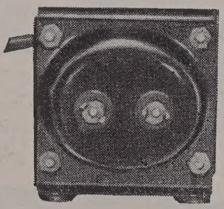
Description	Cat. No.	Price†
⅛-in. Ironclad copper tip (pyramid-shaped)	6A212	$6.60
¼-in. Ironclad copper tip (chisel-shaped)	6A210	6.60
3/16-in. Ironclad copper tip (pyramid-shaped)	6A214	6.60
⅛-in. Renewal tip and heater assembly	6A213	3.60
¼-in. Renewal tip and heater assembly	6A211	3.60
3/16-in. Renewal tip and heater assembly	6A215	3.60

Net weight iron less cord 1¾ oz.
Net weight iron including cord 5 oz.
Shipping weight complete iron 8 oz.
Standard package consists of 6 irons of one tip size. Tip and heater assemblies can be purchased in any quantities.

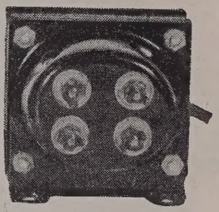
⅛- and 3/16-in. dia. tip, Cat. Nos. 6A212 and 6A214

¼-In. dia tip, Cat. No. 6A210

SPECIAL TRANSFORMERS (OPTIONAL) FOR G-E MIDGET SOLDERING IRONS



Single-tap, Cat. No. 6A362



Four-tap, Cat. No. 6A364

Specially designed 115-volt transformers are available as optional equipment in two types:

1. Single-tap 115/6 volts—for use where only one soldering heat is required
2. Four-tap 115/6.3/6/5.7/5.4 volts — gives wide range of heats (from 20 to 30 watts) for close temperature control of tips

Transformers are small, lightweight, but sturdy. Their 6-foot extension cords can be plugged in any 115-volt a-c circuit.

Description	Cat. No.	Price†
Single-tap	6A362	$5.30
Four-tap	6A364	7.90

Publication Reference GEA-4519

THE MIDGET OFFERS MAJOR ADVANTAGES

Low-cost soldering—Solders more efficiently, using only approximately one-fourth wattage normally used.

Fingertip operation—Only 8 inches long, weighs but 1¾ ounces. Styled for fingertip grip.

Quick, continuous heat—Famous G-E Calrod* heater built into Ironclad copper tip for rapid heat transfer.

Easy renewal—Ironclad tip and heater can be replaced as a unit merely by unscrewing from handle.

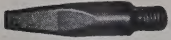
Long life, low maintenance—Low voltage permits use of heavy, long-lasting resistant wire. Reduced servicing with long-lasting Ironclad copper tip.

* Registered trade-mark.
† Manufacturers' suggested retail price.

HEXACON ELECTRIC SOLDERING IRONS

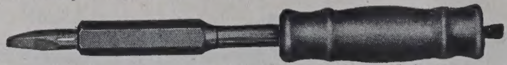
GENERAL INFORMATION—Equipped with 6 ft. (10,000 cycle) approved heater cord (covered with twine braid for extra long wear) and rubber plug. Continental or English type plugs 25c extra list. Metal stand furnished with each iron. Heating elements made of best grade nickel-chromium resistance wire, insulated with finest mica obtainable. Elements in the plug tip irons are replaceable by the user and in the screw tip irons replaceable at the factory. Tips in all irons are replaceable; made of hard drawn pure copper. Case is made from solid Hexacon steel (except No. 50 and P-30), affording it great mechanical strength, preventing denting. Terminal easily accessible and constructed to relieve cord strain. Smooth, cool, comfortable handle—readily replaceable. Voltage range: 32 to 250. Standard voltages 110/120, 121/130, 220/250. All other voltages $1.00 extra list.

SCREW TIP IRONS

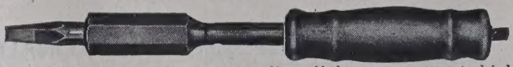


No. 50—For light soldering on radio, telephone and electrical apparatus. 50 Watts. Tip diam., 7/16". Ship. wt., 1 lb. Equal to ½-lb. old style copper....each **$5.00**

No. 60—Medium light soldering on telephone, radio, apparatus and linemen's kits. 60 Watts. Tip diam., ½". Ship. wt., 1⅛ lb. Equal to 1-lb. old style copper....each **$7.00**



No. 85—A high speed tool for telephone, radio and home use. 90 Watts. Tip diam., ½". Ship, wt., 1¼ lb. Equal to 1½-lb. old style copper ....each **$7.75**



No. 120—Light tinware, toys, typewriter, light auto, etc. A high speed iron. 120 Watts. Tip diam., ⅝". Ship. wt., 1⅜ lb. Equal to 2-lb. old style copper....each **$8.50**

No. 130—Same as No. 120 except has larger tip and 10 more watts capacity. 130 Watts. Tip diam., ⅞". Ship. wt., 1⅝ lb. Equal to 2-lb. old style copper....each **$9.50**

No. 170—Medium tinware, small cans, auto repairs, pipes, gutters, toys, small motors. 175 Watts. Tip diam., 1". Ship. wt., 2¼ lb. Equal to 2½-lb. old style copper....each **$10.50**

No. 225—Medium tinware, cans, auto repairs, metal patterns, light roofing, small branders. 250 Watts. Tip diam., 1⅛". Ship wt., 2⅝ lb. Equal to 3-lb. old style copper....each **$12.50**

No. 350—Heavy tinware, large cans, autos, roofing, refrigerators, ship and airplane. 350 Watts. Tip diam., 1⅜". Ship wt., 3⅜ lb. Equal to 4-lb. old style copper....each **$14.00**

No. 500—Auto repairs, sinks, roofs, cans, armatures, large branders, tinsmiths, etc. 500 Watts. Tip diam., 1⅝". Ship. wt., 4 lb. Equal to 5-lb. old style copper....each **$16.00**

No. 700—For extra heavy soldering and large branders. 700 Watts. Tip diam., 1¾". Ship. wt., 5 lbs. Equal to 7-lb. old style copper. each **$30.00**

OPERATE ON A.C. OR D.C., ANY CYCLE

PLUG TIP IRONS

No. P-30—For extremely light soldering on finest wire and delicate instruments. 40 Watts. Tip diam., ¼". Ship. wt., ⅝ lb. Equal to ¼ lb. old style copper....each **$5.00**

No. P-70—For light soldering on radio and telephone apparatus and electrical instruments. 80 Watts. Tip diam., ⅜". Ship. wt., 1⅛ lb. Equal to 1-lb. old style copper....each **$7.00**

No. P-100—A high speed tool for telephone switchboards, electrical instruments, etc. 100 Watts. Tip diam., ⅜". Ship. wt., 1¼ lb. Equal to 1½-lb. old style copper....each **$7.75**

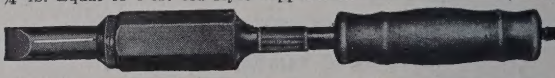
No. P-125—For light tinware, toys, typewriter type bars, small cans, auto, etc. 130 Watts. Tip diam., ⅝". Ship. wt., 1½ lb. Equal to 2-lb. old style copper....each **$9.25**

No. P-150—Extra high speed iron for radios, electrical apparatus and where a light iron with small diameter is required. 150 Watts. Tip diam., ⅜". Ship. wt., 1¾ lb. Equal to 2-lb. old style copper each **$8.50**

No. P-151—Same as No. P-150, except where a larger tip is desired. 175 Watts. Tip diam., ½". Ship. wt., 1¾ lb. Equal to 2½-lb. old style copper....each **$9.00**

No. P-200—For medium tinware, cans, auto repairs, light roofing, sheet metal, etc. 200 Watts. Tip diam., ⅝". Ship wt., 2⅛ lb. Equal to 2¾-lb. old style copper....each **$9.50**

No. P-250—Same as No. P-200, except where greater speed is required for manufacturing. 250 Watts. Tip diam., ⅝". Ship. wt., 2¼ lb. Equal to 3-lb. old style copper....each **$10.75**



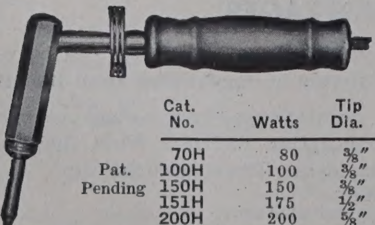
No. P-300—For heavy tinware, large cans, auto, roofing, refrigerator work, etc. 300 Watts. Tip diam., ⅞". Ship. wt., 2⅞ lb. Equal to 4-lb. old style copper....each **$12.50**

No. P-550—For auto radiators, copper sinks, roofs, heavy armatures, large branders, etc. 550 Watts. Tip diam., 1⅛". Ship. wt., 4⅛ lb. Equal to 5-lb. old style copper....each **$16.50**

SPECIFY VOLTAGE WHEN ORDERING

HEXACON HATCHET TYPE IRON

For same use as Plug Tip irons of equal wattage, shown above. Replaceable elements and all other features of Plug Tip Irons.



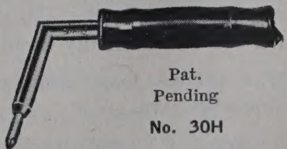
Perfect Balance
Less Fatigue
Better Soldered Joints

Pat. Pending

Cat. No.	Watts	Tip Dia.	Ship. Wt.	Price
70H	80	⅜"	1⅜ lbs.	$ 9.00
100H	100	⅜"	1½ lbs.	9.75
150H	150	⅜"	2 lbs.	10.50
151H	175	½"	2 lbs.	11.00
200H	200	⅝"	2⅜ lbs.	11.50
300H	300	⅞"	2⅞ lbs.	14.50

HEXACON FEATHERWEIGHT HATCHET IRON

So light its weight is hardly noticeable, but more powerful than the wattage rating would indicate. Hatchet design makes iron effortless to use. No transformer or other cumbersome and expensive equipment required.



Pat. Pending

No. 30H

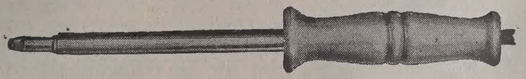
List Price....$5.50
Weight: 5½ ozs. (less cord).
*Watts: 40, 50 or 60.
Both ⅛" and ¼" dia. tips furnished with each iron.
Shipping weight: 1 lb.
*Specify watts when ordering.

SOLDERMASTER Royal Blue Line
ELECTRIC SOLDERING IRONS

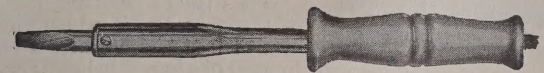
GENERAL INFORMATION—Replaceable elements. Best grade of Madagascar mica for insulation. No. 55 has brass-sheathed cartridge element. Best grade nickel-chrome resistance wire. Replaceable hard drawn copper tips. All one piece swaged cases gun metal finish. Equipped with 6 ft. Underwriters' Approved heater cord, rubber plug. Continental or English type plug 25c extra list. Stand for resting iron furnished.

VOLTAGES 110/120 220/250 A.C. or D.C., ANY CYCLE
SPECIFY VOLTAGE WHEN ORDERING

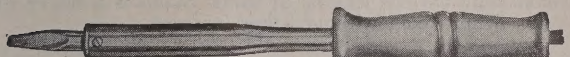
SCREW TIP IRONS



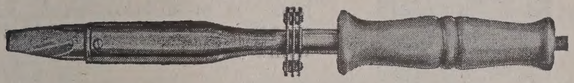
No. 55B—For light soldering, radio apparatus, etc. 55 Watts. Tip diam., 7/16". Ship. wt., 13 oz..........each **$2.75**



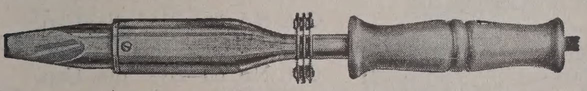
No. 76B—For light work, electrical instruments, etc. 75 Watts. Tip diam., ½". Ship. wt., 15 oz..........each **$4.50**



No. 100B—Same as No. 76B except used where more speed is required and heavier work is done. For home use. 90 Watts. Tip diam., ½". Ship. wt., 16 oz..........each **$5.00**

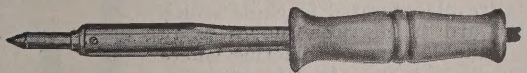


No. 150B—Ideal size for garage and repair work. For home use. 170 Watts. Tip diam., ⅞". Ship. wt., 24 oz..........each **$7.00**

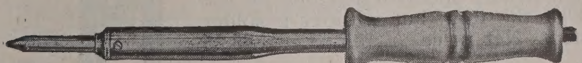


No. 300B—For heavy steel metal, auto radiators, etc. 275 Watts. Tip diam., 1⅛". Ship. wt., 38 oz..........each **$10.00**

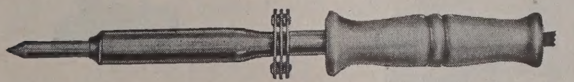
PLUG TIP IRONS



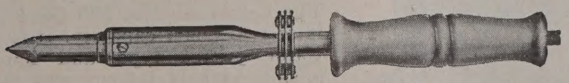
No. 71B—For light work, radio repairs, etc. 75 Watts. Tip diam., ⅜". Ship. wt., 16 oz..........each **$4.50**



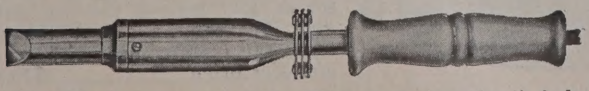
No. 101B—For same work as No. 71B, but where more speed is required or heavier work is done. For home use. 100 Watts. Tip diam., ⅜". Ship. wt., 18 oz..........each **$5.00**



No. 121B—High speed iron for radio and electrical repairs. 125 Watts. Tip diam., ⅜". Ship. wt., 1¾ lbs..........each **$6.00**



No. 201B—For same work as No 150B, except where plug tip is desired. 200 Watts. Tip diam., ⅝". Ship. wt., 34 oz..........each **$8.00**



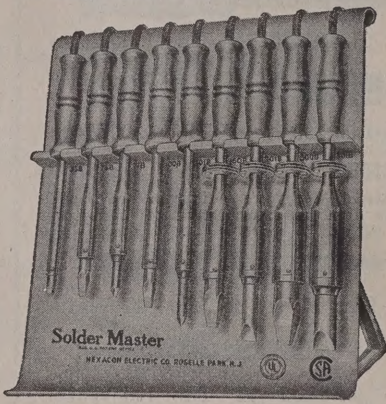
No. 301B—For same work as No. 300B, except where plug tip is desired. 300 Watts. Tip diam., ⅞". Ship. wt., 46 oz..........each **$10.00**

DISPLAYS

Increase your sales with these silent salesmen. Irons securely mounted, but readily removable for sale. Individually packed in cartons ready for shipment. Catalog number and wattage shown on front of display. Complete catalog information and price list on back.

SCROLL TYPE DISPLAY

Striking, Modernistic, All Metal Panel



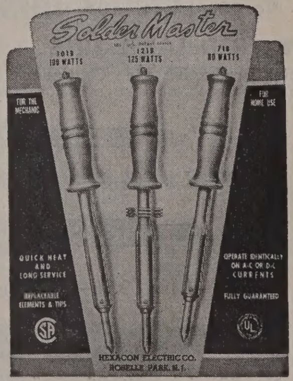
No. 1 DISPLAY Illustrated
Size 15" x 17½" (Nos. 1B, 2B, and 3B also same size)
This Display Panel Also Furnished With
Five or Seven Irons (See Below)

	Ship. Wt.	List Price
No. 1B—Nine Iron with Nos. 55B, 76B, 100B, 150B, 300B, 71B, 101B, 201B, 301B....	20 lbs.	**$56.75**
No. 2B—Seven Iron with Nos. 55B, 76B, 100B, 150B, 300B, 71B, 101B..........	17 lbs.	**38.75**
No. 3B—Five Iron with Nos. 55B, 76B, 100B, 150B, 300B..........	15 lbs.	**29.25**
No. 4B—Five Iron with Nos. 71B, 101B, 121B, 201B, 301B..........	16 lbs.	**33.50**

ATTRACTIVE THREE COLOR CARDBOARD DISPLAY

This same display card also furnished with No. 5B and No. 5DB, but mounted with irons listed below.

No. 6B DISPLAY Illustrated
Size 12" x 16½"
(Nos. 5B, 5DB also same size)



	Ship. Wt.	List Price
No. 5B—Three Iron with Nos. 55B, 76B, 100B ...	4 lbs.	**$12.25**
No. 5DB—Three Iron with Nos. 55B, 100B, 150B on display and 2 No. 55B and 1 No. 100B for stock..........	8 lbs.	**25.25**
No. 6B—Three Iron with Nos. 71B, 101B, 121B....	5 lbs.	**15.50**

ESICO

REG. U. S. PAT. OFF.

ELECTRIC SOLDERING IRONS FOR HOME, PROFESSIONAL MECHANIC AND FACTORY

• GREEN LABEL LINE

For intermittent duty. Meets all requirements of the home craftsman.

No. 415—List $2.15—3/8" Tip—55 Watts

No. 416—List $3.25—1/4" Tip—60 Watts

No. 417—List $4.35—3/8" Tip—100 Watts

No. 418—List $5.45—1/2" Tip—130 Watts

• ORANGE LABEL LINE

For Professional Mechanics — light or heavy soldering where iron must withstand operation for eight hour periods or more on frequent occasions.

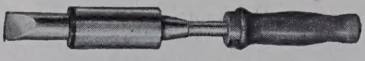
No. 62—List $5.45—1/4" Tip—60 Watts

No. 63—List $6.55—3/8" Tip—100 Watts

No. 64—List $7.65—1/2" Tip—130 Watts

No. 65—List $8.75—5/8" Tip—200 Watts

No. 67—List $9.85—7/8" Tip—300 Watts



No. 69—List $12.05—1 1/8" Tip—500 Watts

• RED LABEL LINE

For Production Line Continuous Operations. These Irons are of most rugged construction.

No. 38—List $7.65—3/8" Tip—100 Watts

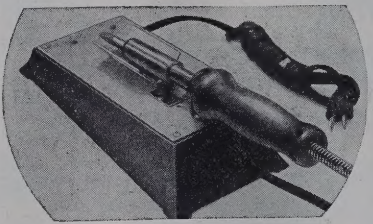
No. 58—List $9.85—5/8" Tip—200 Watts

No. 78—List $12.05—7/8" Tip—300 Watts

No. 98—List $14.25—1 1/8" Tip—550 Watts

FOR FASTER SOLDERING . . . LONGER IRON LIFE

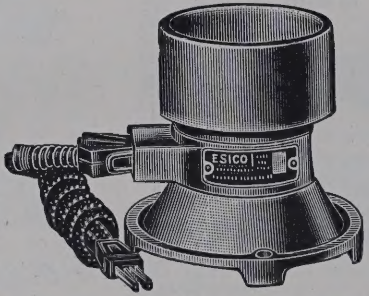
MAINTAINS DESIRED IRON TEMPERATURE BETWEEN JOBS • PREVENTS OVERHEATING SAVES ELECTRIC CURRENT • ADJUSTABLE TO ANY SIZE IRON SAVES TIME • NO LONG WARM-UP PERIOD



A practical, time and money saving device which accurately regulates and maintains soldering iron temperature between jobs. Lengthens iron life by reducing tip oxidation and amalgamation of tip with solder which increases with over-heating.

When placed on stand, iron rests in a copper cradle which conducts heat of iron and actuates a bimetal to open or close a switch. Temperature is easily regulated by an adjusting slide at bottom of stand. As iron is removed from stand, full current is instantly supplied. Stem rest adjustable to accommodate various lengths of irons. Stand is a heavy gray iron casting—stays firmly fixed without being fastened.

• SOLDERING POTS



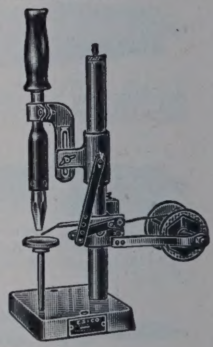
Ruggedly constructed, cast iron pots for production work. Elements are easily replaced even while pots are hot.

	Net Price
Cat. No. 12—1 1/2" dia. Cap. 3/4 lbs.	$ 4.95
Cat. No. 36—2 1/2" dia. Cap. 2 1/4 lbs.	6.05
Cat. No. 60—3 1/2" dia. Cap. 3 3/4 lbs.	7.15

• SPOT SOLDERING MACHINE

Model "F" is a treadle operated machine which feeds solder forward as the iron moves away from the work. Suitable for spot soldering where a mechanical connection has first been made. Net price $16.50

Model "N" is a treadle operated machine for the advancement of the iron, but without a solder feed attachment. Net price........................ $8.25



ESICO ELECTRIC GLUE POT

• GLUE POTS

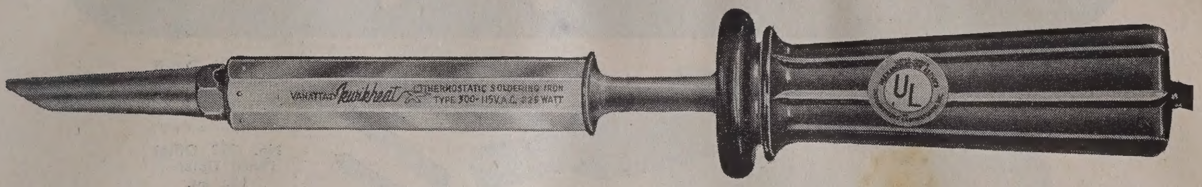
The catalogue No. 700 Glue Pot is of two quart capacity. It is the water jacket type and has a gasket sealed element and thermostat completely protected from moisture. Thermostat is normally set at 150 degrees for use with glue, but can be set at various temperatures for use with wax, etc. Net price $20.35

ELECTRIC SOLDERING IRON CO., INC.

THERMOSTATICALLY CONTROLLED

KWIKHEAT ELECTRIC SOLDERING IRONS

Built-in Vanatta Automatic Thermostat


VANATTA Kwikheat THERMOSTATIC SOLDERING IRON TYPE 300-115V.A.C. 225 WATT
UL

KWIKHEAT TYPE NO. 300

225-Watts — 115 or 230 Volts AC Only

Weight of Iron with Standard No. 1 Tip	14 oz.
Shipping Weight per Iron with No. 1 Tip & resting stand	1½ lb.
Length of Iron with No. 1 Tip	13"
Length of Heater Cord	6 ft.

LIST PRICES

Iron with tip	
300/115/2	$12.25
115v 2 conductor bayonet plug	
300/230/2	13.00
230v 2 cond. cord bayonet plug	
300/115/3	14.00
115v 3 cond. cord bayonet or twist lock plug	
300/230/3	14.75
115v 3 cond. cord bayonet or twist lock plug	
Replacement Elements	
328/115	8.60
328/230	9.35
Tips, any style	1.50
#20 Anti-freeze compound	.60

TEMPERATURE

The Kwikheat Element can be set at the factory to any desired tip temperature between 275° and 875° F. Additional charges for this service.

1 to 49	$1.00 ea.
50 to 99	.50 ea.
100 or more	standard price.

CORROSION RESISTANT

Tips and core are forged of tellurium copper alloy and plated for resistance to corrosion.

HOT IN 90 SECONDS

Kwikheat Thermostatically controlled Soldering Irons are the only irons containing built-in thermostats. Allowing a much greater watt density with less radiation of heat.

TEMPERATURES ARE PRE-SET

Thermostat NOW set to give proper heat at the tip to flow solders allowed under tin conservation order M 8.

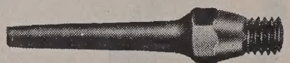
WHEN IRONS ARE TO BE USED FOR HEAVY OR HIGH SPEED SOLDERING SPECIFY A PRODUCTION IRON.

The use of recently developed alloys have permitted the increase of thermostat temperatures with reduced creep.

Please contact your jobber for trade discounts.

— 6 INTERCHANGEABLE TIPS —

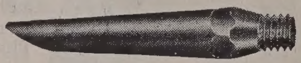
¼" at end



#0

For light soldering — radio and radar hook-up — light mechanical joints of all kinds . . . television and other delicate electronic soldering.

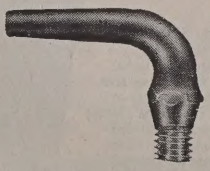
⅜" at end



#1

Standard tip — light to medium soldering — electrical wiring — many uses for soldering various electronic components.

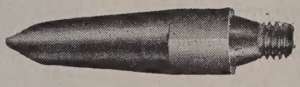
90° Bend
⅜" at end



#3

For light soldering that is hard to reach with a straight tip — light production soldering where a twist of the wrist will put the end of the tip on the work.

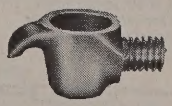
½" at end



#4

Medium to heavy soldering — heavy wiring — light sheet metal soldering — radio, radar, and television chassis soldering.

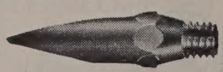
Solder Pot



#5

A small melting and tinning pot holding 1 ounce of solder.

1/16 x 7/16"
at end



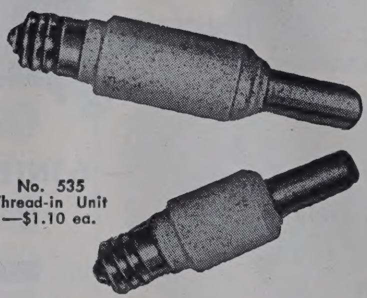
#9

For use when continuous soldering is done — such as production line soldering.

KWIKHEAT MFG. CO. **Glendale 4, California**

Get *TRIPLE* soldering efficiency with

Ungar Elkaloy Tiplets



No. 1235
Thread-in Unit
—$1.35 ea.

No. 535
Thread-in Unit
—$1.10 ea.

No. 331 Pencil
Tiplet—15c ea.

No. 332 Offset
Pencil Tiplet—
15c ea.

No. 333 Chisel
Tiplet—15c ea.

Now a Single Heating Unit Does the Work of THREE!

Now — more versatility with Ungar ELKALOY TIPLETS plus two thread-in heating units: No. 535 for general soldering (23½ watts) and the new No. 1235 (37½ watts) for production-line industrial soldering where more heat is required. Now—Ungar Elkaloy Tiplets make the famed Ungar Soldering Pencil 3 times more efficient. They save (1) Time (2) Money (3) Strategic Copper. Made of Elkaloy "A" for perfect tinning, stepped-up heat conductivity, and extra resistance to pitting and corrosion, each of the three tips threads into either of the heating units. In turn the heating unit fits the famed light-as-a-feather Ungar Handle. YOU CONTINUE TO USE THE HEATING ELEMENT WITH TIP AFTER TIP!

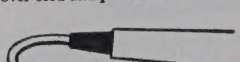
Check These Improvements
in the Famous No. 776

Ungar Handle

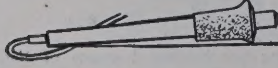
Now Better Than Ever!

Check these features: Extra length brass shell firmly engages all threads, keeps heating unit tight; Spring action rivet assures positive contact; Extra flexible cord protected with molded Neoprene sleeve; Cooler handle of durable molded plastic, perfectly balanced; Form-fit cork grip; Ceramic insulation for double safety; Underwriters' listed (110-120V. 37½ watts).
No. 776 Handle & Cord
Set only **$1.15** ea.

NEW PROTECTIVE
RUBBER SLEEVE
fits over cord and prevents wear.



NEW FORM-FITTED CORK BUSHING
keeps handle tilted at 10-degree angle — eliminates need for extra handle-rest — keeps hot tip pointed up, away from bench surface.



UNGAR ELKALOY TIPLETS SCORE THESE ADVANTAGES:

CONSERVES STRATEGIC MATERIALS. By substituting Elkaloy "A" for the tips, and iron for the heating units, we have helped solve the copper problem — and can assure you immediate delivery of heating units and Elkaloy Tiplets IN ANY QUANTITY. (Note: Nos. 537S, and 537C and 538 Tips have been discontinued until further notice.)

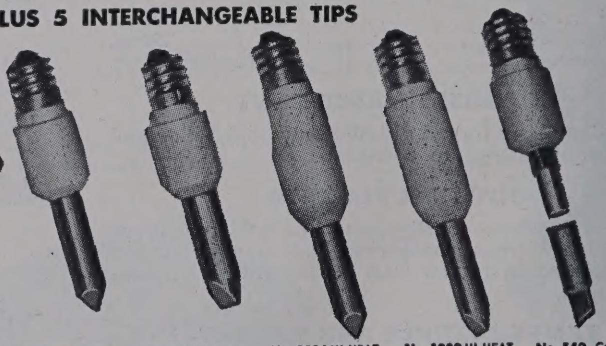
SAVES YOU MONEY because you no longer discard the heating unit when the tip has worn down. Long-lived heating units can be used over and over again.

EASIER TINNING. Elkaloy "A" requires no special tinning procedure. Does not oxidize as rapidly as copper. No flux or paste ever required. Eliminates unnecessary and costly maintenance.

EXCELLENT HEAT CONDUCTIVITY. Elkaloy "A" absorbs heat from heating unit — delivers it directly to point of contact.

INTERCHANGE TIPS EASILY AND QUICKLY. When Elkaloy Tiplet is worn down, simply unthread used tip with pliers and screw in new tip. Difference in co-efficient of expansion assures maximum heat conductivity — eliminates corrosion and gumming.

PLUS 5 INTERCHANGEABLE TIPS



No. 536 Tellurium Pyramid Tip, 5/16", 20-Watts $1.10 ea.

No. 539 Tellurium Chisel Tip, 3/8", 20-Watts $1.10 ea.

No. 1236 HI-HEAT Pyramid Tip, 5/16", 37½-W. $1.35 ea.

No. 1239 HI-HEAT Chisel Tip, 3/8", 37½-W. $1.35 ea.

No. 540 Comb. of #267 Heating Unit & #122 Brass Knife Tip for Plastics — 20-Watts $1.10 ea.
No. 267 85¢ ea.
No. 122 25¢ ea.

DISCOUNTS: $1.10 — $9.90, 20%; $10 — $99, 35%; $100 or more, 40%.
PLEASE CONTACT YOUR JOBBER — WE DO NOT SELL DIRECT.

***Ungar* Electric Tools, Inc.**

Los Angeles 54,
California

WELLER SOLDERING GUNS

For All Types of Soldering

WELLER SOLDERING GUN
WELLER MFG. CO.
UL

Automotive, Electrical, Radio and TV, Telephone, Laboratory and Experimental, Maintenance, Homecraft, Intermittent Assembly Work.

Models for Regular or Heavy Soldering

- **STANDARD MODEL**
  Dual Heat 100/135 watts.
- **HEAVY DUTY MODEL**
  Dual Heat 200/250 watts.

- **DUAL HEAT SAVES TIME AND MONEY**
  Tip life greatly increased by using high heat only when necessary. Switch instantly to high or low heat as job requires.

- **SOLDER WITHOUT DELAY**
  Instant heat at moment you pull trigger—goes off automatically when trigger is released. No waiting. No wasted time or current. Weller Guns pay for themselves in a few months

- **EXCLUSIVE TIP-FASTENING ARRANGEMENT**
  Wiping action of tip-fastening nut eliminates contact resistance and oxidation—assures full, constant heat.

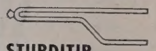
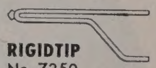
- **DUAL SPOTLIGHTS BANISH SHADOWS**
  Built-in, prefocused spotlights locate work quickly—let you see clearly, even in dark corners. No more "blind soldering". No more flashlights

- **HIGH-IMPACT HOUSING—PERFECT BALANCE**
  Rugged Hycar phenolic plastic housing protects against damage. Streamlined design and built-in transformer give pistol balance and soldering convenience.

- **SLIDES EASILY INTO TIGHT SPACES**
  Longer reach slips easily between wiring—handles difficult, deep-corner jobs with ease. Speeds work and ends damage to insulation.

U.S. Pat. No. 2405866, Other Pat. Pending. Printed in U.S.A

- **LOW-COST, REPLACEABLE WELLERTIPS**
  No redressing or unnecessary tinning. Change tips in just a few moments—at low cost. Chisel shape tip gives greater surface area for faster heat transfer.

MODEL	WATTS	CYCLES	VOLTS	NET PRICE	TYPE OF TIP
WS-100	single heat 100	60	115	$ 8.95	 **STURDITIP** No. 7135 Package of 2—25c
WD-135	dual heat 100/135	60	115	10.95	
WS-200	single heat 200	60	115	9.95	 **RIGIDTIP** No. 7250 Package of 2—35c
WD-250	dual heat 200/250	60	115	11.95	

Also available: DURATIP No. 7300, for all previous model Weller Soldering Guns. Package of 2 — 25c.

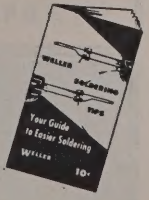
- **Handy Soldering Guide**
  "SOLDERING TIPS" *New, revised, fully up-to-date edition now ready. 20 illustrated pages show ways to faster, easier soldering. Price 10c at your Distributor—or order direct.*

Weller

The Finest Soldering Tools for the Finest Craftsmen

SOLDERING GUNS

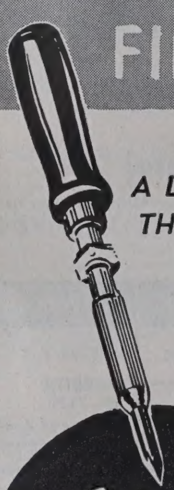
Better from Grip to Tip



Vasco QUICK HEATER SOLDERING IRON

FULL LENGTH LEVER SWITCH ALLOWS HOLDING IRON IN ANY POSITION
DELIVERS FULL HEAT LOAD IN 5 SECONDS BY A NICHROME ELEMENT INSIDE THE REMOVABLE TIP
TWO (2) HEATS....
HIGH - For Heavy Work
NORMAL - For Most Jobs

Another Vasco FIRST!



A LITTLE IRON THAT DOES A *Big Job!*

Vasco
PETITE
SOLDERING IRON

in the home . . .

It's convenient. Because it cools as fast as it heats, you can put it in a kitchen drawer the minute you finish the job. It is always on hand for that quick repair job on a lamp, on jewelry, on utensils.

It eliminates fire hazards. You don't need a special rack to hold the iron while your hands are busy. Only the tip is hot, and the plastic handle keeps the tip from burning anything if you place the iron on carpet or table top.

It saves time. You don't need to wait ten or fifteen minutes for the iron to warm up for a job. Five seconds after you pick it up your *Quick-Heat* is ready to work.

in the shop . . .

It's a money-maker. Your service man can take his *Quick-Heat* with him on the job, plug it in anywhere, and get to work on radio or electrical appliance immediately . . . . without danger of damage to a customer's furniture or carpets.

It speeds the work. A special model for shop use contains a stand-by heating arrangement . . . a resistor cord that maintains partial heat between jobs. As soon as you press the trigger, the tip is at working heat level. For all-day use in a shop, the *Quick-Heat* offers the user instant service the very second he wants it.

in the factory

An extra bonus. Besides all the advantages that *Quick-Heat* provides for other users, it makes employees on assembly lines more comfortable and more efficient by reducing heat radiation drastically. Moreover, in regular assembly-line use it can cut your electricity bill by as much as 85 percent.

See the new Vasco QUICK-HEAT at your dealer's, or write for further information to

Vasco Division of
MITCHELL INDUSTRIES, INC.
MINERAL WELLS, TEXAS POST OFFICE BOX 17

Two famous KESTER FLUX-CORE SOLDERS

KESTER SOLDER
KESTER SOLDER
KESTER SOLDER
KESTER SOLDER
"RESIN-FIVE"
"RESIN-FIVE"

KESTER "RESIN-FIVE" CORE SOLDER

Formulated especially for Radio and TV; will easily solder such metals as brass, zinc and ferrous alloys. It is non-corrosive and non-conductive.

KESTER SOLDER
KESTER SOLDER
KESTER SOLDER
KESTER SOLDER
Plastic Rosin-Core
Plastic Rosin-Core

KESTER PLASTIC ROSIN-CORE SOLDER

The most widely used solder in the TV and radio field. All Kester Solders are made from the finest tin and lead available.

★ Kester Plastic Rosin-Core Solder
★ Kester "Resin-Five" Core Solder
★ Kester "44" Resin-Core Solder
★ Kester Radio Solder
★ Kester Acid-Core Solder
★ Kester "A" Flux-Core Solder
★ Kester Nosput Flux-Core Solder
★ Kester Knorust Flux-Core Solder
★ Specialized Flux-Core Solders
★ Solid Wire and Bar Solders
★ Kester Solderforms, Rings, Pellets, Washers, Ribbon
★ External Rosin Soldering Fluxes
★ Other Fluxes
★ Kester Soldering Iron Brackets

For Peak Soldering Efficiency, It's Kester!

Kester offers every conceivable type of Solder product. Strand sizes as small as .008" diameter in Flux-Core Solder, unusual alloys and varying Flux contents or Core sizes.

A Technical Service for Manufacturers

If you are not getting peak efficiency or have a specific problem in your soldering operations, take advantage of the facilities of Kester's Technical Department. . . . It costs you nothing.

STANDARD FOR THE TV AND RADIO FIELD **KESTER SOLDER** **KESTER SOLDER COMPANY**

4253 Wrightwood Avenue, Chicago 39, Illinois • Factories Also at Newark, New Jersey - Brantford, Canada

ERSIN

Multicore

3 CORE SOLDER

ERSIN
Multicore
3-CORE
SOLDER
The Finest Cored Solder in the World
ERSIN
Multicore
THREE CORE
SOLDER
CONTAINS 3 CORES OF
NON-CORROSIVE FLUX
MULTICORE SOLDERS LTD.

Ersin Multicore conforms with following specifications:

Federal QQ-S-571 b

Army-Navy-Air Force Mil-S-6872 (AN-S-62)

U.S. Air Force No. 41065-B-Method 31

Made of virgin metals only:
Tin 99.95% pure
Lead 99.97% pure

Available in a wide range of alloys and gauges. Every reel or carton clearly marked as to gauge and alloy, tin/lead content, and color coded.

MULTICORE SALES CORPORATION • NEW YORK 13, N. Y.

Multicore
World's Finest
3 CORE SOLDER

THE ONLY SOLDER MADE WITH NON-CORROSIVE, EXTRA-ACTIVE ERSIN FLUX

Actual performance proves it melts more rapidly due to thin-wall construction. Removes surface oxides, prevents reforming and will bond difficult metals safely, surely and economically.

TECHNICAL ADVANTAGES

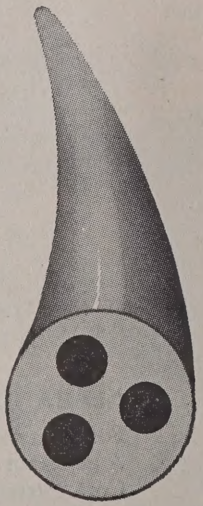
ERSIN FLUX

Ersin Flux is exclusive to Multicore and will not be found in any other solder. It is a high grade, water white rosin, homogeneously activated.

Ersin Flux has a vigorous fluxing action and possesses the non-corrosive and protective features of the original rosin. Soldered joints made with Ersin Flux do not corrode even after prolonged exposure to any degree of humidity. Ersin Flux reduces the surface tension of molten solder, causing it to wet metals rapidly, increasing speed of operation with resultant production economies.

Free from objectionable odor. Non-toxic in use.

Leaves nothing but pure rosin on the work after soldering, and may be used wherever plain rosin is specified.



MULTICORE SOLDER

Three separate cores of flux eliminate possibility of no flux in a portion of the wire, which may occur in single cored solder. Guaranteed continuity of the flux stream prevents "dry" joints, i.e., those having high electrical resistance.

Although there are three cores of flux in Multicore, the total percentage of flux to solder is less than many single cored solders.

Very rapid melting results from the multiple core construction which provides thinner walls of solder than are found in the same gauge single cored solder. Multicore's unique properties make perfect joints possible on difficult metalsand alloys, even if oxidized.

Ability to tin rapidly produces perfect joints with less solder. Greater coverage per pound.

MULTICORE SALES CORPORATION • NEW YORK 13, N. Y.

alert craftsmen prefer

SOLDER

by **ALPHA**

foremost in Quality

All Alpha Solders are approved by Underwriters Laboratories and exceed ASTM Class "A" Specifications. The most modern Rolling, Casting, Extrusion and Drawing Equipment, plus 58 years of experience in fabricating Tin Lead Alloys combine to bring you the finest solders that can be made.

TRI-CORE *"ENERGIZED"* ROSIN-FILLED SOLDER

Three cores for faster fluxing—contains faster acting "Energized" Rosin. Requires less heat, makes a fast, sure bond. "Takes" faster, especially on plated or oxidized surfaces. Non-corrosive, non-conducting. Used by leading Radio, Electronic and Television manufacturers.

SPOOLS—1 & 5 lbs.
DIAMETERS—.081 or .062
ALLOYS—Forty, Fifty or Sixty Grade✲

TRI-CORE *"LEAK-PRUF"* ACID-FILLED SOLDER

For general all purpose soldering. Three cores of chalk-like flux which will not leak. No need to crimp or seal after using. Can be formed into rings, segments or pieces without loss of flux. Fast acting; solders Stainless Steel and other difficult metals. Non-sputtering, non-toxic, less corrosive. Used by leading metal manufacturing fabricators.

SPOOLS—1 & 5 lbs.
DIAMETER—.125
ALLOYS—Forty, Fifty or Sixty Grade✲

ALPHA SOLID WIRE SOLDER

For use where separate flux is required. Made of finest virgin Tin & Lead. Alpha wire solder is extruded by the "Unity Process" assuring Homogenous alloy and uniform wire diameter throughout.

SPOOLS—1, 5, 25 or 50 lbs.
DIAMETERS—.125 or .062
ALLOYS—Forty, Fifty, or Sixty Grade✲

ALPHA HANDY CANS — Rosin or Acid Core

For the small user, Ham, Hobbyist or Householder. A generous coil of Tri-Core solder in Acid or Rosin Core. Attractive metal tin packed in Handy counter display box. Retail 25c. 12 cans per box.

OTHER ALPHA PRODUCTS

Bar Solder, Preforms, Sheet & Strip Foil, Powdered Solders, Lead & Tin Pipe & Tubing. Lead Anodes, Music Engraving Plates. Lead & Tin products in any form. Rolled, Cast, Extruded or Drawn.

STANDARD PACKING

1 lb. spools—Individual Cartons—50 Cartons per Shipping Container.
5 lb. spools—Packed 10 spools per shipping container.

ALPHA
SOLDER

ALPHA **ALPHA METALS, INC.**

buy from your parts jobber

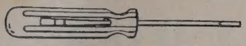
✲Subject to Government Restrictions

VACO PRODUCTS COMPANY • CHICAGO 11, ILLINOIS • U. S. A.

Hand Forged Chrome Vanadium Screw and Nut Drivers With Amberyl* S/B* (Slo-Burn) Fire Safe Break and Shock Proof Handles

*Trade Marks Registered U. S. Pat. Off.

ROUND BLADE SCREW DRIVERS



VACO S/B A616-8

Pocket Styles*—3/32" & ⅛" Blades.
***High carbon tool steel blades only.**

Stock Number	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
A 010	13/32" x 1¾"	3/32" x 1⅜"	¼ lb.
A 130-2	½" x 1⅞"	⅛" x 2"	½ lb.
A 130-3	½" x 1⅞"	⅛" x 3"	⅔ lb.
A 116-2	½" x 2½"	3/32" x 2"	⅔ lb.
A 116-3	½" x 2½"	3/32" x 3"	⅓ lb.

Electrician and Cabinet Styles—⅛" Blades.

Stock Number	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
A 216-2*	⅝" x 2¾"	⅛" x 2"	¾ lb.
*With Pocket Clip.			
A 216-4	⅝" x 2¾"	⅛" x 4"	1 lb.
A 216-6	⅝" x 2¾"	⅛" x 6"	1¼ lbs.
A 216-8	⅝" x 2¾"	⅛" x 8"	1½ lbs.
A 216-10	⅝" x 2¾"	⅛" x 10"	1¾ lbs.

Electrician and Regular Cabinet Styles — 3/16" Blades.

Stock Number	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
A 316-3	⅞" x 3½"	3/16" x 3"	1¼ lbs.
A 316-4	⅞" x 3½"	3/16" x 4"	1½ lbs.
A 316-6	⅞" x 3½"	3/16" x 6"	1¾ lbs.
A 316-8	⅞" x 3½"	3/16" x 8"	2 lbs.
A 316-10	⅞" x 3½"	3/16" x 10"	2½ lbs.

General Service Round Blade Styles —¼" Blades.

Stock Number	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
A 416-4	1" x 3⅝"	¼" x 4"	2¼ lbs.
A 416-5	1" x 3⅝"	¼" x 5"	2½ lbs.
A 416-6	1" x 3⅝"	¼" x 6"	2¾ lbs.
A 416-8	1" x 3⅝"	¼" x 8"	3¼ lbs.
A 416-10	1" x 3⅝"	¼" x 10"	3½ lbs.

Heavy Duty General Service Round Blade Styles — 5/16" Blades.

Stock Number	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
A 516-6	1-1/16" x 4"	5/16" x 6"	4 lbs.
A 516-8	1-1/16" x 4"	5/16" x 8"	4½ lbs.
A 516-10	1⅛" x 4¼"	5/16" x 10"	5½ lbs.
A 516-12	1⅛" x 4¼"	5/16" x 12"	6½ lbs.

RADIO ALIGNING TOOLS
NON-METALLIC ALIGNER

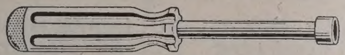
No metal — completely non-capacitance. Bone fibre blade may be repointed as required.

VACO S/B AT 55

Stock Number	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
AT 55	½" x 2½"	5/32" x 5"	¾ lbs.

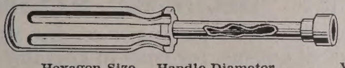
VACO Super Hard NUT DRIVERS

Color Coded Hollow Handles For Quick Size Identification. For Use on Hardened Steel Self-Threading Sheet Metal Screws, Etc.



Stock Number	Hexagon Size (Across Flats)	Handle Diameter and Length	Color Code	Fits Machine Screw Nos.
S 61	3/16"	1" x 3⅝"	Brown	2 and 3
S 82	¼"	1" x 3⅝"	Red	4
S 103	5/16"	1" x 3⅝"	Green	5 and 6
S 114	11/32"	1" x 3⅝"	Ivory	8
S 125	⅜"	1" x 3⅝"	Blue	10
S 146	7/16"	1" x 3⅝"	Orange	12 and ¼"
S 167	½"	1" x 3⅝"	Yellow	5/16"

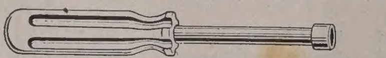
ALL HOLLOW SHAFT NUT DRIVERS



Stock Number	Hexagon Size (Across Flat s)	Handle Diameter and Length	Weight per Doz.
S 160	½"	1" x 3⅝"	3 lbs. 4 oz.
S 180	9/16"	1" x 3⅝"	3 lbs. 8 oz.

VACO EXTRA HARD NUT DRIVERS

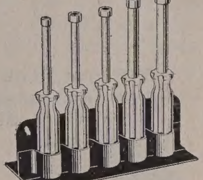
Size Stamped on Each Shaft for Easy Identification
Solid Amberyl S/B Fire Safe Handles



Stock Number	Hexagon Size	Handle Diameter and Length	Weight per Doz.
S 5	5/32"	⅞" x 3½"	1 lb. 8 oz.
S 6	3/16"	⅞" x 3½"	1 lb. 10 oz.
S 7	7/32"	⅞" x 3½"	1 lb. 11 oz.
S 8	¼"	⅞" x 3½"	1 lb. 12 oz.
S 9	9/32"	⅞" x 3½"	1 lb. 14 oz.
S 10	5/16"	⅞" x 3½"	2 lbs.
S 11	11/32"	⅞" x 3½"	2 lbs. 8 oz.
S 12	⅜"	⅞" x 3½"	2 lbs. 12 oz.
S 14	7/16"	⅞" x 3½"	2 lbs. 14 oz.
S 15	15/32"	⅞" x 3½"	2 lbs 15 oz.
S 16	½"	⅞" x 3½"	3 lbs.

Extra Large Size

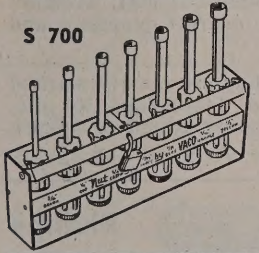
Stock Number	Hexagon Size	Handle Diameter and Length	Weight per Doz.
S 17	17/32"	1-1/16" x 4"	4½ lbs.
S 18	9/16"	1-1/16" x 4"	4½ lbs.
S 19	19/32"	1-1/16" x 4"	4½ lbs.
S 20	⅝"	1-1/16" x 4"	4½ lbs.



No. S 500 METAL BENCH HOLDER

Furnished with 1 each of five most popular sizes: S 8, S 10, S 11, S 12, S 14. Weight each . . . 1½ lbs.

S 700

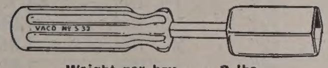


VACO WALL OR BENCH PADLOCK TYPE NUT DRIVER STAND

Holds One Complete Driver Outfit . . . from 3/16" to ½".

Stock Number		Weight (Packed)
S 700		2¼ lbs.
S 70	(Stand only)	1 lb. 2 oz.

VACO AMBERYL ELECTROLYTIC CONDENSER NUT DRIVERS

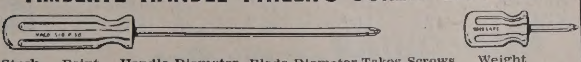


Weight per box . . . 3 lbs.

Packed 4 each of following sizes in display box, or assorted as desired:

No. S 32 for 31/32" Nuts
No. S 34 for 1" Nuts
No. S 36 for 1-5/32" Nuts

AMBERYL HANDLE PHILLIPS SCREW DRIVERS

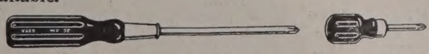


Stock Number	Point Number	Handle Diameter and Length	Blade Diameter and Length	Takes Screws Number	Weight per Doz.
P 01	1	⅝" x 2¾"	⅛" x 2½"	4 and smaller	¾ lb.
P 1	1	⅞" x 3½"	3/16" x 3"	4 and smaller	1¼ lbs.
P 2	2	1" x 3⅝"	¼" x 4"	5 to 9	2½ lbs.
P 3	3	1-1/16" x 4"	5/16" x 6"	10 to 16	3½ lbs.
P 4	4	1-3/16" x 4½"	⅜" x 8"	18 and larger	6 lbs.
P 5§	2	1¼" x 2⅛"	¼" x 1¾"	5 to 9	1¼ lbs.
P 6§	1	1⅛" x 1¾"	3/16" x 1¼"	4 and smaller	1 lb. 2 oz.
P 12†	1	½" x 2½"	⅛" x 2½"	4 and smaller	11 oz.
P 101‡	1	¾" x 3"	3/16" x 3"	4 and smaller	1¼ lbs.

§Stub. †Pocket Clip. ‡Screw-Holding.

WOOD HANDLE PHILLIPS SCREW DRIVERS

High Carbon Tool Steel Blades . . . Chrome Vanadium Blades Also Available.



Stock Number	Handle Diameter and Length	Blade Diameter and Length	Take Screws Number	Weight per Doz.
WP 10	1" x 4"	3/16" x 3"	4 and smaller	1¼ lbs.
WP 20	1⅛" x 5"	¼" x 4¾"	5 to 9	2½ lbs.
WP 30	1¼" x 6"	5/16" x 6"	10 to 16	3¾ lbs.
WP 40	1-5/16" x 7"	⅜" x 8"	18 and larger	5 lbs.
WP 50 (Stub)	1-5/16" x 2¼"	¼" x 1¾"	5 to 9	1 lb. 2 oz.
WP 60 (Stub)	1-5/16" x 2¼"	3/16" x 1¼"	4 and smaller	1 lb.

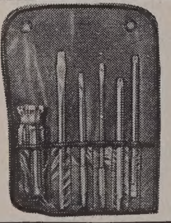
VACOMBO Nut Setter Kit No. ZS 60

Kit Consists of:

1 — ZH 1 Amberyl Handle with Clutch
1 — ZS 8 Hex. Wrench ¼" x 3"
1 — ZS 10 Hex. Wrench 5/16" x 3"
1 — ZS 11 Hex. Wrench 11/32" x 3"
1 — ZS 12 Hex. Wrench ⅜" x 3"
1 — ZS 14 Hex. Wrench 7/16" x 3"
1 — ZR 77 Seven Section Leatherette Tool Roll

Also Available
6" Extension No. ZX 56
3/16" Hex. Wrench No. ZS 6
½" Hex. Wrench No. ZS 16

Weight packed . . . 9 oz.



VACOMBO Screw Driver Kit No. ZB 50

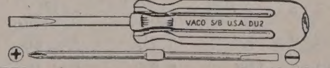
Kit Consists of:

1 — ZH 1 Amberyl Handle with Clutch, 1" x 3⅝"
1 — ZB 24 Blade ⅛" x 4" Out of Handle
1 — ZB 34 Blade 3/16" x 4" Out of Handle
1 — ZB 45 Blade ¼" x 5" Out of Handle
1 — ZP 14 Blade No. 1 Phillips x 4"
1 — ZP 24 Blade No. 2 Phillips x 4"
1 — ZR 77 Seven Section Leatherette Tool Roll

Also Available — **6" Extension No. ZX 56**
Specifications: Amberyl S/B (Slo-Burn) Fire Safe Handle — Oil Tempered Chrome Vanadium Blades — Bright Cadmium Rust-Proof Plated Finish.

Weight packed . . . 8 oz.

VACO DUPLEX REVERSIBLE SCREW DRIVERS
with Amberyl S/B (Slo-Burn) Plastic Handle



A Phillips bit on one end

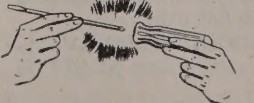
A regular bit on other end

TWO SIZES
DU2 Light Duty —
DUH4 Heavy Duty

Chrome vanadium steel blade. Long lasting Amberyl handle of high dielectric and impact strength . . . shock and break resistant . . . impervious to most alkalies and acids.

	Specifications	
Stock Number	Handle Diameter and Length	Blade Diameter and Length
DU 2	1" x 3⅝"	No. 1 Phillips 3/16" x 2⅝" Regular 3/16" x 2⅝"
DUH 4	1 1/16" x 4"	No. 2 Philips ¼" x 3⅜"

A Flip of the Wrist Does It . . . From Phillips to Regular.



Precision engineered blade may easily be inserted or removed and reversed to provide either a regular or Phillips bit. Ideal for automobiles, radios, refrigerators, household utilities, toys, etc., where straight slot screws and cross slot screws are frequently used in combination.

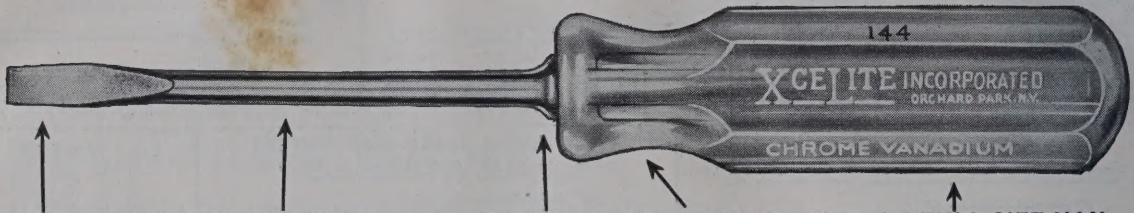
Quality XCELITE *Tools*

REG. TRADE MARK

Originators of

SHOCK-PROOF BREAK-PROOF AMBER PLASTIC HANDLE

SCREWDRIVERS


144
XCELITE INCORPORATED ORCHARD PARK, N.Y.
CHROME VANADIUM

TIP ground on flat belt and gauged for perfect fit in screw slot.

BLADE forged of SAE 6150 Chrome Vanadium Electric Furnace Steel.

FLANGE on the blade at handle resists shock of pounding.

WINGED END of blade embedded in handle prevents turning in handle.

FULL SIZE HANDLE for adequate grip. Genuine Xcelite plastic.

There's an XCELITE Screwdriver "Sized" for Every Job!

Number	Size Blade	List	Weight Box of 10	
*R-3322	3/32″ x 2″	.33	½ lb.	4 ea. on 332 Display
*R-3323	3/32″ x 3″	.33	½ lb.	
*R-3324	3/32″ x 4″	.33	½ lb.	
**R-181	⅛″ x 1″	.33	½ lb.	4 ea. used on #12 Display
*R-183	⅛″ x 3″	.33	½ lb.	
*R184½	⅛″ x 4″	.33	½ lb.	
R-182	⅛″ x 2″	.50	½ lb.	
††R-184	⅛″ x 4″	.55	½ lb.	
††R-186	⅛″ x 6″	.60	¾ lb.	
††R-188	⅛″ x 8″	.66	1 lb.	
††R-1810	⅛″ x 10″	.75	1 lb.	
R-5323	5/32″ x 3″	.65	1 lb.	ea. on #10 Display
R-5324	5/32″ x 4″	.65	1 lb.	
R-5325	5/32″ x 5″	.65	1 lb.	
R-5328	5/32″ x 8″	.80	1¼ lb.	
R-3163	3/16″ x 3″	.75	1½ lb.	
R-3164	3/16″ x 4″	.80	1½ lb.	
R-3166	3/16″ x 6″	.95	1¾ lb.	
R-3168	3/16″ x 8″	1.00	1¾ lb.	
R-31610	3/16″ x 10″	1.15	2 lb.	
R-31618	3/16″ x 18″	1.95	(pk. 1) ¼ lb. ea.	
R-142	¼″ x 2″	.95	1¾ lb.	
R-144	¼″ x 4″	1.00	2 lb.	
R-146	¼″ x 6″	1.05	2¼ lb.	
R-148	¼″ x 8″	1.15	2½ lb.	
R-1410	¼″ x 10″	1.25	2¾ lb.	
R-5166	5/16″ x 6″	1.25	3½ lb.	
R-5168	5/16″ x 8″	1.35	4 lb.	

**24 of this number used on #24 display.

*These numbers have ½″ dia. handles.

††These numbers have ¾″ dia. handles. For insulated blades any size add 35 cents to list price.

SQUARE BLADED SCREWDRIVERS ALSO AVAILABLE in the sizes you want. Ask your XCELITE jobber.

PACKED BY "DECIMAL" SYSTEM

We have standardized our packages on the decimal system instead of in dozens, for ease in keeping inventory. All screwdrivers and nut drivers will be packed ten in a box, except where otherwise noted (exceptions are large sizes or slow moving items). Weights given above are correct to the nearest quarter-pound limit.

EASY TO SELECT SIZES. They are clearly marked on handles. For example, No. 144 means ¼″ dia. blade 4″ long. "R" or "S" signify round or square blades.

XceLite- Phillips

No.	Point Size	Length Blade	Diameter Blade	Box of Ten Weight	List Price
X-108	1	6″	3/16″	1½ lbs.	$1.15
X-101	1	3″	3/16″	1¼ lbs.	1.05
X-102	2	4″	¼″	2 lbs.	1.35
X-103	3	6″	5/16″	3½ lbs.	1.80
X-104	4	8″	⅜″	5¼ lbs.	2.25
X-1010	1	10″	3/16″	2 lbs.	1.60
X-1020	2	10″	¼″	3 lbs.	1.80

SHORT STUBBY TYPE

No.	Point Size	Length Blade	Diameter Blade	Box of Ten Weight	List Price
SX-101	1		3/16″	⅞ lbs.	1.00
SX-102	2		¼″	1¼ lbs.	1.10

XCELITE
Clutch Head Screwdrivers

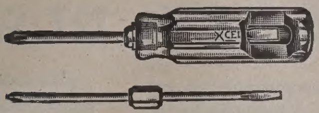
Type G No.	Size	Diameter Blade	Length Blade	List Price Each
G-183	⅛″	3/16″	3″	$1.20
G-5324	5/32″	¼″	4″	1.32
G-3164	3/16″	¼″	4″	1.32
G-146	¼″	5/16″	6″	1.75
G-5166	5/16″	⅜″	6″	2.15

SUBJECT TO CHANGE WITHOUT NOTICE

Quality XCELITE Tools

REG. TRADE MARK

MULTI-PURPOSE SCREWDRIVERS



"Combination-Detachable" SCREWDRIVER

ORIGNATED BY XCELITE

This original dual-purpose screwdriver has a BIG handle—1$\frac{3}{16}$" x 4$\frac{1}{16}$" —hollow to receive the dual-blade units. Gives you two screwdrivers for about the price of one, and every additional blade you buy means more savings.

INDIVIDUAL Blade Combinations

(Please Order by Number)

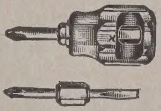
No. 1—No. 1 Phillips and $\frac{3}{16}$" XceLite
No. 2—No. 2 Phillips and ¼" XceLite
No. 3—No. 3 Phillips and $\frac{5}{16}$" XceLite

COMPLETE (Regular Type)	List Price	BLADES ONLY (Regular Type)	List Price
No. CR1	$1.75	No. RB1	$0.95
No. CR2	1.75	No. RB2	.95
No. CR3	1.75	No. RB3	.95

HANDLES ONLY

	List Price
No. 25 Regular	$0.80

STUBBY TYPE



"Combination-Detachable" Screwdrivers

COMPLETE (Stubby Type)		BLADES ONLY (Stubby Type)	
No. CS1	$1.50	No. SB1	$0.75
No. CS2	1.50	No. SB2	.75

HANDLES ONLY

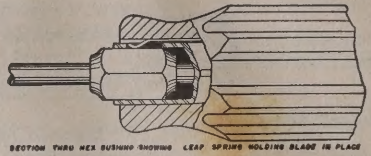
No. 26 Stubby....................$0.75

XCELITE No. 3 *De Luxe*

RADIO AND ELECTRICAL PLASTIC ROLL KIT

Set includes: R-142, R-3163, R-5166, R-184, R-144, X-101 and R-3166.

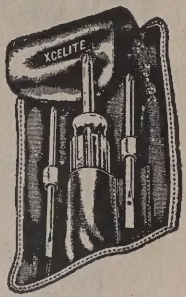
No. 3........$7.75
No. 3C Chrome Plated..$8.50


SECTION THRU HEX BUSHING SHOWING LEAF SPRING HOLDING BLADE IN PLACE

Another XCELITE "First"! This New Spring Fastener

Unique spring-and-bushing assembly makes the simplest and most foolproof fastener yet. It fits all XCELITE ball fastener type blades. Handle is a $\frac{7}{16}$" hex NUT DRIVER, and the spring holds the nut from falling.

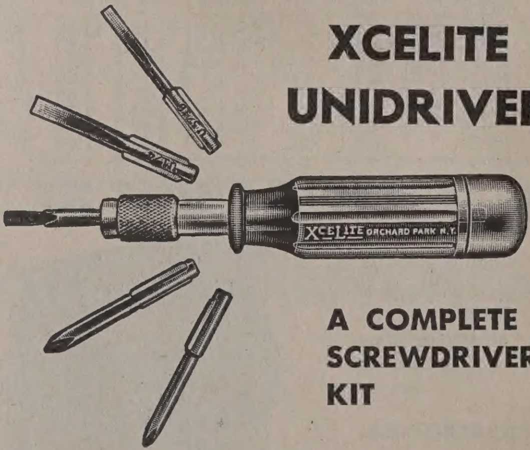
ROLL KIT Combinations



No. CK3 . . . $4.35 List. Contains RB-1, RB-2, RB3 and Combination Handle.

No. CK-2 . . . $3.40 List. Contains RB-1, RB2 and Combination Handle.

XCELITE UNIDRIVER



A COMPLETE SCREWDRIVER KIT

Not another "gadget" but a fine tool with large genuine XCELITE hollow handle which holds assortment of bits. Chuck means quick changes of bits. No more delays in finding the right screwdriver. In the handle are contained these XCELITE bits:

Phillips No. 1 Point (U31)
Phillips No. 2 Point (U32)
Slotted $\frac{3}{16}$" Diameter Blade (U34)
Slotted ¼" Diameter Blade (U35)
$\frac{3}{16}$" Clutch (U39)

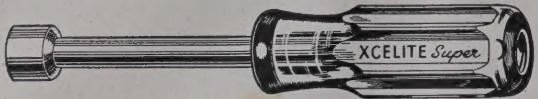
Unidriver, complete with above blades List Price $3.50

SUBJECT TO CHANGE WITHOUT NOTICE

Quality XCELITE *Tools*

REG. TRADE MARK

NUT DRIVERS and NUT DRIVER SETS



6" Overall Length

Number	Size	List
6	3/16″	$0.80
7	7/32″	.80
8	¼″	.80
9	9/32″	.80
10	5/16″	.80
11	11/32″	.80
12	⅜″	.80
14	7/16″	1.25
16	½″	1.25

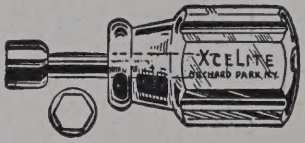
9" Overall Length

Number	Size	List
A-6	3/16″	$1.05
A-7	7/32″	1.05
A-8	¼″	1.05
A-9	9/32″	1.05
A-10	5/16″	1.05
A-11	11/32″	1.05
A-12	⅜″	1.05
A-14	7/16″	1.38
A-16	½″	1.38

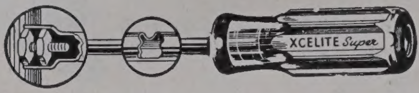
STUBBIES

3¼" Overall Length

Number	Nut Size	List
S-8	¼″	$0.77
S-10	5/16″	.77
S-12	⅜″	.77

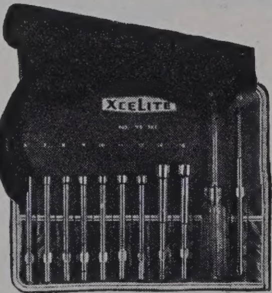


HOLLOW SHAFT NUT DRIVERS



No. and Length Overall	Nut Size	Depth of Hole	Weight per Box	List	Insulated List
HS-8 6″	¼″	5″	1½ lbs.	$1.15	$1.50
HS-10 6″	5/16″	5″	1½ lbs.	1.15	1.50
HS-11 6″	11/32″	5″	1½ lbs.	1.15	1.50
HS-12 6″	⅜″	5″	2 lbs.	1.15	1.50
HS-14 7″	7/16″	5″	2¾ lbs.	1.30	1.65
HS-16 7″	½″	5″	2¾ lbs.	1.35	1.70
HS-18 7″	9/16″	5″	2¾ lbs.	1.40	1.75
HS-20 7″	⅝″	5″	3 lbs.	1.65	2.00

No. 99 PR MULTI-PURPOSE SET



CONTENTS

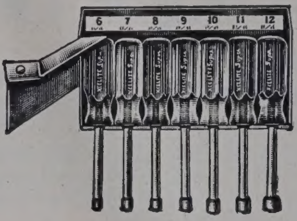
99-1	Multi-Purpose Handle
99-82	Reversible Phillips Blade
99-81	Screwdriver Blade
99-6-7-8-9-10-11-12-14-16	Nut Drivers

ACCESSORIES

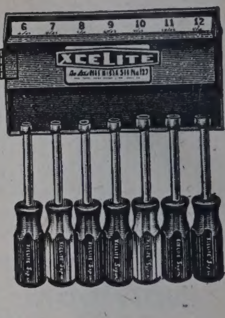
99-83	Reversible Reed and Prince Blade

Number	Description	List
99	Comb. Set in Metal Box	Temp. Disc.
99-PR	Comb. Set in Plastic Roll	10.95
99-1	Handle	.95
99-6 through 99-12	Nut Drivers	.65 ea.
99-14	Nut Driver	.90
99-16	Nut Driver	.90
99-81	Reversible Screw Driver	1.15
99-82	Reversible Phillips	1.15
99-83	Reversible Reed & Prince	1.15

Deluxe No. 127 Set



7 Nut Drivers in Lockable Wall Holder



- COLORED HANDLES FLASH SIZE!
- NEW LARGER HANDLES — BRIGHTER COLORS
- Set contains Nos. 127-6, 127-7, 127-8, 127-9, 127-10, 127-11, and 127-12. Furnished in either full polished or chrome finish.
- Sturdy metal holder in red wrinkle finish.

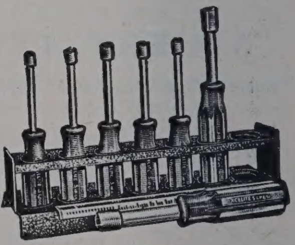
Individual Drivers, Polished	$0.85
Chrome	.95
No. 127—Polished Finish	7.15
No. 127C—Chrome Plated	7.95

NO. 137 NUT DRIVER SET

With Colored Handles

Consisting of:

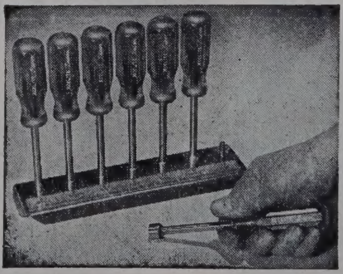
Number		Size	List Pol.	List Chr.
127-6	Black	3/16″	.85	.95
127-8	Red	¼″	.85	.95
127-10	Yellow	5/16″	.85	.95
127-11	Green	11/32″	.85	.95
127-12	Blue	⅜″	.85	.95
HS-16	Red	½″	1.40	1.50
HS-18	Brown	9/16″	1.45	1.55



No. 137 Polished Finish	$8.15
No. 137C Chrome Plated	8.95

NO. 17 NUT DRIVER SET

Amber Handles — Highly Polished Blades



Consisting of:

Number	Size
6	3/16″
7	7/32″
8	¼″
9	9/32″
10	5/16″
11	11/32″
12	⅜″

Complete with Rack $6.15

SUBJECT TO CHANGE WITHOUT NOTICE

Quality XCELITE *Tools*

REG. TRADE MARK

PLIERS

XCELITE Pliers are made specifically for work in the electrical and electronics fields. Each is made of the high grade alloy best suited for the job. Workmanship, materials and inspection are of the highest quality. All blades are hand honed.

No. 51 XCELITE
Long Needle Nose and Side Cutter Plier

List Price $3.40

No. 52 XCELITE
Long Needle Nose (Without Side Cutter)

List Price $2.90

No. 55 XCELITE
Electricians' Diagonal Plier, 5″

List Price $3.25

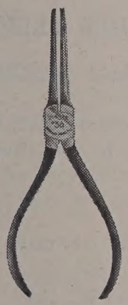
No. 60 XCELITE
Side Cutting Plier 6″

List Price $3.15

No. 58 XCELITE
Radio and TV Plier

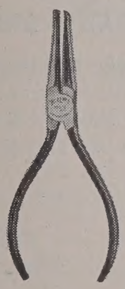
List Price $4.00

No. 56 XCELITE
Slim Needle Nose Plier



List Price $3.15

No. 57 XCELITE
Long Duck Bill Plier, 7″

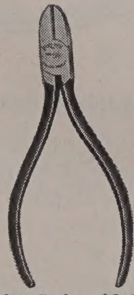


List Price $3.25

No. 59 XCELITE
Chain Nose Electricians' Plier

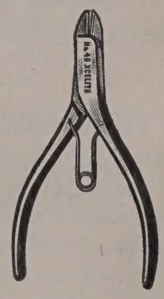
List Price $3.55

No. 54 XCELITE
Electricians' Midget Diagonal Plier, 4″



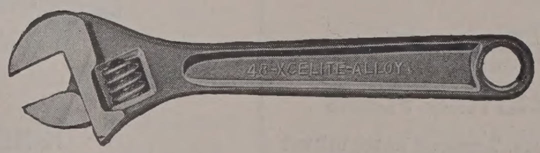
List Price $3.25

No. 49 XCELITE
Electronic Midget Snip (Shear action type)



List Price $3.70

XCELITE ADJUSTABLE WRENCHES



- THIN PATTERN designed by mechanics for mechanics to get into hard-to-reach places!
- EASY TURNING KNURL for quick adjustment.
- AN IDEAL TOOL for securing antenna mounts!
- STRONG! Drop forged from chrome alloy steel!
- BETTER GRIP! Movable jaws has wide bearing surface!

No.	Size	Wgt. Box of 6	List
44	4″	⅞ lb.	$2.45
46	6″	2 lbs.	2.60
48	8″	3¾ lbs.	3.00

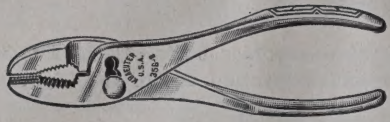
SUBJECT TO CHANGE WITHOUT NOTICE

Printed in U.S.A.

KRAEUTER & COMPANY, INC.
K
NEWARK, NEW JERSEY, U.S.A.

KRAEUTER

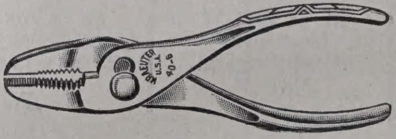
The choice of skilled mechanics



"GRIPTITE" COMBINATION PLIERS

The finest quality combination pliers. Designed for heavy duty. Slightly tapered nose, sharp deep milled teeth and grooved jaws for gripping cotter pins and wire. Knurled handles. The 8" and 10" sizes have three slip joint adjustments which give a wide range of parallel grips.

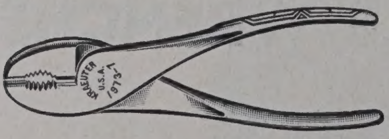
No.	Length	Finish	Wt. per doz.	Price Each
356	5½ in.	Full Nickel	3½ lbs.	$1.75
356	6 in.	Full Nickel	5¼ lbs.	2.00
356	8 in.	Full Nickel	8¾ lbs.	2.50
356	10 in.	Full Nickel	14 lbs.	3.00



THIN NOSE COMBINATION PLIERS

The tapered jaws and thin nose of these pliers enable the mechanic to grip objects difficult to reach in tight, narrow working spaces. Knurled handles, milled gripping teeth and wire cutters.

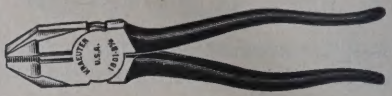
No.	Length	Finish	Wt. per doz.	Price Each
40	6 in.	Nickel Plated	4¼ lbs.	$1.50



MECHANICS' SIDE CUTTING PLIERS

Gripping pliers with side cutters. Tapered nose, milled teeth and grooved jaws for gripping cotter pins and wire. Knurled handles. The cutters are very handy for light wire work.

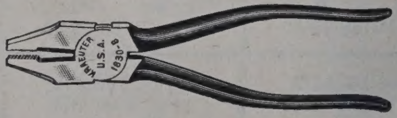
No.	Length	Finish	Wt. per doz.	Price Each
1973	5½ in.	Full Nickel	3½ lbs.	$2.75
1973	7 in.	Full nickel	7¼ lbs.	3.00



LINEMEN'S SIDE CUTTING PLIERS

Designed for heavy work to meet the requirements of linemen. Drop forged from selected plier steel, skilfully hardened and tempered. Powerful wire cutters, a well balanced head and deep milled gripping jaw surface for holding and bending wire.

No.	Length	Finish	Wt. per doz.	Price Each
1801	6 in.	Blue Temper	5¼ lbs.	$2.75
1801	7 in.	Blue Temper	7½ lbs.	3.20
1801	8½ in.	Blue Temper	11¼ lbs.	4.00

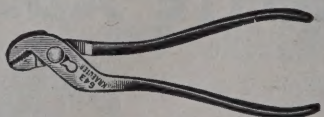


ELECTRICIANS' SIDE CUTTING PLIERS

Used extensively in electric wiring of fixtures, appliances and other general repair work.

Very popular with mechanics on production work where electric wiring is required in the finished product.

No.	Length	Finish	Wt. per doz.	Price Each
1830	4 in.	Blue Temper	1½ lbs.	$2.00
1830	5 in.	Blue Temper	2¼ lbs	2.25
1830	6½ in.	Blue Temper	4¾ lbs.	2.50
1830	7 in.	Blue Temper	6¾ lbs.	2.75
1830	8 in.	Blue Temper	8¼ lbs.	3.00



IGNITION PLIERS

Very narrow head, serrated gripping teeth and well shaped handle grips. Three slip joint positions. Generally used on distributor, generator, magneto and carburetor work.

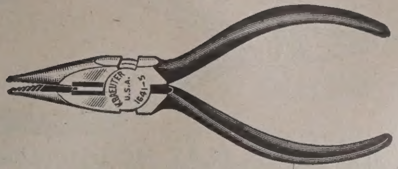
No.	Length	Finish	Wt. per doz.	Price Each
643	5 in.	Blue Temper	1 lb.	$1.65

THIS IS ONLY A PARTIAL LISTING OF KRAEUTER TOOLS . . . . . SEND FOR CATALOG

KRAEUTER & COMPANY, INC. NEWARK, NEW JERSEY, U.S.A.

KRAEUTER

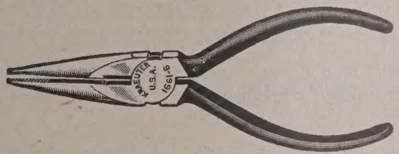
The choice of skilled mechanics



SHORT CHAIN NEEDLE NOSE PLIERS

Short tapered jaws for bending and looping wire. The short nose gives these pliers extra leverage and gripping strength. Used for wiring switches and other open electric work.

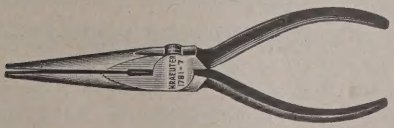
No.	Length	Finish	Wt. per doz.	Price Each
1641	5 in.	Blue Temper	2¾ lbs.	**$2.25**
1643	Same without Cutter		2¾ lbs.	**2.00**



LONG CHAIN NEEDLE NOSE PLIERS

Long tapered jaws and needle nose. Used extensively in all industries . . . from switchboard, electric fixture and appliance wiring . . . to motor ignition, aviation and general manufacturing work.

No.	Length	Finish	Wt. per doz.	Price Each
1661	6 in.	Blue Temper	3½ lbs.	**$2.75**
1671	Same without Cutter		3½ lbs.	**2.25**



EXTRA LONG CHAIN NOSE PLIERS

Extra long tapered jaws with narrow pointed nose. Used extensively in automotive . . . electric . . . aviation and general production and repair work.

Length of jaw 2¾ in.

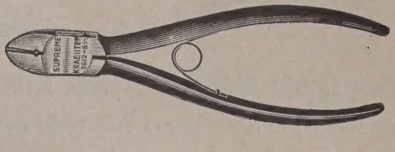
No.	Length	Finish	Wt. per doz.	Price Each
1781	7 in.	Blue Temper	3¾ lbs.	**$3.10**
1771	Same without Cutter		3¾ lbs.	**2.50**

KRAEUTER
U.S.A.
4501-6

DIAGONAL "OBLIQUE" CUTTING PLIERS

Made especially for close cutting. Used extensively in electrical work, radio manufacturing, telephone and automotive ignition work.

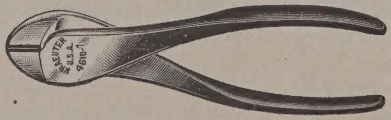
No.	Size	Finish	Wt. per doz.	Price Each
4501	4½ in.	Blue Temper	1½ lbs.	**$2.10**
	5 in.	“ “	2¾ lbs.	**2.40**
	6 in.	“ “	3¾ lbs.	**2.75**



WIRE STRIPPING DIAGONAL CUTTING PLIERS

Narrow head and notched cutters for stripping fine wire .062 diameter. The spring in the handle makes this a very fast cutting tool. Used by manufacturers of electric fixtures, appliances, radio and radio tubes.

No.	Length	Finish	Wt. per doz.	Price Each
2612	6½ in.	Blue Temper	3 lbs.	**$3.10**



"HIGH POWER" DIAGONAL CUTTING PLIERS

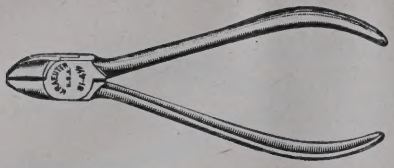
This type diagonal plier has the joint very close to the end of the cutter to give added leverage which makes cutting easy. A well balanced tool adaptable to the work in many trades.

No.	Length	Finish	Wt. per doz.	Price Each
4610	7 in.	Blue Temper	5¾ lbs.	**$2.70**

THIS IS ONLY A PARTIAL LISTING OF KRAEUTER TOOLS . . . . . SEND FOR CATALOG

KRAEUTER

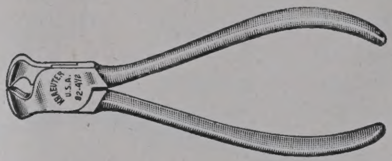
The choice of skilled mechanics



JEWELERS' DIAGONAL CUTTING PLIERS

Carefully edged cutting jaws. Designed for very fine close work.

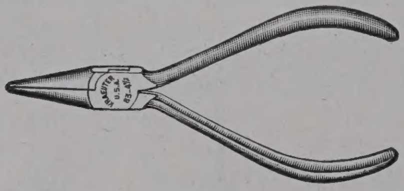
No.	Size	Finish	Wt. per doz.	Price Each
81	4½″	Full Polished	1 lb.	$2.75



JEWELERS' END CUTTING NIPPERS

Carefully edged cutting jaws. Designed for very fine close work.

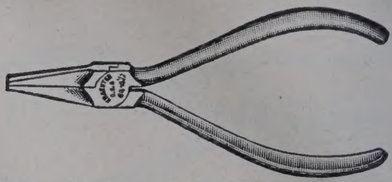
No.	Size	Finish	Wt. per doz.	Price Each
82	4½″	Full Polished	1½ lbs.	$3.25



JEWELERS' CHAIN NOSE PLIERS

Jaws 1/32″ diameter at point of nose. No cutter. 1 1/16″ smooth jaw. Supplied with milled jaws when specified.

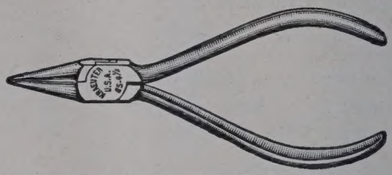
No.	Size	Finish	Wt. per doz.	Price Each
83	4½″	Full Polished	1¼ lbs.	$2.50



JEWELERS' FLAT NOSE PLIERS

Jaws ⅛″ wide at point of nose. No cutter. 1 1/16″ smooth jaw. Supplied with milled jaws when specified.

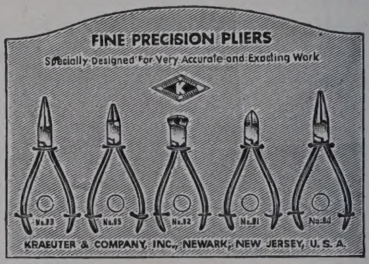
No.	Size	Finish	Wt. per doz.	Price Each
84	4½″	Full Polished	1½ lbs.	$2.60



JEWELERS' ROUND NOSE ROUND JAW PLIERS

Each jaw 1/32″ diameter at point of nose. No cutter. 15/32″ smooth jaw. Supplied with milled jaws when specified.

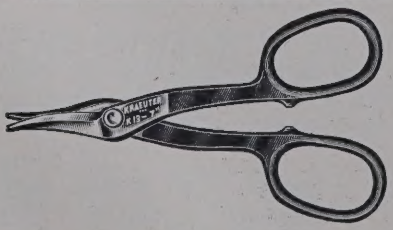
No.	Size	Finish	Wt. per doz.	Price Each
85	4½″	Full Polished	1¼ lbs.	$2.60


FINE PRECISION PLIERS
Specially Designed For Very Accurate and Exacting Work
No.83
No.85
No.82
No.81
No.84
KRAEUTER & COMPANY, INC., NEWARK, NEW JERSEY, U. S. A.

NO. 88 COUNTER DISPLAY

Size 12½″ x 8¾″ with easel back
One each of Nos. 81, 82, 83, 84, 85. Fine precision made pliers for the hobby crafters—model builders—skilled technicians.

Price, complete $13.70



COMBINATION PATTERN SNIP

Drop forged from solid steel and skillfully heat treated for hard shearing blades. The bolt and nut assembly is machine finished with bearing surfaces properly hardened to resist wear.

No.	Length	Cut	Finish	Wt. ea.	Price Each
K13	7″	1⅝″	Polished head Black handles	5½ oz.	$2.00

THIS IS ONLY A PARTIAL LISTING OF KRAEUTER TOOLS . . . . . SEND FOR CATALOG

KRAEUTER & COMPANY, INC.
NEWARK, NEW JERSEY, U.S.A.

KRAEUTER

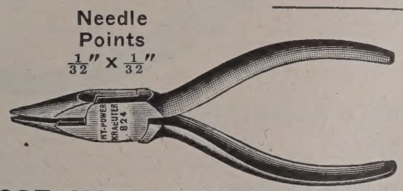
The choice of skilled mechanics

Professional Line

SPECIAL NEEDLE POINT PLIERS

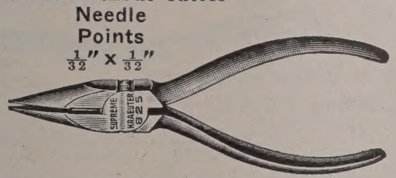
Designed for light fine professional work. The special needle points of these pliers make them invaluable where delicate adjustments have to be made.

(NOSE OF THESE PLIERS NOT GUARANTEED)


Needle Points $\frac{1}{32}'' \times \frac{1}{32}''$
MY-POWER
KRAEUTER
824

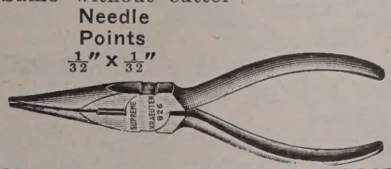
SHORT NOSE NEEDLE POINT PLIERS

No.	Length	Finish	Wt. per.doz.	Price Each
824	4½ in.	Full Polished	1½ lbs.	$2.60
834	Same without cutter			2.25


Needle Points $\frac{1}{32}'' \times \frac{1}{32}''$
SUPREME
KRAEUTER
825

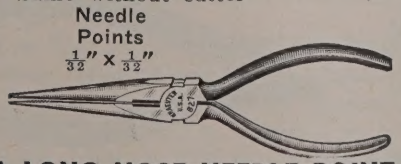
MEDIUM NOSE NEEDLE POINT PLIERS

No.	Length	Finish	Wt. per.doz.	Price Each
825	5 in.	Full Polished	2¼ lbs.	$2.75
835	Same without cutter			2.40


Needle Points $\frac{1}{32}'' \times \frac{1}{32}''$
SUPREME
KRAEUTER
826

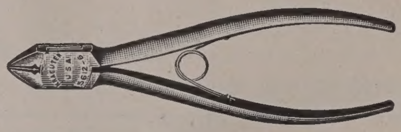
LONG NOSE NEEDLE POINT PLIERS

No.	Length	Finish	Wt. per.doz.	Price Each
826	6 in.	Full Polished	3 lbs.	$3.10
836	Same without cutter			2.70


Needle Points $\frac{1}{32}'' \times \frac{1}{32}''$
KRAEUTER
U.S.A.
827

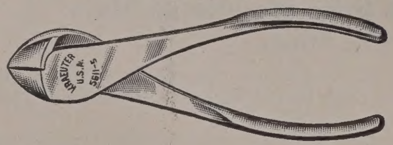
EXTRA LONG NOSE NEEDLE POINT PLIERS

No.	Length	Finish	Wt. per.doz.	Price Each
827	7 in.	Full Polished	3¾ lbs.	$3.40
837	Same without cutter		3¾ lbs.	3.00


KRAEUTER
U.S.A.
5612

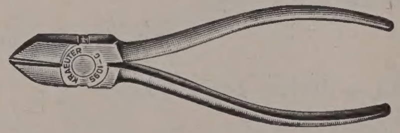
NEEDLE POINT DIAGONAL CUTTING PLIERS

No.	Length	Finish	Wt. per.doz.	Price Each
5612	6½ in.	Full Polished (With Stripping Notch)	3 lbs.	$3.70


KRAEUTER
U.S.A.
5611-5

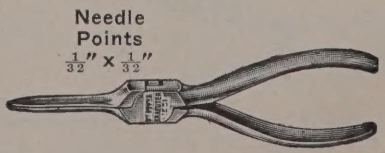
OVAL HEAD DIAGONAL CUTTING PLIERS

No.	Length	Finish	Wt. per.doz.	Price Each
5611	5 in	Full Polished	2 ¼ lbs.	$3.15


KRAEUTER
5601

NEEDLE POINT DIAGONAL CUTTING PLIERS

No.	Length	Finish	Wt. per.doz.	Price Each
5601	4½ in.	Full Polished	2 lbs.	$2.70
5601	5 in.	Full Polished	2¾ lbs.	2.90
5601	6 in.	Full Polished	3¾ lbs.	3.20


Needle Points $\frac{1}{32}'' \times \frac{1}{32}''$

NEEDLE POINT SNIPE NOSE PLIERS

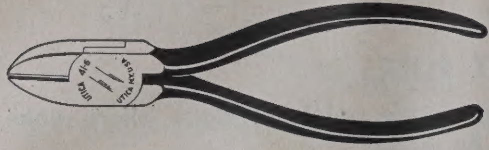
No.	Length	Finish	Wt. per.doz.	Price Each
842	6 in.	Full Polished	2¼ lbs.	$2.75

THIS IS ONLY A PARTIAL LISTING OF KRAEUTER TOOLS . . . . . SEND FOR CATALOG

Utica Tools

ADD POWER TO YOUR HANDS

U TI CA ®

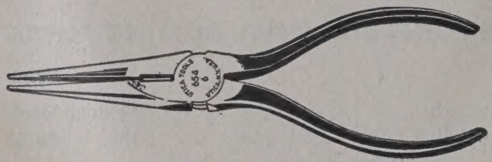


No. 41 • Electricians' Diagonal Pliers—

Hardened and tempered in oil. Narrow nose for radio and electrical work.

Size	4 in.	5 in.	6 in.
List Price	**$2.20**	**$2.54**	**$2.80**

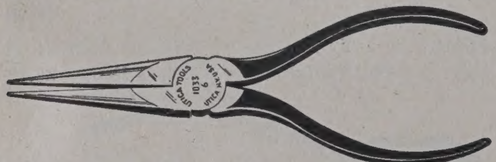
Can be furnished with insulation stripper.



No. 654 • Utica Long Needle Nose Side Cutting Pliers

This is a long, fine, spring-tempered nose, side-cutting pliers, drop forged and with hand-honed cutting knives.

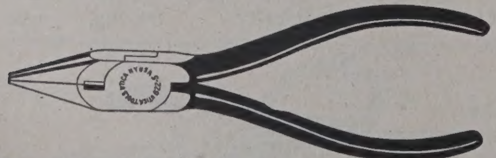
Size	6 in.	7 in.
List Price	**$2.80**	**$3.30**



No. 1033 • Utica Long Chain Needle Nose Pliers

This is a long needle nose type of pliers without a side cutter. It has a spring-tempered needle nose with a fine balance for delicate work.

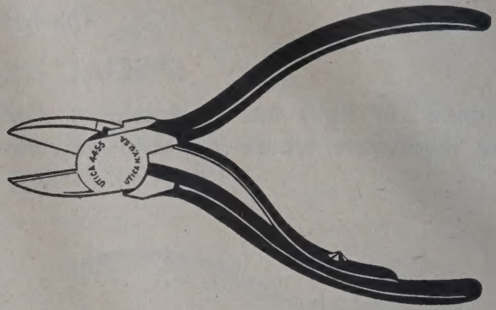
Size	6 in.	7 in.
List Price	**$2.20**	**$2.40**



No. 622 • Utica Short Chain Nose Mechanic's Pliers

This pliers is a Short Chain Nose Side Cutting Pliers, hand-honed cutting knives. It makes an all around Electrical Mechanic's pliers.

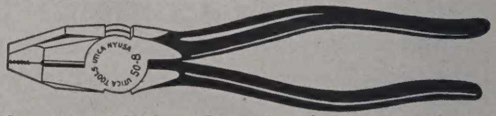
Size	5 inches
List Price	**$2.40**



No. 44S • Special Diagonal Pliers with Spring

A slim nose cutting pliers designed especially for radio and electrical work. Extra fine hand honed edges permit nearly flush cuts.

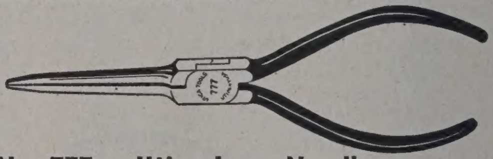
Size	5 in.	6 in.
List Price	**$2.86**	**$3.20**



No. 50 • Utica Standard Side Cutting Pliers

An ideal tool for electrical work. Drop forged and skillfully tempered. Its cutting qualities are unsurpassed by any side cutting pliers.

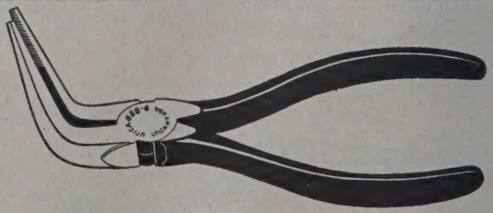
Size	4 in.	5 in.	6 in.	7 in.	8 in.
List Price	**$2.10**	**$2.20**	**$2.40**	**$2.70**	**$3.00**



No. 777 • Utica Long Needle Nose Pliers

This pliers has a long, half-round, spring-tempered nose for very fine work in assembling small electrical apparatus.

Size	6 inches
List Price	**$2.54**



No. 888 • Curved Needle Nose Pliers—

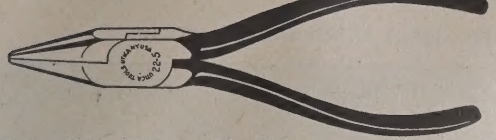
This is a long curved spring-tempered Needle Nose Pliers for use in deep and narrow places. It may be used without turning or twisting the hand in the assembling of small fixtures, electrical apparatus, etc.

Size	6 inches
List Price	**$2.90**

Utica Tools

ADD POWER TO YOUR HANDS

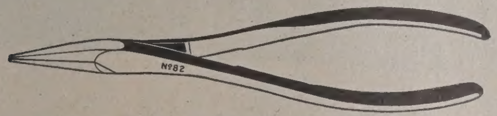
U TI CA ®



No. 22 • Utica Chain Nose Pliers

This is a Short Chain Nose Pliers forged from a fine quality of steel with fine points particularly adapted for the use of Jewelers, Opticians, Telephone Installers, Electricians and Radio Assemblers.

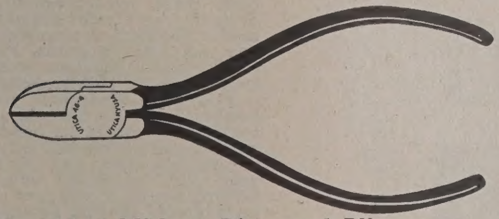
Size	4 in.	4½ in.	5 in.	6 in.
List Price	$1.80	$1.95	$2.04	$2.20



No. 82 • Utica Chain Nose Wiring Pliers

This is a special Radio Repair Man's Pliers having a chain nose for those who prefer this type of construction.

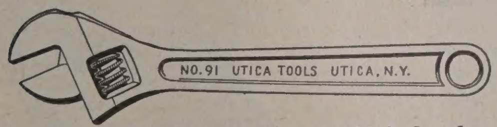
Size	8 inches
List Price	$2.60



No. 46 • Midget Diagonal Pliers

A small Diagonal for radio and electrical work. Hand honed edges with a slim nose for use in cramped quarters.

Size	4 inches
List Price	$2.36

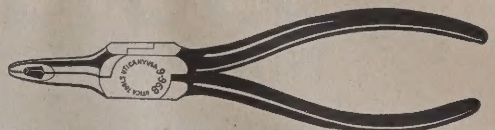


No. 91 • Thin Adjustable 22½° Angle Wrenches, Electronically Hardened Steel

Both the handle and jaw are drop forged from a high grade **Alloy Steel,** hardened and tempered in oil. Will not break or wear in the gear teeth and allow play in the wrench, permitting the jaw to slip off the nut.

It will give better service and last longer than any other wrench.

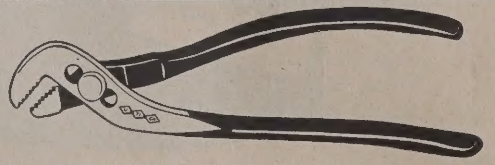
Size	4 in.	6 in.	8 in.	10 in.	12 in.
List Price	$1.80	$1.80	$2.10	$2.70	$3.96



No. 896 • Utica Radio Pliers

This is a General Radio Repair Man's Pliers. It has a center cutter and flat scored nose for looping and bending.

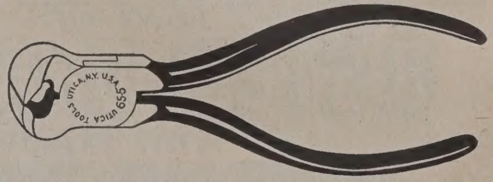
Size	6 inches
List Price	$3.30



No. 517 • Utica Ignition Pliers

This Ignition Pliers with its unique design will fit all ignition units, spring tempered. A great little tool for the hard to get at adjustments.

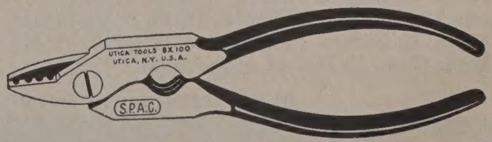
No. 517	5 inches
List Price	$1.25



No. 65 • Utica End Cutting Nippers

This Nippers is forged from a fine grade of steel, carefully tempered. A light, strong End Cutting Nippers, used by Electricians and Machinists. The keen cutting edges and "Perfect Fit" handles make this a very popular tool.

Size	4½ in.	5 in.
List Price	$2.90	$3.14



No. 100BX • Utica-Smith Pocket Armor Cutters

The easiest, quickest tool made for cutting armored cable. Fully illustrated instructions packed with each tool.

Size	7 inches
List Price	$4.40

Equipto AURORA, ILLINOIS

In 12" or 18" Depths

18 STEEL DRAWERS

WITH FRAME

OLIVE GREEN BAKED ENAMEL FINISH

NO. 11
12" DEEP
NO. 22
18" DEEP

No. 11 — EQUIPTO'S most popular item. Width 34 inches; height 13¾ inches; depth 12 inches. Each of the 18 boxes comes equipped with 2 adjustable and removable dividers (see cut) making 3 compartments per box. This makes a total of 54 adjustable compartments. Shipped set up complete, in olive green.

No. 22 — Same as above but 18" deep.

FEATURES

Frames Stack on Each Other.

Frames Welded into One Strong, Solid Assembly.

Drawers Have Adjustable Dividers on 1 inch Centers.

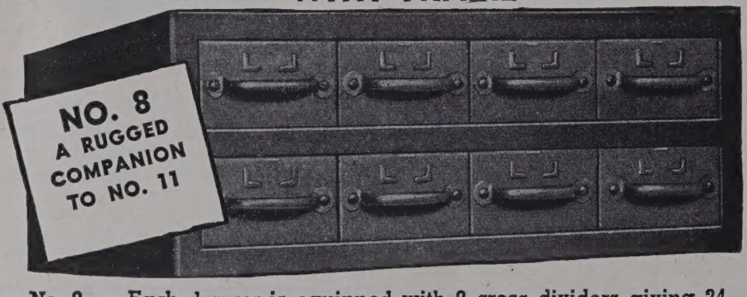
Label Holders on Every Drawer and Divider.

The handiest unit you ever had for taking care of your small parts. Stack, use individually, or as an insert under counters and in shelving. A wonderful item for sale in stores. Fits readily under counters, work benches, mailing tables, bolted to the wall—in any spot you need it. Stores, farmers, home owners rave about its handiness in storing nuts and bolts, screws, electrical and hardware supplies, flower bulbs, thread, small containers of tooth paste, rouges, lipsticks —any thing you can think of.

HEAVY DUTY

8 STEEL DRAWERS

WITH FRAME



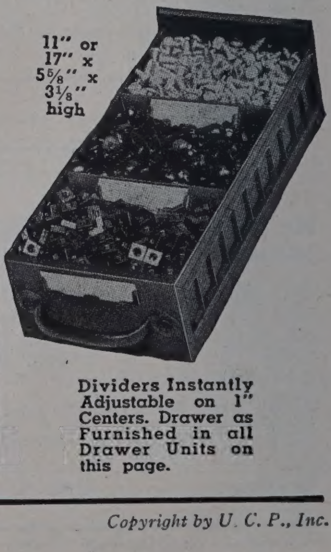
No. 8 — Each drawer is equipped with 2 cross dividers giving 24 adjustable compartments. Width 23¼ inches; height 9½ inches; depth 12 inches. Drawer size 11 inches x 5⅝ inches x 3⅛ inches high. Over 30 lbs. of ruggedness.

OLIVE GREEN BAKED ENAMEL FINISH

Equipto
AURORA, ILLINOIS
OUR 40TH YEAR
DIVISION OF AURORA EQUIPMENT COMPANY
775 PRAIRIE • PHONE: AURORA 9231

FREE Illustrated Catalogs

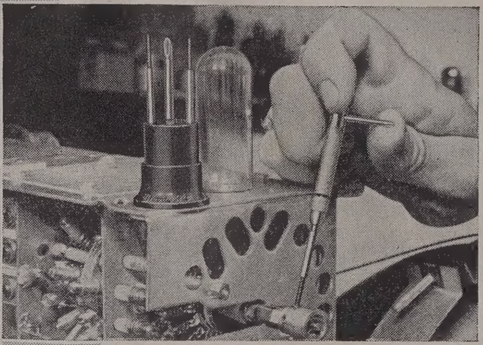
11" or 17" x 5⅝" x 3⅛" high



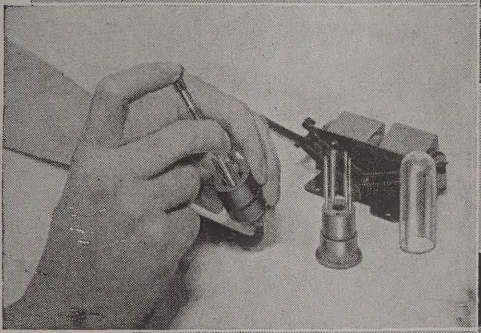
Dividers Instantly Adjustable on 1" Centers. Drawer as Furnished in all Drawer Units on this page.

THERE'S A THOUSAND AND MORE USES FOR *Moody Kits* IN ELECTRONICS

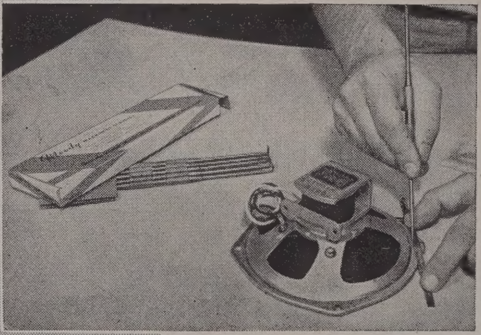
NEW SMALL TOOL SETS FOR YOU



Here's the PA-5 Moody Kit, a combination Allen type wrench and Phillips screw driver set, in action, it's especially made for Radio and T.V. work.

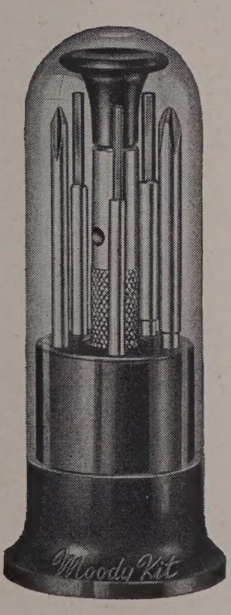


Here's the SC-5 Moody Kit precision screw driver set, just perfect to get at those recessed small screws in electrical work.



Here's the ever handy helper of the electrical technician — the MS-2 Moody Scriber marking metal for close tolerance cutting.

If you haven't seen the Moody line of small tools, ask your jobber to get them for you. They're manufactured expressly for Radio, T.V. and electronics work. If your jobber can't supply you, give us his name and address together with your own and we'll send you our catalog from which you can order.



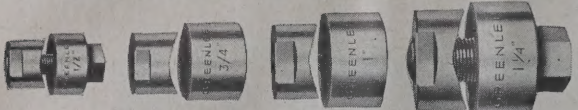
PA-5 ACTUAL SIZE

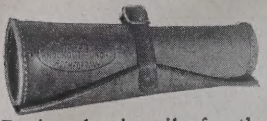
Moody MACHINE PRODUCTS CO., INC.
52 DUDLEY STREET • PROVIDENCE 5, RHODE ISLAND

TOOLS FOR CRAFTSMEN
GREENLEE

KNOCKOUT PUNCHES AND CUTTERS

Greenlee Tool Co., Rockford, Illinois

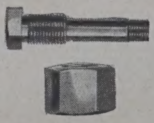




NO. 735 KNOCKOUT PUNCH SET

Designed primarily for the electrical trade to permit fast, easy enlarging of knockouts and cutting of holes for conduit in metal boxes and cabinets. Also excellent for automobile work where holes are needed for heater pipes and other accessories. Simply insert the tool in a knockout or small drilled hole and give the screw a few turns with an ordinary wrench. No. 735 set has four punches for cutting ⅞, $1\frac{3}{32}$, $1\frac{11}{32}$, $1\frac{11}{16}$-inch holes for ½, ¾, 1, 1¼-inch conduit. Set is neatly packed in leather case illustrated. The ½-inch punch will cut a ⅞-inch hole for ½-inch conduit where no standard knockout is provided when a $\frac{7}{16}$" hole is drilled.

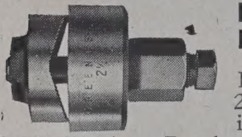
Heavy Duty Drive for ½" Punch



To increase length of service of the ½-inch Knockout Punch in cutting ⅞-inch holes in heavier-gauge sheet metals, the No. 1387 AV Drive Screw with No. 1388 AV Drive Nut illustrated is recommended.

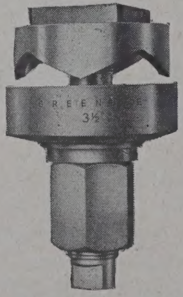
NO. 737 KNOCKOUT PUNCH SET

Similar to the No. 735 set, but consists of only two punches for cutting holes to accommodate 1½" and 2" conduit. Packed in leather case.



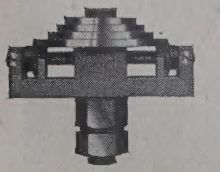
NOS. 738 AND 739 KNOCKOUT PUNCHES

For cutting holes to accommodate 2½" and 3" conduit. Design is similar to that of smaller GREENLEE Knockout Punches: insert in a knockout or drilled hole and turn drive nut with an ordinary wrench. Packed and sold individually.



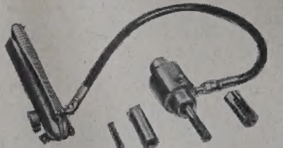
NOS. 741 AND 742 KNOCKOUT PUNCHES

For quickly making smooth openings for 3½" and 4" conduit. Hole is clean, no filing of burrs necessary. Operation is similar to that of other GREENLEE Knockout Punches. Simply insert in hole for 1" conduit and turn drive nut with an ordinary wrench.



No. 740 Knockout Cutter

Companion tool to GREENLEE Knockout Punches. Enlarges knockouts to take 1½, 2, 2½ and 3-inch conduit. Operation is simple since an ordinary wrench drives the tool. Cutting is done by the drive action of two wheel cutters. Special discs can be furnished for cutting odd sizes of holes from $1\frac{1}{16}$ to 3½-inch diameter. Packed in leather case.



NO. 7646 HYDRAULIC KNOCKOUT PUNCH DRIVER

A powerful portable hydraulic unit for driving all GREENLEE Knockout Punches. Also drives GREENLEE Radio Chassis Punches using ⅜" or larger drive screws. Quickly, easily cuts holes in 10-gauge metal. Excellent for use in tight places. Packed in metal case. List price complete, $86.50. Weight, 20 lbs.

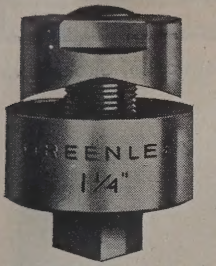
KNOCKOUT PUNCHES — LIST PRICES AND WEIGHTS (IN POUNDS)

	Hole Size	*Price*	*Weight*
No. 735 Knockout Punch Set Complete..		$10.00	2½
AV121 ½" Punch	⅞"	1.25	$\frac{1}{16}$
AV122 ½" Die	⅞"	.65	$\frac{1}{16}$
AV322 ⅜" x 1¾" Drive Screw...		.25	$\frac{1}{16}$
AV123 ¾" Punch	$1\frac{3}{32}$"	1.45	⅛
AV124 ¾" Die	$1\frac{3}{32}$"	.80	$\frac{3}{16}$
AV125 1" Punch	1-11/32"	1.65	$\frac{3}{16}$
AV126 1" Die	1-11/32"	.95	⅜
AV127 1¼" Punch	$1\frac{11}{16}$"	1.90	$\frac{5}{16}$
AV128 1¼" Die	$1\frac{11}{16}$"	1.05	7/16
AV249 ¾" x 2⅞" Drive Screw....		.35	⅜
Heavy Duty Drive for ½" Punch Complete		$1.10	¼
AV1387 Heavy Duty Drive Screw..		.75	⅛
AV1388 Heavy Duty Drive Nut....		.35	⅛
No. 737 Knockout Punch Set Complete...		$10.00	3½
AV439 1½" Punch	1-15/16"	2.30	½
AV440 1½" Die	1-15/16"	2.00	⅝
AV441 2" Punch	2⅜"	3.20	⅞
AV442 2" Die	2⅜"	2.50	1
AV304 ¾" x 3½" Drive Screw....		.50	7/16
No. 738 Knockout Punch Complete.....		$14.00	4¼
AV1429 2½" Punch	2⅞"	5.40	1⅜
AV1430 2½" Die	2⅞"	5.00	1½
AV1433 Drive Nut		1.35	$\frac{9}{16}$
AV1434 ¾" x 5⅞" Drive Screw...		2.75	⅞
No. 739 Knockout Punch Complete.....		$19.00	6½
AV1431 3" Punch	3½"	8.00	2½
AV1432 3" Die	3½"	7.50	2½
AV1433 Drive Nut		1.35	$\frac{9}{16}$
AV1434 ¾" x 5⅞" Drive Screw ...		2.75	⅞
No. 741 Knockout Punch Complete.....		$39.00	10⅜
AV2981 3½" Die	4"	14.00	3¼
AV2982 3½" Punch	4"	18.00	3
AV3026 1⅛" x 7½" Drive Screw...		6.00	2¼
AV3036 Drive Nut		2.00	1¼
AV3037 Bushing		2.25	⅝
No. 742 Knockout Punch Complete.....		$48.00	12⅛
AV2983 4" Die	4½"	18.00	3½
AV2984 4" Punch	4½"	24.00	4½
AV3026 1⅛" x 7½" Drive Screw...		6.00	2¼
AV3036 Drive Nut		2.00	1¼
AV3037 Bushing		2.25	⅝
No. 740 Knockout Cutter Complete.....		$15.00	4½
AV323 Lock Screw (2)		.30	
AV324 Wheel Cutter (2)		.50	
AV325 Feed Nut		.20	
AV326 Disc for 1½" Conduit		.70	
AV2021 Disc for 2" Conduit		.80	
AV2022 Disc for 2½" Conduit		1.00	
AV2023 Disc for 3" Conduit		1.20	
AV327 Body		5.00	
AV328 Center Shaft (¾" diameter)		.80	
AV329 Drive Nut		.80	
AV330 Retainer Screw (2)		.45	
AV331 Cutter Bushing (2)		.25	
AV332 Cutter Support (2)		.65	
AV333 Key Washer		.25	
669GB Woodruff Key		.05	

TOOLS FOR CRAFTSMEN
GREENLEE

RADIO CHASSIS PUNCHES
ROUND, SQUARE, "KEY" AND "D" TYPES

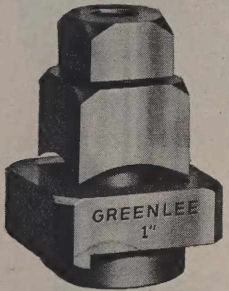
Greenlee Tool Co., Rockford, Illinois



No. 730 Round Punch

NO. 730 ROUND PUNCH

Swiftly cuts clean, accurate holes in radio chassis for sockets, switches, controls and other equipment. Operates simply with an ordinary wrench for drive power . . . just insert in a small drilled hole and turn drive screw. No reaming or filing . . . hole is smooth, perfect. Thirteen sizes from ½ to 2¼" diameter.



No. 731 Square Punch

NO. 731 SQUARE PUNCH

Cuts square or oblong openings as desired. Available in three sizes for making ⅝", ¾" and 1" square holes. Drive screw fits into ½" hole, which can be drilled or made with ½" No. 730 Greenlee Round Punch. Operates with an ordinary wrench for drive power. Individually packed.

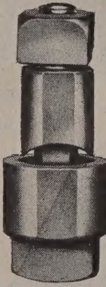
NO. 732 "KEY" PUNCH

Quickly, easily cuts holes for keyed radio sockets. Operates on same principle as other Greenlee Radio Chassis Punches . . . an ordinary wrench supplies the drive power. In four sizes to make openings of 15/16", 1-11/64", 1-17/64", 1-21/64". Drive screw fits into ½" hole. Individually packed.

No. 732 "Key" Punch

NO. 733 "D" PUNCH

Simplifies and speeds the work of making "D" shaped openings for high-frequency, miniature tube sockets and other equipment using this type opening. Available in ½" size. Operates on same principle as other Greenlee Radio Chassis Punches with an ordinary wrench supplying the drive power. Drive screw fits into ⅜" drilled hole. Individually packed.



No. 733 "D" Punch

NO. 730 RADIO PUNCHES — LIST PRICES AND WEIGHTS (WTS. IN OZ.)

	Price	Wt.
½" No. 730 Radio Punch Complete	$2.15	1¾
AV-1760 ½" Punch	1.25	¼
AV-1759 ½" Die	.65	¾
AV-1675 ¼" Screw	.25	¾
⅝" No. 730 Radio Punch Complete	2.15	2¼
AV-1742 ⅝" Punch	1.25	½
AV-1743 ⅝" Die	.65	1
AV-1675 ¼" Screw	.25	¾
¾" No. 730 Radio Punch Complete	2.15	3
AV-113 ¾" Punch	1.25	¾
AV-114 ¾" Die	.65	1¼
AV-322 ⅜" Screw	.25	1
⅞" No. 730 Radio Punch Complete	2.15	4¾
AV-121 ⅞" Punch	1.25	1½
AV-122 ⅞" Die	.65	2¼
AV-322 ⅜" Screw	.25	1
1" No. 730 Radio Punch Complete	2.35	6½
AV-87 1" Punch	1.35	1½
AV-88 1" Die	.75	3¾
AV-112 ⅜" Screw	.25	1¼
1 1/16" No. 730 Radio Punch Complete	2.50	7
AV-1763 1 1/16" Punch	1.45	2¼
AV-1764 1 1/16" Die	.80	3½
AV-112 ⅜" Screw	.25	1¼
1⅛" No. 730 Radio Punch Complete	2.50	7¼
AV-91 1⅛" Punch	1.45	2½
AV-92 1⅛" Die	.80	3½
AV-112 ⅜" Screw	.25	1¼
1 5/32" No. 730 Radio Punch Complete	2.50	7¾
AV-83 1 5/32" Punch	1.45	2½
AV-84 1 5/32" Die	.80	4
AV-112 ⅜" Screw	.25	1¼
1 3/16" No. 730 Radio Punch Complete	2.50	8
AV-115 1 3/16" Punch	1.45	2¾
AV-116 1 3/16" Die	.80	4
AV-112 ⅜" Screw	.25	1¼
1¼" No. 730 Radio Punch Complete	2.50	9¾
AV-117 1¼" Punch	1.45	3
AV-118 1¼" Die	.80	5½
AV-112 ⅜" Screw	.25	1¼
1⅜" No. 730 Radio Punch Complete	2.85	10½
AV-119 1⅜" Punch	1.65	3¾
AV-120 1⅜" Die	.95	5½
AV-112 ⅜" Screw	.25	1¼
1½" No. 730 Radio Punch Complete	3.20	12¼
AV-89 1½" Punch	1.90	4¼
AV-90 1½" Die	1.05	6¾
AV-112 ⅜" Screw	.25	1¼
2¼" No. 730 Radio Punch Complete	6.20	37
AV-437 2¼" Punch	3.20	11½
AV-438 2¼" Die	2.50	18
AV-304 ¾" Screw	.50	7½

NO. 731 SQUARE RADIO PUNCHES — LIST PRICES AND WEIGHTS (WT. IN OZ.)

	Price	Wt.
⅝" No. 731 Square Punch Complete	$3.35	4¾
AV-2891 ⅝" Square Punch	1.40	¾
AV-2881 ⅝" Square Die	1.15	1¼
AV-2886 31/64" Drive Screw	.60	1¾
AV-2929 Drive Nut	.20	1
¾" No. 731 Square Punch Complete	3.90	6¾
AV-2882 ¾" Square Punch	1.65	1
AV-2883 ¾" Square Die	1.35	2¼
AV-2914 31/64" Drive Screw	.70	2½
AV-2929 Drive Nut	.20	1
1" No. 731 Square Punch Complete	4.50	8¾
AV-2884 1" Square Punch	1.80	2¼
AV-2885 1" Square Die	1.50	2¼
AV-2887 31/64" Drive Screw	1.00	3¼
AV-2929 Drive Nut	.20	1

NO. 732 "KEY" RADIO PUNCHES — LIST PRICES AND WEIGHTS (WT. IN OZ.)

	Price	Wt.
15/16" No. 732 "Key" Punch Complete	$3.75	8½
AV-2972 15/16" Die	1.00	1¾
AV-2973 15/16" Punch	1.50	2½
AV-2974 31/64" Drive Screw	1.05	3¼
AV-2929 Drive Nut	.20	1
1-11/64" No. 732 "Key" Punch Complete	4.00	10¾
AV-3256 1-11/64" Die	1.10	3
AV-3257 1-11/64" Punch	1.60	2¾
AV-3258 31/64" Drive Screw	1.10	4
AV-2929 Drive Nut	.20	1
1-17/64" No. 732 "Key" Punch Complete	4.25	12½
AV-2975 1-17/64" Die	1.15	3
AV-2976 1-17/64" Punch	1.70	4
AV-2977 31/64" Drive Screw	1.20	4½
AV-2929 Drive Nut	.20	1
1-21/64" No. 732 "Key" Punch Complete	4.50	12½
AV-3262 1-21/64" Die	1.25	4
AV-3263 1-21/64" Punch	1.80	2½
AV-3264 31/64" Drive Screw	1.25	4¾
AV-2929 Drive Nut	.20	1

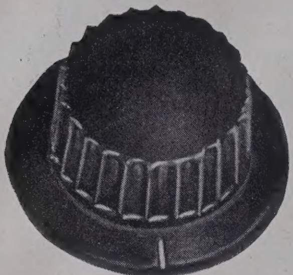
NO. 733 "D" RADIO PUNCHES — LIST PRICES AND WEIGHTS (WT. IN OZ.)

	Price	Wt.
½" No. 733 "D" Punch Complete	$3.50	2
AV-3032 ½" Die	1.00	½
AV-3033 ½" Punch	1.50	¼
AV-3034 5/16" Drive Screw	.75	1
AV-3035 Drive Nut	.25	¼

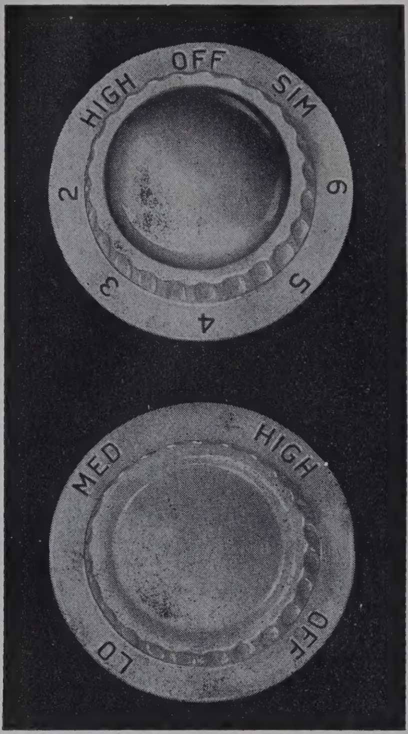
KNOBS *FROM STOCK MOLDS*

For All Types of Instruments and Apparatus . . . Low Cost . . . Immediate Delivery

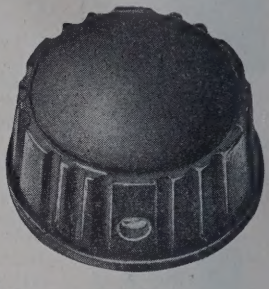
ROGAN BROTHERS • *Compression Molders and Branders of Plastics* • 8023 N. Monticello, Skokie, Ill.



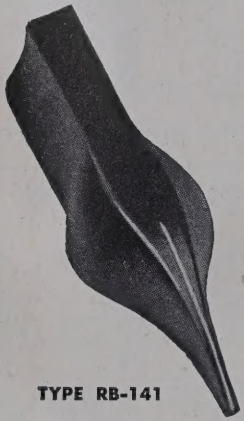
TYPE RB-51



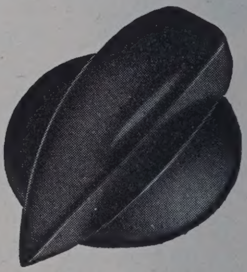
TYPES RB-85 and 80



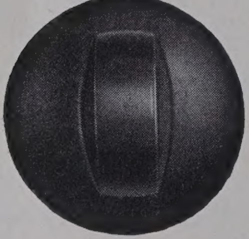
TYPE RB-211



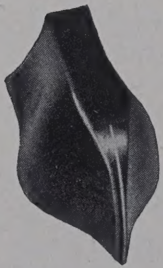
TYPE RB-141



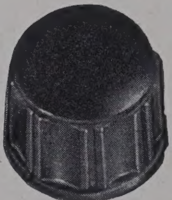
TYPE RB-131



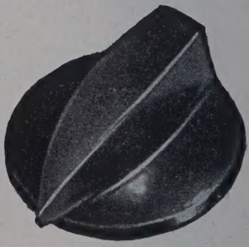
TYPE RB-171



TYPE RB-41



TYPE RB-301



TYPE RB-31

WIDE SELECTION OF SHAPES AND SIZES

Shown above, are but a few of the many Rogan plastic knobs available to you from our regular stock molds. These are supplied without tool charge, resulting in considerable savings in cost, faster delivery. Choice of a wide selection of sizes, shapes and colors. Molded of phenolic or urea thermosetting materials, which will not soften, warp, or scratch easily. Heat resisting materials can be used so knobs can withstand 350-400° F. continuous heat. Most knobs supplied with 1/4" shaft hole and set screws. Special shaft hole sizes and means of fastening can be supplied to specifications at nominal cost.

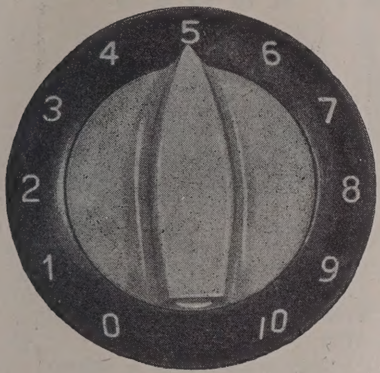
KNOBS CAN BE BRANDED, AS REQUIRED

Rogan's famous "deep relief" branding process, applied after molding, provides sharp perfect marking at low cost. Any type marking, graduations or numerals can be branded on blank knobs to fit your requirements. Rogan knobs are available in black, brown or walnut, when molded of phenolic materials; and in all light pastel colors when molded of urea materials. Whatever your knob requirements may be, Rogan is equipped to supply you faster, better, more economically. The complete line of Rogan knobs with specifications is shown in the new Rogan catalog. Write for your copy now.

KNOBS FROM STOCK MOLDS

No Tool Charge . . . No Tooling Wait . . . Wide Range of Styles, Sizes and Colors

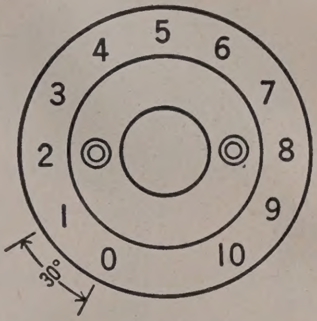
ROGAN BROTHERS • *Compression Molders and Branders of Plastics* • 8023 N. Monticello, Skokie, Ill.



0
1
2
3
4
5
6
7
8
9
10

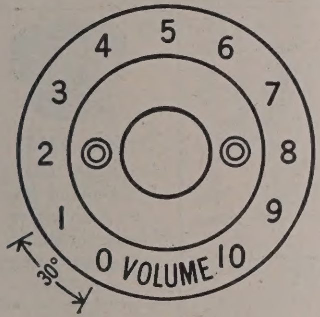
Combination Knobs Save Time, Money

Illustration at left shows RB-1000 escutcheon combined with RB-31 pointer knob, which rotates inside the RB-1000. Available from stock molds, in matching or contrasting colors. Illustrations below, show a few of the stock markings available. These marking dies are already made up, no tool charge, no tooling wait. By using Rogan combination knobs and branding them with these ready-made dies you save time and money. Special markings can also be supplied. Write for complete catalog.



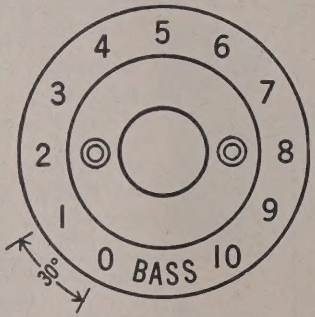
0 1 2 3 4 5 6 7 8 9 10
30°

RB-1000-1



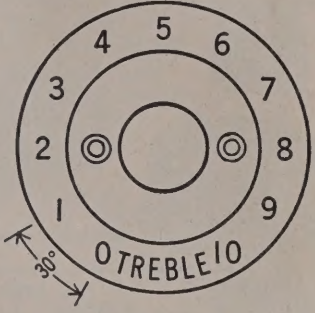
0 1 2 3 4 5 6 7 8 9 10
VOLUME
30°

RB-1000-2



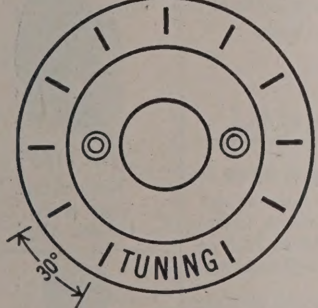
0 1 2 3 4 5 6 7 8 9 10
BASS
30°

RB-1000-3

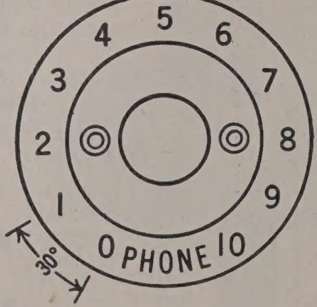


0 1 2 3 4 5 6 7 8 9 10
TREBLE
30°

RB-1000-4

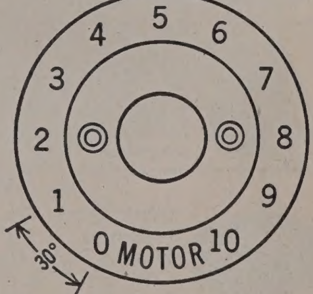


RB-1000-5



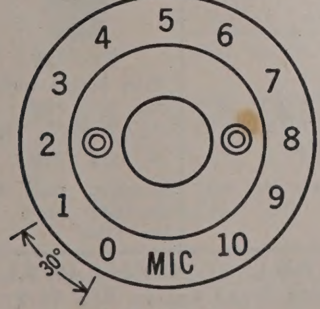
0 1 2 3 4 5 6 7 8 9 10
PHONE
30°

RB-1000-6



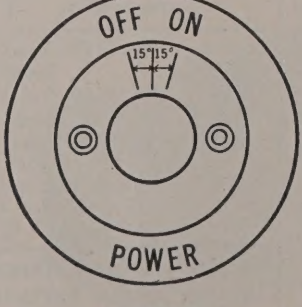
0 1 2 3 4 5 6 7 8 9 10
MOTOR
30°

RB-1000-7



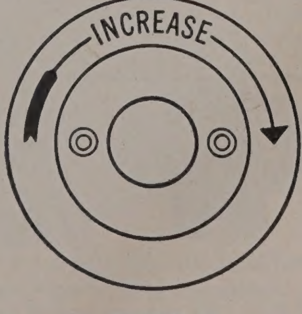
0 1 2 3 4 5 6 7 8 9 10
MIC
30°

RB-1000-8



OFF
ON
15°
15°
POWER

RB-1000-9



RB-1000-10

Harry Davies Molding Co.

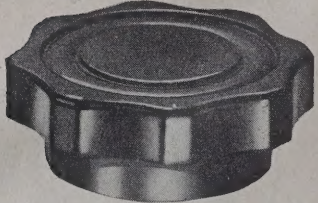
Molders of Plastics

1428 NORTH WELLS STREET • CHICAGO 10, Ill.

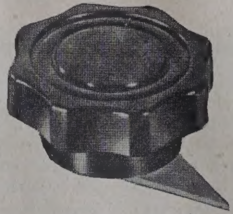
BRANDING OF KNOBS AT MODERATE COST

STANDARD COLORS FOR DAVIES KNOBS: Black, Walnut, Red or Ivory. Others to order. Quality radio knobs for standard ¼" shaft. Set screw, spring, or knurled hole mounting, or ¼" brass bushing.

ELECTRONIC INSTRUMENT KNOBS

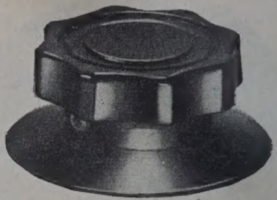


Type No.	Diameter	Height
4100	1⅛"	⅝"
4101	1⅜"	11/16"
4102	1⅝"	¾"
4103	2⅜"	⅞"



Type No.	Dia.	Pointer lengths available (Lengths from shaft center)				
4100	1⅛"	⅝"	¾"	1 1/16"	1 3/16"	1¼"
4101	1⅜"	¾"	⅞"	1 1/16"	1 3/16"	1¼"
4102	1⅝"	⅞"	1 1/16"	1 3/16"	1¼"	1 9/16"
4103	2⅜"	1 1/16"	1 3/16"	1¼"	1 9/16"	

Please specify pointer lengths when ordering.



Type No.	Diameter	Skirt diameter
4104	1⅛"	1½"
4106	1⅜"	1½"
4108	1⅝"	2 1/16"
4109	2⅜"	3"

Skirt available with or without indicator line filled.

No. 1400. (With pointer). Height 13/32". Diameter 11/16".

No. 1450. (No pointer). Height 13/32". Diameter 11/16". Set screw, spring, or knurled hole mounting.

No. 1475. (No Pointer). Height ½". Diameter 1". Set screw, spring, or knurled mounting.

No. 1700.

Height 19/32". Diameter ¾". Set screw, spring, or knurled hole mounting.

No. 2500.

Height ¾". Diameter ¾".

No. 2600.

Height ⅞". Diameter ⅞". Set screw, spring, or knurled hole mounting.

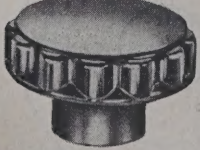
No. 2965.

Short Shank. Dia. ⅞"; Hgt. from ½" to 1½".

Medium Shank. Dia. ⅞"; Hgt. from 9/16" to 1½".

Long Shank. Dia. ⅞"; Hgt. from 9/16" to 1½".

This type knob can be supplied with arrow; Off-On; Tuning; Volume; Tone; Batt-Elec.; Band Switch; Radio-Phono, or Dot markings. Set screw, spring, or knurled hole mounting.



No. 3008.

Dia. 1¼"; Hgt. ¾".

No. 3009.

Dia. 1½"; Hgt. ¾".

No. 3000

Long Shank Dia. 1¾"; Hgt. ¾", 1", 1¼" & 1½".

Short Shank. Dia. 1¾". Hgt. ¾", 1", 1¼" & 1½". ¼" molded hole or brass insert. Plain or threaded hole. Set screw or knurled hole mounting.

WRITE FOR COMPLETE CATALOG.

	Length overall	Hgt.	Dia.
No. 2110	1⅝"	19/32"	¾"
No. 2100	2½"	⅝"	¾"

Molded hole or brass insert, set screw mounting.

	Length overall	Hgt.	Dia.
No. 2110-P	1 15/16"	19/32"	¾"
No. 2100-P	2 13/16"	⅝"	¾"

Metal insert and pointer, set screw mounting.

No. 2300—Zephyr bar knob. Length 1¼".

No. 2350—Zephyr bar knob. Length 2".

Molded hole, set screw mounting.

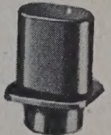
No. 2300-A—Zephyr bar knob. Length 1¼".

No. 2350-A—Zephyr bar knob. Length 2".

¼" brass insert and set screw.

No. 1800 Series

These can be furnished in either plain or recessed tops. Dia. 7/16"; Heights range from 1" to 1⅜". Also supplied with studs of various lengths.



No. 5149 — Rectangular touch tuning knob. Push on, self-locating.

No. 5149-A—Oval touch tuning knob. Push on, self-locating. Hgt. 13/16" - 1 1/32".

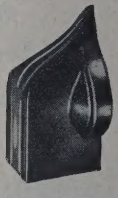
No. 1750—Touch Tuning. Push on, self-locating.

No. 1760—Touch Tuning, Recessed top, push on, self-locating. Dia. 31/64". Hgt. 9/16", 11/16", 13/16", 15/16".

No. 1770—Binding Post and Switch knob. No. 6-32 and No. 8-32 brass inserts. Dia. 31/64". Hgt. ½", ⅝", ¾", ⅞".

No. 2710

Height ½". Dia. ¾". Metal-faced insert or plain insert. Female thread available 8-32, 10-32 and 10-24.



No. 2150

Streamlined bar knob. Length 1¼".

No. 1780

Push button knob. Dia. ½". Hgt. 1", 1⅛", 17/32", 1⅜".

No. 1790

Recessed top. Dimensions same as No. 1780.

Factory & General Offices: 1428 N. WELLS ST., CHICAGO 10, ILL.
Branch Offices: Baltimore, Cincinnati, Grand Rapids, New York, Los Angeles, Milwaukee, Boston and Philadelphia
Foreign Office: Toronto, Canada

SNAP-ON DRAWER CO. MORROW, OHIO

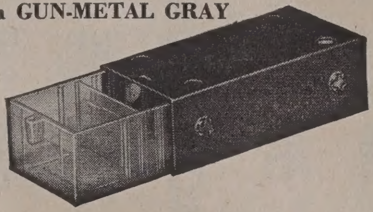
Build Your Own Cabinets

WITH SNAP-ON DRAWERS

The sturdy, steel shells of the SNAP-ON DRAWER snap together on sides, top and bottom, with duplicate shells, to form a strong metal cabinet. No tools are required. Just place the metal buttons of one shell, directly over the holes, in the adjacent shell, and snap the buttons into place, one at a time.

If you wish to change the position of a drawer, the shells can be readily pried apart with a knife blade, and rearranged.

Finished in GUN-METAL GRAY

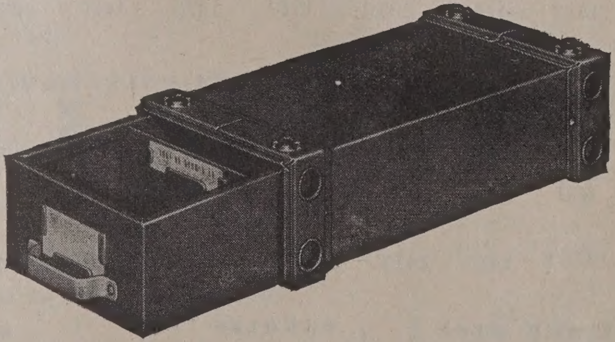


No. 1 SMALL

6-1/16" x 3⅛" x 1⅞"

Plastic & Steel

	Net Price
No. 1 "Small" Snap-On Drawer	$0.53
No. 1-BP "Small" Base Plate	.30
No. 1-D "Small" Divider	.03

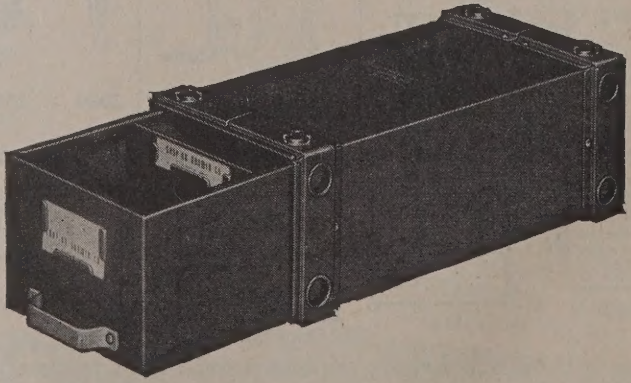


No. 2 JUNIOR

11¾" x 5⅛" x 2½"

All Steel

	Net Price
No. 2 "Junior" Snap-On Drawer	$2.35
No. 2-D "Junior" Divider	.11½



No. 3 SENIOR

11¾" x 5⅛" x 3½"

All Steel

	Net Price
No. 3 "Senior" Snap-On Drawer	$2.65
No. 3-D "Senior" Divider	.12

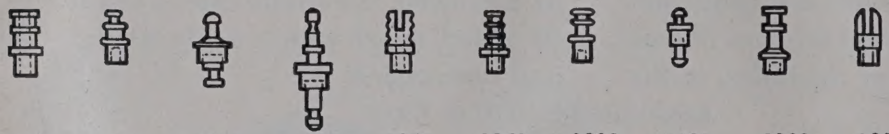
U. S. ENGINEERING CO.

521 COMMERCIAL STREET • GLENDALE 3 • CALIFORNIA

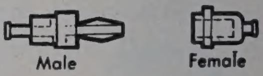
STANDARIZED ELECTRONIC HARDWARE

USECO

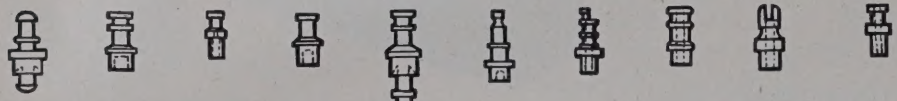
Dependable service and unmatched quality is assured. Call on USECO for your next requirements. Engineering manual and prices available on request.


1200
1210
1220
1230
1250
1260
1280
1290
1300
1310

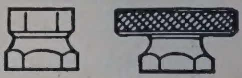
PLUGS


Male
Female

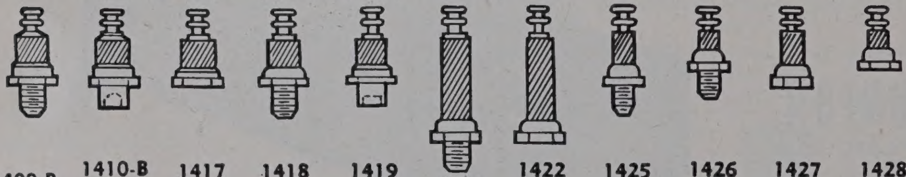
1700 C-D


1320
1330
1340
1350
1360
1370
1380
1390
1391
1392

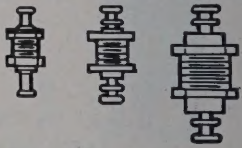
SHAFT LOCKS



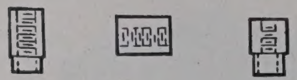
MELAMINE INSULATED TERMINALS—MOULDED


1400-B
1410-B
1417
1418
1419
1421
1422
1425
1426
1427
1428

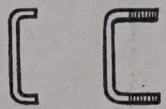
INSULATED FEED THRU


1430
1433
1435

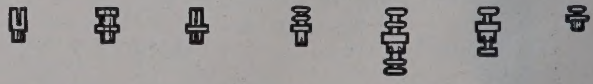
STAND OFFS


1540
1550 A-G
1530

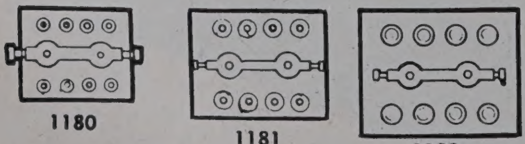
HANDLES



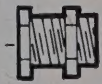
MINIATURE TERMINAL LUGS


2000
2010
2020
2030
2040
2050
2060

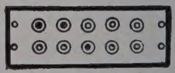
MELAMINE RESISTOR BOARDS


1180
1181
1182

PANEL BEARINGS



STANDARD BOARDS


5 SECTIONS
10 LUGS

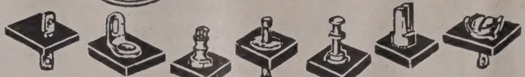
Pictured above are only a few of our products. Hundreds of others available.
Send for complete Engineering Manual.

TERMINAL BOARDS MADE TO CUSTOMER PRINT SPECIFICATIONS

CUSTOM·BILT TERMINAL BOARDS and ASSEMBLIES

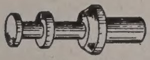
KEYSTONE
DESIGNERS
MANUFACTURERS

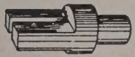
FROM YOUR BLUEPRINT TO FINISHED ITEM!

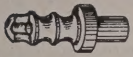


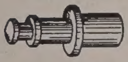
PROMPT DELIVERY USING OUR LARGE STOCKS
OF STANDARD TERMINALS AND BAKELITE
TO **JAN SPECS.**
ALL • TOOLING • FABRICATION • MARKING • FUNGICIDING
DONE ON OUR PREMISES.
PLASTIC FABRICATION • ALIGNING TOOLS • TEST LEADS
RADIO HARDWARE • STAMPINGS • SCREW MACHINE PARTS

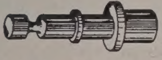
TURRET TERMINALS

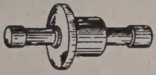

No. 1503

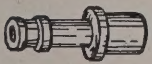

No. 1507


No. 1506


No. 1504

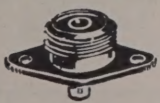

No. 1505


No. 1501

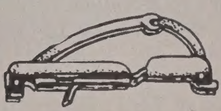

No. 1538

ALSO AVAILABLE IN MINIATURE SIZE

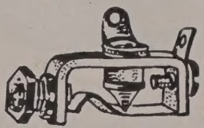
MALE CHASSIS CONNECTOR


PART No. K 507

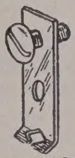
SWITCH LATCH
FOR 1E37 AND 1E17
WALKIE TALKIE
SIGNAL CORPS
No. 3Z9903 K-3
PART No. K 151

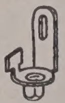


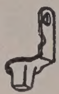
CIRCUIT BREAKER JACK
NAVY No. 49820
PART No. 50

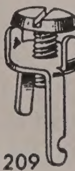


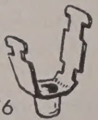
TERMINALS AND BRACKETS

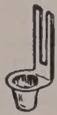

No. 1277


No. 1241


No. 1202

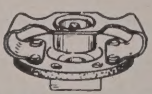

No. 1209


No. 1276


No. 1268

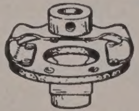
INSULATED FLEXIBLE COUPLINGS
¼" SHAFT

INTERNAL BUSHING


No. K 508

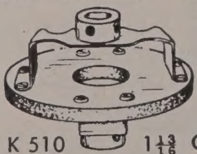
$1\frac{5}{16}$ O.D.

EXTERNAL BUSHING


No. K 509

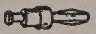
EXTERNAL BUSHING

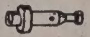
AVAILABLE WITH ANY TYPE OF INSULATION ON SPECIAL ORDER


No. K 510 $1\frac{13}{16}$ O.D.

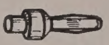
BANANA PLUG - JACK AND BOARD ASSEMBLIES

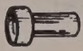
MINIATURE


No. 475

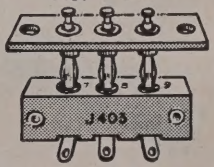

No. 425

MEDIUM


No. 552

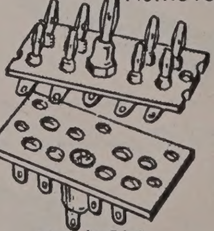

No. 575

MINI PLUG - AND JACK ASSEMBLY
No. K 511



No. K 512

MEDIUM PLUG - AND JACK ASSEMBLY
No. K 513


No. K 514

Send **FOR OUR CATALOG SHOWING OUR COMPLETE LINE OF STOCK ITEMS!**

KEYSTONE ELECTRONICS CORP.
423 BROOME ST., NEW YORK 13, N. Y.
WOrth 2-2789

UNITED TECHNICAL LABORATORIES

MORRISTOWN, N. J.

KLIPZON Products
SELF HOLDING PRODS
PROBES ● ADAPTORS ● MINI-PROD CONNECTORS

PAT PEND
KLIPZON
TEST PRODS
WITH
MINI-PROD CONNECTORS

Type A

PRICE
$1.95

KLIPZON Type A Test Prods are designed for maximum time saving, convenience and safety. Self-holding jaws slip onto wires, lugs, terminals, and grip test points until pulled off. Streamlined, modern design adds minimum capacity to circuit; makes contact with inaccessible wires and terminals easy. Points fit into pin-jacks, sockets, binding posts; grip wires from finest to #12 B&S gauge. Points are needle sharp stainless steel in Duralumin holders. Handles, red and black, 4¾" long, of glossy Tenite. 4 ft., super-flexible rubber covered leads. With Type B Mini-prod Connectors as terminals. Solderless connection in handles.

Complete circuit diagram and instructions for use on reverse side of wrapper.

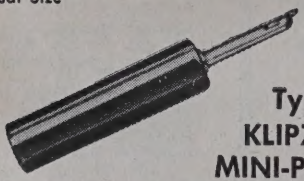
PAT PEND
KLIPZON
HIGH FREQUENCY
CRYSTAL PROBE
WITH
SELF-HOLDING TEST POINT
AND
MINI-PROD CONNECTORS

Type V (MAROON) for VTVM
Type C (BLACK) for VOM

PRICE
$6.95

KLIPZON Type V&C High Frequency Crystal Probes bring added versatility to laboratory and service test equipment. Both types include Self Holding KLIPZON Test Points and Type B Mini-prod Connectors as terminals. Type V provides accurate means of measuring V.H.F. voltages with a vacuum tube voltmeter. Germanium crystal in low capacity. high impedance circuit, supplies rectified voltage to DC input. Complete shielding reduces hand capacity and antenna effect to minimum. Completely insulated. Reads to 200 Mc with 10% accuracy. Input capacity 3.5 Mmf, 400 V DC rating. Input resistance (approx.) .25 Meg-ohms @ 500 Kc, 150,000 Ohms @ 10 Mc, 25,000 Ohms @ 100 Mc. Reads .707 × positive peak of sinusoidal voltage. Type C adapts volt-ohm-milliammeters for indication and comparison of V.H.F. voltages. Has Gernanium crystal and suitable network of resistance and capacity for connection to DC circuit of VOM, with at least 200 Micro-amp. sensitivity.

Actual Size



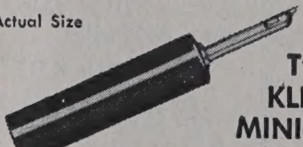
Type B
KLIPZON
MINI-PROD
CONNECTOR

PRICE
$.25 each

In boxes of 20
10 red, 10 black

KLIPZON Type B Mini-prod Connectors, with self-holding points are designed for laboratory or service use where quick, easy to make, temporary test connections are needed. Equipped with various lead lengths they make handy test connectors that can be easily changed without shutting off power. Insures maximum safety in testing. Wiring made easy by solderless connection inside Tenite handle. Needle sharp points for piercing insulation and protective coatings.

Actual Size



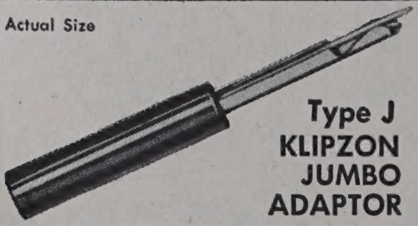
Type M
KLIPZON
MINI-PROD
ADAPTOR

PRICE
$.25 each

In boxes of 20
10 red, 10 black

KLIPZON Type M Mini-prod Adaptors are designed to fit over old style test points and thereby convert them to New Style Self Holding Prods. Fits over usual R.M.A. standard test point directly, or over phonograph needle type with special insert supplied. Size is same as that of KLIPZON Mini-prod Connector.

Actual Size



Type J
KLIPZON
JUMBO
ADAPTOR

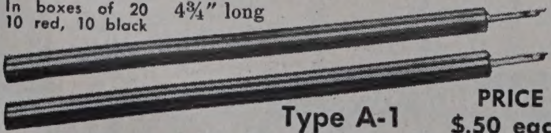
PRICE
$.25 each

In boxes of 20
10 red, 10 black

KLIPZON Type J Jumbo Adaptors are designed to make the self-holding feature available for use on larger wires and terminals. Fits over regular KLIPZON Self Holding Point of Types A, V, or C. Will also fit over standard R.M.A. test points or phonograph needle type with special insert supplied. Suitable for wires up to #4 B&S ga., #12 machine screws and equivalent sized lugs and terminals.

In boxes of 20
10 red, 10 black

4¾" long



Type A-1
KLIPZON TEST PROD HANDLES

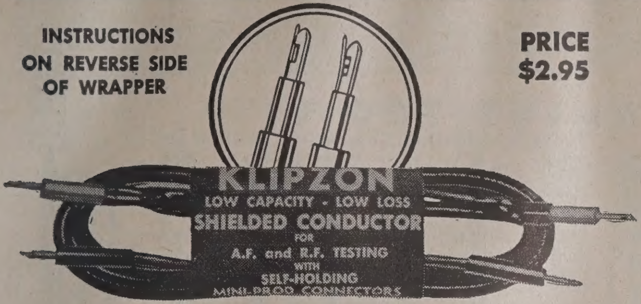
PRICE
$.50 each

KLIPZON Type A1 Test Prod Handles of glossy Tenite with self-holding points and solderless connection in handles, same as supplied with Type A Test Prods. Hole in handle accommodates up to .140" Dia. wire, 4¾" long. Designed for those who wish to wire up their own test prods.

UNITED TECHNICAL LABORATORIES
MORRISTOWN, N. J.

KLIPZON Products
LOW-CAPACITY LOW LOSS LEADS
JUMBO HEAVY DUTY TEST PRODS ● MINI-PROD TEST LEADS

INSTRUCTIONS ON REVERSE SIDE OF WRAPPER



TYPE S

PRICE $2.95

KLIPZON Type S Shielded Leads provide a reliable means of piping audio or radio frequencies in laboratory or service work. Di-electric of air and poly-ethylene is proportioned to provide unusually low capacity and loss even at U.H.F. while retaining strength, durability and flexibility of the lead. Complete shielding of leads eliminates stray pickups, feed back and other undesirable coupling effects. Lead length is 3 ft., O.D. approximately 9/32", total capacity only 25 mmf. Provided with black Mini-Prod Connectors at each end of lead for complete grounding of shield and red Mini-Prods for connecting to circuit or instrument.

PRICE $2.50

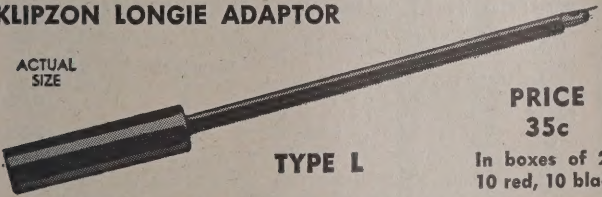
KLIPZON
SELF-HOLDING
JUMBO TEST PRODS
FOR
HEAVY DUTY TESTING

TYPE H

KLIPZON Type H Jumbo Heavy Duty Test Prods and Leads are designed to make the self-holding feature available for large sized wires, lugs and terminals. The oversized self-holding points clip onto conductors up to #4 B&S Ga. and grip test point until pulled off. Points are needle sharp to pierce insulation, fungus and wrappings, and protected with insulating sleeves to prevent shorting to adjacent wires. Handles unscrew for easy renewal of leads by soldering to internal lug. Spade type terminals are provided for ease of connection to meters or other equipment. Provided with 4 ft. lacquered poly-ethylene rayon leads, equivalent to #18 B&S Ga. (16 strands #30 B&S Ga. copper wire)

KLIPZON LONGIE ADAPTOR

ACTUAL SIZE



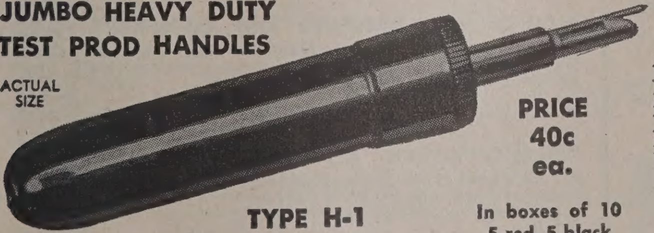
TYPE L

PRICE 35c
In boxes of 20 10 red, 10 black

The Longie Type L Adaptor is especially designed for test work in miniaturized or deep, close packed chassis. The extra long, slender point has the unique self-holding jaw and a needle sharp point for piercing insulation. The Longie fits over R.T.M.A. standard test points directly, and over phonograph needle type with special insert supplied.

JUMBO HEAVY DUTY TEST PROD HANDLES

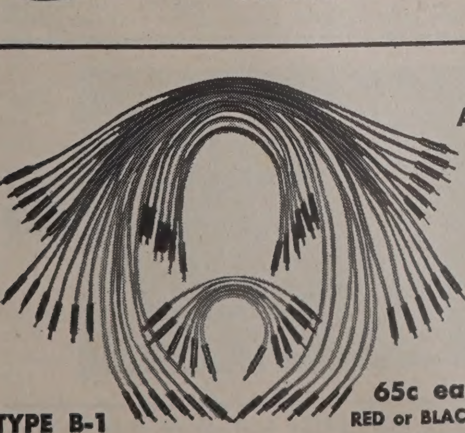
ACTUAL SIZE



TYPE H-1

PRICE 40c ea.
In boxes of 10 5 red, 5 black

KLIPZON Type H-1 Test Prod Handles of wear resistant plastic with heavy duty self-holding points, the same as provided with Type H Jumbo Test Leads. Point unscrews from handle, for attachment of leads to internal soldering lug. Hole in handle accommodates up to .220" dia. wire. Designed for those who wish to wire up their own test prods.



TYPE B-1

65c ea.
RED or BLACK

TEST LEAD ASSORTMENT

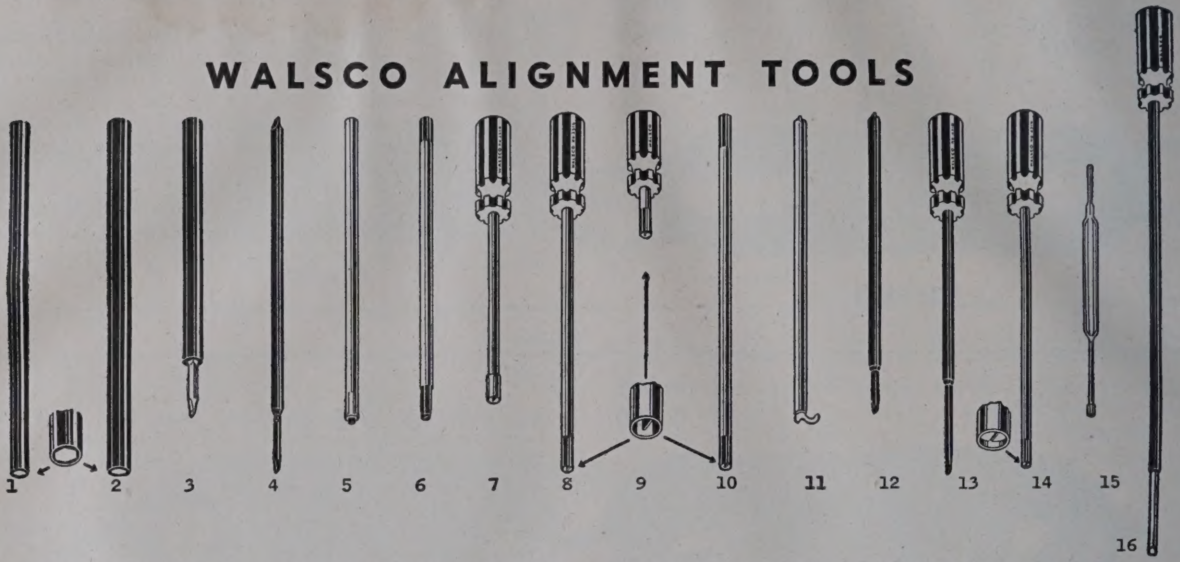
MINI-PROD CONNECTORS AS TERMINALS.

LENGTHS
6"
12"
18"
24"
30"

Every electronics laboratory, service shop and production line needs a supply of these handy KLIPZON Type B-1 leads. Each lead is equipped with two Type B Mini-Prod Connectors, which may be used as a miniature prod or clip. Points are protected by insulating sleeves to prevent shorting to adjacent wires. Sleeves are easily removable so that point may be inserted into pin jacks, binding posts and tube sockets. Needle sharp points readily make contact with inner conductors by piercing insulation. Lead wire is super-flexible, rubber covered (41 strands, #34 B&S Ga. copper) in red or black 6, 12, 18, 24 and 30 inch lengths. Solderless connector in handle makes renewal of leads easy.

Net

WALSCO ALIGNMENT TOOLS



WALSCO ¼" HEX I. D. NEUTRALIZING WRENCH.

Very durable. Can be cut if corners become rounded from wear. Over-all length—7½", O.D.—⅜" round.

Cat. No.	Picture No.	List Price
§2503—Lo-loss Plastic Wrench	1	$0.45

WALSCO 5/16" HEX. I. D. NEUTRALIZING WRENCH.

Same construction as ¼" wrench listed above. Over-all length—7½". O.D.—7/16".

Cat. No.	Picture No.	List Price
§2508—Lo-loss Plastic Wrench	2	$0.45

WALSCO FIBRE HEX-WRENCH-AND-SCREW-DRIVER.

Standard ¼" hex wrench combined with a tough nylon screwdriver tip.

Cat. No.	Picture No.	List Price
°2510—Combination Tool	3	$0.65

WALSCO DUPLEX ALIGNMENT SCREWDRIVER.

Precision made. Ground or molded to fit large or small screws. Width of blade on large end—7/32"; on small end—5/32". Thickness to conform to standard slot dimensions. Over-all length—7".

Cat. No.	Picture No.	List Price
°2520—Fibre Screwdriver	4	$0.55

WALSCO METAL TIP ALIGNMENT SCREWDRIVER.

Butyrate handle. This tool combines the low capacity effect of an alignment tool with the mechanical strength of a metal screwdriver. Diameter—7/32"; over-all length—6".

Cat. No.	Picture No.	List Price
°2525—Alignment Screwdriver	5	$0.50

WALSCO TUNING WAND.

Made from Butyrate rod with inductance-increasing powdered iron core on one end and inductance-reducing brass piece on opposite end. Over-all length—6".

Cat. No.	Picture No.	List Price
°2540—Tuning Wand	6	$0.55

WALSCO TV OSCILLATOR ALIGNMENT TOOLS.

Cat. No.	Picture No.	List Price
°2518—For Philco Receivers	7	$1.75
°2522—For Receivers with "Standard Coil" Front Ends	13	1.10
§2523—Extra long (12"); with replaceable super-tough molded nylon tip, for general front-end alignment without removing from cabinet......Picture No. 16		1.80
°2523-1—Replacement Tip for tool No. 2523 (Standard Pack: 20 Tips)		0.30

WALSCO TV I.F. ALIGNMENT SCREWDRIVERS.

Standard Tools for all TV and FM sets. Made of new flexible low-loss plastic with thin precision screwdriver tips.

Cat. No.	Picture No.	List Price
°2516—8½" long, for No. 6 Studs	8	$1.10
°2517—2" long, for No. 6 Studs	9	0.70
°2519—7" long—1 end for No. 6 Studs; other end for No. 4 Studs	10	1.05
°2524—8½" long, Slotted Type, for No. 6 Studs	14	1.10
°2526—5" long, Molded-Nylon Tool, hex stud one end, very small screwdriver other end. For Zenith, Hoffman, Raytheon, and other sets..................Picture No. 15		0.55

WALSCO WIRE DRESSING AND ALIGNMENT TOOL.

Made with thin (7/32") Butyrate handle, 7" long. Special tool on one end for dressing wires and finding loose connections or shorts. Other end has low capacity metal screwdriver tip.

Cat. No.	Picture No.	List Price
°2512—Wire Dressing and Alignment Tool	11	$0.60

WALSCO "K-TRAN" ALIGNMENT TOOL.

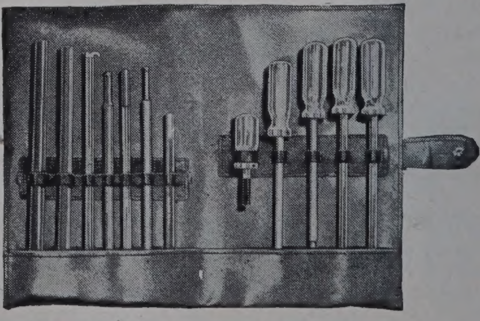
For adjustment of all miniature (K-Tran) I.F. transformers. Made of tough bone fibre. One end is machined to fit "K-tran" slots; other end is equipped with low-capacity metal screwdriver tip.

Cat. No.	Picture No.	List Price
°2515—"K-Tran" Alignment Tool	12	$0.80

WALSCO TV-FM ALIGNMENT TOOL KITS

Handy TV-FM alignment tool kit or wall rack. Durable leatherette kit gives servicemen every tool necessary to align TV and FM sets. Handy wall rack for use above bench in shop. Provides proper place for each tool, and always handy.

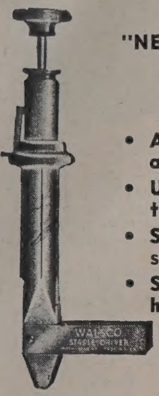
Cat. No.	List Price
580—12 Tools in leatherette case	$12.65
581—12 Tools on wall rack	12.65



For Bulk Quantity Prices on these items, see WALSCO INDUSTRIAL AND BULK PRICE LIST, pages U-54 to U-61.

§ Standard Package: Display Card of 12 Tools.
° Standard Package: Display Card of 20 Tools.

SPECIAL TOOLS WIRE STRIPPERS



WALSCO STAPLE DRIVER

"NEW IMPROVED GUARANTEED MODEL"

Patent No. 2,285,384

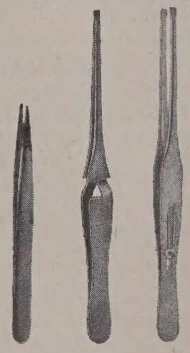
Pays for itself on the first job!

- **A sensational tool for installing wires and cables, that saves time and money.**
- **Used by Radio, Public Address and Intercom Technicians.**
- **Staples into corners and other inaccessible places.**
- **Staples on hard surfaces such as plaster, hardwood, etc.**
- **Can be loaded in 10 seconds.**

Cat. No.		List Price	Dealer's Net
500	Staple Driver Complete, including box of staples	$9.05	$5.43
507	Rubber Cap for Head of Staple Driver	0.40	0.24
550	Box of 250 Carbon Steel Staples	0.65	0.39
552	Box of 1000 Carbon Steel Staples	2.50	1.50

WALSCO SERVICE TWEEZERS

These handy holding tools are made of fine spring steel and are polished nickel-plated. They have numerous uses in the shop and laboratory, such as starting screws and nuts in difficult places, holding wires and small parts together when soldering, clamping cemented items, installing dial cord and record-changer springs, looping and untying knots on drive cord, etc.


572 570 571

Cat. No.		List Price
570	**Self - Closing Tweezer** with cross-over action, 6½" long, serrated, blunt points	$1.05

(Standard Package: Display card with 10 tweezers . . . Cat. No. 570D)

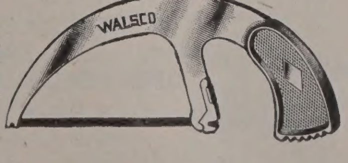
571—**Heavy-Duty Tweezer** with slide-lock feature. Length 6½", serrated, blunt points $1.30
(Standard Package: Display card with 10 tweezers . . . Cat. No. 571D)

572—**Precision Tweezer** with narrow, pointed ends especially suitable for delicate work. Over-all length 4½" $0.60
(Standard Package: Display card with 20 tweezers . . . Cat. No. 572-D)

575—**TWEEZER KIT, made of durable leatherette, containing one each of the above listed tweezers. Provides servicemen with necessary tweezers for every need. Neat, compact, handy** $3.55
(Standard Package: Display of 12 kits . . . Cat. No. 575-D)

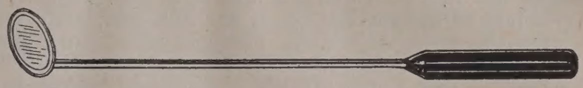
WALSCO WHIZ-SAW

Handy, lightweight (3½ oz.) hacksaw for cutting volume control shafts, TV antenna tubing, etc. Ideal for general shop use.



Cat. No.		List Price
556	Whiz Saw	$ 1.45
556D	Display of 12 No. 556	17.40
557	Replacement Blades	0.20

WALSCO INSPECTION MIRROR



An extremely useful tool for inspecting those hidden spots without removing the record changer, TV or radio set. The long, insulated handle can reach into any blind area. Bright reflection mirror makes all parts easily visible. Sturdily constructed. 12 units per display card.

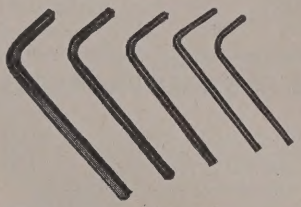
Cat. No.		List Price
554	Inspection Mirror	$.055
554-D	Display of 12 No. 554	6.60

WALSCO QUIK-KLIP

A quick method of attaching lead-in wires to TV sets. Can't short-out. Works in any position. Free display with order of 50 units.

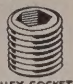
Cat. No.		List Price
1525	Quik-Klip	$ 0.50
1525-D	Display of 50 No. 1525	25.00

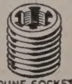
WALSCO KEY WRENCHES



FOR HEX AND SPLINE SOCKET SCREWS

WALSCO features three sets of socket wrenches made of special alloy steel to fit all standard socket screws used in radio and electronic equipment.


HEX SOCKET


SPLINE SOCKET

Cat. No.	Description	List Price
†780	Assortment of 4 small HEX wrenches Fits set screws No. 4 to No. 10 and cap screws No. 2 to 6.	$0.55
†781	Assortment of 3 medium HEX wrenches Fits set screws ¼" to ⅜" and cap screws No. 8 to ¼".	0.55
†784	Assortment of 4 small SPLINE wrenches Fits all set screws up to ¼" and cap screws up to No. 8.	0.55

WALSCO HEX & SPLINE WRENCH KIT

A handy kit containing a complete range of wrench sizes as used in the electronic trade. The case is made of durable leatherette with double snap button closure and contains both hex (Allen) and spline (Bristol) wrench keys for No. 2 to ⅜" screws.

Cat. No.		List Price	Dealer's Net
560	Wrench Kit	$1.80	$1.08

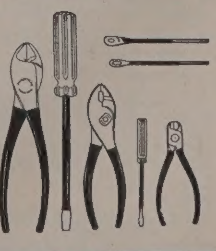
Standard Package — 25

WALSCO PROTECTO TUBE

A new synthetic tubing designed for insulating handles of pliers, screwdriver blades, etc. Highly abrasion-resistant. Will not crack or shatter. Expanding Solution "swells" tubing to permit easy application. Upon drying, tubing shrinks on tight.

Protecto-Tube Kit, containing approx. 12 ft. assorted sizes and colors of WALSCO Protecto-Tube, jar of Expanding Solution, and instructions.

Cat. No. K-18............**List Price $1.80**



***Std. Pack: Display Box of 20 Individual Packages.** Add suffix "B" to part number to indicate one standard package. Example: 1 #3330-B consists of standard box containing 20 packages #3330.
†Available Either in Standard Display Box of 20 Packages or on Standard Display Card of 20 Packages When ordering add suffix "B" for box or suffix "D" for display card. See example above.

WALSCO DIAL CABLES AND CORDS

WALSCO
DIAL CABLES AND CORDS

WALSCO Dial Cables and Cords are manufactured to meet the most rigid standards of the Government, Radio Industry and Engineering Laboratories. The finest raw materials are used and production is controlled to supply a uniform product with an absolute minimum stretch factor. All standard Cords are made with **NYLON** braid, known to have the highest abrasion resistance. These selected materials, plus special chemical treatment after fabrication, make WALSCO Cords the finest on the market. WALSCO Dial Cords are used by leading manufacturers as a standard component.

25-ft. and 100-ft. spools are packaged in clear plastic, re-usable storage boxes with sliding lids.

HEAVY CORD—Diameter .062″—Same as used on many Philco and Majestic sets. Very durable, and treated to prevent slipping.

No. 33	25 ft.	List Price $1.90
No. 33-1C	100 ft.	List Price 5.05

BRONZE CABLE—16-Strand Braided—Diameter .039″—Breaking Strength 50 lbs.—A braided cable with good flexibility and abrasion resistance. "Fiber-glass" is used as core material and the braid is constructed of special hard Cadmium bronze. Does not unravel.

No. 31	25 ft.	List Price $1.30
No. 31-1C	100 ft.	List Price 3.80
No. 31-5C	500 ft.	List Price 15.40

PHOSPHOR BRONZE CABLE—42-Strand—Diameter .032″—Breaking Strength 60 lbs.—A very flexible metal cable constructed of 42 strands of hard Phosphor bronze over a "Fiber-glass" core. Extremely durable. Used for replacement of dial cables and many special applications where a strong, stranded cable is required.

No. 30	25 ft.	List Price $1.65
No. 30-1C	100 ft.	List Price 5.50
No. 30-5C	500 ft.	List Price 22.00

SPECIAL THIN BRONZE CABLE—Diameter .022″—An extra-thin cable for dial drives, flexible connections, pigtails, and many other applications—wherever a thin, but strong cable is required.

No. 32	25 ft.	List Price $1.40
No. 32-1C	100 ft.	List Price 4.95
No. 32-5C	500 ft.	List Price 14.30

The following cords cover over 80% of the replacement demand. With one spool of each kind on hand, the serviceman has the proper size for practically any set manufactured since 1934. Constructed with "Fiber-glass" or linen core and "pre-stretched," these are the most efficient cords available. The braided sleeves are made of Nylon.

Cat. No.	Diam.	Breaking Strength	LIST PRICES Feet Per Spool 25	100	500
		"SPECIAL THIN"			
35	.025″	15 lbs.	$1.40		
35-1C	.025″	15 lbs.		$4.95	
35-5C	.025″	15 lbs.			$14.30
		STANDARD			
39	.032″	20 lbs.	$1.40		
39-1C	.032″	20 lbs.		$4.95	
39-5C	.032″	20 lbs.			$14.30
		MEDIUM			
34	.040″	35 lbs.	$1.40		
34-1C	.040″	35 lbs.		$4.95	
34-5C	.040″	35 lbs.			$17.60

STANDARD PACKAGE—12

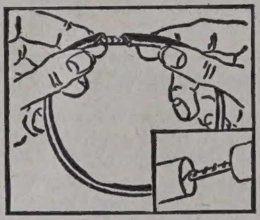
POPULAR DIAL CORD IN SMALL PACKAGES

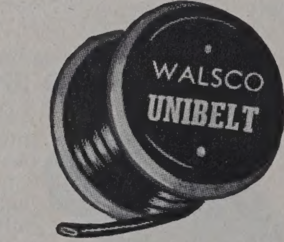
Cat. No.		List Price
3070	Approximately 10 ft. Special Thin Cord (Type 35)	$0.45
3080	Approximately 8 ft. Medium Cord (Type 34)	0.45
3090	Approximately 8 ft. Standard Cord (Type 39)	0.45

(Standard Package . . . 20; available on display card or box)

WALSCO UNIBELT

A NEW UNIVERSAL DIAL-DRIVE BELT ADJUSTABLE TO FIT ANY DIAL DRIVE





Covered by Patent No. 2,300,706

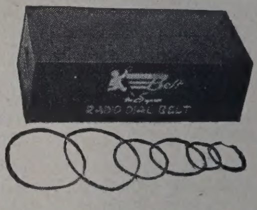
- **Eliminates need for stocking 96 different sizes of belts.**
- **Unibelt gives the Radio Man the correct size belt for every make and model set.**
- **Easily installed in a few minutes. No need for taking dial mechanism apart.**
- **Put up on spools in continuous lengths which will make five or more average belt replacements.**
- **New patented construction incorporates special stainless steel core and pure latex covering.**
- **Belts cannot stretch, and when properly installed will not slip, fray or break.**
- **Unconditionally guaranteed.**

The ingenious construction of the New **WALSCO Unibelt** makes it possible to assemble any size belt by merely cutting the desired length and joining the ends with a simple "zipper-like" connector. The connected belt cannot stretch and has a breaking strength of **over 60 lbs. ONLY ONE SIZE NEEDED** for any belt replacement job.

Cat. No.		List Price	Dealer's Net
303	5-ft. spool Unibelt (with 10 connectors and instructions)	$3.00	$1.80

WALSCO DIAL DRIVE BELTS

- **Precision Made.**
- **No Stretch — No Slip.**
- **Smooth and Uniform.**
- **Exceptionally Strong.**

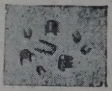


Available for any type of radio set. Specially constructed to give long lasting, trouble-free service. Treated for maximum friction and to provide accurate tuning. WALSCO Dial Belts are uniformly thick throughout the entire length and are precision made and guaranteed to fit perfectly.

All Sizes..........**List Price Each, $0.30**

Also put up in Kits of 25, 50, 100 and 150 Belts

WALSCO DIAL CORD CLIPS



For fastening the end of dial drive cord. The assortment contains the proper sizes for all standard thicknesses of cord.

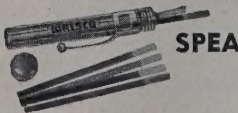
Cat. No.		List Price per pkg.
*2770	Approximately 35 Clips	$0.45

WALSCO PLASTIC DIAL CRYSTALS

Can be cut with scissors. Easily press-fitted or cemented in place. Solves the replacement problem on radio dials, instruments, etc.

Cat. No.	Size	List Price
990	6″ Maximum Diameter	$1.20
992	9″ Maximum Diameter	2.00
994	8″ x 10″ Flat Sheet	1.80

WALSCO SPEAKER ADJUSTMENT SHIMS



- Made of Non-magnetic Metal
- Strong and Flexible, Spring Temper
- Corrosion-Resistant

4 Shims of each of 4 sizes supplied in handy plastic case with screw top and pencil clip. As easy to carry as a fountain pen. Marked for easy identification. Sizes supplied—.004″, .006″, .008″ and .010″. Indispensable to the serviceman in adjusting voice coils.

Cat. No.		List Price
2550	16 Assorted Shims—4 of each size	$0.75

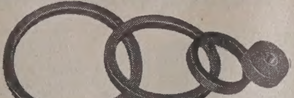
For Bulk Quantity Prices on these items, see WALSCO INDUSTRIAL AND BULK PRICE LIST, pages U-54 to U-61.

---

*__Std. Pack: Display Box of 20 Individual Packages.__ Add suffix "B" to part number to indicate one standard package. Example: 1 #3330-B consists of standard box containing 20 packages #3330.

†**Available Either in Standard Display Box of 20 Packages or on Standard Display Card of 20 Packages.** When ordering add suffix "B" for box or suffix "D" for display card. See example above.

WALSCO PHONO-MOTOR DRIVES

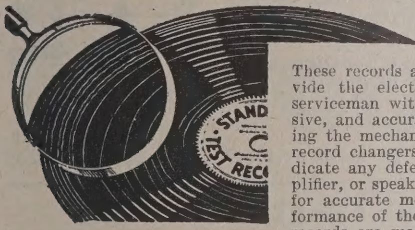


Precision made to assure constant uniform speed and made of abrasion-resistant synthetic rubber to assure long wear. For attaching, use WALSCO Rubber Cement.

Cat. No.	I.D.	O.D.	Thick	No. of Drives per pkg.	Used on	List Price per pkg.
2560-14	⅝″	11/16″	¼″	3	G-I, V-M, Philco, Garod and others	$0.45
†2560-16	2″	2⅜″	5/32″	2	Gen. Indust. Mod. LX & RX	0.45
†2560-17	1½″	1¾″	3/16″	2	Alliance, Seeburg, G.E. V. M. 400	0.45
†2560-18	⅞″	1⅛″	3/16″	3	Seeburg, R.C.A., G.E.	0.45
†2560-19	⅛″	⅜″	¼″	4	Philco, R.C.A., etc.	0.45
†2560-20	5¾″	6″	3/16″	1	Detrola	0.45
*2560-22	1 7/32″	1 15/32″	3/16″	3	G.I. Recorder/Changer	0.45
*760-23	11/16″	1⅛″	¼″	2	R.C.A., RP-176, 177 and most pre-war R.C.A. Changers. Also on G.E. 809-J, etc.	0.45
761-23	4½″	5½″	5/16″	1	Same as #760-23	1.10
760-24	2⅞″	3⅜″	¼″	1	R.C.A. 960015, 960260, 960276. Also most Admiral and Crescent postwar changers	0.55
†760-25	Spring-Drive			1	Detrola - Utah	0.55

WALSCO STANDARD TEST RECORDS

FOR TESTING AND ADJUSTING RECORD PLAYERS, CHANGERS PICK-UPS, AND AMPLIFIERS



These records are designed to provide the electronic engineer and serviceman with a quick, inexpensive, and accurate means of checking the mechanical performance of record changers. They will also indicate any defects in pick-up, amplifier, or speaker, and may be used for accurate measurements of performance of these components. All records are made of long-wearing, plastic material, and are unbreakable in normal use.

Cat. No. 720-6—Set of six 10″ records consisting of one each of the following: Record No. 720, 721, 725, 726, 727, 728.
With this set, all mechanical and electrical performance characteristics of a phonograph system can be quickly and accurately checked. No laboratory or well-equipped service shop should be without this set............ **List Price $10.90**

Cat. No. 720—10″ record with accelerated pitch. Playing time approximately 45 sec. Lead-in grooves modulated with 3 tones to indicate set-down position of pick-up. Proper tripping action indicated by tone signals at end of record. Both sides of record identical **List Price $1.80**

Cat. No. 721—10″ record. One side with accelerated pitch and without starting spiral for checking "feed-in" of pick-up. Other side same as No. 720............ **List Price $1.80**

Cat. No. 725—10″ record. One side: Sweep Frequency Record at N.A.B. standard level. Range 10,000 to 50 c.p.s. Cross-over to constant amplitude at 500 c.p.s. Other side same as No. 720. **List Price $2.10**

Cat. No. 726—10″ record. One side: Test Frequency Record at N.A.B. standard level. Range 10,000 to 50 c.p.s. in 16 steps. Other side same as No. 720............ **List Price $2.10**

Cat. No. 727—10″ record. One side contains 1000 and 400-cycle tone for 1 min. each. Especially designed for testing irregular turntable speed ("WOW"). Other side same as No. 720......... **List Price $2.10**

Cat. No. 728—10″ record. One side contains silent (unmodulated) groove for checking turn-table rumble. Other side same as No. 720. **List Price $1.80**

Cat. No. 730-4—Set of four 12″ records of same design as No. 720. Designed for use in connection with set No. 720-6 in checking performance of intermix changers............ **List Price $10.90**

WALSCO STROBOSCOPE DISK

WALSCO
STROBOSCOPE DISK

For checking proper speed of turntables. Lines on disk appear to be stationary on correct speed when observed under 60-cycle AC lighting (preferably fluorescent). For checking 78, 45, and 33⅓ rpm. speeds.

Cat. No.	List Price
949—Stroboscope Disk	$0.17

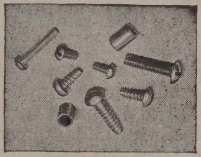
Standard Packing: 25

WALSCO PHONOGRAPH PICKUP SET SCREWS

Precision knurled head steel screws, antique bronze finished for all popular pickups and recording heads. The assortment contains several each of the popular numbers and one each of the other sizes.

Cat. No.	Approx. No. Units per pkg.	Used On	Size	List Price per pkg.
†2570	10	Assorted	Assorted sizes	$0.45
*2571	10	Shure and others	2-56 x ⅝″	0.45
*2572	10	Most Astatic & Webster	2-64 x ¾″	0.45
*2576	4	Most RCA, etc.	1-72 x 1″	0.45

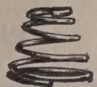
WALSCO PICKUP CARTRIDGE MOUNTING SCREWS



An assortment containing small machine and self-tapping screws of various lengths, sizes and styles as required in fastening cartridge to pick-up arm. Especially useful when threads are stripped or replacement of different cartridge requires longer screws.

Cat. No.	List Price
*3365—Apprx. 30 Screws & Spacers	$0.45

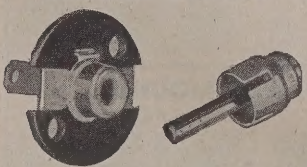
WALSCO PHONO PANEL MOUNTING SPRINGS



An assortment of various sizes of conical springs as used in mounting record changer units.

Cat. No.	List Price per pkg.
*3385—8 Assorted Springs	$0.45

WALSCO PHONO PLUGS AND JACKS



Standard plugs and jacks as used for connecting record players or pick-ups; also used on auto radio antennas. Used for all single conductor, shielded cable connections.

Cat. No.	List Price per pkg.
†2580—Package of 4 Plugs	$0.45
†2585—Package of 2 Jacks	0.45

WALSCO PHONE TIPS

Fit all standard tip jacks. Easy to solder. Made of brass, nickel-plated. These are the conventional tips so often needed by both experimenters and service men.

	THE 40 LINE $0.45 List Ea. Pkg. Cat. No.	Approx. Quan.	THE 99 LINE $1.80 List Ea. Pkg. Cat. No.	Approx. Quan.
Phone Tips	†2725	10	2725-99	60

WALSCO PHONO TURNTABLE FELTS

Made of high-quality brown felt, accurately die-cut with concentric center hole. Use WALSCO Radio Cement or WALSCO Fabric Cement for attaching.

Cat. No.		List Price
350-8 —	7⅞″ diameter	$0.50
350-9 —	8⅞″ diameter	0.65
350-10—	9⅞″ diameter	0.70
350-12—	11⅞″ diameter	0.85

WALSCO SPEAKER DUST FELTS

Special, thin felt disks to keep metal particles and dust out of voice coils. Use Walsco Radio Cement to attach to cone.

Cat. No.	List Price per Pkg.
*2775—Approx. 25 assorted sizes	$0.45

For Bulk Quantity Prices on these items, see WALSCO INDUSTRIAL AND BULK PRICE LIST, pages U-54 to U-61.

***Std. Pack: Display Box of 20 Individual Packages.** Add suffix "B" to part number to indicate one standard package. Example: 1 #3330-B consists of standard box containing 20 packages #3330.
†Available Either in Standard Display Box of 20 Packages or on Standard Display Card of 20 Packages. When ordering add suffix "B" for box or suffix "D" for display card. See example above.

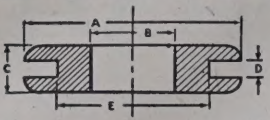
WALSCO ELECTRONIC HARDWARE

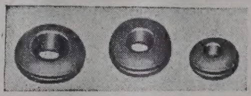
The 99 *Line*
IN PERMANENT *Transparent* PLASTIC STORAGE BOXES with SLIDING TOPS

The 40 *Line*
PACKED IN HANDY ECONOMICAL PLASTIC BAGS

WALSCO RUBBER GROMMETS

For protecting cables from abrasion when passing through chassis holes. Also used for vibrationless mounting of parts.





Dimensions					THE 40 LINE $0.45 List Ea. Pkg.		THE 99 LINE $1.80 List Ea. Pkg.	
A	B	C	D	E	Cat. No.	Approx. Quan. per pkg.	Cat. No.	Approx. Quan. per pkg.
11/32	1/8	3/16	1/16	1/4	†3341	15	3341-99	85
7/16	3/16	7/32	1/16	5/16	†3342	12	3342-99	85
9/16	1/4	1/4	1/16	3/8	†3343	10	3343-99	65
5/8	3/8	1/4	1/16	1/2	†3344	10	3344-99	55
13/16	1/2	9/32	1/16	5/8	†3345	6	3345-99	35
Assorted					†3340	12		

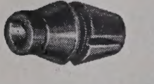
WALSCO RUBBER WASHER AND BUMPER ASSORTMENT

An assortment of the various kinds of rubber washers, bumpers, and spacers used in the electronic and radio industry for shockless, vibrationless mounting, for eliminating rattles and microphonics, etc.

Cat. No.	List Price
†3440—20 Assorted Washers and Bumpers	$0.45

WALSCO CORD STRAINRELIEFS

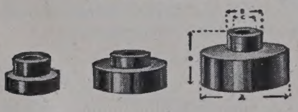
FOR POSJ WIRE



Provides a grommet and strain relief in one piece. For use on appliance cord sets. Use WALSCO Rubber Cement (Cat. No. 112) for attaching to cord. Prevents insulation of wire from being damaged by sharp-edged holes in metal chassis or cabinets.

Cat. No.	List Price per pkg.
*3348—4 Strainreliefs	$0.45

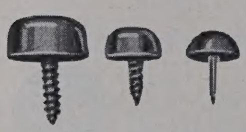
WALSCO CHASSIS MOUNTS



Made of resilient synthetic rubber to give chassis or other components a floating effect and to reduce "microphonics." Essential wherever vibration will affect operation.

Dimensions				THE 40 LINE $0.45 List Ea. Pkg.		THE 99 LINE $1.80 List Ea. Pkg.	
A	B	C	D	Cat. No.	Quan. per pkg.	Cat. No.	Quan. per pkg.
3/4"	1/2"	1/4"	3/8"	*2742	5	2742-99	25
1"	1/2"	1/4"	17/32"	*2744	4	2744-99	20
Assorted				†2740	10		

WALSCO CABINET FEET



Made of oil resistant synthetic rubber. Wood screws are supplied with screw-type feet but machine or selftapping screws may be used. The rubber tack feet have steel tacks securely molded in.

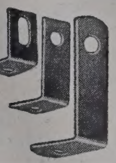
PKGS. OF SCREW-TYPE FEET, INDIVIDUAL SIZES

Diam.	Height	THE 40 LINE $0.45 List Ea. Pkg. Cat. No.	Quan.	THE 99 LINE $1.80 List Ea. Pkg. Cat. No.	Quan.
3/8"	7/32	*3351	8	3351-99	55
1/2"	9/32	*3352	8	3352-99	50
3/4"	3/8	*3353	6	3353-99	30
Assorted		†3350	8		

PKGS. OF RUBBER TACK FEET

Diam.	Height	Cat. No.	Quan.	Cat. No.	Quan.
1/2"				3355-99	55
3/8"				3356-99	50
Assorted		†3355	10		

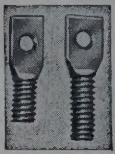
WALSCO ANGLE BRACKET ASSORTMENT



Handy brackets of various lengths and shapes as needed by every repairman, experimenter, "ham", etc. Precision made, of steel, or brass and plated.

Cat. No.	List Price, per pkg.
*2610—Approximately 14 Assorted Brackets	$0.45

WALSCO SPADE BOLTS

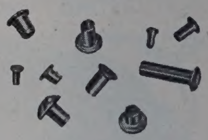


Indispensable for attaching condensers, coils, cans, and similar items. For Experimenters, Servicemen and Manufacturers of electronic equipment. Stud size 6-32. Hole size for No. 6 screw.

Approx. Length	THE 40 LINE $0.45 List Ea. Pkg. Cat. No.	Quan. per pkg.	THE 99 LINE $1.80 List Ea. Pkg. Cat. No.	Quan. per pkg.
5/8"			3271-99	100
3/4"			3272-99	100
Assorted	†3270	18		

WALSCO RIVET ASSORTMENT

Various sizes of hollow, solid and split rivets in brass, copper and aluminum as used in everyday repair and experimental work. Sizes range approximately from 1/16" to 3/16" in diam. and up to 3/4" in length.



Cat. No.	List Price per pkg.
†2620—Approx. 60 asstd. Rivets	$0.45

WALSCO EYELET ASSORTMENT

Brass eyelets of various diameters and lengths. A handy item for every repair shop.

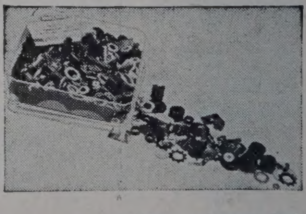
Cat. No.	List Price per pkg.
†2630—Approx. 55 Eyelets	$0.45

WALSCO SMALL COTTER & HAIR PINS

Package contains an assortment of most popular sizes of cotter and hair pins. A valuable aid in the repair of radios and phonograph mechanisms.

Cat. No.	List Price per pkg.
*2650—Approx. 50 Assorted Cotter and Hair Pins	$0.45

WALSCO HARDWARE ASSORTMENT



A wonderful assortment of screws, nuts, washers, springs, clamps, eyelets, grommets, terminals, etc. Only regular hardware included. Just the thing for the experimenter, ham and technician. In plastic box.

Cat. No.	List Price	Dealer's Net
K3003—"1000 Piece" Hardware Assortment	$1.80	$1.08

For Bulk Quantity Prices on these items, see WALSCO INDUSTRIAL AND BULK PRICE LIST, pages U-54 to U-61.

***Std. Pack: Display Box of 20 Individual Packages.** Add suffix "B" to part number to indicate one standard package. Example: 1 #3330-B consists of standard box containing 20 packages #3330.
†Available Either in Standard Display Box of 20 Packages or on Standard Display Card of 20 Packages. When ordering add suffix "B" for box or suffix "D" for display card. See example above.

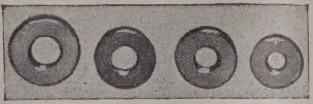
WALSCO ELECTRONIC HARDWARE

The 99 *Line* — IN PERMANENT *Transparent* PLASTIC STORAGE BOXES with SLIDING TOPS

The 40 *Line* — PACKED IN HANDY ECONOMICAL PLASTIC BAGS

WALSCO METAL WASHERS

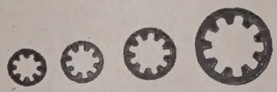
Precision steel washers, Cadmium plated, in standard small sizes for innumerable uses.



For Screw Size	Dimensions I.D.	O.D.	Thick.	THE 40 LINE $0.45 List Ea. Pkg. Cat. No.	Approx. Quan.	THE 99 LINE $1.80 List Ea. Pkg. Cat. No.	Approx. Quan.
#4	.125″	5/16″	1/32″	*3511	80		
#6	.149″	3/8″	1/32″	*3512	80	3512-99	500
#8	.175″	3/8″	1/32″	*3513	80	3513-99	500
#10	.203″	7/16″	1/32″	*3514	75	3514-99	300
1/4″	.265″	1/2″	1/32″	*3515	60	3515-99	300
Assorted				†3510	80		

WALSCO LOCK WASHERS

Made of special steel and rust-proofed. Sizes listed below are the most popular ones in the radio and electrical appliance field.



For Screw Size	The 40 LINE $0.45 List Ea. Pkg. Cat. No.	Approx. Quan.	THE 99 LINE $1.80 List Ea. Pkg. Cat. No.	Approx. Quan.
#6	*3592	50	3592-99	300
#8	*3593	45	3593-99	275
#10	*3594	45	3594-99	275
1/4″			3595-99	200
3/8″			3596-99	125
Assorted	†3590	45		

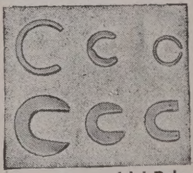
WALSCO KNOB FELT WASHERS

Keep cabinets from being scratched and make knobs turn smoothly. Made of tough brown felt with 1/4″ hole to fit standard control and condenser shafts. O.D. is approx. 3/4″ and thickness 1/32″.

THE 40 LINE $0.45 List Ea. Pkg. Cat. No.	Quan. per pkg.	THE 99 LINE $1.80 List Ea. Pkg. Cat. No.	Quan. per pkg.
†3490	45	3490-99	250

WALSCO RETAINING RINGS AND "C" WASHERS

A necessity in the servicing of volume controls, record changers, etc. The rings are tempered spring steel. The washers are annealed.



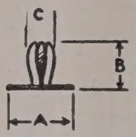
Cat. No.	Description	Approx. No. of units per pkg.	List Price per pkg.
†3420	Assorted Rings & Washers	25	$0.45
*3422	"C" Washers for 1/4″ Shaft	15	0.45
*3423	"C" Washers for 3/16″ Shaft	18	0.45

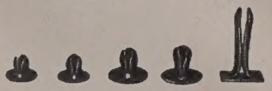
WALSCO SPRING (FRICTION) WASHERS

Used in record changers, automatic tuning assemblies, etc. Assortment contains many popular sizes of phosphor bronze and spring steel washers.

Cat. No.		List Price per pkg.
†3425	Approx. 15 Assorted Spring Washers	$0.45

WALSCO SNAP-IN TRIMOUNTS

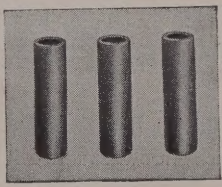




Faster than screws. Use them on modern radio sets, back covers, dial scales, chassis, built-in antennae, etc., to speed assembly and repairs.

Dimensions A	B	C	For Hole	THE 40 LINE $0.45 List Ea. Pkg. Cat. No.	Quan. per pkg.	THE 99 LINE $1.80 List Ea. Pkg. Cat. No.	Quan. per pkg.
9/32″	13/64″	9/64″	1/8″	*3462	20	3462-99	125
23/64″	9/32″	3/16″	5/32″	*3464	18	3464-99	100
3/8″	5/8″	5/32″	5/32″	*3465	15	3465-99	85
Assorted				†3460	approx. 20		

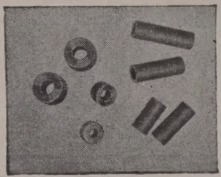
WALSCO FUSE INSULATORS



Standard fibre insulators for use on automobile radios. Two lengths included fit all standard 1/4″ diameter fuses.

Cat. No.		List Price per pkg.
†2690	Approx. 16 Assorted Insulators	$0.45

WALSCO METAL AND INSULATING SPACERS



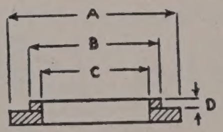
A popular assortment of spacers of various lengths, with hole size to accommodate #6 and #8 screws. Often used for mounting sockets, switches, and for raising panels, chassis, and condensers.

Cat. No.		List Price per pkg.
*2670	Approx. 12 Assorted Insulating Spacers	$0.45
*2680	Approx. 12 Assorted Metal Spacers	0.45

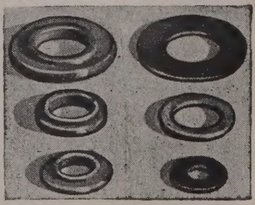
WALSCO INSULATING WASHERS

Precision made of high-grade vulcanized fibre or phenolic material. Used on electronic and electrical equipment to insulate parts from chassis, etc.

In the "99 LINE," WALSCO Insulating Washers come in packages of either flat or extruded washers. In the "40 LINE" the packages contain both flat and extruded washers.



Overall thickness of extruded washers is approximately 3/32″ and of the flat washers 1/32″.



Dimensions A	B	C	D	Fits Screw Size	THE 40 LINE $0.45 List Ea. Pkg. Cat. No.	Quan. per pkg. Flat & Extruded	THE 99 LINE $1.80 List — Ea. Pkg. — $1.80 List Cat. No.	Quan. Flat	Cat. No.	Quan. Extruded
5/16	3/16	.136	1/32	#6	*3431	15 and 15	3431-F-99	250	3431-E-99	125
3/8	1/4	.165	1/32	#8	*3432	15 and 15	3432-F-99	250	3432-E-99	125
3/8	.308	.195	1/32	#10	*3433	12 and 12	3433-F-99	250	3433-E-99	100
1/2	11/32	.255	1/32	1/4″	*3434	12 and 12	3434-F-99	225	3434-E-99	100
5/8	1/2	.380	1/32	3/8″	*3435	10 and 10	3435-F-99	175	3435-E-99	85
Assorted					†3430	15 and 15				

For Bulk Quantity Prices on these items, see WALSCO INDUSTRIAL AND BULK PRICE LIST, pages U-54 to U-61.

***Std. Pack: Display Box of 20 Individual Packages.** Add suffix "B" to part number to indicate one standard package. Example: 1 #3330-B consists of standard box containing 20 packages #3330.

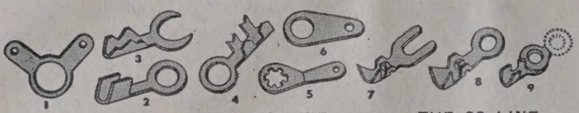
†Available Either in Standard Display Box of 20 Packages or on Standard Display Card of 20 Packages. When ordering add suffix "B" for box or suffix "D" for display card. See example above.

WALSCO ELECTRONIC HARDWARE

The **99** *Line* IN PERMANENT *Transparent* PLASTIC STORAGE BOXES with SLIDING TOPS

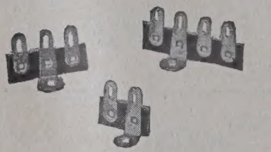
The **40** *Line* PACKED IN HANDY ECONOMICAL PLASTIC BAGS

WALSCO TERMINAL LUGS



	THE 40 LINE $0.45 List Ea Pkg.		THE 99 LINE $1.80 List Ea. Pkg.	
Figure No.	Cat. No.	Approx. Quan.	Cat. No.	Approx. Quan.
1	*3281	20	3281-99	125
2	*3282	20	3282-99	140
3	*3283	20	3283-99	115
4	*3284	20	3284-99	100
5	*3285	20	3285-99	100
6	*3286	40	3286-99	250
7	*3287-X	20	3287-X-99	140
8	*3287-Y	20	3287-Y-99	115
9			3287-Z-99	35
Assorted	†3280	30		

WALSCO TERMINAL STRIPS



For mounting parts which are to be insulated from chassis, and for wire distribution. Made with high-grade phenolic insulation. Solder-coated terminals.

Cat. No.	List Price per pkg.
*2660—Assortment of various size Strips	$0.45

WALSCO GRID CAP ASSORTMENT

An assortment of Grid Caps for all standard metal and glass tubes. Includes clip for hi-voltage TV rectifier tubes.

Cat. No.	List Price, per pkg.
†2600—Approximately 10 Assorted Caps	$0.45

WALSCO SPRING CONNECTOR CLIPS
(FAHNESTOCK TYPE)

For fast connection and good electrical contact. No tools required for connecting or disconnecting. Made of spring brass or phosphor bronze.

	THE 40 LINE $0.45 List Ea. Pkg.		THE 99 LINE $1.80 List Ea. Pkg.	
For Wires	Cat. No.	Approx. Quan.	Cat. No.	Approx. Quan.
#16 gauge and smaller	*2731	18	2731-99	100
#12 to #18 gauge	*2732	12	2732-99	75
Assorted	*2730	12		

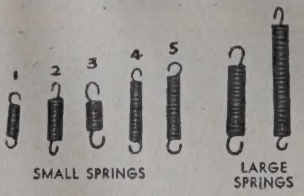
WALSCO MINIATURE PLUG AND JACK

Meets Army, Navy and J.A.N. Specifications

Ideal for hearing aids, speaker extensions, microphone connections and wherever a very small precision plug and jack is required. Housing of Nos. 790 and 791 cement together. Nos. 792 and 793 use small screws. Illustration shown approx. half size.

Cat. No.	List Price
†790—Plug (Type PL291)	$0.60
†791—Jack (Type JK48)	0.80
*792—Plug (Type PL291A)	0.80
*793—Jack (Type JK55)	1.20

WALSCO DIAL DRIVE SPRINGS



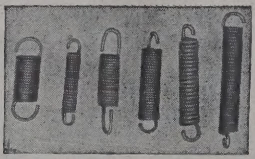
Made of fine music wire for greater flexibility. Available in all standard sizes. Carefully looped at each end, rust-proofed and cadmium plated.

Illustration Approximately two-thirds actual size

	THE 40 LINE $0.45 List Ea. Pkg.		THE 99 LINE $1.80 List Ea. Pkg.	
Springs	Cat. No.	Qun. per pkg.	Cat. No.	Qun. per pkg.
Assorted (Large and Small)	3400	10	3400-99	50
Assorted Small Springs	3410	10		

	Dimensions					
Cat. No.	Overall Length	Diam.	Wire Thickness	Picture Number	No. of springs per pkg.	List Price
*3411	½"	⅛"	.016"	1	10	$0.45
*3412	⅝"	5/32"	.018"	2	10	0.45
*3413	9/16"	3/16"	.020"	3	10	0.45
*3414	¾"	⅛"	.016"	4	8	0.45
*3415	¾"	5/32"	.020"	5	8	0.45

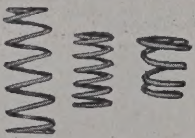
WALSCO EXPANSION SPRINGS



Very handy for radio and electrical shops, laboratories, etc. The assortments contain various sizes of springs for many applications: record changers—to name one of a thousand.

Cat. No.	List per pkg.
†3290—10 Assorted Large Springs	$0.45
†3390—10 Assorted Small Springs	0.45

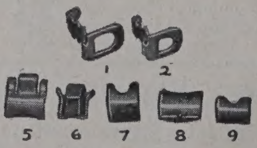
WALSCO COMPRESSION SPRINGS



A hard-to-get item. The Walsco assortments contain all of the springs often needed for repair work on radio and electronic equipment, motors, appliances, etc. Available in two assortments.

Cat. No.	List per pkg.
†3370—20 Assorted Small Springs	$0.45
†3380—15 Assorted Large Springs	0.45

WALSCO RADIO KNOB SPRiNGS



The modern method of fastening knobs to shafts. Available in all regular sizes and shapes. The assortment is complete and most useful to radio shops. Finest grade of selected steel is used.

Cat. No.	Picture No.	Approx. No. of Springs per pkg.	List per pkg.
†3450	Assorted	16	$0.45
*3451	1	8	0.45
*3452	2	10	0.45
*3455	5	10	0.45
*3456	6	18	0.45
*3457	7	20	0.45
*3458	8	15	0.45
*3459	9	25	0.45

WALSCO FUSE CLIPS

Made of spring brass, nickel plated for single hole mounting.

Cat. No.	List Price, per pkg.
*2720—10 Assorted Clips	$0.45

For Bulk Quantity Prices on these items, see WALSCO INDUSTRIAL AND BULK PRICE LIST, pages U-72 to U-79.

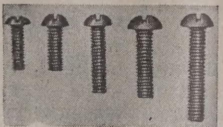
*Std. Pack: Display Box of 20 Individual Packages. Add suffix "B" to part number to indicate one standard package. Example: 1 #3330-B consists of standard box containing 20 packages #3330.
†Available Either in Standard Display Box of 20 Packages or on Standard Display Card of 20 Packages. When ordering add suffix "B" for box or suffix "D" for display card. See example above.

WALSCO ELECTRONIC HARDWARE

The 99 Line IN PERMANENT *Transparent* PLASTIC STORAGE BOXES with SLIDING TOPS

The 40 Line PACKED IN HANDY ECONOMICAL PLASTIC BAGS

WALSCO STEEL MACHINE SCREWS



Round head, cadmium-plated, steel machine screws. Available in assortments or individual sizes, conveniently packaged for experimenters, servicemen and amateurs.

WALSCO Standard Machine Screw Ass'tm't

All the standard sizes used in electronic and similar work are combined in this handy, inexpensive assortment. It contains Nos. 6, 8, 10 screws—¼ to 1″ long.

	THE 40 LINE $0.45 List Ea. Pkg.		THE 99 LINE $1.80 List Ea. Pkg.	
	Cat. No.	Approx. Quan.	Cat. No.	Approx. Quan.
Assorted Screws	†3560	40	3560-99	200

WALSCO Small Machine Screw & Nut Ass'tm't

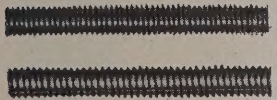
A special assortment of extra small screws (Nos. 2 and 4), and nuts so often needed in electronic and experimental work for fastening small parts, to replace rivets, etc.

Cat. No.	List Price, per pkg.
†3360—Approximately 50 Assorted Screws and Nuts	$0.45

PACKAGES OF SCREWS — INDIVIDUAL SIZES

	THE 40 LINE $0.45 List Ea. Pkg.		THE 99 LINE $1.80 List Ea. Pkg.	
Size	Cat. No.	Approx. Quan.	Cat. No.	Approx. Quan.
#2-56 x 3/16″			3091-99	225
#2-56 x ⅜″	3093	35	3093-99	200
#2-56 x ½″	3094	35	3094-99	200
#4-40 x ¼″	3096	35	3096-99	225
#4-40 x ⅜″			3097-99	200
#4-40 x ½″	3098	35	3098-99	200
#6-32 x ¼″	†3100	40	3100-99	225
#6-32 x ⅜″	†3110	35	3110-99	225
#6-32 x ½″	†3120	35	3120-99	200
#6-32 x ¾″	*3130	30	3130-99	175
#6-32 x 1″			3132-99	150
#8-32 x ¼″	*3135	30	3135-99	200
#8-32 x ⅜″	†3140	30	3140-99	175
#8-32 x ½″	†3150	25	3150-99	160
#8-32 x ¾″	†3160	20	3160-99	140
#8-32 x 1″			3162-99	125
#10-32 x ½″	*3165	20	3165-99	140
#10-32 x ¾″	*3167	20	3167-99	115
#10-32 x 1″	*3169	15	3169-99	100

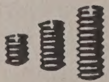
WALSCO THREADED STEEL RODS



These rods have many uses in service and repair work and are made from the finest cold rolled steel to give maximum strength. Each package contains one each of 6-32 and 8-32 threaded rod. Both 8 inches long.

Cat. No.	List Price
†2640—1 each 6-32 and 8-32 Threaded Rod	$0.45

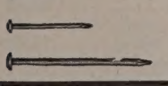
WALSCO STEEL SET SCREWS



Precision, hardened steel set screws in all popular sizes for radio knobs, record changers, home and automobile radios, or wherever set screws are needed.

	THE 40 LINE $0.45 List Ea. Pkg.		THE 99 LINE $1.80 List Ea. Pkg.	
Size	Cat. No.	Approx. Quan.	Cat. No.	Approx. Quan.
#6-32 x 3/16″	†3210	15		
#8-32 x 3/16″	†3220	15	3220-99	55
#8-32 x ¼″	†3230	15		
#10-32 x ¼″	*3237	15		
Assorted	†3480	15	3480-99	55

WALSCO ESCUTCHEON PIN ASSORTMENT

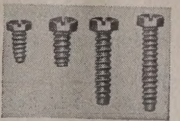


Brass finished pins in various sizes and lengths from ¼″ to ⅝″.

Cat. No.	List per pkg.
†3555—Approx. 100 Asstd. Pins	$0.45

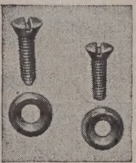
WALSCO SHEET METAL AND SELF-TAPPING SCREWS

These screws cut their own threads in either metal or plastic. Just drill a hole and drive in the screw—no nut or tapping required. Ideal for mounting parts to chassis, replacing rivets and eyelets, etc.



	THE 40 LINE $0.45 List Ea. Pkg.		THE 99 LINE $1.80 List Ea. Pkg.	
Size	Cat. No.	Approx. Quan.	Cat. No.	Approx. Quan.
Assorted	†3470	25	3470-99	125
#6 x ¼″	†2910	30	2910-99	150
#6 x ⅜″	*2911	25	2911-99	150
#6 x ½″	*2912	25	2912-99	150
#6 x ¾″	*2914	20	2914-99	125
#6 x 1″	*2916	20	2916-99	125
#8 x ¼″	*2919	20	2919-99	125
#8 x ⅜″	*2920	20	2920-99	125
#8 x ½″	*2922	20	2922-99	125
#8 x ¾″	*2924	15	2924-99	100
#8 x 1″	*2926	15	2926-99	100
#10 x ⅜″	*2930	20	2930-99	100
#10 x ½″	*2932	16	2932-99	100
#10 x ¾″	*2934	15	2934-99	100

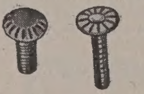
WALSCO RACK SCREWS & CUP WASHERS



Oval head screws and cup washers for mounting panels in racks and cabinets, fastening record-players and recording chassis, etc. Enhances appearance of any assembly. Nickel plated.

	THE 40 LINE $0.45 List Ea. Pkg.		THE 99 LINE $1.80 List Ea. Pkg.	
Size	Cat. No.	Approx. Quan.	Cat. No.	Approx. Quan.
#6-32 x ⅝″ Screws	*3543	30	3543-99	175
#8-32 x ⅝″ Screws	*3541	25	3541-99	150
#10-32 x ¾″ Screws	*3542	20	3542-99	100
#6 Washers (7/16″ O.D.)	*3544	40	3544-99	275
#8 Washers (½″ O.D.)	*3545	40	3545-99	250
#10 Washers (9/16″ O.D.)	*3546	30	3546-99	200
Asstd. Screws & Washers	†3540	12		

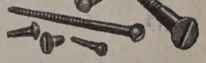
WALSCO ORNAMENTAL HEAD SCREWS



Antique bronze finished; rosette head. For mounting of speakers, etc.

	THE 40 LINE $0.45 List Ea. Pkg.		THE 99 LINE $1.80 List Ea. Pkg.	
Size	Cat. No.	Quan. per pkg.	Cat. No.	Quan. per pkg.
#6-32 x ¾″	*2951	20	2951-99	125
#6-32 x 1″	*2952	20	2952-99	125
#8-32 x 1¼″	*2953	12	2953-99	80
Assorted	†2950	15		

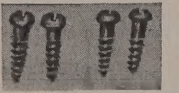
WALSCO Standard Wood Screw Assortment



Handy assortment for workshop or home. Contains round and flathead screws of popular sizes in brass and steel.

Cat. No.	List Price
†3553—Approx. 30 Screws, per pkg.	$0.45

WALSCO SMALL ESCUTCHEON AND WOOD SCREW ASSORTMENT



This assortment contains the extra small sizes of hard-to-get wood screws as needed by radio men, model builders, etc., for fastening name plates, escutcheons and numerous other devices.

Cat. No.	List Price
†3550—Approx. 30 Assorted Screws, per pkg.	$0.45

For Bulk Quantity Prices on these items, see WALSCO INDUSTRIAL AND BULK PRICE LIST, pages U-54 to U-61.

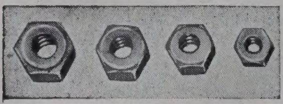
***Std. Pack: Display Box of 20 Individual Packages.** Add suffix "B" to part number to indicate one standard package. Example: 1 #3330-B consists of standard box containing 20 packages #3330.

†Available Either in Standard Display Box of 20 Packages or on Standard Display Card of 20 Packages. When ordering add suffix "B" for box or suffix "D" for display card. See example above.

WALSCO ELECTRONIC HARDWARE

The 99 *Line* IN PERMANENT *Transparent* PLASTIC STORAGE BOXES with SLIDING TOPS ● *The* 40 *Line* PACKED IN HANDY ECONOMICAL PLASTIC BAGS

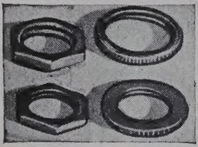
WALSCO MACHINE SCREW NUTS



Walsco nuts are "Small Pattern" as preferred in the electronic and electric trade. Precision made and plated.

	THE 40 LINE		THE 99 LINE			
	$0.45 List Ea. Pkg.		$1.80 List Ea. Pkg.		$1.80 List Ea. Pkg.	
Size	Steel, Cadm. Pl. Cat. No.	Apprx. Quan.	Brass, Nickel Pl. Cat. No.	Apprx. Quan.	Steel, Cadm. Pl. Cat. No.	Apprx. Quan.
#2-56	3173	30			3173-99	200
#4-40	3175	30			3175-99	200
#6-32	†3180	35	3180-B-99	150	3180-99	200
#8-32	†3190	30	3190-B-99	125	3190-99	200
#10-32	*3195	25	3195-B-99	100	3195-99	175
Assorted	†3520	35			3520-99	175

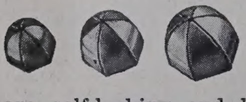
WALSCO SPECIAL MOUNTING NUTS



Various kinds of nuts used on volume controls, switches, jacks, potentiometers, etc. A "must" for every radioman and electrician. All nuts are cadmium or nickel plated.

	THE 40 LINE		THE 99 LINE	
	$0.45 List Ea. Pkg.		$1.80 List Ea. Pkg.	
Description	Cat. No.	Apprx. Quan.	Cat. No.	Apprx. Quan.
⅜" x 32 Vol. Control Hex Nut....	*3531	15	3531-99	85
$\frac{15}{32}$" x 32 Toggle Switch Hex Nut.	*3532	8	3532-99	50
$\frac{15}{32}$" x 32 Toggle Switch Ring Nut.	*3533	8	3533-99	50
Assorted..............................	†3530	12		

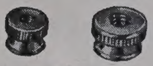
WALSCO ACORN NUTS



Greatly improves the appearance on panel assemblies, test instruments, cabinets, etc. These PAL type steel nuts are self-locking and bright cadmium plated.

Cat. No.	List per pkg.
*2960—12 Assorted Nuts..	$0.45

WALSCO KNURLED THUMB NUTS



Precision-made, Brass Nuts. Cat. No.	List Price per pkg.
*2971—Approx. 8 Nuts, 6-32................	$0.45
*2972—Approx. 8 Nuts, 8-32................	0.45
*2973—Approx. 4 Nuts, 10-32................	0.45

WALSCO WING NUTS

Handy for experimental work and hobby craft.

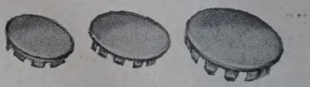
	List per Pkg.
*2975—12 Nuts, 6-32..	$0.45
*2976— 8 Nuts, 8-32..	0.45
*2977— 6 Nuts, 10-32..	0.45

WALSCO GLASS JARS AND PLASTIC BOXES

Handy for storing small hardware items to keep them clean and rust-free.

Cat. No.	List Price
997—Plastic Box with 4 compartments and telescoping lid. 4½" square, 1⅜" high. (Standard pack: 24)................	$0.70
998—Plastic Box with Sliding Lid. (Standard pack: 24)........	0.28
999—Glass Jar, 2 oz. size. (Standard pack: 36)......................	0.13

WALSCO SNAP-HOLE PLUGS



A round, polished nickel-plated flat head, metal button with spring flanges that snap right into the hole. Used to seal adjustments, cover unused holes, etc.

	THE 40 LINE		THE 99 LINE	
	$0.45 List Ea. Pkg.		$1.80 List Ea. Pkg.	
Description	Cat. No.	Quan. per pkg.	Cat. No.	Quan. per pkg.
For ¼" hole......	*3501	8	3501-99	50
For ⅜" hole......	*3502	8	3502-99	50
For ½" hole......	*3503	6	3503-99	40
For ⅝" hole......	*3504	6	3504-99	30
For ¾" hole......	*3505	5	3505-99	25
For 1" hole......	*3506	4	3506-99	20
Assorted............	†3500	8		

For additional sizes see Industrial and Bulk Price List

WALSCO VENTILATING HOLE PLUGS

For amplifiers, transmitters, portable radios, amateur equipment, etc., wherever ventilation is required.

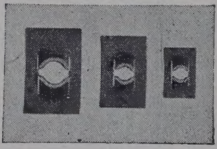
Cat. No.	List Price, per pkg.
†3320	$0.45

WALSCO CABLE CLAMPS

Heavy gauge steel, Cadmium plated, ⅜" wide. Perfectly punched and formed with No. 6 or No. 8 mounting holes. Available in 3 sizes for cables from ⅛" to $\frac{5}{16}$" in diameter.

	THE 40 LINE		THE 99 LINE	
	$0.45 List Ea. Pkg.		$1.80 List Ea. Pkg.	
For Cables	Cat. No.	Quan. Per pkg.	Cat. No.	Quan. per pkg.
⅛" to $\frac{3}{16}$" Diam.	*3331	20	3331-99	125
$\frac{3}{16}$" to ¼" Diam.	*3332	18	3332-99	100
¼" to $\frac{5}{16}$" Diam.	*3333	15	3333-99	75
Assorted............	†3330	20		

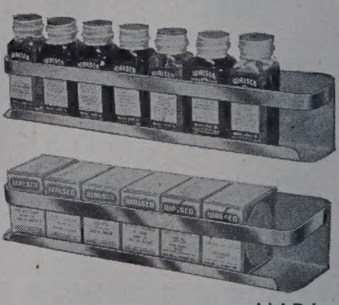
WALSCO SPEED NUTS



Self-locking and easy to install. Often required for replacement on many record changers, tuning units, etc.

Cat. No.	List Price per pkg.
*2980—Approx. 30 Assorted Speed Nuts................	$0.45

WALSCO WALL RACKS



Keeps loose hardware and chemicals in one place. Makes it easy to find and select the item you need. Helps to keep your workbench orderly. Can be fastened firmly to wall or cabinet door. Made of satin finished aluminum with polished edges.

Cat. No	List Price
995—Wall Racks for eight 2-oz. bottles....................................	$1.40
996—Wall Racks holding 7 Walsco 99 Line hardware, Walsco dial cord, or Cat. No. 998 plastic storage boxes............	1.40

For Bulk Quantity Prices on these items, see WALSCO INDUSTRIAL AND BULK PRICE LIST, pages U-54 to U-61.

---

*Std. Pack: Display Box of 20 Individual Packages. Add suffix "B" to part number to indicate one standard package. Example: 1 #3330-B consists of standard box containing 20 packages #3330.

†Available Either in Standard Display Box of 20 Packages or on Standard Display Card of 20 Packages. When ordering add suffix "B" for box or suffix "D" for display card. See example above.

WALSCO products
Help The Radio Man
WALTER L. SCHOTT COMPANY, LOS ANGELES 18, CALIF.

CEMENTS — SOLVENTS SPECIAL RADIO CHEMICALS

WALSCO RADIO CEMENT

Vibration-Proof **Heat Resisting**
Unsurpassed Adhesive Power

An elastic cement especially made for the manufacture and repairing of speakers and for general radio work. Unaffected by vibration, dries fast and will not become brittle with age.

Walsco Radio Cement can also be used for repairing cabinets, loose tube bases, grid caps, etc. It will provide a strong bond between almost any materials and is not affected by high temperature, moisture or oil.

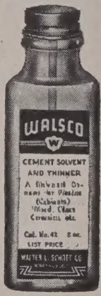
WALSCO
RADIO CEMENT
WALSCO
RADIO CEMENT

All bottles come with built-in brush and have an evaporation-proof cap liner.

Cat. No.	List Price
51—1¾ oz. tube	$0.60
52—2 oz. bottle	0.65
54—4 oz. bottle	1.10
58—8 oz. bottle	1.90
59—1 pt. bottle	3.65
50-GL—1 gal. can	11.35

Also available in 5 and 50 gal. containers.

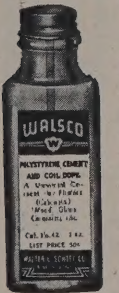
WALSCO CEMENT SOLVENT AND THINNER



This Cement-Solvent is used for loosening cement on speaker cones, voice coils, and other parts where cement has been applied previously. Recommended also for thinning Walsco Radio Cement, Plastic Cement, and Fabric Cement.

Cat. No.	List Price
62—2 oz. bottle	$0.55
64—4 oz. bottle	0.95
68—8 oz. bottle	1 25
69—1 pt. bottle	1.80

WALSCO POLYSTYRENE CEMENT AND COIL DOPE



For Bonding Polystyrene Parts and Coil Coating in Radio and High Frequency Work

A Polystyrene solution with a high solid content. Can be brushed on or parts can be dipped. Renders coils or other parts moisture-proof. Holds windings firmly in place due to a certain amount of shrinkage upon drying. Electrical losses due to coating with this cement are negligible—even if used for high or ultra-high frequency work.

Cat. No.	List Price
152—2 oz. bottle	$0.65
154—4 oz. bottle	1.10

Larger Sizes on Request.

WALSCO Polystyrene Solvent and Thinner

This thinner is especially designed for use with Walsco Polystyrene Cement where regular thinner cannot be used.

Cat. No.	List Price	Cat. No.	List Price
162—2 oz. bottle	$0.55	164—4 oz. bottle	$0.95

WALSCO "CARBON-X"

The best way to touch up the worn and noisy carbon strips on volume controls. An electrical conductor.

Cat. No.	List Price
96—1 oz. bottle	$0.80

WALSCO FABRIC CEMENT

WALSCO
FABRIC CEMENT

Does Not Penetrate the Fabric

Especially made for attaching grille cloth, turntable felt, covering of portable radios, etc. Dries very fast; is unaffected by moisture, sunlight, and high temperature and does not become brittle. Indispensable to Radio Dealers and Servicemen—eliminates the danger of spoiling the outside of a grille cloth, turntable felt, or other fabrics, since it does not penetrate the material.

Cat. No.	List Price
21-A—2 oz. bottle	$0.65

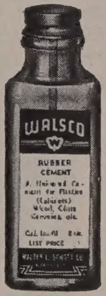
WALSCO WOOD GLUE

WALSCO
WOOD GLUE

An "extra strength" adhesive incorporating the latest chemical developments and resins. A "must" item for every repair shop. Bottle caps have non-sticking rubber gaskets.

Cat. No.	List Price
222—2 oz. bottle	$0.65
224—4 oz bottle	1.10

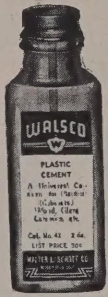
WALSCO ALL-PURPOSE RUBBER CEMENT



For cementing rubber parts to metal or wood, rubber mounts to chassis, rubber cushions to lids, etc.—gives an especially strong bond. A Radio Serviceman should always have a bottle on his work bench.

Cat. No.	List Price
112—2 oz. bottle	$0.65
114—4 oz. bottle	1.20

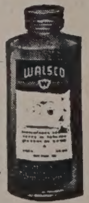
WALSCO PLASTIC CEMENT



Especially made to repair broken plastic cabinets, knobs, etc. Waterproof, heat-resisting, and heavier in substance than Walsco Radio Cement. Unexcelled as "Household Cement," "Model Airplane Cement," etc. Cements Plastics, Metal, Wood, Glass, etc. Dries fast and forms an exceedingly strong bond.

Cat. No.	List Price
41—1¾ oz. tube	$0.60
42—2 oz. bottle	0.65
44—4 oz bottle	1.20
48—8 oz. bottle	1.90

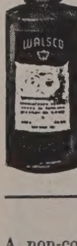
WALSCO VINYLITE CEMENT



This adhesive uses the new Vinylite plastic resin as a base and has remarkable properties such as high tackiness, extreme flexibility when dry and excellent adhesion to metals, plastics, leather, cardboard and paper. Fast drying. Also an excellent thermoplastic cement for joining nonporous materials (e.g. metals).

Cat. No.	List Price
25—2 oz. bottle	$0.75

WALSCO "NO-SLIP"



Greatly increases the friction of pulleys, cords or belts. Contracts, "sets" and shrinks the fibres Stops instantly any slippage of Dial Belts, Dial Cords, etc. Easily applied with brush.

Cat. No.	List Price
401 —½ oz. bottle	$0.50
402 — 2 oz. bottle	0.80
401D—Display of 12 #401	6.00

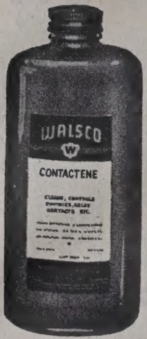
WALSCOFLUX

A non-corrosive soldering flux. Quick acting, easy to apply May be safely used for all electrical, radio and telephone work. Helps to keep the iron tip clean.

Cat. No.	List Price
220—2 oz. bottle with applicator	$0.65

For Bulk Quantity Prices on these items, see WALSCO INDUSTRIAL AND BULK PRICE LIST, pages U-72 to U-79.

CLEANING AND LUBRICATING COMPOUNDS — APPLICATORS



WALSCO "CONTACTENE"

New Improved "Contact Cleaning Fluid"

- Cleans contacts and controls.
- Keeps controls and contacts noise-free.
- Lubricates and reduces friction.

A fast-evaporating combination of special solvents affording greatest cleaning power without affecting insulating materials. Contains "No-Ox," which after evaporation of the solvents, forms a thin film that protects the contacts. Contactene is recommended for treating volume controls, band switches, tuning condensers, springs, etc., to eliminate noisy operation. Bottles come with built-in brushes.

Cat. No.	List Price
82—2 oz. bottle	$0.55
84—4 oz. bottle	0.95
88—8 oz. bottle	1.25
89—1 pt. bottle	2.00

WALSCO
WALSCOLUB
B

WALSCOLUB - B

Counteracts oxidation, prevents corrosion of metals and eliminates noise on band switches, push buttons, tuners, volume and other controls, as well as air-exposed electrical contacts, attenuators, etc. Will not change electrical properties. It is superior to any graphite compound for this purpose. Ideal on metal surfaces to prevent rust. Large, handy applicator tube.

Cat. No.	List Price
22—1¾ oz. tube	$0.65

Available also in 1 lb., 5-lb. and 25-lb. containers for industrial users. Prices on request.

WALSCO "LUBRIPLATE"

The latest development in chemicals for lubricating purposes. Much superior to ordinary greases because of its higher lubricating and lasting qualities. Its viscosity does not appreciably change with temperature. Used on phonograph motors, record changers, switches, and all appliances that require a grease-type lubricant. In large handy "applicator" tube.

Cat. No.	List Price
23-A—2 oz. tube	$0.65

WALSCO
LUBRIPLATE

WALSCO
TUNERLUB

WALSCO "TUNERLUB"

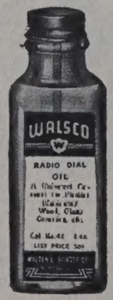
A special lubricant for use on TV tuners and other high frequency switch contacts. Contains no zinc or other harmful metal oxides. Prevents oxidation and noisy operation.

Cat. No.	List Price
26—1¾ oz. tube	$0.75

WALSCO RADIO DIAL OIL

A light-bodied lubricating oil for all electronic and electrical appliances.

Cat. No.	List Price
72—2 oz. bottle	$0.50



WALSCO "NO-OX"*

"The Miracle Electronic Contact Fluid"

WALSCO
ELECTRICAL CONTACT CLEANER

Fast-acting liquid chemical formulated with a neutral, non-gumming special lubricating base. The answer to the radioman's need for an outstanding contact and control cleaner. Contains no solvents; its corrosion-dissolving action is entirely chemical. Cleans, lubricates and preserves.

"NO-OX" is highly recommended for treatment of volume and tone controls, attenuators, mixers, relay contacts and similar equipment.

Cat. No.	List Price
101—1 oz. bottle	$ 0.85
102—2 oz. bottle	1.60
100-16—1 pt. bottle	12.50

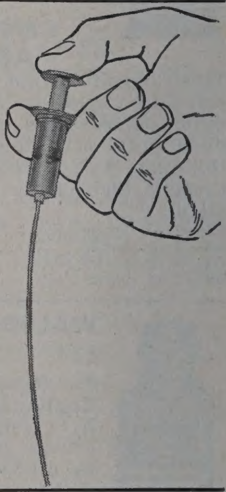
* Mfd. under exclusive licensing agreement with NO-OX Laboratories. Trade mark registered.

WALSCO "TUNERCLEAN"

A special cleaner for T.V. tuners and other H.F. or U.H.F. switch contacts. Lubricates and inhibits oxidation.

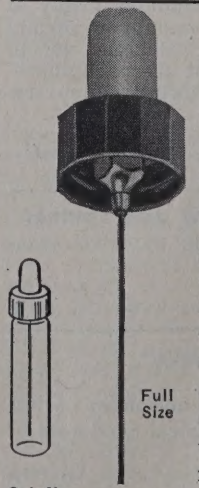
Cat. No.	List Price
105—1 oz. bottle	$ 0.85
106—2 oz. bottle	1.60
108—pint (16 oz.)	12.50

WALSCO "LUBRICATOR"



Very useful for applying light greases and oils, such as Walscolub B, Lubriplate, Tunerlub, etc. Designed to reach the many cramped and inaccessible points in radios, TV sets and record changers. Syringe-type plunger releases desired amount of lubricant.

Cat. No.	List Price
988—Lubricator	$0.80
988D—Display of 12 No. 988	9.60


Full Size

WALSCO "CONTACTENE INJECTOR"

For applying WALSCO Contactene, NO-OX, Dial Oil, etc., to spots which are not accessible with ordinary applicators. "Injector Needle" will permit application of contact chemicals to most volume controls without unsoldering connections or taking control apart.

This tool is made with the highest quality surgical-grade needle, and an oil-resistant rubber bulb.

Comes complete with small glass vial. A handy, useful item for every radio and TV service kit.

Cat. No.	List Price
989 —Contactene Injector	$0.75
989D—Display of 12 No. 989	9.00

For Bulk Quantity Prices on these items, see WALSCO INDUSTRIAL AND BULK PRICE LIST, pages U-72 to U-79.

POLISHES, PAINTS, LACQUERS SPECIAL CHEMICAL

WALSCO SCRATCH REMOVING POLISH

"Makes Scratches Disappear"

WALSCO
SCRATCH REMOVING POLISH

A blend of polishing and staining ingredients. Removes scratches from cabinets and polishes at the same time. Will not change shade of finish. Use "Dark" for walnut, mahogany, etc. "Light" for light maple, light oak, etc.

Cat. No. Dark	Light		List Price
414	434	4 oz. bottle	$0.55
416	438	8 oz. bottle	0.80

Std. Pkg.—4 oz. bots....1 doz.; 8 oz. bots.....2 doz.

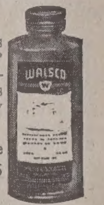
WALSCO SUPER POLISH

"A Concentrated White Cream Wax Polish"

Forms a hard, dry and durable film that will protect the object for a long time, giving it a "brand new" appearance.

Cat. No.	List Price	Standard Package:	
412—4 oz. bottle	$0.55	4 oz. bottles	1 doz.
418—8 oz. bottle	0.80	8 oz. bottles	2 doz.

WALSCOCLEAR *(Formula 91)*



A scientific preparation for cleaning plastics such as television filters, lenses, optical systems, vinyl, LP records, etc. WALSCOCLEAR counteracts the dust-attracting electrostatic effect which usually interferes with proper polishing of plastic articles. Absolutely harmless to all plastics.

Cat. No.	List Price
91—4 oz. bottle	$0.55

Standard Package: 12

WALSCO
CARBON TETRA-CHLORIDE
For general cleaning and spot removing.
Cat. No. 214
4 oz.

WALSCO CARBON TETRACHLORIDE

For general cleaning and spot removing. Dissolves dirt and grease instantly. May be used on most delicate parts. Chemically pure, rapid drying, non-explosive and non-inflammable. A safe cleaning fluid.

Cat. No.	List Price
214 — 4 oz. bottle	$0.80
219 —16 oz. bottle	1.90
214-GL—1 gal. can	7.60

WALSCO INSULATING VARNISH

A fast "air" drying varnish for radio coils, transformers, solenoids, motors, and all electrical appliances. Withstands heat and is extremely resistant to acid, oil, and grease. It is non-corrosive and moisture-proof. An all-around clear insulating varnish.

Cat. No.	List Price
192—2 oz. bottle	$ 0.65
193—1 pt. can	2.75
194—1 gal. can	15.00

WALSCO "R. H. CLEANER"

For cleaning oxide dust from magnetic recording heads. Cleans head and will not leave residue. Every owner of a magnetic recorder should have a bottle on hand.

Cat. No.	List Price
93—1 oz.	$0.80

ANTI-CORONA LACQUER

A special, fast-drying coating of very high dielectric strength (over 15,000 V. for a film thickness of 0.010"). Prevents corona discharge and arcing in high-voltage supply of TV sets, when applied to wiring, solder lugs, sharp corners and points on chassis, inside high-voltage cage, etc.

Cat. No.	List Price
195—2 oz. bottle	$1.20
196—1 pt. can	7.50

WALSCO C. R. TUBE COAT

For patching outer conductive coating of T.V. picture tubes that have become scratched or peeled. Fast drying.

Cat. No.	List Price
199—2 oz. bottle	$1.20

WALSCO AIR-DRY WRINKLE VARNISH

WALSCO
Air-Dry Wrinkle Varnish

WALSCO Air-Dry Wrinkle Varnish provides a film that is hard, tough, and very resistant to wear. Repairs and replaces original wrinkle finish of manufactured equipment. No baking required. WALSCO Wrinkle Varnish will air-dry at room temperature.

Standard colors: grey and black. Other colors upon request.

Cat. No.	List Price	Cat. No.	List Price
145—Gray 2 oz. jar	$0.65	147—Gray 16 oz. jar	$3.30
145—Black 2 oz. jar	0.65	147—Black 16 oz. jar	3.30

WALSCO CRYSTALLIZING LACQUER

Easily applied to metal, wood, cardboard, etc. Brushed on, will dry in about thirty minutes. Identical to finish found on commercial chassis, panels, speakers and transformers. Use Walsco Lacquer Sealer, Cat. No. 142, as undercoat for porous materials or over other finishes.

Cat. No.	List Price
122—2 oz. jar	$0.65
129—16 oz. can	4.10
142—Sealer, 2 oz. jar	0.55

Available colors: Black, Green, Grey, Brown, Clear. Specify color when ordering.

WALSCO LIGHT BULB COLORING

A transparent, heat and moisture-resisting dipping lacquer especially made for coloring bulbs such as used in radio dials, signal systems, auto dash lights, and fancy illumination. Big jars permit dipping of even larger bulbs.

Cat. No.	List Price
116 Red—2 oz. jar	$0.65
117 Blue—2 oz. jar	0.65
118 Green—2oz. jar	0.65
119 Assorted—Kit of 3	1.75

WALSCO SATIN FINISH LACQUER

(TELEPHONE)

WALSCO
TELEPHONE BLACK

Made for commercial and amateur use on cabinets, chassis, panels, meters, racks, etc. This "satin finish" lacquer dries very fast and produces the "original finish" of most standard telephone and communication equipment. It air dries. May be brushed or sprayed.

Cat. No. Black	Grey		List Price
172	182	2 oz. jar	$0.65
179	189	1 pt. can	3.30

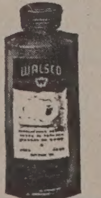
WALSCO FUNGUS LACQUER

Meets government specifications for moisture and fungus treating of electronic equipment. Applied by brush, dip or spray. Air-dries quickly.

Cat. No.	List Price
135—2 oz. bottle	$ 0.65
136—1 pint can	2.75
137—1 gal. can	16.50

THINNER FOR FUNGUS LACQUER

138 —8 oz. can	$1.25
138-GL—1 gal. can	7.50



WALSCO "STRIPVAR"

Rapidly removes enamel, Formvar, Formex and similar insulation from magnet wires. Just dip wire in "Stripvar" and wipe off.

Cat. No.	List Price
130 —2 oz. bottle	$ 0.75
131 —1 pt. can	4.50
130-GL—1 gal. can	25.00

For Bulk Quantity Prices on these items, see WALSCO INDUSTRIAL AND BULK PRICE LIST, pages U-72 to U-79.

WALSCO RADIO CABINET PATCHING OUTFIT

"The Most Popular Kit on the Market"

PLASTIC WOOD

A complete kit especially designed for radio men who have little experience in cabinet work. Over 95% of all cabinet-finish damages can be repaired with this kit. The kit contains two shades of Spirit Walnut Stain, Dark Brown Lacquer, Plastic Wood, two shades of Ivory Spirit Enamel, Patching Lacquer, Super Polish, Alcohol, Brushes, Garnet Finishing Paper, French Polishing Pad, and Steel Wool, together with complete Instruction Booklet.

Cat. No.	List	Dealer's Net
K-10—In sturdy box with hinged lid	$7.15	$4.29
K-10-W—In California redwood case	8.25	4.95

WALSCO RADIO CABINET REPAIR KIT

A very handy compact and inexpensive kit that fills the requirements of many shops and stores. Especially useful for the Dealer or Serviceman who has only occasional cabinet repairs. The kit contains one bottle each of the following: Ivory Spirit Enamel—light and dark; Lacquer Enamel—Dark Brown; Spirit Stain; Super Polish; French Varnish; Finishing Paper; Steel Wool; Polishing Cloth; Instruction Booklet.

Cat. No.	List	Dealer's Net
K-9	$3.30	$1.98

WALSCO STICK SHELLAC KIT

An inexpensive kit for servicemen who have some experience in cabinet refinishing. Combined with Radio Cabinet Patching Outfit (K-10) it makes a most economical and completely professional kit for repairing radio cabinets. The shellac sticks match in color almost any cabinet on the market. The Walsco shellac rubbing fluid makes it possible to smooth the patch without any effort or skill. Kit includes: six colors Stick Shellac, Alcohol Lamp, Burn-in Spatula, bottle of Shellac Rubbing Fluid, Felt, Steel Wool, Alcohol and Instructions.

Cat. No.	List	Dealer's Net
K-11	$3.85	$2.31

REFILLS OF POPULAR REFINISHING MATERIALS AS CONTAINED IN ABOVE KITS

Cat. No.	List Price
Stains	
287—Spirit Stain, 1 oz. (Walnut, Mahogany, Maple, Black)	$0.33
288—Spirit Stain, 8 oz.	1.55
289—Blending Stain (Lt. Brown, Med. Brown)	0.80
Patching Lacquer (Improved French Varnishing Materials)	
290—4 oz. bottle	1.30
291—16 oz. bottle	3.85
Stick Shellac Rubbing Fluid	
295—4 oz. bottle	0.80
296—16 oz. bottle	1.90
Stick Shellac	
299—Set of 8 assorted colors	1.95

WALSCO "SUPER-CHIEF" REFINISHING KIT

A "Must" Item

This is the most complete kit of its kind on the market. Designed by Walsco for radio dealers. It contains everything which is needed to make an old radio look like new—all handy in one box-type carrying case. Contents of kit can be used by either skilled or unskilled refinishers, to completely refinish old radios and trade-ins, or to quickly patch up scratches, mars, etc. This kit will pay for itself on the first or second job. Every first-class radio dealer should have one. Kit contains the following:

Spirit Stain Dark Walnut
Spirit Stain Black
Spirit Stain Mahogany
Spirit Stain Maple
Super Polish
Spirit Stain Light Walnut
Blending Stain Light Brown
Blending Stain Medium Brown
Lacquer Enamel Light Ivory
Lacquer Enamel Dark Brown
Lacquer Enamel Dark Ivory
Shellac Rubbing Fluid
Stick Shellac (8 asstd. shades)
Scratch Removing Polish (Dark)
Scratch Removing Polish (Light)
Patching Lacquer
Alcohol Lamp
Alcohol
Spatula
Felt
Polishing Cloth
Polishing Pad
Garnet Paper (8 sheets)
Instruction Book
Brushes (3 different sizes)

Cat. No.	List	Dealer's Net
K-26	$20.35	$12.21

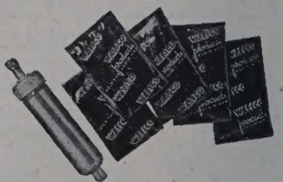
WALSCO FURNITURE REFINISHING KIT

Ideal for touch-up work on radios, furniture, pianos, etc. Scratches, mars, dents, broken edges can be repaired quickly. Contains: Super Polish, Patching Lacquer, Alcohol, Spirit Stains in Walnut, Mahogany, Maple and Black; Shellac Rubbing Fluid, Plastic Wood, six colors Stick Shellac, Alcohol Lamp, Spatula, Brushes, Garnet Finishing Paper, Complete Instruction Book. Kit furnished in California Redwood case with hinged lid.

Cat. No.	List	Dealer's Net
K-15	$8.80	$5.28

WALSCO TIRE STATIC NEUTRALIZING KIT

- **Reduces or Eliminates Automobile Radio Tire Static.**
- ***Dissipates Body Contact Shock (Door-handle Sparks).***



This kit contains a special injector gun and 5 packages of WALSCO Static Neutralizing Powder (one for each tire, including spare). The powder is blown into each tire in a very simple operation, which takes just a few minutes and lasts for the life of the tire.

Cat. No.	List Price
980—Tire Static Neutralizing Kit, complete with injector, powder and instructions	$2.95
982—Injector gun only	1.80
985—Powder only (enough for 5 passenger-car tires)	1.10

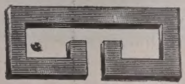
WALSCO products
Help The Radio Man
WALTER L. SCHOTT COMPANY, LOS ANGELES 18, CALIF.

CABINET HARDWARE SPEAKER ACCESSORIES

WALSCO KNOBS & PULLS

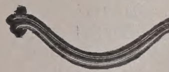
The most distinctive cabinet hardware available. Attractively finished. Rigid construction, will not rattle. Mounting screws included.

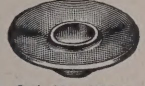
Cat. No. 330-7

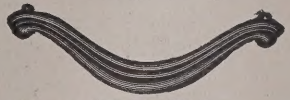

Cat. No. 330-4

Cat. No. 330-1

Cat. No. 330-2


Cat. No. 330-5


Cat. No. 330-3

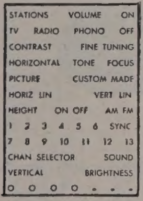

Cat. No. 330-6

Cat. No.	Size	Finish	List Price Each
330-1	1⅞″ diam.	Brass	$0.45
330-2	2⅝″ diam.	Brass	0.75
330-3	3″ diam.	Brass	0.90
330-4	3¾″ long	Brass	1.90
330-5	4¼″ long	Bronze	1.00
330-6	6⅛″ long	Bronze	1.45
330-7	4″ long	Bronze	1.05

WALSCO DRAWER SLIDES

Made of durable, heavy-gauge steel, with a corrosion-resistant finish. Will make drawers slide smoothly and easily—no sticking or drag. Furnished with screws.

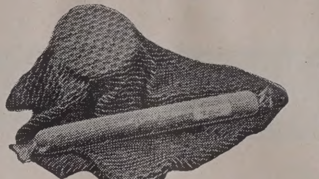
Cat. No.	Size	List Price, Per Pair
331-1	14″ long (Standard pack: 6 pairs)	$2.75



TV RECEIVER DECALS

Complete sets of markings in gold-colored, easy-to-read type, for custom-built sets or for replacement purposes. Over 40 markings per set, including: Tuning, Contrast, Focus, Sync., Brightness, etc.

Cat. No.	List Price, per package
†2551—2 complete sets of Decals (Standard Pack: 20 packages No. 2551)	$0.45



GRILLE CLOTH

Acoustically excellent cloth available to match walnut, mahogany or light wood finishes. For custom cabinets or renewing older sets.

Cat. No.	Size	List Price
360	12″ x 12″	$0.70
361	18″ x 24″	1.80
362	1 yard x 50″ (packaged)	6.90

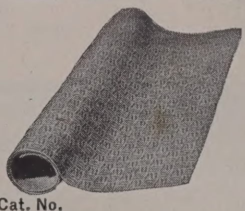
"LUMITE" WOVEN SARAN GRILLE CLOTH

The perfect acoustical Grille Cloth—used by leading manufacturers of hi-fidelity cabinets. Lumite resists mildew and fading, and can be easily cleaned.

"For the T.V. or speaker cabinet of distinction."

Pattern
A—Maroon
B—Bronze and Gold
C—Ecru

Cat. No.	Size	List Price
366	12″ x 18″	$1.65
367	36″ x 36″	9.25



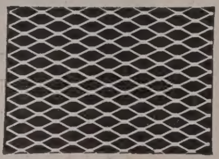
GRILLE SCREENING
(Flocked)

Galvanized, rayon-flock covered screening. Attractive, weather-proof and modern. For auto radios, P.A. and Intercom. speakers, etc.

Cat. No. Brown	Cat. No. Ivory	Size	List Price
374-1	374-3	8″ x 11″	$0.95
376-1	376-3	18″ x 24″	3.20
378-1	378-3	36″ x 36″	9.90

ORNAMENTAL METAL GRILLE

Heavy perforated grille, beautifully "brushed brass" plated and lacquered with gold finish effect. For use over cloth or screening in custom-built radios, high quality P.A. speakers, juke boxes, etc.



Cat. No.	Size	List Price
382	12″ x 18″	$ 3.00
384	18″ x 24″	5.50
386	24″ x 36″	10.45

WALSCO FLOCK FINISH SPRAY KIT

For flock finishing of radio cabinets, speaker grilles, interior of record and other cabinets, turntables, jewelry and gift boxes, toys, novelties and many automotive and hobby uses. This original WALSCO Flock Kit is very easy to use and requires no skill — anyone can obtain expert results. Contains everything to produce a colorful, velvet-like and durable flock finish. The kit includes patented felt flock spray gun, ivory and brown felt flock, undercoats to match, thinner, brushes and complete instructions.

Cat. No.	List Price
K-50—Complete Flocking Kit	$13.10

WALSCO FELT FLOCK MATERIALS

Felt Flock

Made of precision cut, lustrous rayon. Packed in 3¼ oz. containers (covers 7 to 10 square feet). List Price $1.80

Cat. No.	Color	Cat. No.	Color
470	Brown	475	Green
471	Ivory	476	Silver
472	Blue	477	White
473	Taupe	478	Black
474	Red	479	Canary
474-1	Maroon		

	List Price
Flock per pound (specify color)	$6.05

Flock Undercoat

Provides proper adhesive and color base for felt flock. Packaged in half-pint cans (covers 10-15 square feet of non-porous surface). List Price $1.80

Cat. No.	Color	Cat. No.	Color
480	Brown	484-1	Maroon
481	Ivory	485	Green
482	Blue	486	Silver-White
483	Taupe	488	Black
484	Red	489	Canary

	List Price
Undercoat per gal (specify color)	$15.85

WALSCO
WALSCO
WALSCO
WALSCO
WALSCO
WALSCO

Undercoat Thinner

For thinning of Undercoat, if necessary, and washing out brushes.

Cat. No.	List Price
468—Half-pint can	$0.60

Felt Flock Spray Gun

Same as contained in WALSCO Flock Finish Spray Kit.

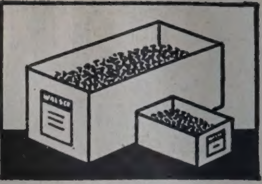
Cat. No.	List Price
455	$4.80

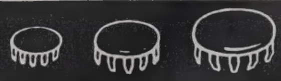
WALSCO ELECTRONIC HARDWARE

The 99 *Line*

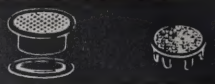
BULK PACK

IN PERMANENT *Transparent* PLASTIC STORAGE BOXES with SLIDING TOPS ● PROMPT DELIVERY FOR INDUSTRIAL AND OTHER QUANTITY USERS





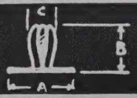
HOLE PLUGS



Description	THE "99 LINE" $1.08 Net, Ea. Pkg. Part No.	Quantity per Package	BULK PACK Bulk Part No.	Net Prices, per Thousand 250 to 4999	5M and up
SNAP-HOLE PLUGS, Steel, Bright Nickel-Plated					
Fits ⅛″ hole			3501-1	$16.45	$12.65
Fits 3/16″ hole			3501-1A	16.45	12.65
Fits ¼″ hole	3501-99	50	3501-2	16.45	12.65
Fits ⅜″ hole	3502-99	50	3501-3	16.45	12.65
Fits ½″ hole	3503-99	40	3501-4	18.11	13.92
Fits ⅝″ hole	3504-99	30	3501-5	23.00	17.71
Fits ¾″ hole	3505-99	25	3501-6	23.00	17.71
Fits ⅞″ hole			3501-7	27.95	21.51
Fits 1″ hole	3506-99	20	3501-8	32.89	25.30
Fits 1⅛″ hole			3501-9	36.17	27.83
Fits 1¼″ hole			3501-10	39.45	30.36

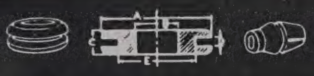
VENTILATING HOLE PLUGS

Description	Bulk Part No.	100 to 999	1M and up
Snap-fit for 1″ hole, screen type	3320-1	$97.75	$75.90
Snap-fit for 1″ hole, perforated type	3320-7	76.00	59.00
Eyelet-type for 13/32″ hole	3320-2	28.12	21.62
Eyelet-type for ¾″ hole	3320-3	32.95	25.36

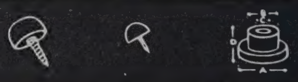


SNAP-IN TRIMOUNTS

Dimensions A	B	C	For Hole	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
9/32″	13/64″	9/64″	⅛″	3462-99	125	3460-2	$5.29	$4.03
23/64″	9/32″	3/16″	5/32″	3464-99	100	3460-4	6.27	4.83
⅜″	⅝″	5/32″	⅛″	3465-99	85	3460-5	8.22	6.33



GROMMETS, CABINET FEET AND CHASSIS MOUNTS



RUBBER GROMMETS

Dimensions, inches A	B	C	D	E	Part No.	Quantity per Package	Bulk Part No.	500 to 9999	10M and up
11/32	⅛	3/16	1/16	¼	3341-99	85	3340-1	$ 7.53	$ 5.81
7/16	3/16	7/32	1/16	5/16	3342-99	85	3340-2	8.28	6.38
9/16	¼	¼	1/16	⅜	3343-99	65	3340-3	10.35	7.99
⅝	⅜	¼	1/16	½	3344-99	55	3340-4	11.73	9.03
13/16	½	9/32	1/16	⅝	3345-99	35	3340-5	18.86	14.49

CORD STRAIN RELIEFS

Description	Bulk Part No.	500 to 9999	10M and up
For POSJ Wire	3340-9	30.13	23.17

RUBBER FEET

		Part No.	Quantity per Package	Bulk Part No.	500 to 9999	10M and up
SCREW-TYPE: Diameter	Height					
⅜″	7/32″	3351-99	55*	3350-1*	7.36	5.69
½″	9/32″	3352-99	50*	3350-2*	8.11	6.27
¾″	⅜″	3353-99	30*	3350-3*	16.04	12.36
		(*Wood screws included.)		(*No screws included.)		
TACK FEET:						
⅜″ diameter		3355-99	55	3350-5	12.82	9.89
½″ diameter		3356-99	50	3350-15	13.23	10.18

CHASSIS MOUNTS

Dimensions, inches A	B	C	D	Part No.	Quantity per Package	Bulk Part No.	500 to 9999	10M and up
¾	½	¼	⅜	2742-99	25	2740-2	24.09	18.52
1	½	¼	17/32	2744-99	20	2740-4	30.13	23.17

CABLE CLAMPS

Steel, cadmium plated

For Cables	Mounting Hole Size	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
⅛″ to 3/16″ diameter	#6	3331-99	125	3330-1	$5.06	$3.91
3/16″ to ¼″ diameter	#8	3332-99	100	3330-2	5.69	4.37
¼″ to 5/16″ diameter	#8	3333-99	75	3330-3	6.79	5.23

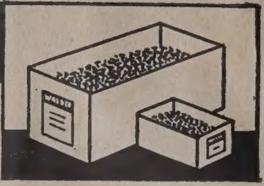
WALSCO ELECTRONIC HARDWARE

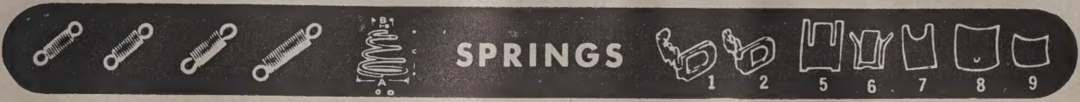
The 99 Line

IN PERMANENT *Transparent* PLASTIC STORAGE BOXES with SLIDING TOPS

BULK PACK

PROMPT DELIVERY FOR INDUSTRIAL AND OTHER QUANTITY USERS





SPRINGS

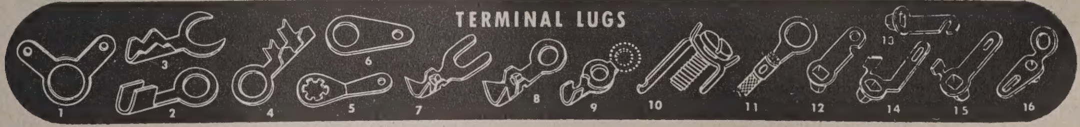
Description			THE "99 LINE" $1.08 Net, Ea. Pkg. Part No.	Quantity per Package	BULK PACK Bulk Part No.	Net Prices, per Thousand	
DIAL DRIVE SPRINGS, Steel, Cadmium-Plated							
O/L	Diameter	Wire Size				250 to 4999	5M and up
½"	⅛"	.016"			3410-1	$13.51	$10.29
⅝"	5/32"	.018"			3410-2	13.51	10.29
9/16"	3/16"	.020"			3410-3	13.80	10.58
¾"	⅛"	.016"			3410-4	13.80	10.58
¾"	5/32"	.020"			3410-5	14.09	10.75
1"	13/64"	.022"			3400-1	15.81	12.13
1¼"	13/64"	.022"			3400-2	17.42	13.40
Assorted			3400-99	50			

PHONO PANEL MOUNTING SPRINGS, Spring Steel, Cadmium-Plated

Dimensions A	B	C	Wire Thickness	Bulk Part No.		
1"	⅜"	⅞"	.075"	3385-1	12.82	9.78
1 3/16"	11/32"	1"	.062"	3385-2	13.51	10.35
¾"	¼"	¾"	.047"	3385-3	12.65	9.55

KNOB SPRINGS

	Bulk Part No.		
Style 1	3450-1	12.25	9.43
Style 2	3450-2	11.50	8.86
Style 5	3450-5	12.65	9.72
Style 6	3450-6	6.10	4.72
Style 7	3450-7	4.95	3.80
Style 8	3450-8	4.26	3.28
Style 9	3450-9	4.49	3.45



TERMINAL LUGS

SOLDER TYPE

Style	Available for Screw Numbers (Specify)	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
1	#6, #8, #10	3281-99	125	3280-1	$5.69	$4.37
2	#6, #8	3282-99	140	3280-2	4.77	3.68
3	#6, #8	3283-99	115	3280-3	5.87	4.49
4	#6, #8, #10	3284-99	100	3280-4	6.21	4.77
5	#6, #8	3285-99	100	3280-5	8.17	6.27
6	#6, #8, #10	3286-99	250	3280-6	2.59	2.01
7	#10	3287X-99	140	3280-7X	4.83	3.74
8	#10	3287Y-99	115	3280-7Y	5.87	4.49

SCREW TYPE

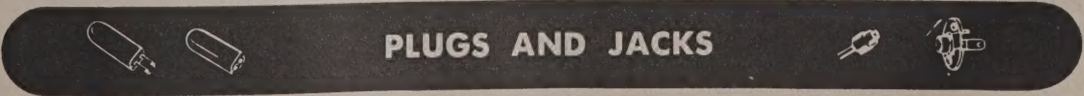
	Bulk Part No.	100 to 999	1M and up
10 with #8-32 x ⅜" Screw	3288-3-1	$46.06	$35.42

SOLDERLESS TYPE

Style	Fits Screw #	Fits Wire Gauge #	Part No.	Quantity per Package	Bulk Part No.	250 to 4999	5M and up
9 fits both #8 and #10			3287Z-99	35	3280-7Z	$18.57	$14.26
11	6	16 to 20			3288-1-6	21.39	16.45
11	8	16 to 20			3288-1-8	21.39	16.45
11	10	16 to 20			3288-1-10	21.39	16.45

EYELET TYPE

Style	Bulk Part No.	1000 to 9999	10M and up
12	3288-2-1	$3.28	$2.53
13	3288-2-2	4.60	3.57
14	3288-2-3	3.62	2.76
15	3288-2-4	4.60	3.57
16	3288-2-5	8.57	6.56



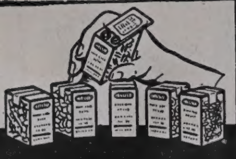
PLUGS AND JACKS

MINIATURE PLUGS AND JACKS, Not Assembled

	Bulk Part No.	100 to 999	1M and up
2-Conductor Plug (type PL-291)	2590 BU	$292.50	$225.00
2-Conductor Jack (type JK-48)	2591 BU	439.47	338.04
2-Conductor Plug (PL-291-A)	2592 BU	Prices on request	
2-Conductor Jack (JK-55)	2593 BU	Prices on request	

PHONO PLUGS AND JACKS

	Bulk Part No.		
Shielded, Single-Conductor Plug	2580-1	45.43	34.21
Shielded, Single-Conductor Jack	2580-6	71.30	54.63



WALSCO ELECTRONIC HARDWARE

The 99 *Line*

IN PERMANENT *Transparent* PLASTIC STORAGE BOXES with SLIDING TOPS

BULK PACK

PROMPT DELIVERY FOR INDUSTRIAL AND OTHER QUANTITY USERS

MACHINE SCREWS

THE "99 LINE" $1.08 Net, Ea. Pkg.

BULK PACK

ROUND HEAD, Steel, Cadmium-Plated

Description	Part No.	Quantity per Package	Bulk Part No.	Net Prices, per Thousand 1000 to 9999	10M and up
Sizes Assorted	3560-99	200			
#2-56 x 3/16"			3561-2-1A	$2.36	$1.84
#2-56 x 3/8"			3561-2-3	2.47	1.90
#2-56 x 1/2"			3561-2-4	2.59	1.96
#4-40 x 1/4"			3561-4-2	2.59	2.01
#4-40 x 3/8"			3561-4-3	2.70	2.13
#4-40 x 1/2"			3561-4-4	2.88	2.24
#4-40 x 1"			3561-4-8	3.74	2.88
#6-32 x 1/4"	3100-99	225	3561-6-2	2.88	2.24
#6-32 x 3/8"	3110-99	225	3561-6-3	3.16	2.42
#6-32 x 1/2"	3120-99	200	3561-6-4	3.34	2.59
#6-32 x 3/4"	3130-99	175	3561-6-6	3.91	2.99
#6-32 x 1"	3132-99	150	3561-6-8	4.43	3.39
#8-32 x 1/4"	3135-99	200	3561-8-2	3.74	2.88
#8-32 x 3/8"	3140-99	175	3561-8-3	3.97	3.05
#8-32 x 1/2"	3150-99	160	3561-8-4	4.31	3.28
#8-32 x 3/4"	3160-99	140	3561-8-6	4.89	3.80
#8-32 x 1"	3162-99	125	3561-8-8	5.64	4.37
#10-32 x 1/2"	3165-99	140	3561-10-4	5.00	3.85
#10-32 x 3/4"	3167-99	115	3561-10-6	5.92	4.54
#10-32 x 1"	3169-99	100	3561-10-8	6.73	5.18

BINDING HEAD, Brass

Description	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
#6-32 x 1/4"			3565-6-2	4.89	3.74
#6-32 x 3/8"			3565-6-3	5.58	4.31
#6-32 x 1/2"			3565-6-4	6.33	4.89
#8-32 x 1/4"			3565-8-2	7.02	5.41
#8-32 x 3/8"			3565-8-3	7.94	6.15

SHEET METAL SCREWS

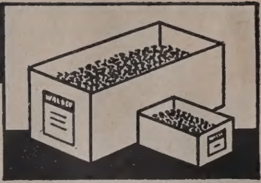
HEX HEAD, Slotted, Type "B" — Blunt Point

Description	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
Sizes Assorted	3470-99	125			
#6 x 1/4"	2910-99	150	3471-6-2	$3.97	$3.05
#6 x 3/8"	2911-99	150	3471-6-3	4.20	3.22
#6 x 1/2"	2912-99	150	3471-6-4	4.37	3.39
#6 x 3/4"	2914-99	125	3471-6-6	4.95	3.80
#6 x 1"	2916-99	125	3471-6-8	5.41	4.14
#8 x 1/4"	2919-99	125	3471-8-2	4.95	3.80
#8 x 3/8"	2920-99	125	3471-8-3	4.89	3.80
#8 x 1/2"	2922-99	125	3471-8-4	5.23	4.03
#8 x 3/4"	2924-99	100	3471-8-6	6.04	4.66
#8 x 1"	2926-99	100	3471-8-8	6.90	5.29
#10 x 3/8"	2930-99	100	3471-10-3	6.04	4.66
#10 x 1/2"	2932-99	100	3471-10-4	6.33	4.89
#10 x 3/4"	2934-99	100	3471-10-6	7.13	5.46

WALSCO ELECTRONIC HARDWARE

The 99 *Line* — IN PERMANENT *Transparent* PLASTIC STORAGE BOXES with SLIDING TOPS

● BULK PACK — PROMPT DELIVERY FOR INDUSTRIAL AND OTHER QUANTITY USERS



SET SCREWS

Steel, hardened

HEADLESS TYPE, Slotted, Cadmium-Plated

Description	THE "99 LINE" $1.08 Net, Ea. Pkg. Part No.	Quantity per Package	BULK PACK Bulk Part No.	Net Prices, per Thousand 500 to 9999	10M and up
Assorted	3480-99	55			
#6-32 x ⅛"			3481-6-1	$13.28	$10.18
#6-32 x 3/16"			3481-6-1A	11.44	8.80
#6-32 x ¼"			3481-6-2	11.50	8.86
#8-32 x ⅛"			3481-8-1	13.28	10.18
#8-32 x 3/16"	3220-99	55	3481-8-1A	11.44	8.80
#8-32 x ¼"			3481-8-2	11.50	8.86
#10-32 x 3/16"			3481-10-1A	11.50	8.86
#10-32 x ¼"			3481-10-2	11.73	9.03

HEX — ALLEN-HEAD

Description	Bulk Part No.	100 to 999	1M and up
#4-40 x ⅛"	3482-4-1	$62.04	$47.73
#5-40 x ⅛"	3482-5-1	62.79	48.30
#6-32 x ⅛"	3482-6-1	63.54	48.88
#6-32 x 3/16"	3482-6-1A	64.29	49.45
#6-32 x ¼"	3482-6-2	64.29	49.45
#8-32 x ⅛"	3482-8-1	64.29	49.45
#8-32 x 3/16"	3482-8-1A	65.03	50.03
#8-32 x ¼"	3482-8-2	65.78	50.60
#10-32 x 3/16"	3482-10-1A	65.78	50.60
#10-32 x ¼"	3482-10-2	66.53	51.18
¼-20 x ¼"	3482-¼-2	68.02	52.33

MISC. SCREWS

WOOD SCREWS

Size	Head	Finish	Bulk Part No.	1000 to 9999	1OM and up
#2 x ¼"	Oval Hd.	Statuary Bronze	3550-2-2	$4.49	$3.45
#2 x ⅜"	Oval Hd.	Statuary Bronze	3550-2-3	4.72	3.62
#2 x ½"	Round Hd.	Statuary Bronze	3550-2-4	4.89	3.74
#3 x ⅜"	Round Hd.	Blued	3550-3-3	4.72	3.62
#6 x ½"	Round Hd.	Blued	3550-6-4	5.29	4.08
#6 x ⅞"	Flat Hd.	Cadmium-Plated	3550-6-7	5.75	4.43
#8 x ⅝"	Round Hd.	Blued	3550-8-5	6.15	4.77

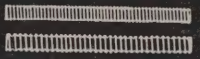
ORNAMENTAL HEAD SCREWS, Steel, Statuary Bronze Finish

Description	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
#6-32 x ¾"	2951-99	125	2951-6-6	4.37	3.34
#6-32 x 1"	2952-99	125	2951-6-8	5.12	3.97
#8-32 x 1¼"	2953-99	80	2951-8-10	7.65	5.87

RACK SCREWS, Oval Head, Steel, Nickel-Plated

Description	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
#6-32 x ⅝"	3543-99	175	3541-6-5	3.68	2.82
#8-32 x ⅝"	3541-99	150	3541-8-5	4.60	3.51
#10-32 x ¾"	3542-99	100	3541-10-6	5.92	4.54
#12-24 x ⅝"			3541-12-5	7.13	5.46

MISC. FASTENERS



SPADE BOLTS, Steel, Cadmium-Plated

Description	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
#6-32 x ⅝" O/L	3271-99	100	3270-1	$6.96	$5.35
#6-32 x ¾" O/L	3272-99	100	3270-2	7.02	5.41

HAIR PIN and COTTER PINS, Straight

Dimensions A	B	C		Bulk Part No.	1000 to 9999	10M and up
⅜"	1/16"	.026"		2650-1	3.34	2.53
⅜"	3/32"	.026"		2650-2	3.34	2.53
½"	9/64"	.032"		2650-3	3.34	2.53
⅝"	3/16"	.047"		2650-4	3.12	2.40
½"	——	——	1/16" straight type	2650-7	1.48	1.14
¾"	——	——	1/16" straight type	2650-8	1.87	1.44

THREADED ROD, Steel

Description	Bulk Part No.	100 to 999	1M and up
#6-32; 8" long	2640-1	$52.04	$40.02
#8-32; 8" long	2640-2	54.74	42.09

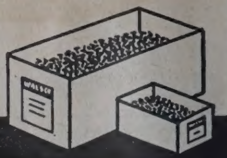
WALSCO ELECTRONIC HARDWARE

The 99 *Line*

IN PERMANENT *Transparent* PLASTIC STORAGE BOXES with SLIDING TOPS

BULK PACK

PROMPT DELIVERY FOR INDUSTRIAL AND OTHER QUANTITY USERS



HEX NUTS

Description			THE "99 LINE" $1.08 Net, Ea. Pkg.		BULK PACK		
Thread Size	Width Across Flats	Thickness	Part No.	Quantity per Package	Bulk Part No.	Net Prices, per Thousand 1000 to 9999	Net Prices, per Thousand 10M and up
SMALL PATTERN, Steel, Cadmium-Plated							
Assorted			3520-99	175			
2-56	3/16"	1/16"			3521-2	$4.26	$2.88
4-40	3/16"	1/16"	3175-99	200	3521-4	4.26	2.88
6-32	¼"	3/32"	3180-99	200	3521-6	3.62	2.70
8-32	5/16"	7/64"	3190-99	200	3521-8	4.03	2.99
10-32	5/16"	7/64"	3195-99	175	3521-10	4.31	3.34
STANDARD PATTERN, Steel, Cadmium-Plated							
6-32	5/16"	7/64"			3522-6	3.85	2.99
8-32	11/32"	⅛"			3522-8	4.31	3.34
10-32	⅜"	⅛"			3522-10	4.72	3.62
BRASS NUTS, Nickel-Plated							
4-36	¼"	3/32"			3523-4X*	4.31	3.22
4-40	¼"	3/32"			3523-4*	4.31	3.22
6-32	¼"	5/64"	3180-B-99	150	3523-6*	4.31	3.22
8-32	11/32"	⅛"	3190-B-99	125	3523-8*	7.19	5.46
10-32	⅜"	⅛"	3195-B-99	100	3523-10*	7.94	6.04

(*Brass, Add 10% for Nickel Plating)

MOUNTING NUTS

Thread Size	Width Across Flats	Thickness	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
VOLUME CONTROL HEX NUTS, Steel, Cadmium-Plated							
⅜-32	½"	3/32"	3531-99	85	3530-1	$ 7.65	$ 5.87
VOLUME CONTROL HEX NUTS, Brass							
⅜-32	½"	3/32"			3530-1B	16.91	13.00
TOGGLE SWITCH HEX NUTS, Steel, Cadmium-Plated							
15/32-32	9/16"	3/32"	3532-99	50	3530-2	14.26	10.98
TOGGLE SWITCH RING NUTS, Brass, Nickel-Plated							
15/32-32	19/32"	5/64"	3533-99	50	3530-3	13.92	10.70

SPECIAL NUTS

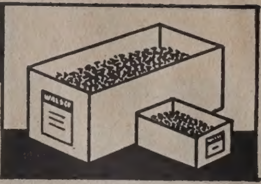
Size	Bulk Part No.	1000 to 9999	10M and up
KNURLED THUMB NUTS, Brass			
#6-32	2971-6	$12.31	$ 9.43
#8-32	2971-8	12.31	9.43
#10-32	2971-10	25.82	19.90
WING NUTS, Zamack Metal, Nickel-Plated			
#6-32	2976-6	9.09	7.02
#8-32	2976-8	14.32	11.04
#10-32	2976-10	18.46	14.20
ACORN NUTS, PAL TYPE, Steel, Nickel-Plated			
#6-32	2961-6	12.25	9.43
#8-32	2961-8	14.09	10.81
#10-32	2961-10	17.54	13.46
SPEED NUTS, Tempered Steel, Parkerized			
#6-32	2981-6	4.08	3.11
#8-32	2981-8	5.69	4.37
#10-24	2981-10	7.36	5.64
¼-20	2981-¼	10.41	8.05

WALSCO ELECTRONIC HARDWARE

The **99** *Line*

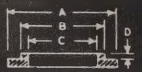
BULK PACK

IN PERMANENT *Transparent* PLASTIC STORAGE BOXES with SLIDING TOPS ● **PROMPT DELIVERY FOR INDUSTRIAL AND OTHER QUANTITY USERS**



INSULATING WASHERS

Phenolic Fibre



THE "99 LINE"

$1.08 Net, Ea. Pkg.

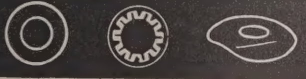
BULK PACK

EXTRUDED TYPE

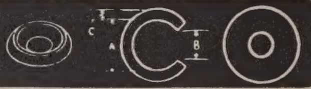
Fits Screw No.	Dimensions A	B	C	D	Part No.	Quantity per Package	Bulk Part No.	Net Prices, per Thousand 1000 to 9999	10M and up
6	5/16"	3/16"	.136"	1/32"	3431-E-99	125	3432-6	$5.41	$4.14
8	⅜"	¼"	.165"	1/32"	3432-E-99	125	3432-8	5.41	4.14
10	⅜"	.308"	.195"	1/32"	3433-E-99	100	3432-10	5.98	4.60
¼"	½"	11/32"	.255"	1/32"	3434-E-99	100	3432-¼	6.38	4.89
⅜"	⅝"	½"	.380"	1/32"	3435-E-99	85	3432-⅜	7.36	5.69

FLAT TYPE

Fits Screw No.	O.D.	I.D.	Thickness	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
6	5/16"	.136"	1/32"	3431-F-99	250	3431-6	2.65	2.07
8	⅜"	.165"	1/32"	3432-F-99	250	3431-8	2.82	2.19
10	⅜"	.195"	1/32"	3433-F-99	250	3431-10	2.88	2.24
¼"	½"	.255"	1/32"	3434-F-99	225	3431-¼	3.05	2.36
⅜"	⅝"	.380"	1/32"	3435-F-99	175	3431-⅜	3.97	3.05



MISC. WASHERS



FLAT METAL WASHERS, Steel, Cadmium-Plated

Fits Screw No.	O.D.	Thickness	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
4	9/32"	1/32"			3511-4	$1.04	$ .81
6	⅜"	1/32"	3512-99	500	3511-6	1.09	.86
8	⅜"	1/32"	3513-99	500	3511-8	1.09	.86
10	7/16"	1/32"	3514-99	300	3511-10	1.61	1.21
¼"	½"	1/32"	3515-99	300	3511-¼	1.90	1.44

LOCK WASHERS, Int. Teeth, Steel, Cadmium-Plated

Fits Screw No.	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
4			3591-4	2.36	1.84
6	3592-99	300	3591-6	2.36	1.84
8	3593-99	275	3591-8	2.53	1.96
10	3594-99	275	3591-10	2.53	1.96
¼"	3595-99	200	3591-¼	3.28	2.53
⅜"	3596-99	125	3591-⅜	5.69	4.37

SPRING (FRICTION) WASHERS

I.D.	O.D.	Thickness	Bulk Part No.	1000 to 9999	10M and up
⅛"	5/16"	.010"	3425-1	8.05	6.33
3/16"	⅜"	.008"	3425-2	8.91	6.90
¼"	½"	.012"	3425-3	10.06	7.76

CUP WASHERS, Steel, Nickel-Plated

Fits Screw No.	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
6	3544-99	275	3542-6	2.24	1.73
8	3545-99	250	3542-8	2.76	2.13
10	3546-99	200	3542-10	3.45	2.65
12			3542-12	4.95	3.80

"C" WASHERS, Soft Steel, Cadmium-Plated

Fits Shaft	A	B	C	Thickness	Bulk Part No.	1000 to 9999	10M and up
¼"	.260	3/16"	1/16"	1/32"	3420-2	7.19	5.52
3/16"	5/32"	⅛"	1/16"	1/32"	3420-3	6.21	4.77

KNOB FELT WASHERS, Brown

O.D.	I.D.	Thickness	Part No.	Quantity per Package	Bulk Part No.	1000 to 9999	10M and up
¾"	¼"	1/32"	3490-99	250	3490-1	2.01	1.27

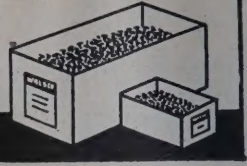
PHONE TIPS

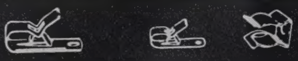
	Part No.	Quantity per Package	Bulk Part No.	250 to 4999	5M and up
15/16" O/L	2725-99	60	2725-1	$10.41	$7.99

WALSCO ELECTRONIC HARDWARE

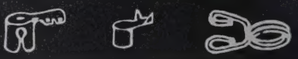
The 99 Line — IN PERMANENT *Transparent* PLASTIC STORAGE BOXES with SLIDING TOPS

BULK PACK — PROMPT DELIVERY FOR INDUSTRIAL AND OTHER QUANTITY USERS





MISC. CLIPS



THE "99 LINE" $1.08 Net, Ea. Pkg.

BULK PACK

SPRING CLIPS, Spring Brass, Nickel-Plated

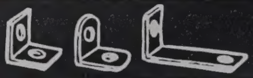
Length	Width	Mtg. Hole Size	Part No.	Quantity per Package	Bulk Part No.	Net Prices, per Thousand 1000 to 9999	10M and up
11/16"	7/32"	4 and 5	2731-99	100	2730-1	$ 6.50	$5.00
13/16"	5/16"	6	2732-99	75	2730-2	8.80	6.79

GRID CAPS

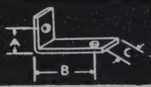
Description	Bulk Part No.	250 to 4999	5M and up
For Glass Tubes	2600-1	$22.43	$17.25
For Metal and "GT" Tubes	2600-4	7.25	5.58
For High Voltage TV Rectifier Tube	2600-6	34.39	26.45
FUSE CLIPS			
For ¼" Fuses	2720-1	9.20	6.61
For 9/32" Fuses	2720-2	16.10	12.42

FUSE INSULATORS

Description	Bulk Part No.	1000 to 9999	10M and up
1⅛" long, ¼" I.D.	2690-1	$ 3.85	$2.93
⅝" long, ¼" I.D.	2690-2	3.39	2.65



ANGLE BRACKETS



Material	Dimensions A	B	C	Bulk Part No.	500 to 9999	10M and up
Brass, cadmium-plated	7/32"	¼"	¼"	2610-1	$ 7.88	$6.04
Steel, cadmium-plated	¼"	⅝"	5/16"	2610-2	8.28	6.38
Brass (one hole tapped 6-32)	5/32"	5/16"	5/16"	2610-5	11.44	8.80

INSULATING TUBING

FLEXITUBE

Extruded vinyl tubing; dielectric strength: 15,000 v.

Clear will be supplied unless order specifies color. Black, Green or Red available subject to stock on hand.

Part No.	Size, B & S Gauge No.	Approx. I.D. Inches	MM.		Part No.	Price per thousand ft. 100 to 1999* ft.	2M* ft. and up
R 600	18	.042	1		R 600	$ 17.25	$ 10.14
R 601	16	.053	1.4		R 601	17.25	10.14
R 602	14	.066	1.6		R 602	17.94	11.93
R 603	12	.085	2		R 603	18.40	13.70
R 604	10	.106	2.7		R 604	20.70	14.03
R 605	8	.133	3.5		R 605	25.53	15.30
R 606	6	.166	4		R 606	29.90	18.40
R 607	4	.208	5		R 607	36.80	26.45
R 608	2	.263	6.5		R 608	51.75	34.50
R 609	....	.330		Flat to fit 300-ohm twin-lead. Clear color only. 75 ft. hanks	R 609	54.63	43.59

RAYOFLEX

Lacquered-rayon tubing, radio grade. Meets A.S.T.M. Specifications B-2. Available in Black, Blue, Red, and Yellow. Please specify color.

Part No.	Size, B & S Gauge No.	Approx. I.D. Inches	MM.	Part No.	100 to 1999* ft.	2M* ft. and up
(Following sizes suppled in continuous lengths.)						
R 630	18	.042	1	R 630	$ 45.43	$ 34.96
R 631	15	.059	1.5	R 631	50.26	38.63
R 632	12	.085	2	R 632	59.69	45.89
R 633	9	.118	3	R 633	69.00	53.13
R 634	6	.166	4	R 634	77.97	60.03
(Following sizes supplied in 30-inch lengths.)						
R 635	2	¼"	6.5	R 635	122.82	94.53
R 636	0	5/16"	8.5	R 636	164.68	126.73
R 637	00	⅜"	9.5	R 637	197.57	152.03
R 638	0000	½"	13	R 638	272.32	209.53

*Various sizes and colors, but not less than 100 ft. of any one size or color, may be combined in one order to take advantage of quantity discounts. Sizes other than listed above can be supplied. Prices quoted on request.

WALSCO *products*
Help The Radio Man
WALTER L. SCHOTT COMPANY, BEVERLY HILLS, CALIFORNIA

BULK PRICE LIST
DIAL CABLE & CORDS — GRILLE CLOTH & SCREENING — CHEMICALS & FINISHES

DIAL CABLE AND CORDS

METAL CABLES

Part No.	Description	3000 to 14,999 ft.	15M ft. and up
R 30	Phosphor bronze cable, twisted, 42-strand, .032″ diameter	$23.00/M ft.	$17.71/M ft.
R 31	Bronze cable, braided, 16-strand, .038″ diameter	11.50/M ft.	9.20/M ft.
R 32	Bronze cable, braided, 8-strand, .026″ diameter	12.65/M ft.	9.78/M ft.

NYLON CORDS

Constructed with impregnated fibreglass core, and black nylon braid. Construction combines minimum stretch, high coefficient of friction, and maximum resistance to abrasion.

Part No.	Description	3000 to 14,999 ft.	15M ft. and up
R 35	"Special-Thin" Cord, approximately .026″ diameter	$10.35/M ft.	$ 6.96/M ft.
R 39	Standard Cord, approximately .032″ diameter	10.81/M ft.	7.13/M ft.
R 34	Medium Cord, approximately .040″ diameter	12.42/M ft.	9.20/M ft.
R 33	Heavy-Duty Cord, approximately .060″ diameter	20.13/M ft.	15.53/M ft.

GRILLE CLOTH, SCREENING AND METAL GRILLE

GRILLE CLOTH

Part No.	Description	5 to 49 yd.	50 yd. and up
R 362 BU	Standard Grille Cloth, 48-54″ wide. (Available in Light, Walnut, and Mahogany)	$3.50/yd.	$2.80/yd.
R 365 BU	Wrinkle- and Stain-Resistant, Highest Quality Material. Approx. 44″ wide. (Available in 6 Standard Patterns)	7.94/yd.	6.10/yd.

FLOCKED GRILLE SCREENING

Part No.	Color	Width, inches	10 to 99 ft.	100 ft. and up
R 374-1 BU	Brown	11	$ .52/lin. ft.	$ .40/lin. ft.
R 374-3 BU	Light Ivory	11	.52/lin. ft.	.40/lin. ft.
R 376-1 BU	Brown	18	.75/lin. ft.	.58/lin. ft.
R 376-3 BU	Light Ivory	18	.75/lin. ft.	.58/lin. ft.
R 378-1 BU	Brown	36	1.50/lin. ft.	1.15/lin. ft.
R 378-3 BU	Light Ivory	36	1.50/lin. ft.	1.15/lin. ft.

Note: Grille Cloth and Flocked Grille Screening also available in "cut-to-order" sizes.........Prices Quoted on Request

ORNAMENTAL METAL GRILLE

Part No.	Description	Price
R 380	Available in a variety of finishes and in any size up to 48″ width	Prices Quoted on Request

CHEMICALS AND FINISHES

INDUSTRIAL ADHESIVES

Part No.	Description	1-gal. Cans	5-gal. Cans
R 21	WALSCO Fabric Cement	$8.63/gal.	$6.67/gal.
R 40	WALSCO Plastic Cement	8.63/gal.	6.67/gal.
R 50	WALSCO Radio Cement	6.33/gal.	4.95/gal.
R 110	WALSCO Rubber Cement	8.63/gal.	6.67/gal.
R 150	WALSCO Polystyrene Cement	6.79/gal.	5.18/gal.

SOLVENTS & THINNERS

Part No.	Description	1-gal. Cans	5-gal. Cans
R 1	For Lacquer No. 120	4.60/gal.	3.57/gal.
R 2	For Cement No. R 110 and Wrinkle Varnish No. R 145	1.44/gal.	1.09/gal.
R 60	For Cements Nos. R 20, R 40, and R 50	4.03/gal.	3.11/gal.
R 160	For Cement No. R 150	2.88/gal.	2.24/gal.
R 214	Carbon-Tetrachloride	4.31/gal.	3.45/gal.

SPECIAL CHEMICALS

Part No.	Description	1-lb. Cans	5-lb. Cans
R 22	WALSCOLUB-B	$1.73/lb.	$1.38/lb.
R 23A	Lubriplate	1.38/lb.	.92/lb.

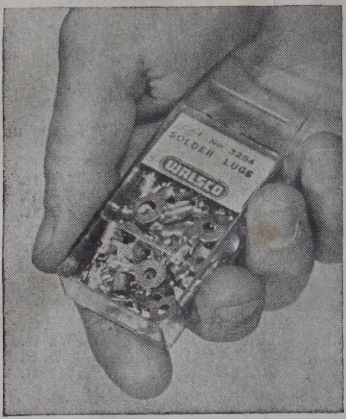
Part No.	Description	1-gal. Cans	5-gal. Cans
R 80	Contactene	$ 5.75/gal.	$ 4.49/gal.
R 100	No-Ox	29.90/gal.	23.00/gal.
R 190	Insulating Varnish	7.48/gal.	5.87/gal.

POLISHES

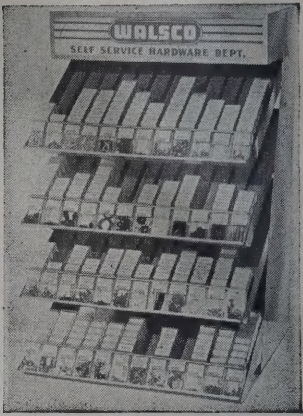
Part No.	Description	1-gal. Cans	5-gal. Cans
R 410	WALSCO Super Polish	4.03/gal.	3.11/gal.
R 414	Scratch-Removing Polish, Dark	2.88/gal.	2.24/gal.
R 430	Scratch-Removing Polish, Light	2.88/gal.	2.24/gal.

LACQUERS AND FINISHES

Part No.	Description	1-gal. Cans	5-gal. Cans
R 120	Crystallizing Lacquer: Black, Green, Grey, Clear, Brown	11.50/gal.	9.37/gal.
R 145	Wrinkle Varnish — Air-Dry: Grey or Black	11.39/gal.	9.26/gal.



THE NEW 50 LINE



It's the smart way to buy hardware . . . it's the convenient way to store hardware . . . it's the economical way to use hardware. The new **WALSCO 50 LINE** is attractively packaged in transparent, plastic containers. The part number, the contents and its uses are all plainly visible on each container, making it easy for you to select your hardware in a jiffy. The new **50 LINE** eliminates the waste of small, loose hardware items being misplaced . . . keeps your busy work bench free from congestion. Now, all your hardware items can be neatly stacked in sturdy, re-usable containers. Available at your jobber. Select all your hardware from the new, self-service **50 LINE** display.

The following listing gives part numbers and description of all items in the **50 LINE.** For detailed descriptions refer to "**40 LINE**" listings on pages U-44 to U-48. List also gives new "**99 LINE**" part numbers which will become effective in Fall, 1952.

"50" LINE PRICE AND ORDER INFORMATION

Suffix **F** after part number indicates "50" Line package. **LIST PRICE 50¢ EACH**

Jobbers standard pack is 20 "**50" Line** packages. Add suffix **B** to part number . . . example: 1 #7014-FB is box of 20 #7014-F.

"99" LINE PRICE AND ORDER INFORMATION

Suffix **N** after part number indicates "**99**" **Line** package. **LIST PRICE $1.80 EACH**

Jobbers standard pack is 6.

Cat. No.	Description
7014-F	Phono Motor Drives—4 drives
7016-F	Phono Motor Drives—2 drives
7017-F	Phono Motor Drives—3 drives
7018-F	Phono Motor Drives—4 drives
7019-F	Phono Motor Drives—4 drives
7020-F	Phono Motor Drives—1 drive
7022-F	Phono Motor Drives—3 drives
7025-F	Rubber Grommets—15 asst.
7030-F	Rubber Grommets—16, ⅛″ I.D. ¼″ Mounting Hole
7030-N	Rubber Grommets—85, ⅛″ I.D. ¼″ Mounting Hole
7032-F	Rubber Grommets—14, 3/16″ I.D. 5/16″ Mounting Hole
7032-N	Rubber Grommets—85, 3/16″ I.D. 5/16″ Mounting Hole
7034-F	Rubber Grommets—12, ¼″ I.D. ⅜″ Mounting Hole
7034-N	Rubber Grommets—65, ¼″ I.D. ⅜″ Mounting Hole
7036-F	Rubber Grommets—10, ⅜″ I.D. ½″ Mounting Hole
7036-N	Rubber Grommets—55, ⅜″ I.D. ½″ Mounting Hole
7038-F	Rubber Grommets—8, 9/32″ I.D. ⅝. Mounting Hole
*7038-N	Rubber Grommets—35, 9/32″ I.D. ⅝″ Mounting Hole
7048-F	Cord Strain Reliefs—5 pieces
7050-F	Rubber Feet—8 asst.
7052-F	Rubber Feet—8, ⅜″ O.D.
7052-N	Rubber Feet—55, ⅜″ O.D.
7054-F	Rubber Feet—8, ½″ O.D.
7054-N	Rubber Feet—50, ½″ O.D.
7056-F	Rubber Feet—8, ⅝″ O.D.
7056-N	Rubber Feet—30, ⅝″ O.D.
7070-F	Rubber Tack Feet—10 asst.
7071-N	Rubber Tack Feet—55, ⅜″ Dia.
7072-N	Rubber Tack Feet—50, ½″ Dia.
7075-F	Chassis Mounts—10 asst.
7077-F	Chassis Mounts—6
7083-F	Rubber Bumpers—asst.
7100-F	Terminal Lugs—30 asst.
7110-F	Terminal Lugs—20
7116-N	Terminal Lugs—125, for #6 Screw
7118-N	Terminal Lugs—125, for #8 Screw
7120-F	Terminal Lugs—25
7126-N	Terminal Lugs—140, for #6 Screw
7128-N	Terminal Lugs—140, for #8 Screw
7130-F	Terminal Lugs—25
7136-N	Terminal Lugs—115, for #6 Screw
7138-N	Terminal Lugs—115, for #8 Screw
7140-F	Terminal Lugs—20
7146-N	Terminal Lugs—100, for #6 Screw
7148-N	Terminal Lugs—100, for #8 Screw
7150-F	Terminal Lugs—15
7156-N	Terminal Lugs—100, for #6 Screw
7158-N	Terminal Lugs—100, for #8 Screw
7160-F	Terminal Lugs—35
7166-N	Terminal Lugs—250, for #6 Screw
7168-N	Terminal Lugs—250, for #8 Screw
7170-F	Terminal Lugs—25
7179-N	Terminal Lugs—140, for #10 Screw
7180-F	Terminal Lugs—20
7189-N	Terminal Lugs—100, for #10 Screw
7190-F	Terminal Lugs—8
7199-N	Terminal Lugs—35 Fold-Over Type
7250-F	Terminal Strips—asst.
7300-F	Snap-Hole Plugs—8 asst.
7306-F	Snap-Hole Plugs—8 for ¼″ Hole
7306-N	Snap-Hole Plugs—50 for ¼″ Hole
7308-F	Snap-Hole Plugs—8 for ⅜″ Hole
7308-N	Snap-Hole Plugs—50 for ⅜″ Hole
7310-F	Snap-Hole Plugs—6 for ½″ Hole
7310-N	Snap-Hole Plugs—40 for ½″ Hole
7312-F	Snap-Hole Plugs—6 for ⅝″ Hole
7312-N	Snap-Hole Plugs—30 for ⅝″ Hole
7314-F	Snap-Hole Plugs—5 for ¾″ Hole
7314-N	Snap-Hole Plugs—25 for ¾″ Hole
7316-F	Snap-Hole Plugs—5 for 1″ Hole
*7316-N	Snap-Hole Plugs—20 for 1″ Hole
7330-F	Vent Plugs—asst. sizes
7370-F	Trimounts—20 asst.
7373-F	Trimounts—25, fits ⅛″ Hole
7373-N	Trimounts—125, fits ⅛″ Hole
7375-F	Trimounts—20, fits 5/32″ Hole
7375-N	Trimounts—100, fits 5/32″ Hole
7377-F	Trimounts—15, fits ⅛″ Hole
7377-N	Trimounts—85, fits ⅛″ Hole
7380-F	Sml. Cotter & Hair Pins—50 asst.
7395-F	Dial Cord—10′ Special Thin
7396-F	Dial Cord—10′ Standard Thin
7397-F	Dial Cord—10′ Medium
7400-F	Dial Drive Springs, small—10 asst.
7400-F	Dial Drive Springs, lg. & sm. 8 asst.
7401-N	Dial Drive Springs, lg. & sm. 50 asst.
7404-F	Dial Drive Springs—10
7405-F	Dial Drive Springs—10
7407-F	Dial Drive Springs—10
7409-F	Dial Drive Springs—8
7411-F	Dial Drive Springs—8
7420-F	Exp. Springs, small—10 asst.
7421-F	Expansion Springs, large—10 asst.
7440-F	Comp. Springs, small—20 asst.
7441-F	Comp. Springs, large—15 asst.
7480-F	Knob Springs—18 asst.
7485-F	Knob Springs—8 springs
7486-F	Knob Springs—10 springs
7488-F	T.V. Knob Springs—12 springs
7490-F	Knob Springs—12 springs

*Size of item does not permit packaging in standard boxes. Item will not fit No. 1032 display.

"50" LINE PRICE AND ORDER INFORMATION (Cont'd.)

Cat. No.	Description
7491-F	Knob Springs—20 springs
7493-F	Knob Springs—24 springs
7495-F	Knob Springs—15 springs
7496-F	Knob Springs—25 springs
7500-F	Cable Clamps—20 asst.
7502-F	Cable Clamps—25 for ⅛" to 3/16" Diameter Cables
7502-N	Cable Clamps—125 for ⅛" to 3/16" Diameter Cables
7503-F	Cable Clamps—20 for 3/16" to ¼" Diameter Cables
7503-N	Cable Clamps—100 for 3/16" to ¼" Diameter Cables
7505-F	Cable Clamps—16 for ¼" to 5/16" Diameter Cables
7505-N	Cable Clamps—75 for ¼" to 5/16" Diameter Cables
7510-F	Eyelets—50 asst.
7525-F	Rivets—50 asst.
7527-F	T.V. Cord Riverts—asst.
7560-F	Escutcheon Pins—100 asst.
7565-F	Twin-Lead Wiring Nails —approx. 40
7565-N	Twin-Lead Wiring Nails—200
7570-F	Angle Brackets—15 asst.
7590-F	Spring Clips—15 asst.
7592-F	Spring Clips—18 small
7594-F	Spring Clips—14 medium
7600-F	Fuse Clips—12 asst.
7609-F	Grid Caps—10 asst.
7620-F	Metal Spacers—12 asst.
7630-F	Insul. Spacers—12 asst.
7640-F	Fuse Insulators—20
7645-F	Phone Tips—10
7645-N	Phone Tips—60
7665-F	Phono Plugs—4 plugs
7667-F	Phono Jacks—3 jacks
7740-F	Speaker Dust Felts—15 asst.
7745-F	Dial Cord Clips—30
7750-F	Spring Washers—12 asst.
7760-F	Knob Felt Washers
7770-F	Ret. Rings & "C" Washers—25 asst.
7772-F	"C" Washers—15 for 3/16" shaft
7774-F	"C" Washers—15 for ¼" shaft
7778-F	Ret. Rings
7806-F	Cup Washers—45 for #6 Screw
7806-N	Cup Washers—275 for #6 Screw
7808-F	Cup Washers—45 for #8 Screw
7808-N	Cup Washers—250 for #8 Screw
7810-F	Cup Washers—35 for #10 Screw
*7810-N	Cup Washers—200 for #10 Screw
7820-F	Insulating Washers—35 asst.
7824-F	Insulating Washers—30 for #6 Srew
7825-F	Insulating Washers—30 for #8 Srew
7826-F	Insulating Washers 30 for #10 Screw
7827-F	Insulating Washers 24 for ¼" Screw
7828-F	Insulating Washers 20 for ⅜" Screw
7836-N	Insulating Washers—250, Flat, #6
7838-N	Insulating Washers—250, Flat, #8
7840-N	Insulating Washers—250, Flat, #10
7842-N	Insulating Washers—225, Flat, ¼"
7844-N	Insulating Washers—175, Flat, ⅜"
7856-N	Insulating Washers 125, Extruded #6
7858-N	Insulating Washers 125, Extruded #8
7860-N	Insulating Washers 100, Extruded #10
7862-N	Insulating Washers 100, Extruded ¼"
7864-N	Insulating Washers 85, Extruded ⅜"

Cat. No.	Description
7870-F	Metal Washers—80 asst.
7874-F	Metal Washers— 80 for #4 Screw
7876-F	Metal Washers— 80 for #6 Screw
7876-N	Metal Washers—500 for #6 Screw
7878-F	Metal Washers— 80 for #8 Screw
7878-N	Metal Washers—500 for #8 Screw
7880-F	Metal Washers— 70 for #10 Screw
7880-N	Metal Washers—300 for #10 Screw
7882-F	Metal Washers— 50 for ¼" Screw
7882-N	Metal Washers—300 for ¼" Screw
7920-F	Lockwashers— 50 asst.
7922-F	Lockwashers— 35 for #2 Screw
7924-F	Lockwashers— 50 for #4 Screw
7926-F	Lockwashers— 50 for #6 Screw
7926-N	Lockwashers—300 for #6 Screw
7928-F	Lockwashers— 50 for #8 Screw
7928-N	Lockwashers—275 for #8 Screw
7930-F	Lockwashers— 45 for #10 Screw
7930-N	Lockwashers—275 for #10 Screw
7932-N	Lockwashers—200 for ¼" Screw
7935-N	Lockwashers—125 for ⅜" Screw
8000-F	Std. Machine Screws— 35 asst.
8000-N	Std. Machine Screws—200 asst.
8002-F	Sm. Machine Screws & Nuts 40 asst.
8005-F	Rack Screws & Cup Washers 15 asst.
8021-N	Machine Screws—2-56 x 3/16" (225)
8023-F	Machine Screws—2-56 x ⅜" (40)
8023-N	Machine Screws—2-56 x ⅜" (200)
8024-F	Machine Screws—2-56 x ½" (40)
8024-N	Machine Screws—2-56 x ½" (200)
8042-F	Machine Screws—4-40 x ¼" (40)
8042-N	Machine Screws—4-40 x ¼" (225)
8043-N	Machine Screws—4-40 x ⅜" (200)
8044-F	Machine Screws—4-40 x ½" (35)
8044-N	Machine Screws—4-40 x ½" (200)
8062-F	Machine Screws— 40 #6-32 x ¼"
8062-N	Machine Screws—225 #6-32 x ¼"
8063-F	Machine Screws— 40 #6-32 x ⅜"
8063-N	Machine Screws—225 #6-32 x ⅜"
8064-F	Machine Screws— 35 #6-32 x ½"
8064-N	Machine Screws—200 #6-32 x ½"
8066-F	Machine Screws— 30 #6-32 x ¾"
8066-N	Machine Screws—175 #6-32 x ¾"
8068-N	Machine Screws—150 #6-32 x 1"
8062-F	Machine Screws— 30 #8-32 x ¼"
8082-N	Machine Screws—200 #8-32 x ¼"
8083-F	Machine Screws— 30 #8-32 x ⅜"
8083-N	Machine Screws—175 #8-32 x ⅜"
8084-F	Machine Screws— 25 #8-32 x ½"
8084-N	Machine Screws—160 #8-32 x ½"
8086-F	Machine Screws— 25 #8-32 x ¾"
8086-N	Machine Screws—140 #8-32 x ¾"
*8088-N	Machine Screws—125 #8-32 x 1"
8104-F	Machine Screws— 25 #10-32 x ½"
8104-N	Machine Screws—140 #10-32 x ½"
8106-F	Machine Screws— 20 #10-32 x ¾"
*8106-N	Machine Screws—115 #10-32 x ¾"
8108-F	Machine Screws— 17 #10-32 x 1"
*8108-N	Machine Screws—100 #10-32 x 1"
8250-F	Ornam. Screws—20 asst.
8252-F	Ornam. Screws— 25 #6-32 x ¾"
8252-N	Ornam. Screws—125 #6-32 x ¾"
8253-F	Ornam. Screws— 25 #6-32 x 1"
8253-N	Ornam. Screws—125 #6-32 x 1"
8255-F	Ornam. Screws— 15 #8-32 x 1¼"
*8255-N	Ornam. Screws— 80 #8-32 x 1¼"
8265-F	Rack Screws— 30, #6-32 x ⅝"
8265-N	Rack Screws—175, #6-32 x ⅝"
8269-F	Rack Screws— 25, #8-32 x ⅝"
8269-N	Rack Screws—150, #8-32 x ⅝"
8273-F	Rack Screws— 20, #10-32 x ¾"
8273-N	Rack Screws—100, #10-32 x ¾"
8300-F	Sheet Metal Screws— 25 asst.
8300-N	Sheet Metal Screws—125 asst.
8362-F	Sheet Metal Screws— 30 #6 x ¼"

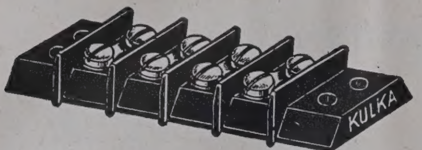
Cat. No.	Description
8362-N	Sheet Metal Screws—150 #6 x ¼"
8363-F	Sheet Metal Screws— 25 #6 x ⅜"
8363-N	Sheet Metal Screws—150 #6 x ⅜"
8364-F	Sheet Metal Screws— 25 #6 x ½"
8364-N	Sheet Metal Screws—150 #6 x ½"
8366-F	Sheet Metal Screws— 20 #6 x ¾"
8366-N	Sheet Metal Screws—125 #6 x ¾"
8368-F	Sheet Metal Screws— 20 #6 x 1"
8368-N	Sheet Metal Screws—125 #6 x 1"
8382-F	Sheet Metal Screws— 20 #8 x ¼"
8382-N	Sheet Metal Screws—125 #8 x ¼"
8383-F	Sheet Metal Screws— 20 #8 x ⅜"
8383-N	Sheet Metal Screws—125 #8 x ⅜"
8384-F	Sheet Metal Screws— 20 #8 x ½"
8384-N	Sheet Metal Screws—125 #8 x ½"
8386-F	Sheet Metal Screws— 15 #8 x ¾"
8386-N	Sheet Metal Screws— 80 #8 x ¾"
8388-F	Sheet Metal Screws— 15 #8 x 1"
8388-N	Sheet Metal Screws— 80 #8 x 1"
8403-F	Sheet Metal Screws— 15 #10 x ⅜"
8403-N	Sheet Metal Screws— 80 #10 x ⅜"
8404-F	Sheet Metal Screws— 15 #10 x ½"
8404-N	Sheet Metal Screws— 80 #10 x ½"
8406-F	Sheet Metal Screws— 12 #10 x ¾"
8406-N	Sheet Metal Screws— 80 #10 x ¾"
8500-F	Sml. Escutcheon Screws—25 asst.
8502-F	Std. Wood Screws—25 asst.
8550-F	Phono Pickup Screws—12 asst.
8552-F	Phono Pickup Screws 12 #2-56 x ⅝"
8553-F	Phono Pickup Screws 12 #2-64 x ¾"
8555-F	Phono Pickup Screws 5 #1-72 x 1"
8560-F	Pickup Cartridge Mounting Screws
8570-F	Spade Bolts—15 asst.
8571-N	Spade Bolts—100 #6-32 x ⅝"
8572-N	Spade Bolts—100 #6-32 x ¾"
8600-F	Hex Wrench Set
8602-F	Spline (Bristol) Wrench Set
8605-F	Set Screws—15 asst.
8605-N	Set Screws—55 asst.
8623-F	Set Screws—15 #6-32 x 3/16"
8633-F	Set Screws—15 #8-32 x 3/16"
8634-F	Set Screws—15 #8-32 x ¼"
8644-F	Set Screws—15 #10-32 x ¼"
8800-F	Hex Nuts— 30 asst.
8800-N	Hex Nuts—175 asst.
8802-F	Hex Nuts, Steel—#2-56 (30)
8802-N	Hex Nuts, Steel—#2-56 (175)
8804-F	Hex Nuts, Steel—#4-40 (30)
8804-N	Hex Nuts, Steel—#4-40 (175)
8806-F	Hex Nuts, Steel—#6-32 (35)
8806-N	Hex Nuts, Steel—#6-32 (200)
8808-F	Hex Nuts, Steel—#8-32 (30)
8808-N	Hex Nuts, Steel—#8-32 (200)
8810-F	Hex Nuts, Steel—#10-32 (30)
8810-N	Hex Nuts, Steel—#10-32 (175)
8846-F	Hex Nuts, Brass—#6-32 (25)
8846-N	Hex Nuts, Brass—#6-32 (150)
8848-F	Hex Nuts, Brass—#8-32 (15)
8848-N	Hex Nuts, Brass—#8-32 (100)
8850-N	Hex Nuts, Brass—#10-32 (80)
8920-F	Mounting Nuts—15 asst.
8923-F	Vol. Control Hex Nuts—18
8923-N	Vol. Control Hex Nuts—85
8924-F	Toggle Switch Hex Nuts—10
8924-N	Toggle Switch Hex Nuts—50
8926-F	Toggle Switch Ring Nuts—10
8926-N	Toggle Switch Ring Nuts—50
8933-F	Wing Nuts—15 #6-32
8934-F	Wing Nuts—10 #8-32
8935-F	Wing Nuts— 8 #10-32
8943-F	Knurled Thumb Nuts—8 #6-32
8944-F	Knurled Thumb Nuts—8 #8-32
8945-F	Knurled Thumb Nuts—5 #10-32
8950-F	Acorn Nuts—10 asst.
8960-F	Speed Nuts—30 asst.

*Size of item does not permit packaging in standard boxes.
Item will not fit No. 1032 display.

SMITH *Electronic Components*

HERMAN H. SMITH, INC.

HEAVY DUTY BAKELITE BARRIER TERMINAL STRIPS

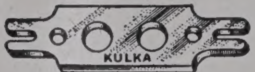


This latest type of construction of bakelite strip is made of molded bakelite of very high tensile strength. The barriers between each terminal prevent any possibility of short circuits and leakage between terminals. The terminals and screws are brass, nickel plated. The strips are manufactured by the KULKA ELECTRIC MFG. CO. INC., Design Patent No. 136, 762 and are exclusively distributed by us to the Radio Parts Distributors.

COLUMN A

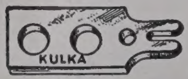
All the Barrier Terminal Strips enumerated in this column for the 600, 601, 602 and 603 series are made with the screw type terminals exactly as shown in the illustration at top of the page.

COLUMN B



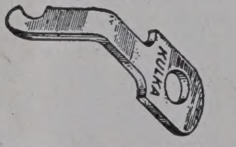
All the Barrier Strips enumerated in this column 600, 601, 602 and 603 series are supplied with the two-solder connection lug illustrated above.

COLUMN C



All the Barrier Strips enumerated in this column 600, 601, 602 and 603 series are supplied with the one-solder connection lug illustrated above.

COLUMN D



All the Barrier Strips enumerated in this column for the 600, 601 and 602 series are supplied with the bottom type connection lug illustrated above.

The 603 series of Barrier Strips not shown here are heavy duty strips with thick barriers and cross sections. They will take up to 35 amps of current and are ideal for heavy duty electrical control units such as spot welding machines, molding equipment, etc., or any place where a rugged heavy duty terminal block is needed for heavy amperage. Height: ¾", Width: 1 13/16" (incl. barrier), Terminals on Center: 11/16", Base (thickness): 7/16", Mounting Hole Spacing ⅝" (has 3 holes), Screws: 10-32 x ⅜" long with binding head.

No. 600 SERIES

Height 11/32", Width ⅞", Thickness ¼". Terminals are ⅜" on centers. Screws 5-40x¼" long, Binding Head.

COL. A			COL. B			COL. C			COL. D		
No.	Terminals	Each	No.	Terminals	Each	No.	Terminals	Each	No.	Terminals	Each
600-1	1	$0.15	600-ST-1	1	$0.19	600¾ST-1	1	$0.19	600-Y-1	1	$0.19
600-2	2	.24	600-ST-2	2	.32	600¾ST-2	2	.32	600-Y-2	2	.32
600-3	3	.33	600-ST-3	3	.44	600¾ST-3	3	.44	600-Y-3	3	.44
600-4	4	.42	600-ST-4	4	.57	600¾ST-4	4	.57	600-Y-4	4	.57
600-5	5	.51	600-ST-5	5	.69	600¾ST-5	5	.69	600-Y-5	5	.69
600-6	6	.59	600-ST-6	6	.83	600¾ST-6	6	.83	600-Y-6	6	.83
600-7	7	.68	600-ST-7	7	.95	600¾ST-7	7	.95	600-Y-7	7	.95
600-8	8	.77	600-ST-8	8	1.08	600¾ST-8	8	1.08	600-Y-8	8	1.08
600-9	9	.86	600-ST-9	9	1.21	600¾ST-9	9	1.21	600-Y-9	9	1.21
600-10	10	.95	600-ST-10	10	1.33	600¾ST-10	10	1.33	600-Y-10	10	1.33
600-11	11	1.03	600-ST-11	11	1.45	600¾ST-11	11	1.45	600-Y-11	11	1.45
600-12	12	1.12	600-ST-12	12	1.58	600¾ST-12	12	1.58	600-Y-12	12	1.58
600-13	13	1.21	600-ST-13	13	1.71	600¾ST-13	13	1.71	600-Y-13	13	1.71
600-14	14	1.31	600-ST-14	14	1.84	600¾ST-14	14	1.84	600-Y-14	14	1.84
600-15	15	1.40	600-ST-15	15	1.96	600¾ST-15	15	1.96	600-Y-15	15	1.96
600-16	16	1.49	600-ST-16	16	2.09	600¾ST-16	16	2.09	600-Y-16	16	2.09
600-17	17	1.57	600-ST-17	17	2.21	600¾ST-17	17	2.21	600-Y-17	17	2.21
600-18	18	1.66	600-ST-18	18	2.34	600¾ST-18	18	2.34	600-Y-18	18	2.34
600-19	19	1.75	600-ST-19	19	2.46	600¾ST-19	19	2.46	600-Y-19	19	2.46
600-20	20	1.84	600-ST-20	20	2.60	600¾ST-20	20	2.60	600-Y-20	20	2.60
600-21	21	1.93	600-ST-21	21	2.72	600¾ST-21	21	2.72	600-Y-21	21	2.72
600-22	22	2.02	600-ST-22	22	2.85	600¾ST-22	22	2.86	600-Y-22	22	2.86

No. 601 SERIES

Height ½", Width 1⅛", Thickness 5/16". Terminals are 7/16" on centers. Screws 6-32x¼" long, Binding Head.

No.	Terminals	Each	No.	Terminals	Each	No.	Terminals	Each	No.	Terminals	Each
601-1	1	$0.20	601-ST-1	1	$0.24	601¾ST-1	1	$0.24	601-Y-1	1	$0.24
601-2	2	.31	601-ST-2	2	.41	601¾ST-2	2	.41	601-Y-2	2	.41
601-3	3	.42	601-ST-3	3	.57	601¾ST-3	3	.57	601-Y-3	3	.57
601-4	4	.54	601-ST-4	4	.74	601¾ST-4	4	.74	601-Y-4	4	.74
601-5	5	.64	601-ST-5	5	.90	601¾ST-5	5	.90	601-Y-5	5	.90
601-6	6	.75	601-ST-6	6	1.07	601¾ST-6	6	1.07	601-Y-6	6	1.07
601-7	7	.88	601-ST-7	7	1.23	601¾ST-7	7	1.23	601-Y-7	7	1.23
601-8	8	.99	601-ST-8	8	1.40	601¾ST-8	8	1.40	601-Y-8	8	1.40
601-9	9	1.10	601-ST-9	9	1.56	601¾ST-9	9	1.56	601-Y-9	9	1.56
601-10	10	1.22	601-ST-10	10	1.73	601¾ST-10	10	1.73	601-Y-10	10	1.73
601-11	11	1.33	601-ST-11	11	1.89	601¾ST-11	11	1.89	601-Y-11	11	1.89
601-12	12	1.44	601-ST-12	12	2.06	601¾ST-12	12	2.06	601-Y-12	12	2.06
601-13	13	1.56	601-ST-13	13	2.22	601¾ST-13	13	2.22	601-Y-13	13	2.22
601-14	14	1.67	601-ST-14	14	2.39	601¾ST-14	14	2.39	601 Y-14	14	2.39
601-15	15	1.78	601-ST-15	15	2.55	601¾ST-15	15	2.55	601-Y-15	15	2.55
601-16	16	1.90	601-ST-16	16	2.72	601¾ST-16	16	2.72	601-Y-16	16	2.72
601-17	17	2.01	601-ST-17	17	2.88	601¾ST-17	17	2.88	601-Y-17	17	2.88
601-18	18	2.12	601-ST-18	18	3.05	601¾ST-18	18	3.05	601-Y-18	18	3.05
601-19	19	2.24	601-ST-19	19	3.21	601¾ST-19	19	3.21	601-Y-19	19	3.21
601-20	20	2.35	601-ST-20	20	3.38	601¾ST-20	20	3.38	601-Y-20	20	3.38
601-21	21	2.47	601-ST-21	21	3.55	601¾ST-21	21	3.55	601-Y-21	21	3.55
601-22	22	2.59	601-ST-22	22	3.72	601¾ST-22	22	3.72	601-Y-22	22	3.72
601-23	23	2.71	601-ST-23	23	3.89	601¾ST-23	23	3.89	601-Y-23	23	3.89

No. 602 SERIES

Height ⅝", Width 1 5/16", Thickness ⅜". Terminals are 9/16" on centers. Screws 8-32x5/16" long, Binding Head.

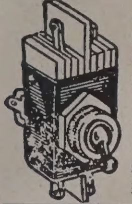
No.	Terminals	Each	No.	Terminals	Each	No.	Terminals	Each	No.	Terminals	Each
602-1	1	$0.23	602-ST-1	1	$0.30	602¾ST-1	1	$0.30	602-Y-1	1	$0.30
602-2	2	.36	602-ST-2	2	.50	602¾ST-2	2	.50	602-Y-2	2	.50
602-3	3	.51	602-ST-3	3	.70	602¾ST-3	3	.70	602-Y-3	3	.70
602-4	4	.65	602-ST-4	4	.90	602¾ST-4	4	.90	602-Y-4	4	.90
602-5	5	.78	602-ST-5	5	1.11	602¾ST-5	5	1.11	602-Y-5	5	1.11
602-6	6	.92	602-ST-6	6	1.31	602¾ST-6	6	1.31	602-Y-6	6	1.31
602-7	7	1.07	602-ST-7	7	1.52	602¾ST-7	7	1.52	602-Y-7	7	1.52
602-8	8	1.20	602-ST-8	8	1.72	602¾ST-8	8	1.72	602-Y-8	8	1.72
602-9	9	1.34	602-ST-9	9	1.93	602¾ST-9	9	1.93	602-Y-9	9	1.93
602-10	10	1.49	602-ST-10	10	2.12	602¾ST-10	10	2.12	602-Y-10	10	2.12
602-11	11	1.62	602-ST-11	11	2.33	602¾ST-11	11	2.33	602-Y-11	11	2.33
602-12	12	1.76	602-ST-12	12	2.53	602¾ST-12	12	2.53	602-Y-12	12	2.53
602-13	13	1.90	602-ST-13	13	2.74	602¾ST-13	13	2.74	602-Y-13	13	2.74
602-14	14	2.04	602-ST-14	14	2.94	602¾ST-14	14	2.94	602-Y-14	14	2.94
602-15	15	2.18	602-ST-15	15	3.15	602¾ST-15	15	3.15	602-Y-15	15	3.15
602-16	16	2.32	602-ST-16	16	3.34	602¾ST-16	16	3.34	602-Y-16	16	3.34
602-17	17	2.45	602-ST-17	17	3.54	602¾ST-17	17	3.54	602-Y-17	17	3.54
602-18	18	2.58	602-ST-18	18	3.74	602¾ST-18	18	3.74	602-Y-18	18	3.74
602-19	19	2.76	602-ST-19	19	3.99	602¾ST-19	19	3.99	602-Y-19	19	3.99
602-20	20	2.90	602-ST-20	20	4.20	602¾ST-20	20	4.20	602-Y-20	20	4.20
602-21	21	3.04	602-ST-21	21	4.41	602¾ST-21	21	4.41	602-Y-21	21	4.41
602-22	22	3.19	602-ST-22	22	4.62	602¾ST-22	22	4.62	602-Y-22	22	4.62
602-23	23	3.33	602-ST-23	23	4.83	602¾ST-23	23	4.83	602-Y-23	23	4.83
602-24	24	3.48	602-ST-24	24	5.04	602¾ST-24	24	5.04	602-Y-24	24	5.04
602-25	25	3.62	602-ST-25	25	5.25	602¾ST-25	25	5.25	602-Y-25	25	5.25
602-26	26	3.76	602-ST-26	26	5.46	602¾ST-26	26	5.46	602-Y-26	26	5.46

SMITH *Electronic Components*

HERMAN H. SMITH, INC.

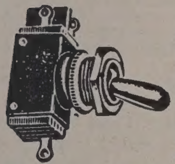
TEAR DROP TOGGLE SWITCHES

Laminated type. Made by H & H, rated at 1 amp. 250 volts, 3 amps. 125 volts. SPST switches rated at 3 amps. 250 volts, 6 amps. 125 volts. Switches nickel plated; supplied with ring nut and mounting nut.



No.	Type	Shaft	Each
500	SPST	$\frac{15}{32}$″	$0.75
501	SPST	1″	1.00
502	SPDT	$\frac{15}{32}$″	1.00
503	SPDT	1″	1.20
504	DPST	$\frac{15}{32}$″	1.40
505	DPST	1″	1.60
506	DPDT	$\frac{15}{32}$″	1.60
507	DPDT	1″	1.85

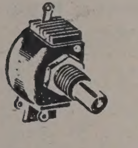
BAT HANDLE TOGGLE SWITCHES



Laminated type. Made by H & H, rated at 1 amp. 250 volts, 3 amps. 125 volts. SPST switches rated at 3 amps. 250 volts, 6 amps. 125 volts. Switches nickel plated; supplied with ring nut and mounting nut.

No.	Type	Shaft	Each
510	SPST	$\frac{15}{32}$″	$0.75
511	SPDT	$\frac{15}{32}$″	1.00
512	DPST	$\frac{15}{32}$″	1.40
513	DPDT	$\frac{15}{32}$″	1.60

ROTARY SWITCHES



Made by H & H, rated at 1 amp., 250 volts, 3 amps. 125 volts. Switches nickel plated; supplied with mounting nut. Threaded shank ⅜″ O.D. x ⅜″ long. Overall length of shaft 1½″.

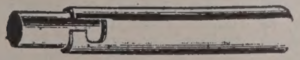
No.	Type	Each
570	SPST	$1.00
571	SPDT	1.20
572	DPST	1.50
573	DPDT	1.85

HEAVY DUTY POWER SWITCHES

These Heavy Duty Power Switches made by H & H and specially recommended for use in amplifiers, transmitters, motors and all heavy current circuits where heavy current is carried. Available in 3 types with neutral off in center position. Rated at 10 amps, 125 volts; 5 amps., 250 volts. Mounting sleeve dia. ¾″.

No.	Mounting	Size	Each
574	DPDT	2″x1¼″x⅞″	$6.25
575	TPDT	2″x2¼″x1″	8.25
576	4PDT	2″x2¼″x1″	12.00

FUSE RETAINER

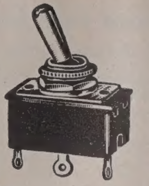


Recommended for use in auto radio power supply cables.

No. 1301 ....$20.00 Per C

PARTS FOR CONNECTOR AND RETAINER

No.	Type	Per C
1305	Male Cap for #1300 & #1301	$3.00
1306	Female Shell for #1300	3.50
1307	Contact for #1300 & #1301	5.00
1308	Spring for #1300 & #1301	1.00
1309	Washer for #1300 & #1301	.50
1310	Insulating Tube for #1301	.90
1311	Female Shell for #1301	5.00



MOLDED BAKELITE SWITCHES

Made by H & H, rated at 3 amps. 250 volts, 6 amps. 125 volts, with bat handle. Back connected silver plated contacts. Slotted sleeve.

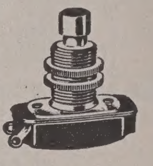
No.	Type	Shaft	Each
520	SPST	$\frac{15}{32}$″	$1.10
521	SPDT	$\frac{15}{32}$″	1.25
522	DPST	$\frac{15}{32}$″	1.70
523	DPDT	$\frac{15}{32}$″	2.00

MOLDED BAKELITE MOMENTARY SWITCHES

Same as above except switches are momentary type with circuit normally "OFF."

No.	Type	Shaft	Each
524	SPST	$\frac{15}{32}$″	$1.60
525	DPDT	$\frac{15}{32}$″	2.50

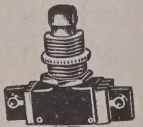
MOMENTARY PUSH BUTTON SWITCH



Momentary contact A.C. Push Button Switches. Molded type with soldering lug. Rated at 1 amp. 125 volts. Normally "OFF," push to make, release to break. $\frac{15}{32}$″ shank.

No.	Type	Each
540	SPST	$0.80
541	SPDT	.85
542	DPST	.90
543	DPDT	1.30

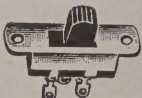
PUSH BUTTON MOMENTARY SWITCH



Slow make and break switch made by H & H. Laminated type, solder lug. Circuit normally "OFF," push to make. $\frac{9}{16}$″ slotted sleeve, rated at 1 amp., 125 volts. The two circuit switch has one circuit normally on, one circuit normally off. Black or Red buttons available for both switches.

No.	Type	Each
579	SPST	$0.90
580	Two Circuit	1.40
581	Button only	.35

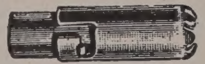
SLIDE LEVER SWITCHES



Rated 1½ amps. 110 volts. Size 1⅜″ x ½″. Mounting centers 1⅛″.

No.	Type	Each
515	SPST	$0.35
516	SPDT	.40
517	DPST	.50
518	DPDT	.55

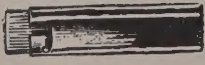
ANTENNA CONNECTOR



For use as connection of auto radio antenna lead-in to auto radio receiver.

No. 1300....................................$12.00 Per C

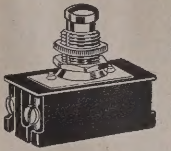
JUMBO FUSE HOLDERS



These jumbo fuse holders are for use with various types of auto receivers. All parts comprising bushings, springs, contacts, etc., are furnished unassembled, packed in individual envelopes.

No.	Size	Fuse Size	Each
1302	½″ x 2⅛″	9 amp.	$0.32
1303	½″ x 2⅝″	14 amp.	.32
1311	½″ x 2⅝″	30 amp.	.32

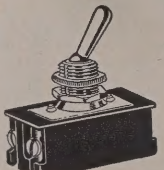
HEAVY DUTY MOMENTARY SWITCH



Made by H. & H. DPST Momentary contact push button switch, normally off, screw terminal, bakelite case, $\frac{7}{16}$″ slotted sleeve. Rated at 6 amps, 250 volts—12 amps, 125 volts—1 HP at 250 volts.

No. 595...$3.00 each

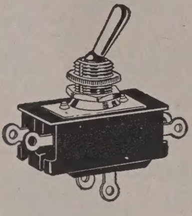
HEAVY DUTY SWITCH



Made by H. & H. DPST Switch Maintained contact bat handle bakelite case, $\frac{5}{16}$″ slotted sleeve, screw terminals. Rated at 6 amps, 250 volts — 12 amps, 125 volts — 1 HP at 250 volts.

No. 596......$2.10 each

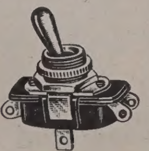
CENTER OFF SWITCHES



Made by H. & H. Three Position bat handle switch. "Center Off." Bakelite case, rated at 3 amps, 250 volts — 6 amps, 125 volts — solder terminals.

No.	Type	Each
566	SPDT	$1.90
567	DPDT	2.35

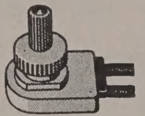
DPDT CENTER OFF SWITCH



Bat handle toggle switch rated at 1 amp. — 125 volts with center "OFF" position. Lug terminals, $\frac{15}{32}$″ brass nickle plated shaft. Can be used for switching to either high or low frequency antenna on TV receivers.

No. 565 $1.45 each

CANOPY SWITCH



Rated at 3 amps. 125 volts, 1 amp. 250 volts. Supplied with 6″ leads. C.S.A. approved.

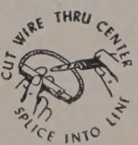
No. 585 $0.45 each

NAME PLATES

Brass nickel plated name plates to fit all standard $\frac{15}{32}$″ sleeves.

No.	Type	Per C
508	ON-OFF	$5.50
509	HI-LOW	5.50

WIRED FUSE RETAINER



Wired fuse retainer saves the soldering operation necessary when replacing retainer. Simply cut wire, strip and put in line. Will accommodate either 3 A.G. 20 amp. or SFE 14 amp. fuse.

No.		Each
1304		$ 0.45
786	Display of 24	10.80

LEAD-IN ADAPTER

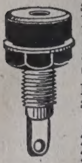
Lead-in adapter converts Motorola pin plug to Delco type plug.

No. 1204 ....$11.00 per C

SMITH *Electronic Components*

HERMAN H. SMITH, INC.

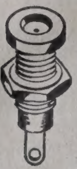
INSULATED PHONE TIP JACK



Accommodates all standard insulated and non-insulated phone tip plugs. Recommended for use with our Nos. 200 and 201 phone tip plugs. Available in Black, Red, Yellow and Green. Mounts in a $\frac{5}{16}$″ hole. Complete with insulating shoulder washer and nut. Specify color.

No.	Head Dia.	per C
202	$\frac{7}{16}$″	$20.00
223	½″	35.00

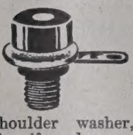
ALL INSULATED TIP JACK



Standard phone tip all insulated jack with phosphor bronze contact. Mounts in ⅜″ hole in panels up to $\frac{5}{16}$″ thick; overall length 1″. Supplied in Red, Black, Yellow, Green, Blue. Specify color. Supplied with nut.

No. 240..................**$50.00 per C**

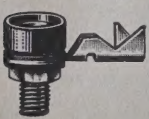
INSULATED BANANA JACK



Accommodates all standard banana type plugs. Mounts in a $\frac{5}{16}$″ hole in panels up to ⅜″ thick. Insulated head $\frac{7}{16}$″ dia. available in Black, Red, Yellow and Green. Complete with insulated shoulder washer, soldering lug, and nut. Specify color.

No. 205 ....**$20.00 per C**

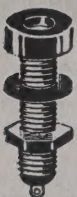
INSTRUMENT BANANA JACK



Made of brass, nickel plated. Jack receptacle countersunk to accept all standard Banana type plugs for a snug and positive contact. Insulated head ½″ diameter, supplied complete with insulating washer, lock washer, heavy duty soldering lug and nut. Available in Black, Red, Yellow and Green. Specify color.

No. 219 ....**$22.00 per C**

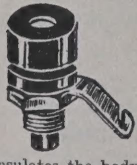
INSULATED COMBINATION JACK



This combination jack accommodates all standard plugs, of the phone tip type or banana type construction. Mounts in a $\frac{5}{16}$″ hole in panels up to ½″ thick. Overall length 1⅜″. Complete with insulating shoulder washer and nut. Insulated head available in Black, Red, Yellow and Green. Specify color.

No. 206 ....**$25.00 per C**

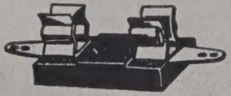
INSULATED MIDGET BANANA JACK



Accommodates all standard banana type plugs. Mounts in a $\frac{5}{16}$″ hole in panels up to ¼″ thick. Supplied with soldering lug; overall length $\frac{13}{16}$″. The insulated head as well as the washer insulates the body of the jack from the panel to prevent possibility of shock or grounding. Insulated head ⅜″ diameter. Available in Black, Aed, Yellow and Green. Specify color.

No. 221 ....**$30.00 per C**

FUSE MOUNTING BASES

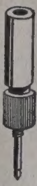


Black bakelite, panel mount type. Accommodates 3 A G Auto type cartridge fuse.

No.	Type	Per C
530	Single	$25.00
531	Double	40.00
532	Clip Only	2.50

SOLDERLESS PHONE TIP PLUG

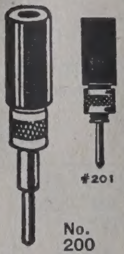
Signal Corps Approved



Solderless steel, case hardened phone tip made in accordance with Signal Corps drawing and specifications. Supplied with insulated handle ⅞″ long made in accordance with JAN Specs. Overall length 1⅞″. Red and Black colors. Specify color.

No. 250.........................**$65.00 per C**

INSULATED SOLDERLESS TIP PLUGS



Insulated sleeve ¾″ long, cable opening $\frac{3}{16}$″. Available in Black, Red, Yellow and Green. Fits all standard phone tip jacks. Wire fits through sleeve of plug, and is wrapped around screw portion, then tightened with the knurled nut provided, making soldering unnecessary. Specify color.

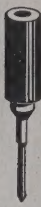
No.	Length	Per C
200	1$\frac{15}{16}$″	$23.00
201	1⅝″	23.00

FIBRE HANDLE SOLDERLESS PLUGS

Same as above except handles are of Vulcanized Fibre.

No.	Length	Per C
230	1$\frac{15}{16}$″	$23.00
231	1⅝″	23.00

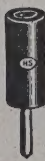
HEAVY DUTY PHONE TIP PLUG



Heavy duty threaded phone tip plugs, 2$\frac{3}{16}$″ overall. Insulated handle 1″ long. Tip threaded ¼-32. Cable opening $\frac{3}{16}$″, rear of plug will accommodate heavy wire. Supplied in Red, Black, Yellow and Green. Specify color.

No. 215.......................**$25.00 per C**
No. 125—Tip only ...... **13.00 per C**

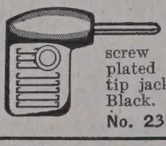
INSULATED SHORT PHONE TIP



Fits all standard phone tip jacks of the insulated or non-insulated types. Insulated sleeve ¾″ long, overall length 1¼″, cable opening $\frac{3}{16}$″. Available in Black, Red, Yellow and Green. Specify color.

No. 203 ....**$20.00 per C**

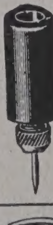
MOLDED METER TIP PLUG



Molded Meter Type Plug molded in two halves for easy assembling with screw and nut. Brass nickel plated tip fits in all standard tip jacks. Available in Red and Black. Specify color.

No. 235....................**$0.45 Each**

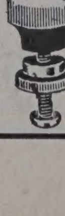
INSULATED NEEDLE TIP PLUG



Insulated sleeve ¾″ long, overall length 2⅛″, cable opening $\frac{3}{16}$″. Available in Black and Red. Body of plug accommodates all standard banana type plugs. The sharp needle point phone tip will pierce through corrosion for positive contact.

No. 216 ....**$25.00 per C**

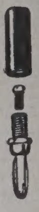
METAL BINDING POST



Made of brass, heavily nickel plated overall. Supplied complete with screw and lockwasher.

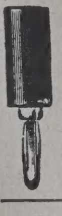
No. 110 ....**$35.00 per C**

INSULATED SOLDERLESS BANANA PLUGS



Spring type construction designed to fit all types of banana jacks. Plug portion made of Hexagon brass, designed to set into our No. 219 Banana Jack described above. Small machine screw stud screws into rear of plug so that wire can be wrapped around and tightened without soldering. All external set screws removed to prevent possibility of shock or grounding. Insulated handle 1″ long, overall length 1$\frac{15}{16}$″, cable opening $\frac{3}{16}$″. Available in Black, Red, Yellow and Green. Specify color.

No. 212 ....**$30.00 per C**

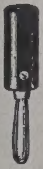


Spring type construction with machine screw stud. Same as described above except that plug portion is not Hexagon but made of round brass. Insulated handle ¾″ long, overall length 1½″, cable opening $\frac{3}{16}$″. Available in Black, Red, Yellow and Green. Specify color.

No. 211 ....**$25.00 per C**

INSULATED BANANA PLUG

Spring Type

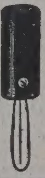


Fits all standard banana type jacks. Set screw provided in side of plug to secure wire to plug without soldering. Insulated sleeve ⅞″ long available in Black, Red, Yellow and Green. Overall length 1⅝″, cable opening $\frac{3}{16}$″. Specify color.

No. 204 ....**$25.00 per C**

INSULATED BANANA PLUG

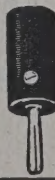
Split Type



Banana plug is of split type construction. Insulated handle ⅞″ long. Set screw provided in side of plug, to secure wire to plug without soldering. Overall length 1½″, cable opening $\frac{3}{16}$″. Available in Black, Red, Yellow and Green, Specify color.

No. 213 ....**$20.00 per C**

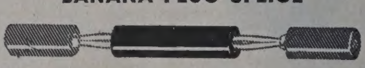
INSULATED BANANA PLUG



Insulated handle ½″ O.D. x 1″ long. Set screw provided in side of plug to secure wire to plug without soldering. Overall length 1$\frac{9}{16}$″, cable opening $\frac{9}{32}$″. Available in Black and Red. Specify color.

No.	Desc.	Per C
233	Split Type	$75.00
234	Spring Type	75.00

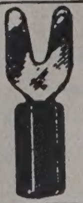
BANANA PLUG SPLICE



This splice receptacle accommodates all standard banana type plugs. Invaluable for quick splicing connections. Supplied in Red, Black, Yellow, or Green colors. Specify color.

No. 245.......................................**$40.00 per C**

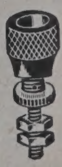
INSULATED SPADE LUG



Insulated sleeve ⅜″ diameter, ¾″ long, overall length 1⅝″, cable opening $\frac{3}{16}$″. Available in Black and Red. Barrel of the insulated sleeve accommodates all standard type banana plugs.

No.	Type	Per C
218	Insulated Lug	$18.00
129	Lug only	2.00

COMBINATION BINDING POST



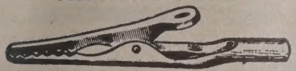
Knurled insulated head binding post. Top of post accommodates standard banana plugs. Hole in side of stud accommodates any standard phone tips. Length 1⅜″ overall with head open, 1¼″ with head closed, 6-32 x ½″ long stud supplied with 2 hex nuts. Black and Red. Specify color.

No. 220 ....**$40.00 per C**

SMITH *Electronic Components*

HERMAN H. SMITH, INC.

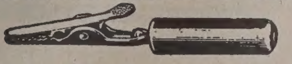
ALLIGATOR CLIP



Clips are made so that the jaws match accurately, permitting them to grip all sizes wire securely. The barrel of clip will accommodate all standard banana type plugs. Made of steel, cadmium plated. Overall length 2″.

No. 300 ....**$10.00 per C**

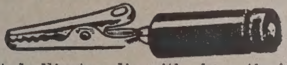
INSULATED ALLIGATOR CLIP



Embodies our No. 300 Alligator Clip. When used with short insulated handle, rear of clip accommodates standard banana plug. Available in Black or Red colors. Specify color.

No.	Handle	Overall	Per C
301	¾″	2$\frac{7}{16}$″	$20.00
306	1¼″	2$\frac{15}{16}$″	35.00

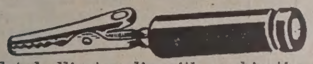
ALLIGATOR CLIP PHONE TIP JACK



Insulated alligator clip with phone tip jack in rear of handle. The jack portion will accommodate all standard phone tip plugs. Handle 1″ long, overall length 2⅝″. Available in Black and Red colors. Specify color.

No. 304 ....**$50.00 per C**

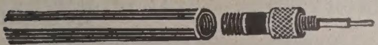
ALLIGATOR CLIP COMBINATION JACK



Insulated alligator clip with combination jack in rear of handle. Jack will accommodate standard phone tip plugs or banana plugs. Handle 1$\frac{9}{16}$″ long, overall length 3″. Available in Black and Red colors. Specify color.

No. 305 ....**$60.00 per C**

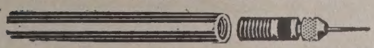
SOLDERLESS TEST PRODS



Insulated handles, available in Black and Red colors. The wire is fed through the insulated handle and is wrapped around the screw portion of the plug and then tightened with the knurled nut provided, making soldering unnecessary. Specify color.

No.	Overall Length	Each
302	5¼″	$0.45
303	6¾″	.50

PHONO NEEDLE TEST PRODS



Insulated handles available in Black and Red colors. Wires can be assembled to the metal tip by unscrewing the tip from the prod handle. Removable chuck for replacing broken needles. Specify color.

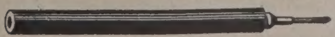
No.	Overall Length	Each
317	5″	$0.45
318	6⅜″	.50

FIBRE TEST PRODS

Handles are made of fibre ⅜″ O.D. x 4″ long and can be obtained with either solderless tips or phono needle tips. The fibre handles are available in black or red. Specify color.

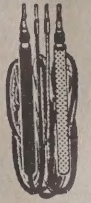
No.	Type	Each
323	Solderless Tip	$0.35

HEAVY DUTY TEST PROD



Heavy duty threaded brass nickel plated phone tips in Tenite plastic handle. Overall length 5⅛″. Supplied in Red and Black. Specify color.

No. 319..**$0.55 Each**

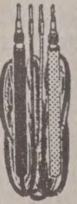


TEST LEADS WITH SOLDERLESS TIPS

Fibre handles colored Red and Black, 4″ long x ⅜″ diameter. Flexible rubber covered wire leads 50″ long also colored Red and Black. Available with standard phone tips, spade lugs or alligator clips.

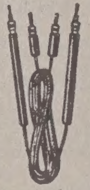
No.	Type	Per Pr.
600	Phone Tips	$1.30
601	Spade Lugs	1.30
602	Alligator Clips	1.40

PHONO NEEDLE TEST LEADS



Fibre handles colored Red and Black, 4″ long x ⅜″ diameter Tips are very sharp phonograph needles. Flexible rubber covered wires 50″ long also colored Red and Black. Available with standard phone tips, spade lugs, or alligator clips.

No.	Type	Per Pr.
613	Phone Tips	$1.30
614	Spade Lugs	1.30
615	Alligator Clips	1.40

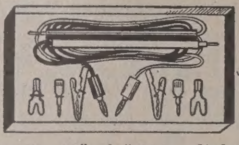


ALL SOLDERLESS TEST LEADS

The insulated handles and the insulated plugs are both of the solderless type construction. Insulated handles, Red and Black, are our No. 302, and the plugs are our No. 200. Flexible rubber covered wire leads 50″ long.

No. 603 ....**$1.95 per pr.**

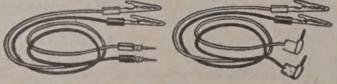
ALL PURPOSE TEST LEAD KIT



Supplied with 48″ of 5,000 volt heavy duty rubber covered kinkless test lead wire. Plastic handles with solderless or needle tips. Other end supplied with standard #204 banana plugs, which are interchangeable with the phone tips, alligator clips, or spade lugs included.

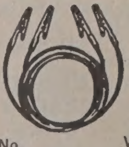
No.		Each
610	Solderless Prods	$2.75
611	Needle Tip Prods	2.75

ALLIGATOR CLIP TEST LEADS



Supplied with 48″ of 5,000 volt heavy duty rubber covered kinkless test lead wire. Insulated alligator clips on one end and meter type or solderless phone tips on other end.

No.	Type	Each
627	Solderless Tips	$1.30
628	Meter Tips	1.85

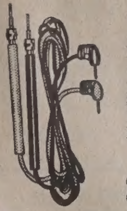


ALLIGATOR CLIP TEST LEADS

Made of very flexible Red and Black wire with alligator clips at each end.

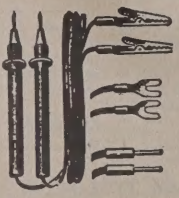
No.	Wire Length	Per Pr.
604	12″	$0.85
605	24″	.95
606	36″	1.10
607	48″	1.20

METER TIP TEST LEAD



Test Leads with 50″ rubber covered kinkless test lead wire. Molded Plastic fingertip tips on one end and 5″ plastic test prod handles on other end. Supplied in two types, solderless tip or needle tip prod handles.

No.	Type	Per Pr.
625	Solderless Prods	$2.25
626	Needle Tip Prods	2.25



HIGH TENSION TEST LEADS

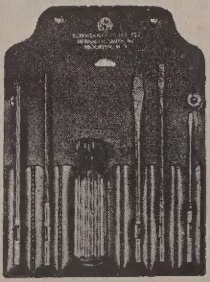
Sturdy, attractive test leads with heavy duty probes, and 48″ of quality high tension kinkless rubber-covered test lead wire with heavy insulation, .248 outside diameter. Supplied with insulated solderless type phone tips, insulated spade lugs or insulated alligator clips. Voltage breakdown (60 cycles), 22,000 volts.

No.	Type	Per Pr.
620	Phone Tips	$3.00
621	Spade Lugs	3.00
622	Alligator Clips	3.60

LABORATORY INTERCHANGE KIT

Permits use of Alligator Clips, Banana Plugs, Spade Lugs, or Phone Tips interchangeably with each other as required. Consists of one each red and black insulated solderless phone tips with banana jack rear, spade lugs with banana jack rear, combination alligator clip jack, and banana plugs with phone tip jack rear. Durable vinyl kit.

No. 640..............**$3.25 Each**

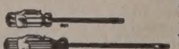


SCREW DRIVER KIT

Attractive Vinyl plastic kit with special pockets. Kit folds quickly and easily for carrying in tool box and has two eyeleted holes for hanging over work bench. Snap-In-Chuck provided in unbreakable amber handle for quick interchanging of blades. Kit contains three tempered steel screw driver blades of the Midget Cabinet and all purpose type and two Phillips drivers, #1 and #2.

No. 825 ....**$2.75 each**

POCKET SCREW DRIVERS

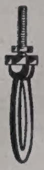


Especially high grade pocket screw driver with unbreakable amber handles supplied with pocket clips. Tempered ground steel blades.

No.	Description	Per C
801	2⅜″ Blade x 4″ Overall	$21.00
812	3½″ Blade x 5″ Overall	35.00

SMITH *Electronic Components*

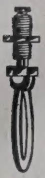
HERMAN H. SMITH, INC.



BANANA TYPE PLUG SPRING TYPE

Hex brass, nickel plated banana plug 1¼" long overall. Threaded portion 6-32 x ⅜" long. Fits all standard banana jacks. Supplied with hex nut.

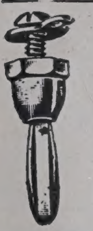
No. 102........................**$20.00 per C**



BANANA TYPE PLUG SPRING TYPE

Hex brass, nickel plated banana plug 1¼" long overall. Threaded portion ¼-32 x ⅜" long. Supplied with machine screw stud in rear for solderless connection and one hex nut. Fits all standard banana jacks.

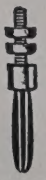
No. 145........................**$22.00 per C**



BANANA TYPE PLUG

This plug is hexed brass, nickel plated. The spring is made of phosphor bronze assuring positive and lasting contact. Plug is constructed with a 6-32 female thread inside and is supplied with a 6-32 screw and soldering lug.

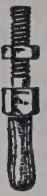
No. 100 ....**$20.00 per C**



BANANA TYPE PLUG
Spring Type

Plug and spring are made of brass, nickel plated. The spring type of construction assures positive and lasting contact. Plug is threaded 6-32 and the threaded portion is ½" long. Supplied with two 6-32 hexagon nuts.

No. 103..........................**$20.00 per C**

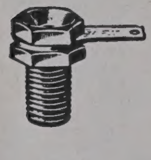


SPLIT TYPE BANANA PLUG

Made of hexed brass, heavily nickel plated overall. Will fit all standard banana type jacks. Overall length 1¼". Threaded portion 6-32 x ½" long. Supplied with two 6-32 hexagon nuts.

No. 104 ....**$20.00 per C**

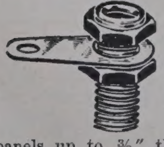
BANANA PLUG JACK



Recommended as the mate for the No. 100 Banana type plug, but will accommodate all standard banana type plugs. Jack is made of brass, heavily nickel plated overall. Mounts in a ¼" hole and will fit in panels up to 7/16" thick. Jack is furnished with ¼-32 nut and soldering lug.

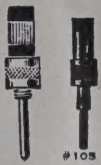
No. 101....................................**$15.00 per C**

BANANA PLUG JACK



Will accommodate all standard banana type plugs and specially recommended as the mate for Nos. 103 and 104 banana plugs. Made of brass, nickel plated, and mounts in ¼" hole in panels up to ⅜" thick. Supplied with nut and soldering lug.

No. 109 ....**$15.00 per C**

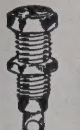


#105

SOLDERLESS PHONE TIPS

These tips are constructed so that the wire fits through the body of the tip, and is wrapped around the screw portion, and tightened with the knurled nut provided, making soldering unnecessary.

No.	Length	Per C
105	1⅝"	$16.00
106	1⅛"	16.00



PHONE TIP JACK

Will accommodate all standard phone tip plugs of insulated and non-insulated types. Made of brass, nickel plated. Mounts in a ¼" dia. hole in panels up to ⅜" thick, and is supplied with hexagon nut.

No. 107 ....**$15.00 per C**

SOLDER TYPE PHONE TIPS

Made of brass, nickel plated. Overall length 1". Dia. of tip will fit all standard phone tip jacks.

No. 108 ....**$30.00 per M**

LARGE DIAMETER PHONE TIP

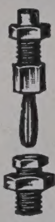
Material of Brass and Nickel-plated finish. The barrel is drilled extra large to accommodate heavy wire. Diameter hole ⅛" — length of barrel ½" and overall length 1".

No. 123 ....**$40.00 per M**

HEAVY DUTY PHONE TIP

Brass nickel plated tip, 1 9/16" long overall. Barrel O.D. ¼", tip O.D. ⅛", tip length ¾", Barrel I.D. 5/32". Ideally suited for testing heavy voltage.

No. 55.........................**$10.00 per C**

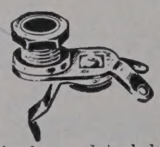


MIDGET PLUGS AND JACKS
Banana Type

Midget banana type lugs and jacks, for use where a minimum amount of space is available. Both plugs and jacks made of brass, nickel plated. A hexagon nut is provided with each plug and jack.

No.	Item	Per C
111	Plug	$15.00
112	Jack	12.00

MIDGET PHONE JACK



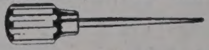
Signal Corps type J 670 — Single open circuit midget phone jack. Mounts in ⅜" hole in panels up to ¼" thick. Bushing is brass, nickel plated. Springs made of phosphor bronze, and the springs are insulated from the frame by heavy duty bakelite washers.

No. 122 ....**$35,00 per C**

TEST PROD
"MAKE YOUR OWN R. F. PROBE"

An exceptionally sturdy fibre prod with rear of prod designed to accommodate IN-34 crystal and condensers, necessary for use as an R.F. Probe. Heavy duty removable screw type tip for easy soldering.

No. 630 ....**$1.20 each**
No. 781—Display of 12 No. 630 Prods **$14.40 each**



SCRATCH AWL

Scratch awl with unbreakable amber handle. Overall length 5". A "must in a serviceman's tool kit"

No. 814 ....**$0.55 each**

DOUBLE NIB ALIGNING TOOL

This tool is especially designed for aligning push-button receivers and for adjusting iron core I.F. transformers and R.F. coils. There is a recessed screw driver nib on one end and a screw driver blade on the other. Both ends knurled for easy grip.

No. 325 ....**$0.90 each**
No. 777—Display of 24 No. 325 Tools **$21.60 each**

METAL NIB ALIGNING TOOL

Fibre handle 7/32" dia. x 6" long, and fitted with a screw driver nib for aligning of coils, padding condensers, etc.

No. 321 ....**$0.45 each**
No. 776—Display of 24 No. 321 Drivers **$10.80 each**

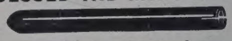
ALIGNING TOOL

For Peanut I.F.'s **For RCA Front End**
For "K" Tran. Transformers

Slender, yet sturdy, this tool is specially adapted for aligning peanut I.F.'s and the difficult-to-get-at front end of some receivers. Available in bulk or on attractive display card.

No. 326 ....**$0.90 each**
No. 778—Display of 24 No. 326 Tools **$21.60 each**

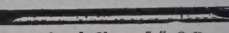
RECESSED NIB MIDGET TOOL



This recessed nib aligning tool is another essential for television servicing. Constructed from fibre with thin recessed nib for slug tuning. Only 2½" long, it makes those hard-to-get-at slugs accessible while chassis is still in cabinet. Available in bulk or on attractive display card.

No. 327 ....**$0.60 each**
No. 779—Display of 48 No. 327 Tools **$28.80 each**

FIBRE ALIGNMENT SCREW DRIVERS



Made of bone hard fibre 7/32" O.D. x 7" long.

No. 307 ....**$0.45 each**
No. 701—Display of 24 No. 307 Drivers **$10.80 each**

"VERI-THIN" ALIGNING TOOL

Fibre aligning tool 7" long x ⅛" O.D. with screw driver on each end. Because of its "Veri-Thin" O.D. this tool can make adjustments on all TV receivers.

No. 328 ....**$0.40 each**
No. 782—Display of 36 No. 328 Tools **$12.60 each**

"LONG REACH" ALIGNING TOOL

Aligning tool 9" long x .165 O.D. with screw driver on each end. Long enough and thin enough to make adjustment on any TV receiver. Material of treated clear lucite.

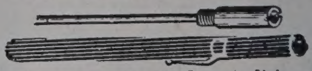
No. 330 ....**$0.60 each**
No. 783—Display of 36 No. 330 Tools **$21.60 each**

EXTRA LONG ALIGNING TOOL

Hard Bone Fibre screw driver 12 inches long by ⅛ inches dia. Extra strong and durable. Available in bulk or on attractive display card.

No.	Each
333	$ 0.70
333D—Display of 50 tools	35.00

NEUTRALIZING AND ALIGNMENT TOOL



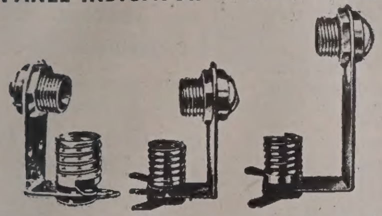
A complete, fully insulated neutralizing tool, screw driver and wrench combination. The fibre wrench portion has a ¼" hexed socket on one end and a 5/16" hexed socket on the other end. A ¼" metal screw driver nib on the inside portion of the tool fits into the fibre tube itself.

No. 320 ....**$1.00 each**
No. 700—Display of 12 No. 320 Tools **$12.00 each**

SMITH *Electronic Components*

HERMAN H. SMITH, INC.

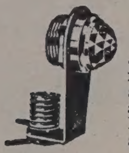
PANEL INDICATOR ½ INCH JEWEL



Jewel holder made of brass, nickel plated. Jewel mounts in a single 7/16" dia. hole. Also available with universal adjustable bracket for use where more accurate focus of the jewel to lamp filament is required. Facetted jewel available in Red, Green, Amber, Blue, Opal and Clear colors. Please specify.

No.	Type	Each
1900	Miniature Screw Base	$0.45
1901	Candelabra Base	.55
1902	Candelabra Base with Univ. Bracket	.58
1903	Bayonet Base	.45
1904	Bayonet Base with Univ. Bracket	.50

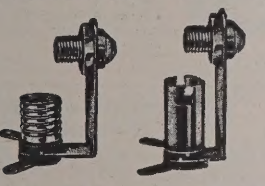
PANEL INDICATOR ¾ INCH JEWEL



Jewel holder is made of brass, nickel plated. Jewel mounts in a single 11/16" dia. hole. Available with facetted jewels in Red, Green, Amber, Blue, Opal and Clear colors. Please specify.

No.	Type	Each
1905	Miniature Screw Base	$0.95
1906	Miniature Bayonet Base	1.00
1907	Candelabra Base	1.00

PANEL INDICATOR ⅜ INCH JEWEL

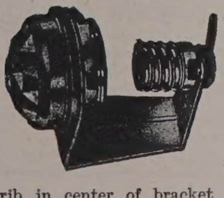


Jewel holder made of brass, nickel plated. Jewel mounts in a single 5/16" dia. hole. Available with facetted jewels in Red, Green, Amber, Blue, Opal and Clear colors. Please specify.

No.	Type	Each
1908	Miniature Screw Base	$0.50
1909	Miniature Bayonet Base	.50

PANEL INDICATOR 1 INCH OPEN TYPE

Jewel Removable from Front Panel

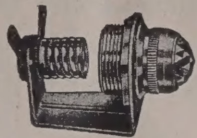


Jewel holder made of brass, chromium plated finish. Jewel mounts in single 1" dia. hole. The embossed rib in center of bracket supplies additional strength, assuring perfect alignment. Available with facetted jewels in the following colors: Red, Green, Amber, Blue, Opal, and Clear colors. Please specify.

No.	Type	Each
1917	Miniature Screw Base	$1.60
1918	Miniature Bayonet Base	1.60
1919	Candelabra Base	1.70

PANEL INDICATOR ½ INCH OPEN TYPE

Jewel Removable from Front of Panel



Jewel holder made of brass, nickel plated. Mounts in a single 11/16" dia. hole. The embossed rib in center of bracket gives additional strength and assures perfect alignment. Available with facetted jewels in Red, Green, Amber, Blue, Opal and Clear colors.

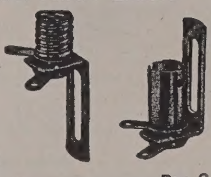
No.	Type	Each
1920	Miniature Screw Base	$0.70
1921	Miniature Bayonet Base	.70

CLIP-ON TYPE PILOT LIGHT SOCKETS

Can be used by clipping on to variable condenser or chassis. All brackets are cadmium plated.

No.	Type	Per C
1922	Min. Screw Up Clip	$14.50
1923	Min. Screw Down Clip	14.50
1924	Min. Bayonet Up Clip	16.50
1925	Min. Bayonet Down Clip	16.50
1926	Candelabra Up Clip	18.75
1927	Candelabra Down Clip	18.75

BRACKET TYPE PILOT LIGHT SOCKETS



Brackets are steel, cadmium plated.

No.	Type	Per C
1928	Min. Screw Up Bracket	$14.50
1929	Min. Screw Down Bracket	14.50
1930	Min. Bayonet Up Bracket	16.50
1931	Min. Bayonet Down Bracket	16.50
1932	Candelabra Up Bracket	18.75
1933	Candelabra Down Bracket	18.75

UNMOUNTED TYPE SOCKETS

No.	Type	Per C
1934	Miniature Screw Base	$14.50
1935	Miniature Bayonet Base	13.50
1936	Candelabra Base	15.50

CLIP-IN SOCKET

This clip-in socket is of the bayonet base type construction, and is assembled with two solder lugs. The special clip-in bracket is steel, cadmium plated, and is designed to clip into the dial directly.

No. 1938 ....**$15.50 per C**

GLASS JEWELS

Jewels are available in Red, Green, Amber, Blue, Opal and Clear colors in smooth or facetted types. Jewel holders are brass, nickel plated, and are supplied with mounting nut.

⅜ Inch Jewel
MOUNTS IN 5/16" HOLE

No.	Type	Each
1940	Smooth	$0.25
1941	Facetted	.25

½ Inch Jewel
MOUNTS IN 7/16" HOLE

No.	Type	Each
1911	Smooth	$0.30
1912	Facetted	.30

¾ Inch Jewel
MOUNTS IN 11/16" HOLE

No.	Type	Each
1913	Smooth	$0.70
1914	Facetted	.70

1 Inch Jewel
MOUNTS IN 1" HOLE

No.	Type	Each
1915	Smooth	$1.25
1916	Facetted	1.25

MICROPHONE CONNECTOR
Single Contact Male

A completely shielded single contact connector. Made of brass and heavily chrome plated. Mate for No. 116 female connector.

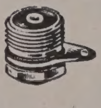
No. 115 ....**$0.55 each**

MICROPHONE CONNECTOR
Single Contact Female

Mate for our No. 117 chassis connector. This connector is used extensively for making connections from microphone to amplifier. Comes equipped with coupling ring. All metal parts are made of brass, heavily chrome plated, except the spring.

No. 116 ....**$0.58 each**

CHASSIS CONNECTOR
Single Contact Male



This type connector is recommended for use on the chassis or in the microphone. Made of brass, heavily nickel plated. Threaded ⅜"-27, and mounts in a ⅜" hole. Supplied complete with washers, soldering lug and nut.

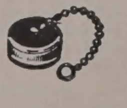
No. 117 ....**$0.38 each**

CLOSED CIRCUIT CHASSIS CONNECTOR

Same as No. 117 Connector except that circuit closes when female microphone connector (our No. 116) is removed. Supplied complete with washers, soldering lug and nut.

No. 114 ....**$0.55 each**

CAP AND CHAIN



Made of brass, heavily nickel plated. The cap seals open end units against dust, eliminating noisy connections. Used with any threaded one or two conductor chassis unit.

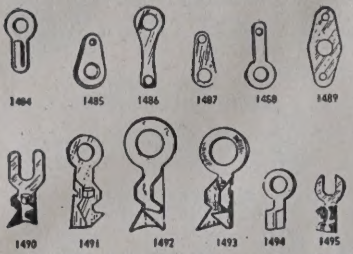
No. 118 ....**$0.60 each**

SMITH *Electronic Components*

HERMAN H. SMITH, INC.

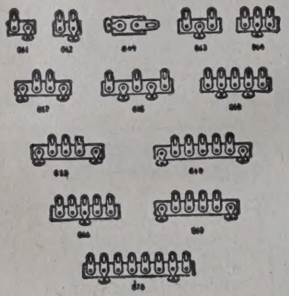
SOLDER TYPE LUGS

Brass Hot Tinned



No.	Length	Hole	Per M
1484	⅝″	No. 6	$ 7.70
1485	⅝″	No. 6	8.00
1486	⅞″	No. 6 & No. 8	8.00
1487	⅝″	No. 6	8.00
1488	¾″	No. 6	6.60
1489	⅞″	No. 8	9.00
1490	¾″	No. 10	10.00
1491	15/16″	No. 10	11.00
1492	1-⅛″	¼″	20.00
1493	1″	¼″	20.00
1494	⅝″	No. 6 & No. 8	8.30
1495	⅝″	No. 8	7.70

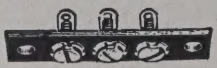
TIE DOWN TERMINAL STRIPS



No.	Per C	No.	Per C
849	$3.10	864	$4.40
853	6.10	865	6.10
860	9.10	866	6.20
861	2.80	867	5.10
862	2.90	868	6.50
863	3.90	869	7.50
		870	9.20

TERMINAL BOARDS

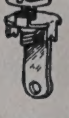
Screw Type

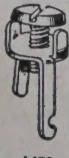


Brass hot tinned lugs mounted on 1/16″ bakelite. Lugs are spaced 7/16″ center to center.

No.	Terminals	Mounting Center	Per C
872	2	1 5/16″	$10.00
873	3	1 ¾″	15.00
874	4	2 3/16″	20.00
875	5	2 ⅝″	25.00
876	6	3 1/16″	30.00
877	7	3 ½″	35.00

TERMINAL LUGS AND SCREWS

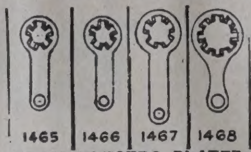

1478


1479

Recommended for heavy duty terminal strips. Lugs are tapped with screw inserted. No. 1478 lug, brass cadmium plated and No. 1479, lug, brass hot tinned.

No.	Per C
1478	$3.50
1479	6.00

LOCKING TYPE TERMINAL LUGS

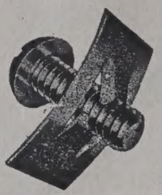


BRASS ELECTRO PLATED

No.	Hole Size	Thick	Per M
1465	No. 4	.020	$14.00
1466	No. 6	.020	14.00
1467	No. 8	.020	14.00
1468	¼″	.020	14.00

TINNERMAN SPEED NUTS

Available packed 100 per package or 24 $0.45 list envelopes on an attractive display card.



Size	No.	Per C
4	1155	$0.90
6	1156	.90
8	1157	.90
10	1158	.90
¼	1159	1.10

Size	Disp. No.	Each
4	1155D	$10.80
6	1156D	10.80
8	1157D	10.80
10	1158D	10.80
¼	1159D	10.80

MINIATURE WAFER SOCKETS

Seven Pin

Miniature bakelite sockets with brass cadmium plated contacts. XP bakelite top plate 1/16″ thick, bottom plate 3/64″ thick; high grade spring brass cadmium plated contact; .095 dia. mounting holes.

No.	Description	MTG. Cen.	Per C
880	Eyelet only	⅞″	$12.00
881	Eyelet and Shield	⅞″	12.50
882	Grid Strap and Shield	⅞″	13.00
840	Eyelet only	1″	13.25
841	Eyelet and Shield	1″	14.50
842	Grd Strap and Shield	1″	15.25

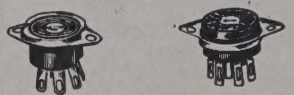
Nine Pin

Miniature bakelite sockets with brass cadmium plated contacts. XP bakelite top plate 1/16″ thick, bottom plated 3/64″ thick; high grade spring brass cadmium plated contact; .095 diameter mounting holes.

No.	Description	MTG. Cen.	Per C
890	Eyelet only	1⅛″	$14.25
891	Eyelet and Shield	1⅛″	14.75
892	Grd Strap and Shield	1⅛″	15.50

MOLDED MINIATURE SOCKETS

Seven Pin — Saddle Type



Molded of general purpose black bakelite-saddle steel cadmium plated, .015 thick; contacts high quality spring brass, cadmium plated; .098 mtg. holes, 7/82 mtg. centers. Supplied with center shield.

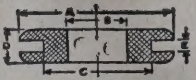
No.	Type	Per C
895	Bottom Mount	$15.40
896	Top Mount	15.40

MINI-MAX CONNECTING STRIP

This fastening connecting strip is spaced so that it will snap onto terminal connections of portable batteries.

No.	Type	Per C
1205	67 ½ Volt	$30.00
1206	90 Volt	40.00

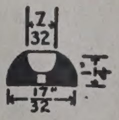
RUBBER GROMMETS



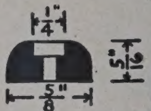
A: Outside Dia.; B: Inside Dia.; C: Panel Hole; D: Thickness Over-all; E: Panel Thickness.

No.	A	B	C	D	E	Per C
2185	5/16″	⅛″	¼″	3/16″	1/16″	$2.20
2172	7/16″	3/16″	5/16″	3/16″	1/16″	3.30
2170	⅝″	¼″	⅜″	⅜″	1/16″	3.85
2174	⅝″	5/16″	7/16″	¼″	1/16″	3.60
2175	11/16″	5/16″	½″	¼″	1/16″	3.85
2177	¾″	7/16″	9/16″	¼″	1/16″	3.60
2186	1 1/16″	½″	¾″	5/16″	1/16″	4.95
2187	1 ⅛″	⅝″	⅞″	5/16″	1/16″	5.20
2188	1 1/16″	9/16″	13/16″	5/16″	1/16″	5.50
2189	1″	¾″	⅞″	5/32″	1/32″	5.50

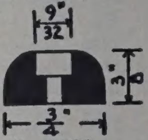
RECESS RUBBER BUMPERS



No. 2192
$2.00 C

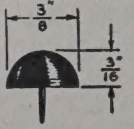


No. 2193
$2.75 C

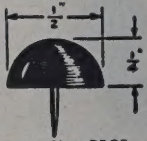


No. 2194
$4.40 C

RUBBER TACK BUMPERS



No. 2190
$2.40 C



No. 2191
$2.65 C

RUBBER FEET BUMPER

Rubber Bumper — ⅝″ diameter x 9/32″ thick. Recessed to accommodate a self-tapping screw, machine screw, wood screw or a tack.

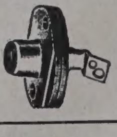
No. 2184 ....$4.00 per C

PHONO ADAPTER ATTACHMENT PLUG

R.C.A. type phono plug. For use with record players, recording and reproducing equipment, etc. Extra long pin for new type jacks and large hole in cap for coaxial cable.

No. 1201 ....$10.00 per C

PHONO JACK



Female for No. 1201 plug. Single prong positive grip jack mounted on 1/16″ bakelite with 11/16″ mounting centers.

No. 1203 ....$14.00 per C

DUAL PHONO JACK

Two positive grip jacks mounted on 1/16″ bakelite. Double mounting holes spaced ½″ x 1 3/16″. Jacks are 9/16″ center to center. Used on recording units and phono players, etc., where dual application is necessary.

No. 1214 ....$20.00 per C

MOTOROLA TYPE PLUG

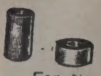
Attachment plug for all Motorola auto radio receivers and many other types of auto radios.

No. 1200 ....$14.00 per C

SMITH *Electronic Components*

HERMAN H. SMITH, INC.

BRASS BUSHINGS



These brass bushings art ideal for use in raising sub panels, chassis, condensers, transformers, etc. Hole in bushing to accommodate a No. 6 or No. 8 screw.

For No. 6			For No. 8	
No.	Per C	Length	No.	Per C
		¼″ O.D.		
2100	$5.00	¼″	2105	$5.00
2101	6.50	⅜″	2106	6.50
2102	8.00	½″	2107	8.00
2103	9.50	¾″	2108	9.50
2104	11.00	1″	2109	11.00
		⅜″ O.D.		
2110	$8.00	¼″	2115	$8.00
2111	9.50	⅜″	2116	9.50
2112	11.00	½″	2117	11.00
2113	12.50	¾″	2118	12.50
2114	14.00	1″	2119	14.00

INSULATED BUSHINGS

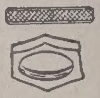
For No. 6		¼″ O.D.	For No. 8	
No.	Per C	Length	No.	Per C
2130	$6.00	¼″	2140	$6.00
2131	6.75	⅜″	2141	6.75
2132	7.00	½″	2142	7.00
2133	9.00	¾″	2143	9.00
2134	10.75	1″	2144	10.75

THREADED BRASS BUSHINGS

Brass bushings ¼″ O.D. Threaded 6-32 and 8-32.

Threaded 6-32			Threaded 8-32	
No.	Per C	Length	No.	Per C
2120	$6.00	¼″	2125	$6.00
2121	7.50	⅜″	2126	7.50
2122	9.00	½″	2127	9.00
2123	11.00	¾″	2128	11.00
2124	12.50	1″	2129	12.50

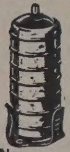
VOLUME CONTROL AND TOGGLE NUTS



Brass Nickel Plated

No.	Type	Dimensions	Per M
1195	Volume Control	⅜-32 x ½ x 3/32	$21.00
1196	Toggle Switch	15-32 x 9/16 x 5/64	30.00
1197	Toggle Ring Nut	15-32 x ⅝ x 1/16	30.00

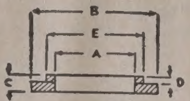
MINI-SHIELDS FOR MINI-TUBES



These Mini-Shields fit snugly on all Mini-Tubes. Serrations in base clip prevent shielded tube from joggling or working loose. Available in two sizes for 1½″ and 2″ long tubes.

No.	Type	Over-all Length	Per C
550	For 2″ Tube	1¾″	$13.00
551	For 1½″ Tube	1¼″	11.00
553	3-Prong Base Clip		5.50
554	Single Clips		3.30

FIBRE SHOULDER WASHERS



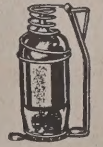
A. Inside Diameter
B. Outside Diameter
C. Thickness Over-all
D. Height of Shoulder
E. Diameter of Shoulder

No.	A	B	C	D	E	Per M
2150	#6-.140	.375	.098	.031	.237	$11.50
2151	#4-.110	.250	.062	.031	.187	9.50
2152	#6-.136	.250	.093	.031	.187	10.00
2153	#6-.136	.312	.093	.031	.187	11.00
2154	¼″-.250	.500	.068	.028	.312	12.00
2155	#8-.172	.375	.093	.031	.246	11.00
2156	#10-.196	.375	.093	.031	.308	11.00
2157	⅜″-.375	.750	.093	.031	.500	14.50
2158	⅜″-.385	.625	.093	.031	.500	14.00

FLAT FIBRE WASHERS

No.	For Screw-(I.D.)	O.D.	Thickness	Per M
2160	#6-.136	.250	1/16	$9.50
2161	#4-.110	.250	1/16	9.50
2162	#6-.140	.375	1/16	9.50
2163	#8-.172	.375	1/16	8.50
2164	#10-.196	.375	1/16	8.50
2165	¼″-.250	.500	1/16	8.50
2166	¼″-.250	.500	3/32	9.00
2167	5/16″-.312	.500	1/16	9.50
2168	⅜″-.385	.625	1/16	9.00
2169	⅜″-.375	.750	1/16	14.00

MINI-SPRING FOR MINI-TUBES

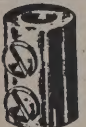


For Table Radios • Electronic Equipment Radio Receivers

The Mini-Tube guard gives support to the Mini-Tube in two ways. It maintains a direct axial pressure downward plus a sideways support that keeps the tube upright and perpendicular to the chassis. The spring action is constant and resilient permanently.

No.	Type	Per C
560	Short	$13.50
561	Medium	13.50
562	Long	13.50
563	9-Prong	13.50

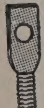
BRASS AND INSULATED COUPLINGS



Available in both brass and insulated material. Overall length ¾″. O.D. 7/16″. Set screws are provided in coupling for tightening to shaft.

No.	Type	Material	Each
120	¼″-¼″	Brass	$0.25
140	¼″-¼″	Insulated	.25
131	⅜″-¼″	Brass	.25
141	⅜″-¼″	Insulated	.25
133	⅜″-⅜″	Brass	.25
142	⅜″-⅜″	Insulated	.25

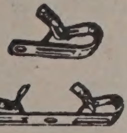
STEEL SPADE BOLTS



Steel, cadmium plated finish, threaded 6-32, thread length 5/16″, length overall ¾″.

No. 15000......................**$11.00 per M**

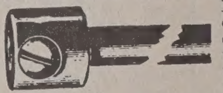
FAHNESTOCK SPRING BATTERY CLIPS



Clips are made of brass, nickel plated and are available in the single and double clip types.

No.	Type	Length	Per C
533	Single	¾″	$1.80
534	Single	1″	2.20
535	Double	1½″	10.00
536	Double	2 1/16″	11.00

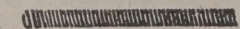
BRASS AND INSULATED EXTENDERS



Extra long extenders in either brass or insulated material. Suitable for use on amplifiers, television receivers, radio receivers or wherever a ¼″ shaft extender is required. Shaft length 1⅜″. Overall length 1¾″.

No.	Type	Material	Each
150	¼″-¼″	Brass	$0.30
130	¼″-¼″	Insulated	.30
132	⅜″-¼″	Brass	.30
134	⅜″-¼″	Insulated	.30

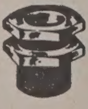
THREADED BRASS RODS



Rods ordinarily supplied in 2-foot lengths; if one-foot length is required, please specify.

No.	Size	Per Foot
1400	6-32	$0.35
1401	8-32	.35
1402	10-32	.45
1403	¼″-20	.50

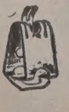
BEARING FOR PANEL ASSEMBLY



Made of brass, and fits in ⅜″ diameter hole in panels up to 5/16″ thick. Bearing is made to accommodate ¼″ shafts. Overall length ½″.

No. 119....................**$0.25 each**

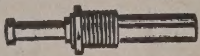
FAHNESTOCK CLIP



A speedy and positive contact spring clip. Especially useful for clipping to ammeter screws on auto radios. Supplied in phosphor bronze.

No. 538....................**$11.00 per C**

PANEL BEARING ASSEMBLY



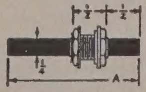
This panel bearing is accurately machined and is specially recommended for use as dial drives, or for mounting volume controls, switches, etc. Over-all length 1⅞″. Supplied with nut. Drive shaft ¼″ O.D.

No. 126......................................**$30.00 per C**

BRASS AND INSULATED RODS

No.	Type	Length	Dia.	Each
1404	Brass	6ff	¼″	$0.30
1405	Brass	12″	¼″	.60
1406	Insulated	6″	¼″	.25
1407	Insulated	12″	¼″	.50

PANEL BEARING ASSEMBLY



This assembly combines either 3″ or 6″ brass rod, ¼″ O.D. with our standard No. 119 Panel Bearing. Completely assembled so that panel bearing is held rigidly in place. Will fit on panels up to 5/16″ thick and can be used with either rigid or flexible couplings.

No.	A	Each
148	3″	$0.50
149	6″	.60

ANTENNA HANK

Cotton covered copper antenna hank.

No. 1222 ....**$35.00 Per C**

SMITH *Electronic Components*

HERMAN H. SMITH, INC.

STEEL MACHINE SCREWS

Round Head, Cadmium Plated

Available in bulk quantities, or can be obtained packed 1,000 or a gross to the box.

No.	Per M	Size	No.	Gross
1000	$5.90	6-32 x ¼″	1018	$1.00
1001	6.30	6-32 x ⅜″	1019	1.10
1002	6.80	6-32 x ½″	1020	1.15
1006	7.60	8-32 x ¼″	1024	1.25
1007	8.30	8-32 x ⅜″	1025	1.35
1008	8.80	8-32 x ½″	1026	1.40

BRASS MACHINE SCREWS

Round Head, Nickel Plated

Available in bulk quantities, or can be obtained packed 1,000 or a gross to the box.

No.	Per M	Size	No.	Gross
1044	$6.50	4-36 x ¼″	1036	$1.00
1045	8.10	4-36 x ⅜″	1037	1.05
1046	10.00	4-36 x ½″	1038	1.10
1047	6.50	4-40 x ¼″	1039	1.00
1048	8.10	4-40 x ⅜″	1040	1.05
1049	10.00	4-40 x ½″	1041	1.10
1050	9.30	6-32 x ¼″	1070	1.55
1051	10.90	6-32 x ⅜″	1071	1.80
1052	12.50	6-32 x ½″	1072	2.10
1056	13.70	8-32 x ¼″	1076	2.30
1057	15.60	8-32 x ⅜″	1077	2.65
1058	17.60	8-32 x ½″	1078	2.95

HEXAGON NUTS

Brass, Nickel Plated

No.	Per M	Size	No.	Gross
1188	$9.00	4-36 x ¼″	1182	$1.55
1168	9.00	4-40 x ¼″	1169	1.55
1189	12.90	6-32 x ¼″	1183	2.10
1190	12.90	6-32 x 5/16″	1184	2.10
1191	14.10	8-32 x ¼″	1185	2.30
1192	14.10	8-32 x 5/16″	1186	2.30
1193	15.90	10-32 x 5/16″	1187	2.65

Steel, Cadmium Plated

No.	Per M	Size	No.	Gross
1179	$7.10	6-32 x ¼″	1176	$1.10
1180	7.10	6-32 x 5/16″	1177	1.30
1181	7.90	8-32 x 5/16″	1178	1.30

PARKER KALON SELF TAPPING SCREWS

Round Head — Cadmium Plated

TYPE A Sharp Point No.	Gross	Size	TYPE Z Blunt Point No.	Gross
1801	$1.45	4 x ½	1807	$1.45
1802	1.35	6 x ¼	1808	1.35
1803	1.40	6 x ⅜	1809	1.40
1804	1.45	6 x ½	1810	1.45
1805	1.55	8 x ⅜	1811	1.55
1806	1.65	8 x ½	1812	1.65

SLOTTED HEX HEAD — CADMIUM PLATED

Type Z — Blunt Point

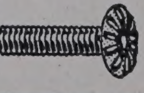
No.	Size	Gross
1830	6 x ¼	$1.35
1831	6 x ⅜	1.40
1832	6 x ½	1.45
1833	8 x ⅜	1.55
1834	8 x ½	1.65

FLAT AND SHAKEPROOF WASHERS

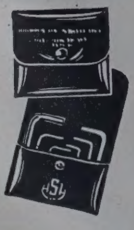
No.	Per M	Type	No.	Gross
1149	$4.80	No. 4 Brass N.P.	1153	$0.70
1150	4.80	No. 6 Brass N.P.	1146	.70
1151	4.80	No. 8 Brass N.P.	1147	.70
1152	4.80	No. 10 Brass N.P.	1148	.70
1127	4.50	No. 4 Shakeproof Int. Teeth	1121	.65
1128	4.80	No. 6 Shakeproof Int. Teeth	1122	.75
1129	4.80	No. 8 Shakeproof Int. Teeth	1123	.75
1130	5.40	No. 10 Shakeproof Int. Teeth	1124	.80
1132	7.20	¼″ Shakeproof Int. Tetth	1126	1.10
1131	9.00	⅜″ Shakeproof Int. Teeth	1125	1.45
1139	4.50	No. 4 Shakeproof Ext. Teeth	1133	.65
1140	4.80	No. 6 Shakeproof Ext. Teeth	1134	.75
1141	4.80	No. 8 Shakeproof Ext. Teeth	1135	.75
1142	5.40	No. 10 Shakeproof Ext. Teeth	1136	.80
1144	7.20	¼″ Shakeproof Ext. Teeth	1138	1.10
1143	9.00	⅜″ Shakeproof Ext. Teeth	1137	1.45

FANCY HEAD BRONZE FINISH SCREWS

No.	Size	Per M
1160	6-32 x ¾″	$10.70
1161	6-32 x 1″	11.40
1162	6-32 x 1¼″	12.50



KEY KITS

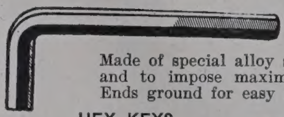


Attractive tear proof Vinyl plastic kit with individual pocket for each of six keys in kit. Hex kit for screws from 3 to 5/16″; Spline kit for screws for No. 5 to 5/16″; combination kit for Nos. 6, 8 and 10 hex and spline screws.

No.	Description	Per C
355	Hex Key Kit	$85.00
385	Spline Key Kit	85.00
390	Combination Key Kit	85.00
395	Combination Key Kit	180.00

DISPLAY CARDS

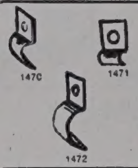
No.	Description	Each
785	Display of 24 Hex Kits	$20.40
784	Display of 24 Spline Kits	20.40
787	Display of 24 Combination Kits	20.40
790	Display of 20 Combination Kits	36.00



HEX AND SPLINE KEYS

Made of special alloy steel, tempered to avoid brittleness and to impose maximum resistance to torsional strain. Ends ground for easy insertion.

HEX KEYS No.	Screw Size	Per C	SPLINE KEYS No.	Screw Size	Per C
340	No. 2	$11.00	370	No. 4	$11.00
341	No. 3, 4	11.00	371	No. 5	11.00
342	No. 5, 6	11.00	372	No. 6	11.00
343	No. 8	11.00	373	No. 8	11.00
344	No. 10	13.20	374	No. 10	13.20
345	¼″	13.20	375	¼″	13.20
346	5/16″	13.20	376	5/16″	13.20



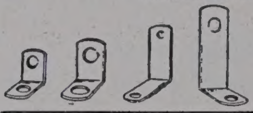
CABLE CLAMPS

1470—Steel, Cadmium plated, No. 8 hole, l. ¾″, w. ⅜″. Fits ¼″ cable....**$1.50**

1471—Steel, Cadmium plated. No. 8 hole, l. ⅝″, w. ⅜″. Fits ⅛-¼″ cable **1.50**

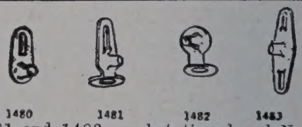
1472—Steel, Cadmium plated. No. 8 hole, l. 1″, w. ⅜″. Fits over ½″ cable **1.80**

BRASS AND STEEL ANGLES



No.	Material	Size	Per C
1474	Brass N.P.	½″x½″	$2.80
1475	Brass N.P.	⅝″x⅝″	5.50
1476	Steel H.T.	¾″x¾″	2.20
1477	Steel H.T.	⅝″x1⅛″	2.20

EYELET TYPE SOLDER LUGS



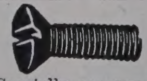
Made of brass. Nos. 1480, 1481 and 1482 are hot tinned and No. 1483 cadmium plated. Specially recommended for mounting on terminal strips.

No.	Length	Hole	Per M
1480	⅝″	5/64 slot	$ 4.50
1481	⅝″	No. 8	10.00
1482	¼″	No. 8	7.50
1483	15/16″		7.50

BINDING HEAD SCREWS

Steel Nickel Plated

No.	Per M	Size	No.	Gross
1425	$5.90	6-32 x ¼″	1450	$1.00
1426	6.30	6-32 x ⅜″	1451	1.10
1427	6.80	6-32 x ½″	1452	1.15
1428	7.60	8-32 x ¼″	1453	1.25
1429	8.30	8-32 x ⅜″	1454	1.35
1430	8.80	8-32 x ½″	1455	1.40

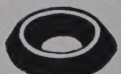


RACK SCREWS

Oval Head, Steel, Nickel Plated

Specially recommended for mounting panels in racks and cabinets. Available in gross packages or packed 1000 to the box.

No.	Per M	Size	No.	Gross
1111	9.20	10-32 x ½″	1099	$1.55
1112	10.40	10-32 x ¾″	1100	1.60



COUNTERSUNK WASHERS

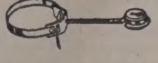
Brass, Nickel Plated

Recommended for use with Rack Screws designated above.

No.	Per M	Size	No.	Gross
1115	$6.80	6	1118	$1.05
1116	7.20	8	1119	1.10
1117	7.20	10	1120	1.10

SMITH *Electronic Components*
HERMAN H. SMITH, INC.

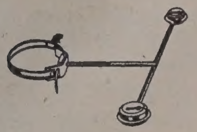
STRAP TYPE STANDOFF



Supplied with Universal Polyethylene Insert for masts up to 2¾″ in diameter. Heavily plated to prevent rust.

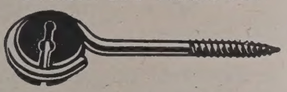
No.	Size	Per C
1603	3½″	$19.00
1607	7½″	25.00

"T" TYPE DUAL STANDOFF



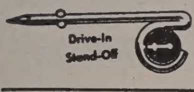
No.	Size	Per C
1633	3½″	$35.00
1677	7½″	40.00

SCREW EYE STANDOFF



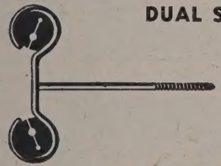
No.	Size	Thread	Per C
1265	3½″	Wood Screw	$ 6.25
1280	7½″	Wood Screw	9.00
1276	3½″	Machine Screw	8.00
1290	7½″	Machine Screw	11.00

DRIVE-IN STANDOFF



No.	Per C
1371	$7.00

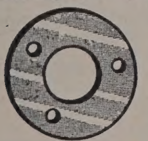
DUAL STANDOFF



No.	Size	Thread	Per C
1320	3½″	Wood Screw	$24.00
1325	7½″	Wood Screw	29.00
1340	3½″	Machine Screw	24.00
1345	7½″	Machine Screw	29.00

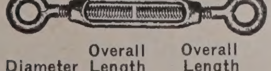
"FLOATING" GUY RING

Made of heavy gauge galvanized steel. Free floating, permitting placement at any point on the mast by use of a clamp underneath.



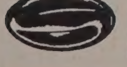
No.	Size	Per C
1390	1″ I.D.	$20.00
1391	1¼″ I.D.	20.00
1392	1⅜″ I.D.	20.00
1393	1½″ I.D.	20.00

MIDGET TURNBUCKLES



No.	Diameter of Bolt	Overall Length Closed	Overall Length Extended	Per C
1215	$\frac{5}{32}$″	3⅜″	4⅝″	$23.00
1216	$\frac{3}{16}$″	4″	5⅝″	25.00
1217	$\frac{7}{32}$″	4½″	6⅜″	27.50
1218	¼″	5½″	7⅝″	33.00
1219	$\frac{5}{16}$″	6¾″	9¼″	55.00
1220	⅜″	7½″	10½″	85.00

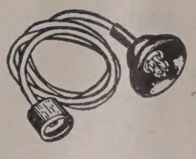
AIRPLANE INSULATOR



White glazed low absorption porcelain insulator 2″ long.

No. 1283............$13.00 Per C

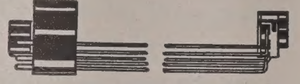
ANODE EXTENSION CORD



Standard Anode connector with 30″ of wire. Female end takes standard anode cap so that cathode tube does not have to be removed from cabinet on some sets when chassis is being serviced.

No. 1382......................................$1.50 each

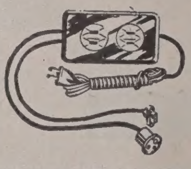
CATHODE RAY TUBE EXTENSION CORD



Female end fits Cathode Ray Tube. Male end fits wiring in chassis to tube. 40″ long. Eliminates interference of tube with short wiring while servicing set. A serviceman's must.

No.	Each
1285—Complete cord	$2.00
1286—Socket only	.30

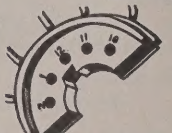
UNIVERSAL TV CHEATER CORD



Cheater cord for all types of TV sets, with dual receptacle for soldering iron.

No.	Each
1224	$2.25

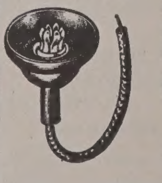
TELEVISION SOCKET
Half Moon Type



Bakelite molded socket. 5 contacts wired with 5 leads, 18″ long #20 wire. Wired from emergence.

No.	Each
1295	$1.00

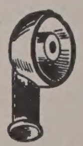
SECOND ANODE CONNECTOR



For television tubes. Silver plated snap button plug insulated by 1½″ diameter rubber cap. Snaps into opening on side of tube. Supplied with 15″ or 23″ long wire lead.

No.	Lead	Each
1380	15″	$0.65
1381	23″	.75

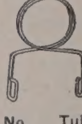
SECOND ANODE CONNECTOR



For Diheptal tubes. Cadmium plated contacts with rubber insulator ¾″ wide by 1$\frac{5}{16}$″ long. Snaps over prong on side of diheptal tubes.

No. 1375 ....$0.60 Each

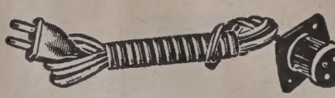
SPRING GRID CLIP



Small and large type grid clip used to replace clips that have lost their tension due to heat causing poor contact. Available in bulk of 24 $.45 list envelopes on attractive display card.

No.	Tube Type	Per C	Disp.	Each
1288	1X2-6BQ6	$8.00	1288D	$10.80
1289	1B3-6BG6	8.00	1289D	10.80

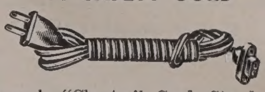
TV SAFETY CORD



Servicemen's "Cheater Cord." This cord is used on some Philco, Zenith, Emerson, Sylvania, and other make sets. Standard A.C. plug on one end which disconnects power when back of receiver is removed. Cord is brown, 6 feet long and hanked. Underwriters' approved.

No. 1221...$1.25 Each

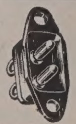
TV SAFETY CORD



Servicemen's "Cheater" Cord. Standard A.C. plug on one end and safety plug on other end which disconnects power when back of receiver is removed. Cord is brown, 6 ft. long and hanked. Underwriters approved.

No. 1209 ....$0.75 Each

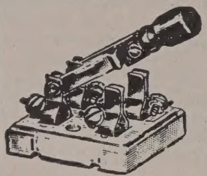
INTERLOCK PLUG



Male plug which is mate for TV Safety Cord as described above. Brass nickel plated prongs.

No. 1208 ....$0.20 Each

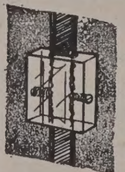
MIDGET KNIFE SWITCHES



Midget knife switches ideal for use in rear of television receiver where two antennas are used. Screw terminals placed for easy connection and two holes in each type base for mounting.

No.	Type	Type Base	Each
1241	SPST	Porcelain	$0.45
1242	SPDT	Bakelite	.55
1243	DPST	Porcelain	.77
1244	DPDT	Bakelite	.88
1245	DPDT	Porcelain	.88

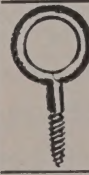
300 OHM SPLICE



A handy connector for splicing 300 ohm line. Will not cause mismatch. Easy to use and makes a secure connection. By using dope to seal ends can be used outdoors.

No. 1225............$25.00 Per C

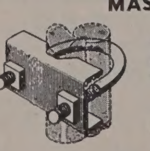
EYE BOLT



Sturdy steel eye bolt for use where guy wire is necessary for T.V. mast installation. Inside diameter $\frac{23}{32}$″, shank length 1⅜″, thread length 1$\frac{1}{16}$″, overall length 2½″.

No. 1249..................$7.00 per C

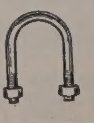
MAST JOINER



"U" Bolt mast coupler. 4″ galvanized "U" bolt with galvanized steel bracket. Bracket "cradles" mast with sufficient "bite" for secure coupling. Accommodates up to two 1½″ masts.

No. 1360 ....$0.30 ea.

"U" BOLT



4″ galvanized steel "U" bolt supplied complete with two nuts and two lock washers. Threaded portion enables securing together two masts from 1″ to 1½″ O.D.

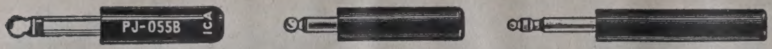
No. 1361 ....$12.00 Per C

SINCE 1921

insuline *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

U. S. ARMY-NAVY SPECIFICATION PLUGS



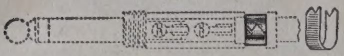
DESIGNED TO MEET THE LATEST JAN SPECIFICATION P-642. High compression-molded insulation for high di-electric and tensile strengths Features durability with low moisture absorption characteristics.

No. PJ-055B..........................**Dealer Cost $ .90**

No. PJ-054...........................**Dealer Cost .90**

No. PJ-068—3 Conductor Microphone Plug....**Dealer Cost $2.36**

STRAIN RELIEF CLAMP

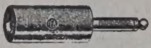


For firm attachment of cables to PJ0 and PL type plugs. Approved by government services.

No. 5695.........................**Dealer Cost $2.00C**

ICA BAKELITE DOUBLE PHONE PLUG

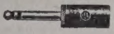
Molded bakelite ribbed barrel. Takes 2 cord tips. Fits all jacks.



No.	Dealer Cost
24B—Black	$ .34
Display Card of 24 above	
D-70024B	8.16
24R—Red	.34
Display Card of 24 above	
D-70024R	8.16
34B—Black barrel only	13.36C
34R—Red barrel only	13.36C
34P—Plug only	.27

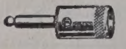
ICA MIDGET PHONE PLUG

Overall length—2¼".
Diameter of barrel 9/16".



No.	Dealer Cost
29B—Black	$ .34
Display Card of 24 above	
D-70029B	8.16
29R—Red	.34
Display Card of 24 above	
D-70029R	8.16

ICA STUBBY SHIELDED PHONE PLUG



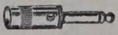
Barrel measures 11/16" diameter x 1" long.

No. 27...............................**Dlr. Cost $ .49**

No. 37—Barrel only...............**Dlr. Cost .32**

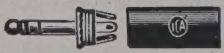
ICA MIDGET SHIELDED PHONE PLUG

Diameter of Barrel 9/16".
Overall size of Plug 2¼".



No. 30...............................**Dealer Cost $ .48**

ICA 3-WIRE MICROPHONE PLUG

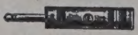


Has solder connections for cable or microphone use. Barrel molded of bakelite; brass parts, nickel plated.

No. 1901...........................**Dealer Cost $ .83**

ICA SHIELDED DOUBLE PHONE PLUG

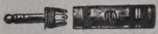
Nickel Barrel—Brass Shell Nickel Plated



Supplied with fibre insulating tube.

No. 25...............................**Dealer Cost $ .60**

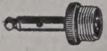
ICA SHIELDED 3-WIRE MICROPHONE PLUG



Shielded Nickel Barrel

No. 1900...........................**Dealer Cost $1.10**

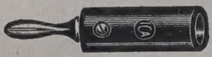
PHONE PLUG ADAPTER



Soldering or wiring not necessary.

No. 33...............................**Dealer Cost $ .30**

ICA INSULATED SOLDERLESS SPLIT BANANA PLUGS



Set screw provided at side of barrel to fasten screw without soldering.

1½" Long

No. 883B—Black	**Dlr. Cost $15.00C**
No. 883R—Red	**Dlr. Cost 15.00C**
Display Card of 20 each above	
No. D-70883B-R	**Dlr. Cost $6.00**

2½" Long

With sleeve covering set screws.

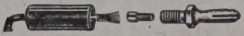
No. 882B—Black	**Dlr. Cost $ .27**
No. 882R—Red	**Dlr. Cost .27**

4" Long

With sleeve covering set screws.

No. 881B—Black	**Dlr. Cost $ .34**
No. 881R—Red	**Dlr. Cost .34**
Display Card of 8 each above	
No. D-70881B-R	**Dlr. Cost $5.44**

ICA INSULATED SOLDERLESS SPLIT BANANA PLUGS With Solderless Wire Nut

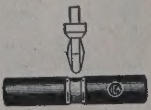


No. 434B—Black	**Dlr. Cost $18.00C**
No. 434R—Red	**Dlr. Cost 18.00C**

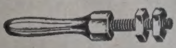
WIRE CONNECTOR WITH BANANA PLUG RECEPTACLE

Ideal for quick splicing for testing point.

No. 1933....**Dlr Cost $ .25**



ICA SPLIT BANANA PLUGS

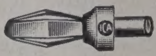


For positive and durable spring action. Allows spring to fit into jack, cannot bend out of shape — Complete with two nuts.

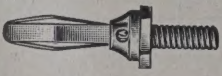
No. 403.........................**Dealer Cost $11.66C**

BERYLLIUM BANANA PLUGS

Approved by the Signal Corps and other government agencies. These plugs are used in all government equipment. Made of nickel-plated Beryllium copper and guaranteed for its spring and durability.



No. 419 — Overall size 13/16" long. Shank length ¼" long. Shank diam. ⅛". **Dealer Cost $13.35C**



No. 421 — Overall size 1 3/16" long. Threaded shank length 13/32" long threaded for 6/32 nuts.

Dealer Cost..**$21.00C**

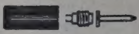
SILVER-PLATED BANANA PLUGS

No. 424—SILVER-PLATED Beryllium Copper Banana Plug. Overall length 1½". Shank length ¾", threaded for 8/32 nuts.

Dealer Cost..**$25.00C**

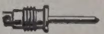
INSULATED MIDGET PHONE TIP PLUG

Fits all standard jacks. Tip is threaded. Overall length 1¼".



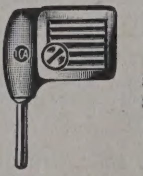
No.	Dealer Cost
876R—Red	$12.00C
876B—Black	12.00C

MIDGET SHARP POINT PHONE TIP THREADED—NOT INSULATED



Threaded to fit all test prods. **No. 365**........**Dlr. Cost $10.00C**

ICA GRIP-RITE MOLDED PHONE TIP PLUG

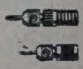


Replacement for ICA and Weston — as well as other make Test Leads.

No.	Dlr. Cost
868—Red	$ .34
869—Black	.34
Display Card of 12 each above	
No. 70868-9	Dealer Cost $8.16

ICA PHONO NEEDLE CHUCKS

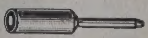
Push on type can be forced into handles — Threaded type can be screwed into handles. Machined of brass, nickel plated with needle point.



No.	Dlr. Cost
508—Push-on Type, Overall size 1"	$12.00C
509—Threaded Type, Overall size 1"	15.00C

STANDARD PHONE TIPS

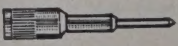
Overall Length 1"



No. 360

Dealer Cost......**$16.67M**

HEAVY DUTY PHONE TIPS



Overall Length 1 11/32".

	Dlr. Cost
No. 361	$7.80C

SINCE 1921

insuline *Corporation of America*

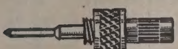
OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ICA INSULATED SOLDERLESS PLUG

2" long — fits all standard phone tip jacks.

No. 885B—Black ....**Dealer Cost $13.80C**
No. 885R—Red ....**Dealer Cost 13.80C**

ICA SR. SOLDERLESS PLUGS



1½" over-all length.

No. 358
Dealer Cost......$9.58C

ICA JR. SOLDERLESS PLUGS—No. 359

1½" over-all length.
Tip ½".

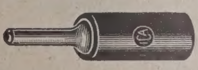
Dealer Cost............$9.58C

ICA INSULATED NEEDLE POINT TIP PLUG

No. 886B—Black
Dlr. Cost......$14.16C
No. 886R—Red
Dlr. Cost......$14.16C

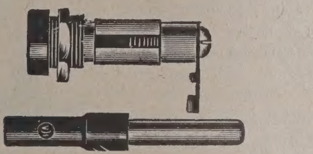
PHONE TIP WITH INSULATING JACKET

Nickel Plated brass with small O.D. insulating sleeve.



No. 341B—Black............**Dealer Cost $10.00C**
No. 341R—Red ....**Dealer Cost 10.00C**

TRANSMITTING PLUGS AND JACKS

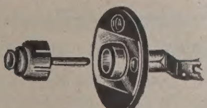


A new line of heavy duty transmitting plugs and jacks. Plug-in type with positive grip contacts. Equipped with heavy insulated threaded heads and handles for safe handling on high R.F. currents. Supplied with large hex nuts for panel mounting.

Handle 1,000 Volts at 10 Amps

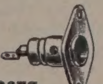
No.	Dealer Cost
450—Medium Plug—RED	$ .42
451—Medium Plug—BLACK	.42
452—Medium Jack—RED	.80
453—Medium Jack—BLACK	.80
454—Giant Plug—RED	.63
455—Giant Plug—BLACK	.63
456—Giant Jack—RED	.88
457—Giant Jack—BLACK	.88

ICA PLUGS AND JACKS



Used on RCA recording units, receivers and auto sets.

No.	Dealer Cost
2383—Pin Plug	$5.00C
2385—Socket and Shield	7.00C



2378

2375

No.	Dealer Cost
2375—Motorola Pin Plug	$ 8.33C
2378—Motorola Shielded Jack	13.33C

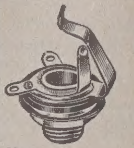
ICA DELUXE PHONE JACKS

Greater Efficiency

New design. Tension fatigue minimized. Spring members made of phosphor bronze. Hooked type soldering lugs — Cannot turn or short. For standard ¼" plug.

No.	Dealer Cost
1920—Single Open Circuit	$ .50
1921—Single Closed Circuit	.58
1922—Three-Way Microphone Jack	.75

ICA PHONE JACKS



Smaller type precision made jacks for limited space. Complete with nut and metal washer.

No.	Dealer Cost
1870—Single Open Circuit	$ .34
1871—Single Closed Circuit	.37
1872—3-Way Microphone Jack	.42

ICA PANEL MOUNTING JACKS

Small and compact. Insulated shoulder washers. Phosphor-bronze, nickel-plated springs.

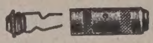
No.	Dealer Cost
325—Single Open Circuit	$ .34
1905—3-Way Microphone Jack	.75

ICA SHIELDED 3-WAY PORTABLE MICROPHONE JACK

For all types of microphones. Sturdily constructed of brass parts with phosphor bronze springs. Nickel plated and thoroughly insulated.
No. 1904...........................**Dealer Cost $1.00**

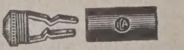
ICA SHIELDED PORTABLE JACK

Single Open Circuit



Dealer Cost
No. 1913—2⅛" Long, 1⁄16" Diameter....**$ .84**

ICA BAKELITE PORTABLE JACKS



Single Open Circuit

No.	Dealer Cost
1911—Overall Size 1⅝"; Diam. ¾"	$ .50

Display Card of 16 above

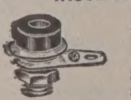
No. D-71911......................**Dealer Cost $8.00**
No. 1903—Portable Jack, black Bakelite barrel..............................**Dealer Cost $ .75**

ICA INSULATED TIP JACKS

With receptacle for standard phone tips.

No.	Dealer Cost
889B—Black	$12.00C
889R—Red	12.00C

INSULATED BANANA JACKS



With receptacle for banana plugs.

No.	Dealer Cost
888B—Black	$12.00C
888R—Red	12.00C

ICA BAKELITE INSULATED TIP JACKS

Molded Bakelite Head

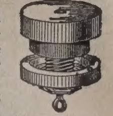
No.	Dealer Cost
1889—Black	$15.00C
Display Card of 40 above	
D-71889	$6.00
1890—Red	$15.00C
Display Card of 40 above	
D-71890	$6.00

INSULATED TIP JACKS

Bakelite. Spring contact of heat treated beryllium copper.

No.	Dealer Cost
1897—Black	$ .36
1898—Red	.36

HIGH VOLTAGE TIP JACK



Nylon insulation can withstand 10,000 v. breakdown. Low leakage resistance; very low moisture absorption. One piece spring contact loop of phosphor bronze. Offers stability in sensitive test equipment. Takes all standard phone tips and test prods. Molded washer affords added protection against "shorts."
No. 1899...........................**Dealer Cost $ .45**

ICA BRASS TIP JACKS

Nickel Plated

No. 357
Dealer Cost..........$9.00C

BAKELITE BANANA TYPE JACKS

No.	Dealer Cost
1891—Black	$15.00C
Display Card of 40 above	
D-71891	$6.00
1892—Red	$15.00C
Display Card of 40 above	
D-71892	$6.00

ICA TRANSMITTING BANANA JACKS

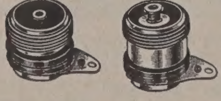
Nickel Plated Brass

No. 402....Dealer Cost $9.00C

ICA COMBINATION BANANA PLUG OR PHONE TIP JACK

Made to take banana plug or standard phone tips interchangeably. Insulated cap in black and red — With washers and nuts.

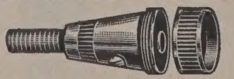
No.	Dealer Cost
528R—Red	$15.00C
528B—Black	$15.00C



MICROPHONE CONNECTORS

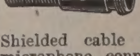
No. 1929—For use on chassis unit or in microphone. Single Contact.
Dealer Cost $18.00C

No. 1930—Closed circuit connector. With spring actuated contact.
Dealer Cost .27



MICROPHONE CONNECTORS

NEW Universal shielded cable single contact microphone connector. Newly designed non-fixed coupling ring permits easy cable connection. Male-female connector in one. Eliminates necessity for mating connectors.
No. 1931............................**Dealer Cost $ .30**

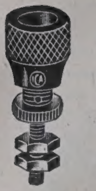


MICROPHONE CONNECTORS

Shielded cable type. Single contact male microphone connector. Chrome-plated brass.
No. 1932............................**Dealer Cost $24.00C**

Net

ICA INSULATED BINDING POSTS WITH JACK FOR BANANA TYPE PLUG

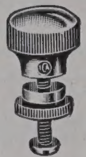


Length 1¼″ overall when top is up. Extends ⅝″ above panel when top is screwed down. Fitted with 8/32 screw 9/16″ long, and two hex nuts.

No.	Dealer Cost
622—Red	$24.00C
623—Black	24.00C

Display Card of 16 each above
D-70622-3........Dealer Cost $7.68

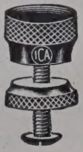
ICA ALL METAL BINDING POST



Designed for high amperage use and where low resistance connections are necessary on test equipment, etc. Nickel plated brass. Dimensions same as No. 617 below.

No.	Dealer Cost
620	$21.00C

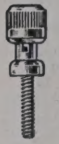
ICA BAKELITE BINDING POSTS



9/16″ Diameter Head with Brass Threaded insert. Nickel Plated Screw; Knurled nut.

No.	Dealer Cost
617—Red	$15.00C
618—Black	15.00C

ICA VISE-GRIP BINDING POST

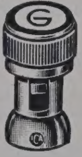


Engineered on principle of a vise. Can cause no damage to even finest wire strands. Wire hole and designating symbol always in alignment. Two styles.

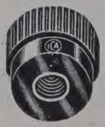
No. 630 Series—Has 8/32 Male Threaded Shank..........................Dealer Cost $ .34

No. 690 Series—Has 8/32 Female Thread........................Dealer Cost $ .40

No.	Marking	No.	Marking
630	ANT	690	ANT
631	GND	691	GND
632	A	692	A
633	G	693	G
634	+	694	+
635	—	695	—
636	Rec.	696	Rec.
637	PLAIN (No Marking)	697	PLAIN (No Marking)



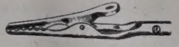
BAKELITE BINDING POST HEADS



Bakelite Heads only with Brass Threaded Insert for 8/32 Screw.

No. 628—Red................Dealer Cost $10.00C
No. 629—Black..............Dealer Cost 10.00C

ICA ALLIGATOR CLIPS

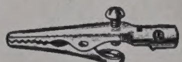


Good firm grip. Ideal for work in tight places. Overall length 2″.

No. 364..........................Dealer Cost $6.66C

Display Card of 40 above
No. D-70364.......................Dealer Cost $2.67

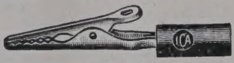
ICA ALLIGATOR CLIP WITH SCREW CONNECTION



Good firm bite. Convenient screw connection eliminates the necessity for soldering. Overall length 2″.

No. 376..........................Dealer Cost $8.35C

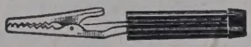
ICA INSULATED ALLIGATOR CLIPS



No. 884B—Black............Dealer Cost $15.00C
No. 884R—Red.............Dealer Cost 15.00C

Display Card of 20 each above
No. D-70884B-R................Dealer Cost $6.00

ICA INSULATED ALLIGATOR CLIP WITH PHONE TIP JACK

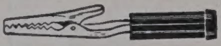


Has standard phone tip jack in insulated sleeve. Will accommodate phone tip or solderless plug tips.

No. 525R—Red..................Dealer Cost $ .37
No. 525B—Black................Dealer Cost .37

Display Card of 12 each above
D-70525R-B 8.88

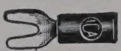
ICA INSULATED COMBINATION JACK ALLIGATOR CLIP



An insulated alligator clip with a dual purpose Jack in catalin sleeve. Equipped with the new combination Jack which takes either solderless phone tip or Banana plug. Overall length—3¼″.

No. 520R—Red..................Dealer Cost $ .42
No. 520B—Black................Dealer Cost .42

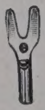
INSULATED SPADE LUG



Insulated Spade Lug with banana plug receptacle on lead end.

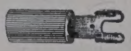
No. 887B—Black............Dealer Cost $10.85C
No. 887R—Red.............Dealer Cost 10.85C

ICA SPADE LUG



Can be used on any size screw or terminal up to size 10. Receptacle fits all I.C.A. and other make Banana Plugs.

No. 879..........................Dealer Cost $3.35C

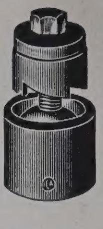


HEAVY DUTY INSULATED SPADE LUGS

Heavy gauge nickel-plated brass spade lug which will fit on screws or binding posts up to 3/16″ in diameter. Supplied with tenite sleeve—red or black—unassembled for forced fit after wiring.

No. 867R—Red..................Dealer Cost $ .21
No. 867B—Black................Dealer Cost .21

ICA SHEARING PUNCHES

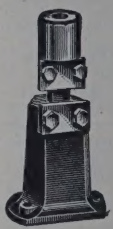


Now! No Hammering Necessary to Punch Chassis Holes

Shearing is accomplished with a wrench which forces shear punch into die. Made of High Grade Steel.

No.	Size of Hole	Dealer Cost
723	⅝″	$2.75
725	¾″	2.75
724	1″	3.17
727	1⅛″	3.33
726	1 5/32″	3.33
728	1 3/16″	3.33
729	1¼″	3.33
730	1⅜″	3.67

ICA SQUARE HOLE SHEARING PUNCH

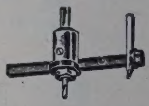


This new punch permits the cutting of any size odd-shape hole (square rectangular, hexagon, oblong, etc.) on any size panel or chassis. Good for Enlarging or punching TRANSFORMER Holes.

No. 790......Dealer Cost $13.35

ICA IMPROVED ALL-PURPOSE CIRCLE CUTTER

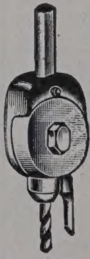
Will Cut Holes from 1½ to 8 Inches



Cutting bar holder is ⅞″ in diameter and also accommodates a centering drill or any size pilot pin. Cutting bar is ⅜″ square and is arranged to hold a 3/16″ high speed cutting bit.

No. 775..............................Dealer Cost $3.97

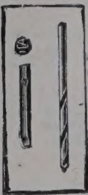
ICA UNIVERSAL MULTI-PURPOSE CUTTING TOOL



This handy tool can be used for counter-sinking, beading, drilling or cutting holes. Equipped with 3/16″ drill for holes from 7/16″ diameter up to 3″ diameter. Can be used either in drill press or hand brace. Also acts as a boring tool when used in a lathe.

No. 780..............................Dealer Cost $3.08

REPLACEMENT DRILLS AND CUTTERS



Used as replacement on ICA No. 775 and No. 780 circle cutters as well as on other make cutters.

No. 776—Replacement drill for No. 775 Circle Cutter
Dealer Cost $ .50

No. 777—Replacement cutter for No. 775 Circle Cutter
Dealer Cost $ .67

No. 781—Replacement drill for No. 780 Circle Cutter
Dealer Cost $ .50

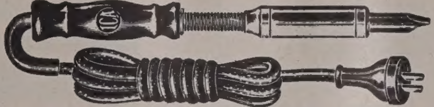
No. 782—Replacement cutter for No. 780 Circle Cutter
Dealer Cost $ .67

SINCE 1921

insuline *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

TOP QUALITY SOLDERING IRONS AND ACCESSORIES



ICA Soldering Irons represent the finest in durable material and precision fabrication . . . submitted to rigid tests for maximum performance.

- Fully insulated, removing slightest possibility of grounding
- Heats to operating temperature in three minutes
- Special air chamber reduces heat losses, assuring cool grip
- Plunger type soldering tip offers proper operating heat at soldering point

60 WATT IRON

No. 1960-A—105-120 Volts....**Dlr. Cost $3.33**
No. 1963—220 Volts ....**Dlr. Cost 3.33**

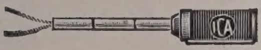
85 WATT IRON

No. 1962-A—105-120 Volts....**Dlr. Cost $4.33**
No. 1964—220 Volts **Dlr. Cost 4.33**

115 WATT IRON

No. 1961-A—105-120 Volts....**Dlr. Cost $5.00**
No. 1965—220 Volts ....**Dlr. Cost 5.00**

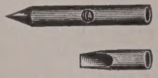
REPLACEMENT ELEMENTS FOR ICA SOLDERING IRONS



Because of the practical design of ICA Soldering Irons, burnt out elements may be easily replaced.

105-120 Volts			220 Volts		
No.	Watts	Dlr. Cost	No.	Watts	Dlr. Cost
1985	60	$2.00	1990	60	$2.00
1986	85	2.33	1991	85	2.33
1987	115	2.33	1992	115	2.33

REPLACEMENT TIPS For ICA Soldering Irons

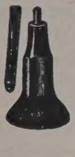


Available in All Sizes

Made of a special copper alloy. Electrolytically pure. For replacement in ICA Soldering Irons. Can also be used in American Beauty and irons of similar construction.

No.	Watts	Tips	Dia.	Length	Dealer Cost
1970	60	Flat	⅜″	3″	$ .42
1972	85	Point	⅜″	3½″	.58
1971	115	Point	7/16″	3½″	.67

ICA RIVET AND EYELET PUNCH SET



A Universal Tool that can be used for either riveting or eyeletting. Holder is made of cast iron with hexagonal sides, thus permitting the tool to be placed in a vise without slipping.

No. 785—Complete with ample assortment of eyelets and rivets.

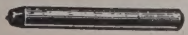
Dealer Cost $3.33

RIVET AND EYELET ASSORTMENT

Additional eyelets and rivets can be purchased separately.

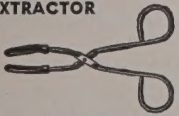
No. 5265—(Asstmt. of 100)....**Dlr. Cost $.57**

RIVET & EYELET SETTING TOOL



No. 786..................................**Dealer Cost $.64**

TUBE EXTRACTOR



For removing all makes and sizes of tubes. Molded rubber cushion over claws offers full tube protection. Sturdy zinc-plated steel; "Iridited."

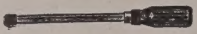
No. 1001...........................**Dealer Cost $1.35**

Display Card of 3 above

No. D-71001......................**Dealer Cost $4.05**

ICA "TURN-TITE" SOCKET WRENCHES

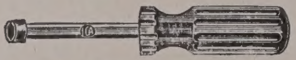
HOLLOW SHAFTS



Made of hardened steel, cadmium plated, with sturdy Black japanned wooden handles.

6 Inches Long		9 Inches Long	
No.	Dlr. Cost	No.	Dlr. Cost
898—3/16″	$.45	900—3/16″	$.53
890—¼″	.45	894—¼″	.53
891—5/16″	.45	895—5/16″	.53
892—⅜″	.45	896—⅜″	.53
893—7/16″	.45	897—7/16″	.53
899—½″	.45	901—½″	.53
910—Set of 6 Wrenches	$2.70	911—Set of 6 Wrenches	$3.18

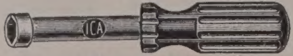
ICA UNBREAKABLE "TURN-TITE" SOCKET WRENCHES



7″ long. Handle is of ribbed shockproof unbreakable material.

No.	Socket	Dlr. Cost	No.	Socket	Dlr. Cost
940	3/16″	$.75	944	⅜″	$.75
941	¼″	.75	945	7/16″	.75
942	5/16″	.75	946	½″	.75
943	11/32″	.75	949	Set of 7 wrenches as above	5.25

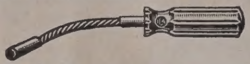
ICA UNBREAKABLE VOLUME CONTROL WRENCH



Socket is 5/16″ diameter.

No. 937..............................**Dealer Cost $1.38**

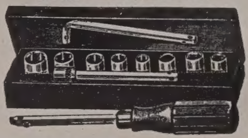
ICA FLEXIBLE SOCKET WRENCH



Especially designed for hard-to-reach spots. Can actually be used around corners or under obstructing objects.

No. 913—¼″ Hex ....**Dealer Cost $1.00**
Display Card of 6 above
No. D-70913 ....**Dealer Cost $6.00**
No. 914—5/16″ Hex ....**Dealer Cost $1.00**
Display Card of 6 above
No. D-70914 ....**Dealer Cost $6.00**

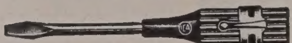
ICA LOCK SOCKET WRENCH AND SCREW DRIVER SET



The all-purpose socket wrench, packed in neat, enameled steel case. Includes sturdy 6½″ Wood Grip Screw Driver—4″ L Handle—3¾″ Extension Adaptor, ¼″, 5/16″, ⅜″, 7/16″ and ½″ Hex—⅜″ Round Knurled Socket—¼″ and 5/16″ Square Sockets.

No. 999..............................**Dealer Cost $2.35**

ICA AMBER COLORED UNBREAKABLE MIDGET SCREW DRIVER



Particularly shaped to fit into set screws of knobs. No. 1013 has convenient pocket clip.

1013—4½″ length **$16.67C**
Display Card of 24 above
D-71013 .... **3.96**
1017—7″ length **21.68C**
Display Card of 16 above
D-71017 .... **3.46**

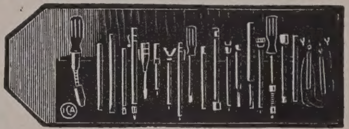
ICA FLEXIBLE SCREW DRIVER

For the Hard to Reach Spots

Allows access to screws in hard to reach and out of the way places. Can go under objects or around corners.

No. 935 ....**Dealer Cost $1.35**
Display Card of 6 above
No. D-70935 ....**Dealer Cost $8.10**

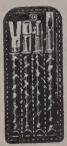
ICA COMPLETE NEUTRALIZING TOOL KIT



The kit consists of one of each of the following ICA tools, described herein:—Nos. 382, 1008, 987, 1015, 977, 996, 992, 985, 990, 1024, 1019, 1026, 1022, 1002, 1013, 1028, 1039, 1029, 1033, 935, 937.

No. 995—Kit, Complete with Carrying Case
Dealer Cost $14.50

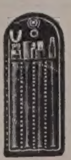
ICA UTILITY NEUTRALIZING AND ALIGNING TOOL KIT



A handy Service Man's Kit containing carefully selected tools suitable for varied uses. Packed in vest pocket leatherette case.

No. 997..........**Dealer Cost $2.17**

ICA NEUTRALIZING AND ALIGNING TOOL KIT



The Kit consists of twelve separate and distinct parts, some of which can be employed for several operations. These units telescope into each other, forming four separate tools when assembled.

No. 998............**Dealer Cost $4.58**
Complete with Carrying Case

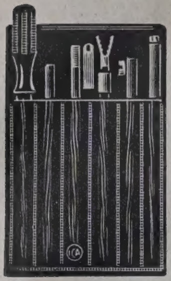
Net

SINCE 1921

insuline Corporation of America

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ICA DE LUXE NEUTRALIZING AND ALIGNING TOOL KIT



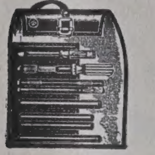
For Every Service Need

Consists of 14 tools, most of which telescope into one another, forming six assembled units in attractive leatherette pocket case.

Includes the following: No. 1039 Screw Driver (double blade); No. 1026 Balancing Tool (2 tools: Screw Driver and Side Wrench); No. 1024 Fork Type Wrench and Screw Driver; No. 1022 5-in-1 neutralizing tool (thin metal nib Screw Driver—¼" hex slotted wrench—$\frac{5}{16}$" hex wrench—Steel Screw Driver Nib—Steel Socket Head Wrench $\frac{5}{16}$"); No. 996 Neutralizing Tool; No. 977 Aligning Tool; No. 935 Flexible Screw Driver; Fibre Wrench, $\frac{5}{16}$" hex.

No. 994 .... **Dealer Cost $5.50**

ICA NEUTRALIZING AND ALIGNMENT TOOL KIT — SIGNAL CORPS No. TE45-A



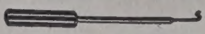
ICA Catalog No. 993

This versatile kit, designed for and used by the Signal Corps, is also strongly recommended for general service use. Compact, and contained in a handsome leatherette case, this kit consists of the following:

1—No. 935 Screw Driver	1—Bone Fibre No. 1015 Neutralizing Tool
1—4¼" Screw Driver No. 1013	2—No. 980—Hex Tools, ¼" I.D.
1—Insulated Screw Driver No. 1028	2—No. 981—Hex Tools, $\frac{5}{16}$" I.D.

No. 993 .... **Dealer Cost $4.90**

ICA DIAL CABLE ADJUSTER



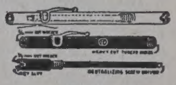
Handy aid to replacing slipped-off dial cable over drive drum. Permits easy manipulation in cramped places.

No. 437 .... **Dealer Cost $ .55**

Display Card of 12 above

No. D-70437 .... **Dealer Cost $6.60**

ICA 4-in-1 NEUTRALIZING TOOLS, SCREW DRIVER AND WRENCH



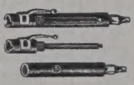
Made of Fenoline
Fully Insulated

No. 1019—Complete .... **Dealer Cost $ .60**

Display Card of 12 above

No. D-71019 .... **Dealer Cost $7.20**

ICA 5-IN-1 NEUTRALIZING AND COMPENSATING TOOL



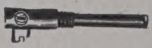
Same features as the 4-in-1 tool described above with an additional all metal screw driver.

No. 1022 .... **Dealer Cost $1.00**

Display Card of 12 above

No. D-71022 .... **Dealer Cost $12.00**

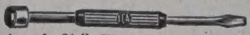
ICA BALANCING TOOL



Fits into No. 1019 Neutralizing Tool.

No. 1026 .... **Dealer Cost $ .37**

ICA ALL PURPOSE ALIGNING TOOL



Handle is of ⅜" Fenoline. End has Socket Screw Driver for neutralizing all iron core tuning systems.

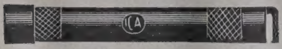
No. 1002 .... **Dealer Cost $ .55**

Display Card of 16 above

No. D-71002 .... **Dealer Cost $8.80**

ICA ALIGNMENT WRENCH

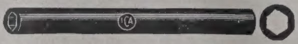
For RCA, Philco, etc.



Used on all makes Air Trimmer. Made of ½" Fenoline Rod—8½" long—one end has hollow shaft hexagon wrench—other end has an especially shaped hook.

No. 1008 .... **Dealer Cost $1.08**

INSULATED NEUTRALIZING WRENCHES



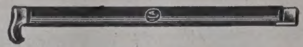
Hexed—Full Length

For Philco, Majestic and Other Receivers
⅜" Diameter

No.	Dealer Cost
985—6" long; Hex ¼"	$21.68C
986—8" long; Hex ¼"	.24
980—5" long; Hex ¼"	20.00C
981—5" long—$\frac{7}{16}$" dia.; Hex $\frac{5}{16}$"	.25

ICA Alignment Tool for Philco Receivers

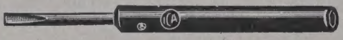
For Air Trimmer Sets



Has specially designed metal clip for air trimmers. Made of narrow fibre rod, $\frac{7}{32}$" diam. by 6" long.

No. 1033 .... **Dealer Cost $ .45**

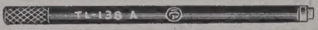
ICA Insulated Adjustable Neutralizing Tools



Absolutely no metal parts. Screw driver slides into inside of neutralizing wrench.

No. 990—Ext. from 6" to 10" **Dlr. Cost $.65**
No. 991—Ext. from 12" to 16" **Dlr. Cost .73**

ICA NEUTRALIZING AND ALIGNING TOOL



U. S. Army No. TL138A — ICA No. 1011

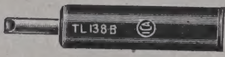
Used for general radio tuning and aligning. Approved by U. S. Army and Navy.

No. 1011 .... **Dealer Cost $ .73**

Display Card of 12 Above

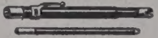
No. D-71011 .... **Dealer Cost $8.76**

BAKELITE NEUTRALIZING TOOL



Neutralizing tool used by U. S. Army Signal Corps (U. S. Army No. TL-138B).

No. 1010 .... **Dealer Cost $ .37**



ICA Neutralizing Tools with Metal Nibs

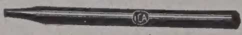
Patent No. U.S. 83,321. Sturdy, unbreakable, will outlast all other type neutralizing tools.

No. 996 .... **Dealer Cost $1.08**

Display Card of 10 Above

No. D-70996 .... **Dealer Cost $10.80**

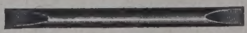
ICA BONE FIBRE SCREW DRIVER



Of $\frac{5}{16}$" bone fibre rod with a sturdy blade.

No. 1029 .... **Dealer Cost $ .53**

ICA BONE FIBRE SCREW DRIVER



Double Edged—No Metal—Fully Insulated
Made of ¼" Bone Fibre Rod

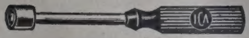
No. 1039 .... **Dealer Cost $ .27**

Display Card of 16 above

No. D-71039 .... **Dealer Cost $4.32**

ICA NEUTRALIZING TOOL

For Push Button Tuners

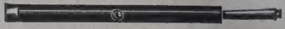


The Socket is $\frac{9}{64}$" in diameter, and contains a screw driver blade.

No. 1003 .... **Dealer Cost $ .55**

ICA SET TRIMMER NEUTRALIZING TOOLS

For Philco, Zenith, RCA, etc.



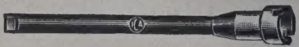
Fits the smallest size trimmer condensers. Trimmer end is $\frac{7}{32}$" diam. to fit ¼" hole.

No. 992—6" long .... **Dealer Cost $ .73**

Display Card of 12 above

No. D-70992 .... **Dealer Cost $8.76**
No. 933—10" long .... **Dealer Cost $ .92**

ICA NARROW SHAFT ALIGNMENT TOOL



RCA—Zenith—etc. $\frac{7}{32}$" Bakelite Shaft

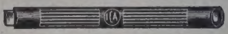
No. 987 .... **Dealer Cost $ .65**

Display Card of 16 above

No. D-70987 .... **Dealer Cost $10.40**

ICA ALIGNMENT TOOLS

For RCA Receivers



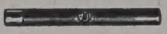
Narrow shaft Neutralizing Tools made of Bone Fibre—$\frac{7}{32}$" wide. Has screw nib inserted in one end; screw driver other end.

No. 1015 .... **Dealer Cost $ .55**

Display Card of 16 above

No. D-71015 .... **Dealer Cost $8.80**

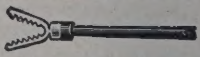
ICA MAGIC TUNING ALIGNMENT TOOL



Consists of a Bakelite rod with a Brass cylinder at one end, and a special finely divided iron core at the other end.

No. 977 .... **Dealer Cost $ .73**

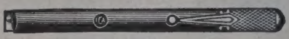
ICA FORK TYPE NEUTRALIZING WRENCH and SCREW DRIVER



For RCA and Other Sets

No. 1024 .... **Dealer Cost $ .37**

ICA Fenoline Neutralizing Screw Drivers



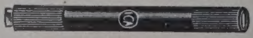
Made of Fenoline. Strong and sturdy, completely insulated for neutralizing and aligning coils, condensers, receivers, etc.

No. 1028 .... **Dealer Cost $ .27**

Display Card of 16 above

No. D-71028 .... **Dealer Cost $4.32**

ICA NEUTRALIZING AND ALIGNING TOOL



Machined of bakelite rod 9/32 inch diameter. Designed for Western Electric Co. Approved by U. S. Army and Navy.

No. 1006 .... **Dealer Cost $ .84**

Display Card of 10 above

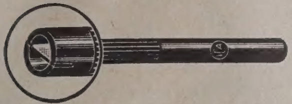
No. D-71006 .... **Dealer Cost $8.40**

SINCE 1921 **insuline** *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

LATEST TELEVISION TOOL KIT, TOOLS — ACCESSORIES

DEEP-NIB ALIGNER



Tough fibre. Metal nib entirely insulated and set within barrel end. For tuning IF and RF shielded coils and trimmers. Small enough to fit under television tubes without removing. Length: 2½″ x ¼″ diameter.

No. 6156 ....Dealer Cost $ .36

Display Card of 16 above

No. D-76156........................Dealer Cost $5.76

TELEVISION "CHANNEL TUNER"

A narrow all-insulated screw driver of machined fiber. Ideal for deep, inaccessible tuning. Overall: 7″ Length.. ⅛″ blade on 4½″ shaft.

No. 6157 ....Dealer Cost $ .55

Display Card of 12 above

No. D-76157........................Dealer Cost $6.60

"BIG STRETCH" ALIGNER

Extra thin, extra long (9″), bone fibre aligning tool, 6½″ blade. Specially designed for adjustment of nested iron cores of "Admiral," "Zenith" and similar make TV sets. Permits use on RCA front ends and normally inaccessible areas.

No. 6162 ....Dealer Cost $ .73

Display Card of 12 above

No. D-76162........................Dealer Cost $8.76

TUNING WRENCH

Insulated fibre tuning wrench with extra thin recessed blade. Extra thin screw driver blade on other end (4¾″ L.). Tenite handle. Especially designed for "Zenith" TV sets, etc.

No. 6164 ....Dealer Cost $ .55

Display Card of 16 above

No. D-76164........................Dealer Cost $8.80

CORE ALIGNER

For Stewart-Warner, Belmont and other television receivers employing Stackpole adjustable cores. The 6″ insulated fibre shaft has brass insert at one end for milled end cores; recessed screw driver blade at other end for standard slotted cores. Inserts are "pinned-in" and flush with shaft end for durability and ease of use.

No. 6170 ....Dealer Cost $ .55

Display Card of 16 above

No. D-76170........................Dealer Cost $8.80

DUAL ALIGNER

Dual purpose narrow shaft, fibre alignment tool for trimmers, IF transformers, etc. Recessed screw nib on one end; metal screw driver on other end.

No. 6166 ....Dealer Cost $ .54

Display Card of 16 above

No. D-76166........................Dealer Cost $8.64

DURA-DUAL FIBRE TV ALIGNER

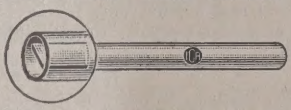
A double bladed aligning tool, measuring 7 inches in length. Made of durable fibre for complete insulation and sturdiness. Narrow shaft is ⅛″ in diameter. Serves many TV servicing requirements.

No. 6158 ....Dealer Cost $24.00C

Display Card of 16 above

No. D-76158........................Dealer Cost $3.84

DOUBLE END "KLEER ALIGNER"



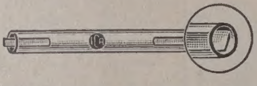
Low-loss CLEAR PLASTIC all-insulated shaft. Has two recessed blades set within rod ends, completely insulated. One blade suitable for No. 6 screw and smaller; other blade for No. 4 screw and smaller. Shaft is 7″ long x 7/32″ diameter.

No. 6193 ....Dealer Cost $ .60

Display Card of 12 above

No. D-76193........................Dealer Cost $7.20

"KLEER-ALIGNER"



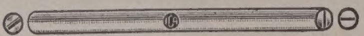
A low-loss CLEAR PLASTIC all-insulated aligning tool. Narrow shaft. Has recessed insulated blade on one end; extended blade on other end. Designed for many aligning uses. For trimmers, IF transformers, etc. Measures 7″ in length x 7/32″ diameter.

No. 6192 ....Dealer Cost $ .60

Display Card of 12 above

No. D-76192........................Dealer Cost $7.20

"SUPER STRETCH KLEER ALIGNER"



All insulated extra long TV aligner for inaccessible areas. The low-loss CLEAR PLASTIC Rod is 12″ long x 7/32″ diam. Carries an extended blade at one end; brass slotted insert at other end. A handy tool for those hard-to-reach spots.

No. 6194 ....Dealer Cost $ .83

Display Card of 12 above

No. D-76194........................Dealer Cost $9.96

TELEVISION HANDI-KIT

For Television servicing. Contains nine (9) latest tools especially designed for television needs. Includes Aligner for IF and RF and "K-Tran" Transformers (No. 978); slim aligning tool for cramped spaces (No. 6161); thin diameter tuning wand (No. 6163); deep nib aligner (No. 6156); narrow insulated screw driver for deep tuning (No. 6157); extra thin long (9″) aligner (No. 6162); tuning wrench (No. 6164); stackpole core aligner (No. 6170); dual aligner, narrow shaft (No. 6166).

No. 6165...........................Dealer Cost $5.00

TRAN-ALIGNER

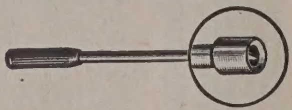
Newly designed all-insulated aligning tool for standard IF and "K-Tran" midget transformers. Trim fiber; milled at one end, screw driver at other end. 2½″ length blade; 6″ overall.

No. 978 ....Dealer Cost $ .54

Display Card of 16 above

No. D-70978........................Dealer Cost $8.64

SLIM-ALIGNER



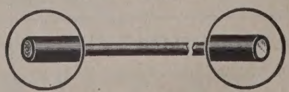
Alignment tool with extra thin recessed blade and slim metal shaft for cramped probing in television receivers. Fiber handle. Especially suitable for "Admiral" and similar make television sets.

No. 6161 ....Dealer Cost $ .73

Display Card of 12 above

No. D-76161........................Dealer Cost $8.76

TUNING WAND



Extra thin diameter to fit small coil openings in television sets. Flexible vinylite. Brass insert in one end; molded powdered iron core in other end. Lowers or increases inductance. Suitable for "Zenith," etc. TV sets.

No. 6163 ....Dealer Cost $ .73

Display Card of 12 above

No. D-76163........................Dealer Cost $8.76

Net

SINCE 1921 ICA INSULINE CORP. of AMERICA TRADE MARK

insuline *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

HEXY-SQUARE ALIGNER

All bone fibre iron core aligning tool especially designed for Raytheon-Belmont IF transformers and similar type transformers. 6" shaft has 3/16" diam.; 3/32" hex one end; 1/8" square other end.

No. 6171 ....**Dealer Cost $ .75**

Display Card of 12 above

No. D-76171......................**Dealer Cost $9.00**

HEX-ALIGNER

All bone fibre iron core aligning tool. Has 3/32" hex one end; 1/8" hex other end. Especially designed for Dumont, Raytheon-Belmont receivers and other sets, using similar type iron cores. Shaft 6" long; 3/16" diam.

No. 6199 ....**Dealer Cost $ .83**

Display Card of 12 above

No. D-76199......................**Dealer Cost $9.96**

ALL-PURPOSE ALIGNER

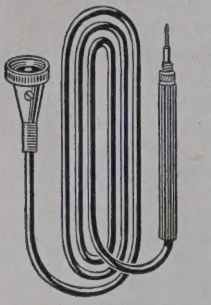
Bone fibre screw driver ends set in red tenite handle. Overall length 6"; blade width 5/32"; tip thickness 1/64". Designed for general aligning purposes for Motorola and other popular receivers.

No. 6248 ....**Dealer Cost $ .55**

Display Card of 16 above

No. D-76248......................**Dealer Cost $8.80**

OHMMETER PROBE For RCA "Voltohmyst"



Designed specifically for RCA "Voltohmyst". Offers precise resistance measurements not ordinarily provided by standard test leads. Includes 48" low-loss coaxial cable; coaxial connector. Tenite handle is 4" long; has heavy duty phone tip.

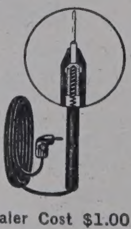
No.	Dealer Cost
317	$2.75

D.C. PROBE for RCA "Voltohmyst"

Includes one megohm resistor for voltage measurements in operating circuits demanding minimum disturbance of circuit parameters. Includes 48" low-loss coaxial cable; coaxial connector. 4" long tenite handle has heavy duty phone tip.

No. 316..........................**Dealer Cost $3.00**

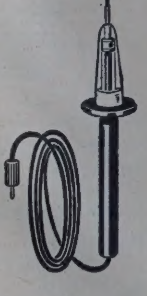
ICA SAFE-T-TESTER



A new, unique, non-shorting prod that makes contact only when pressure is applied to barrel. Ideal for cramped spaces where probing is necessary. Specially applicable to television needs.

No. 446..........................**Dealer Cost $1.00**

"KILOVOLTER" MULTIPLIER PROBE



A skilfully-made probe that combines the finest high voltage design principles with precision fabricating—a superb multiplier probe whose efficiency . . . sturdiness . . . popular price, is beyond compare.

Equipped with 15 K.V. range multiplier that provides full range PLUS existing meter voltage. For example, use of the ICA probe will increase the range of a 5,000 volt range voltmeter to 20,000 volts full scale.

The three (3) built-in 1% resistors (totaling 6 watts dissipation) are coaxially mounted, providing air-spacing to further assure heat dissipation and a completely insulated probe.

Highest grade components include sturdy thermo-plastic barrel with safety finger guard and sealed ends. Over-all length: 8½". Supplied with 5-ft. heavy duty lead with insulated phone tip.

No.		Dealer Cost
6167	20,000 ohms per volt (50 micro amps. meter movement)	$6.95
6168	10,000 ohms per volt (100 micro amps. meter movement)	6.95
6169	5,000 ohms per volt (200 micro amps. meter movement)	6.95

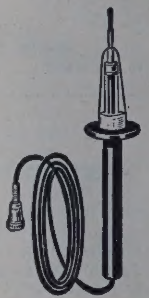
NOTE: Probe of special resistance values up to 2000 megohms are available on order to quantity users.

NEW 30-KV PROBE

Similar to the Insuline "Kilovolter" No. 6167 above, for 20,000 ohm per volt, 50 micro amp. meters only. A precision instrument . . . 600 megohms 2% high voltage multiplier

No. 6220..**Dealer Cost $7.95**

THE INSULINE "100 X" MULTIPLIER PROBE



A new 30KV to 50KV Multiplier Probe (Internal resistance 1090 megohms). For ALL 10 to 11 megohm input instruments.

This VTVM probe will multiply existing meter ranges by a factor of 100; thus, if the top range of the instrument is 300 volts, meter will read 30,000 volts with probe. If top range is 500 volts, meter with probe will read 50,000 volts.

A few of the most popular VTVM's with which this probe may be used follows:

30-KV TOP RANGE

RCA No. WV65A; WV75A; 165A Electronic Design
Heath No. V1; V2; V2A; V4 Radio City 664; Reiner 661; Triplett 2541

50-KV TOP RANGE

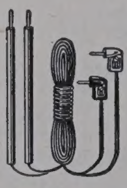
RCA No. WV95A; 162A; 162B; 162C

No.		Dealer Cost
6222	With microphone type connector and ground lead	$7.95

For phone plug instruments, the Insuline No. 33 Adapter is required.

No. 33—Phone Plug Adapter....................................**Dealer Cost $ .30**

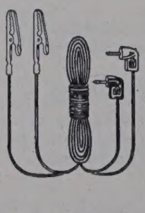
EXTRA LONG HANDLED TEST LEADS



Features special low-loss highly polished hard rubber, high di-electric properties, 8" prod handles — with sharp pointed penetrating tips — for easier testing of less accessible points. The black and red kinkless wire leads measure 48". Includes molded black and red gun-handle phone tip plugs.

No. 329..........................**Dealer Cost $3.00**

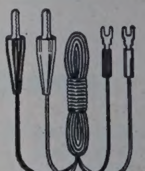
"CLIP-ON" TEST LEADS



A convenient "Clip-on" test lead that includes phone tip plugs on one end; sturdy alligator clips on other end. The red and black kinkless wire leads measure 48". The black and red molded phone plugs are of the gun-handle type.

No.	Dealer Cost
328	$3.00

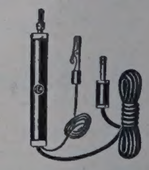
HEAVY DUTY "CLIP-ON" TEST LEADS



Heavy duty test leads of the "clip-on" type for use with binding post type instruments. Includes a heavy gauge nickel-plated brass insulated spade terminal which will fit screws or binding posts up to 3/16" in diameter. The sturdy battery-type spring clips are covered with protective sleeve for safe operation. The pair consists of a 48" red and black lead with tenite insulation.

No. 327..........................**Dealer Cost $1.20**

RF AND SIGNAL TRACER PROBE



Germanium Crystal Circuit. Assures accurate analysis of circuit defects. May be used with audio amplifier for audible tracing or with V.T.V.M. for RF and AF measurements. Low input capacitance. The ideal probe for the audio section of television circuits. The sturdy bakelite barrel has sealed tenite ends with solderless phone tip and includes 48" RG59/U coaxial cable with phone plug and 18" rubber covered ground lead with alligator clip.

No. 4310..........................**Dealer Cost $4.95**

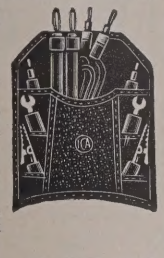
SINCE 1921 insuline Corporation of America

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ICA ALL-PURPOSE TEST LEAD KIT

Complete For Every Testing Need

Equipped with one pair of test leads which have 48″ of red and black kinkless live rubber wire. One end has insulated removable banana-type plugs.



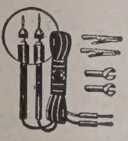
Included in this test kit:
1 pr. all-purpose test leads.
1 pr. insulated alligator clips—red and black No. 884.
1 pr. insulated spade lugs—red and black No. 887.
1 pr. insulated needle points—red and black No. 886.

No. 1005—Kit, complete......**Dlr. Cost $2.67**

ICA PHONO-NEEDLE POINT TEST LEADS

With Slim Handles and Flexible Wire

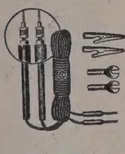
Flexible rubber-covered, kinkless wire, 48″ long. Tenite handles 4″ long.



No. **Dlr. Cost**
382—With Phone Tips....$ .73
Display Card of 6 above
D70382 .... 4.38
381—With Spade Terminals .73
Display Card of 6 above
D-70381 .... 4.38
379—With alligator Clips.. .74

ICA DE LUXE EXTRA-FLEXIBLE TEST LEADS

Slim Handles and Solderless Plugs

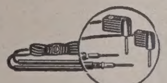


48″ Extra-Flexible Test Leads with 4″ Tenite handles. New non-kinking, rubber insulated wire.

No. **Dlr. Cost**
355—With Phone Tips..$ .73
Display Card of 6 above
D-70355 .... 4.38
356—With Spade Terminals .73
Display Card of 6 above
D-70356 .... 4.38

ICA PENCIL TYPE TEST LEADS

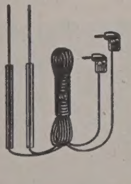
Finger-Grip Molded Tips



All connections are properly soldered providing low resistance connections vital in all precision tests. The Molded Finger Grip Tips are provided with rivets for easy removal of wire. Length of test leads is 48″. Handles are 5″ long.

No. 373....................**Dealer Cost $1.35**
Display Card of 6 above
No. D-70373................**Dealer Cost $8.10**

NEW ICA SLIM-LINE TEST LEADS

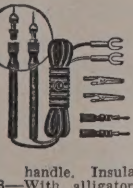


Long vinyl-insulated shaft permits probing in closely wired circuits without fear of shorting. Black and red Tenite handles. 48″ wire lead. With molded phone tip plug.

No. **Dlr. Cost**
438 .... $1.17 pr.
Display Card of 6 above
D-70438 .... $7.02

ICA HEAVY DUTY LABORATORY TEST LEADS

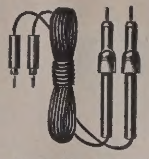
Long Slim Handles and Removable Phono Needle Chuck



Extra long slim red and black handles knurled at end for finger grip ease. Handles 6″ long. 48″ of heavy duty kinkless, flexible rubber wire.

No. **Dlr. Cost**
400—With knurled grip handle. Insulated solderless plug.....$1.20
388—With alligator clip................ 1.13
391—With spade lugs................... 1.00
392—With non insulated phone tips........ 1.00

HEAVY DUTY TEST LEADS



Engineered for TV's high voltage measurements. Insulated to withstand 15,000 volts D.C. Thick-walled bakelite handles with finger guards. 48″ heavy duty cable.

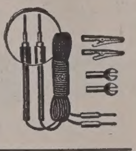
No. 4317.................**Dealer Cost $3 per pair**

Display Card of 3 above

No. D-74317....................**Dealer Cost $9.00**

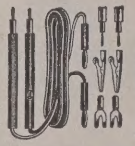
ICA SLIM HANDLE TEST LEADS

Made of sturdy Tenite Handles. 48″ of Kinkless Live Rubber wire. Handles 6″ Long — Overall Length 7″. Prods have pointed large phone tip plugs.



No. **Dlr. Cost**
313—Phone Tips on end.$ .92
Display Card of 6 above
D-70313 .... 5.52
314—Spade Lugs on end. .92
315—Alligator Clips on end 1.00
Display Card of 6 above
D-70315 ....$6.00

ICA ALL PURPOSE TEST LEADS

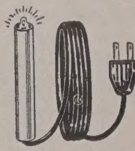


Made of sturdy Tenite Tubing. Slim handles, 6″ long. Overall length 7¼″. Rubber covered wire 48″ long.

With Interchangeable Tips

No. **Dlr. Cost**
312—Complete Kit $1.83

ICA TEST-LITE



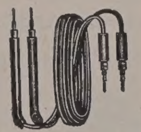
Provides a steady, bright light — without annoying flickering—for dark, narrow spaces around chassis, cabinets, etc. Plugs into any AC-DC socket, 105-125 volt.. 4½ ft. cord. Includes standard 6 volt lamp, No. 47, .15 amp., and plug complete.

No. 938............................**Dealer Cost $1.10**

ICA UNBREAKABLE TEST LEADS

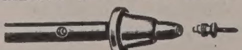
Long Metal Prod with Shock-proof Rubber Handles

One end has standard needle point Tips. Other end has Insulated Solderless Plugs. Supplied with 48″ Kinkless Rubber Wire.



No. 332—With Phone Tips Non Insulated **Dlr. Cost $.75**
No. 331—Insulated Solderless Plug Ends...**Dlr. Cost $.84**

HIGH VOLTAGE ICA HEAVY-DUTY BAKELITE TEST PROD HANDLES

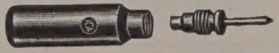


High Voltage, 10,000 Volts

Has midget threaded phone tip. Ideal for all high voltage work. Made of black bakelite with finger guard ring. Minimum amount of metal exposed. Prods are 6″ long overall. Used for high voltage test purposes.

No. 480............................**Dealer Cost $ .84**

HIGH VOLTAGE HEAVY-DUTY BAKELITE TEST PRODS



High Voltage, 10,000 Volts

Made of black bakelite. Fully insulated with threaded midget sharp pointed phone tips. Minimum amount of metal exposed. Measures 2″ overall. Exposed metal tip is only ½″ long.

No. 485............................**Dealer Cost $ .42**

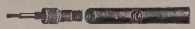
ICA HEAVY-DUTY TEST PRODS

Slim tapped Tenite handle fitted with threaded heavy-duty phone tip. Length 5″.

No. 387R—Red ....**Dealer Cost $ .37**
No. 387B—Black...............**Dealer Cost .37**

ICA SOLDERLESS PLUG TEST PRODS

With Solderless Plug Chuck



Slim tapped Tenite handles in black or red, threaded to take the solderless plug chuck. All brass parts are nickel plated. Available in two sizes.

5¼ Inch Long Prods

No. 390R—Red ....**Dealer Cost $ .27**

Display Card of 16 above

No. D-70390R ....**Dealer Cost 4.32**
No. 390B—Black...............**Dealer Cost .27**

Display Card of 16 above

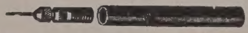
No. D-70390B ....**Dealer Cost 4.32**

7¼ Inch Long Prods

No. 335R—Red ....**Dealer Cost .34**
No. 335B—Black...............**Dealer Cost .34**

ICA FENOLINE PHONO. NEEDLE POINT TEST PRODS

With Removable Chuck



Supplied in black or red Tenite tapped handles. Needle point chuck is tapped to screw into handle. Available in two sizes.

5 Inch Test Prod

No. 389R—Red ....**Dealer Cost $ .27**

Display Card of 16 above

No. D-70389R ....**Dealer Cost 4.32**
No. 389B—Black...............**Dealer Cost .27**

Display Card of 16 above

No. D-70389B ....**Dealer Cost 4.32**

7 Inch Test Prod

No. 334R—Red ....**Dealer Cost .30**
No. 334B—Black...............**Dealer Cost .30**

NON-KINK FLEXIBLE TEST LEAD WIRE

Flexible rubber covered wire that will not kink or wear down in service. Consists of very fine tinned stranded copper wire with a heavy wall of live rubber insulation.

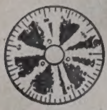
No. 307—100 ft. spool, Black ....**Dlr. Cost $3.35**
No. 309—100 ft. spool, Red......**Dlr. Cost 3.35**

SINCE
1921

insuline Corporation of America

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ICA CHROME SILVER DIAL PLATES



2¾" and 4" diameter. Two types, calibrated 180 degrees 0-100 and 325 degrees, 0-100.

No.	Degrees	Dia. Dial	Calib.	Dlr. Cost
2196	325	2¾"	0-100	$.85
2197	180	2¾"	0-100	.85
2194	325	4"	0-100	1.03
2195	180	4"	0-100	1.03

ICA BRASS BLACK SATIN FINISH DIAL PLATES

With Etched Silver Numerals

No.	Degrees	Dia. Dial	Calib.	Dlr. Cost
2230	325	3⅛"	0-100	$.47
2232	180	3½"	0-100	.47
2233	180	2"	100-0	.37
2234	325	2"	0-100	.37
2236	180	2"	0-100	.37

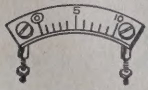
ICA CHROME SILVER DIALS

With Finger Grip Flange Knobs

Beautiful dial plates accurately Etcho-engraved with black numerals and calibrations.

No.	Size	Degrees	Calib.	Dlr. Cost
2170	2¾"	325	0-100	$1.50
2171	2¾"	180	0-100	1.50
2168	4"	325	0-100	2.00
2169	4"	180	0-100	2.00

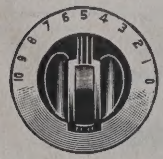
ICA VERNIER DIAL MARKER



Complete with screws, nuts, and spacers for mounting on metal, wood, bakelite or brass panels.

No. 2189—For 2¾"—325° Dials. **Dealer Cost $.37**
No. 2190—For 2¾"—180° Dials. **Dealer Cost .37**
No. 2191—For 4" —325° Dials. **Dealer Cost .37**
No. 2192—For 4" —180° Dials. **Dealer Cost .37**

ICA MINIATURE DIALS



Beautiful Chrome Silver dials with black etched numerals. Finger grip black knob. Only 1⅝" diameter. Fit ¼" shafts.

No.	Dlr. Cost
2164—10-0-180	$.63
2165—10-0-270	.63

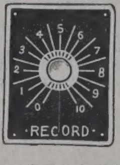
ICA CHROME SILVER DIAL PLATES

Attractive grain satin finish. Black Etcho Engraving on Chrome Silver Background Plates.

No.	Degrees	Dia. Dial	Calib.	Dlr. Cost
2294	180	2"	0-100	$.58
2295	325	2"	0-100	.58
2296	180	3½"	0-100	.92
2297	325	3½"	0-100	.92
2298	180	4"	0-100	1.00
2299	325	4"	0-100	1.00

ICA ETCHED DIAL PLATES

RECTANGULAR TYPES



Made of brass—finished in black with etched silver markings. Calibrated for 300 degree rotation. Marked 0 to 10. Will fit on ⅜" bushing. Size 2¼" x 1-11/16".

No.	Marking	Dlr. Cost
2244	Record	$21.66C
2245	Microphone	21.66C
2246	Gain	21.66C
2247	Tone	21.66C

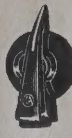
2248—Plain (Calibrated but not worded) . . $21.66C

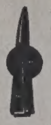
ICA INDICATING PLATES

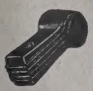
Made of heavy brass with black satin background. Silvered "Etcho Gravured" numerals and lettering. 7/16" center mounting hole. 1 9/16" Diameter.

No.	Degrees	Dlr. Cost
2259—Marked 1 to 6	180	$.25
2450—Marked 1 to 5 (Volume)	325	.27
2451—Marked 1 to 5 (Tone)	325	.27
2452—Marked 1 to 10	325	.27
2453—Marked Off-On—with arrow	325	.27

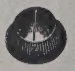
RADIO REPLACEMENT AND INSTRUMENT KNOBS

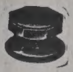

A

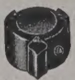

B

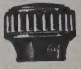

E

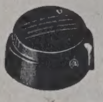
No.	Type	Color	Size	Dlr. Cost
1125	A	Black	1¼"	$13.33C
1127	A	Red	1¼"	16.67C
1126	B	Black	2"	16.67C
1128	B	Red	2"	18.34C
1153	E	Black	1¾"	20.00C
1154	E	Walnut	1¾"	20.00C

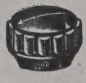

J

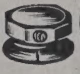

K

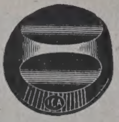

L


M


N

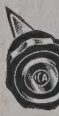

U


T


V

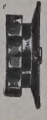
No.	Type	Color	Size	Dlr. Cost
248	J	Black	1⅛"	$18.35C
249	J	Black	1½"	20.00C
1076	K	Walnut	¾"	13.33C
1049	L	Walnut	13/16"	11.66C
1050	L	Walnut	1"	13.33C
1174	M	Black	15/16"	16.67C
1089	N	Walnut	15/16"	13.33C
1090	N	Walnut	1½"	15.00C
1147	U	Black	⅞"	13.33C
1148	U	Walnut	⅞"	13.33C
1077	T	Walnut	¾"	11.66C
1078	T	Walnut	⅞"	13.33C
1272	V	Black	¾"	15.00C
1273	V	Walnut	¾"	15.00C

ICA FINGER-GRIP POINTER KNOBS


A

Moulded of black bakelite with ¼" hole. Pointer type knobs have white indicators, flange type knobs have white indicating line.

With ¼" Brass Inserts


B

TYPE A—WITH POINTER

No. 1166—1⅛" . . . . **Dealer Cost $.40**
No. 1168—1⅝" . . . . **Dealer Cost .55**
No. 1170—2⅜" . . . . **Dealer Cost .70**

TYPE A—LESS POINTER

No. 1165—1⅛" . . . . **Dealer Cost $.32**
No. 1167—1⅝" . . . . **Dealer Cost .38**
No. 1169—2⅜" . . . . **Dealer Cost .55**

TYPE B—WITH FLANGE

No. 1171—2 3/16" . . . . **Dealer Cost $.55**
No. 1172—3" . . . . **Dealer Cost .65**

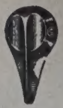
NOTE: Above Knobs also furnished with 2 set screws. Order by adding "S" to each number.

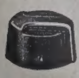
ICA NAME PLATES

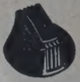
1-INCH ROUND

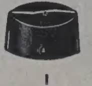
MICROPHONE

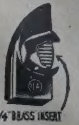
No. 2237—For "Microphone"
No. 2238—For "Phono"
No. 2239—For "On Off"
Dealer Cost $15.00C


F


G


H

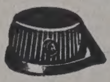

I

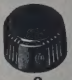


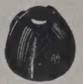
S

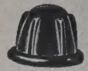
No.	Type	Color	Size	Dlr. Cost
1270	F	Black	1⅝"	$18.35C
1271	F	Black	2½"	21.66C
1137	G	Walnut	⅝"x¾"	13.33C
1138	G	Walnut	¾"x½"	11.66C
1139	G	Walnut	1"x½"	13.33C
1087	H	Walnut	1"	15.00C
1088	H	Black	1"	15.00C
1133	I	Walnut	¾"x½"	11.66C
1134	I	Walnut	1"x⅝"	13.33C
1274	S	Black	1¼"x⅝"	18.35C
1274-S*	S	Black	1¼"x⅝"	.25
1275	S	Black	2"x⅝"	20.00C
1275-S	S	Black	2"x⅝"	$.25

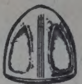
*With 2 Set Screws.


P


Q


R


W


X

No.	Type	Color	Size	Dlr. Cost
1081	P	Black	⅞"	$10.00C
1082	P	Red	⅞"	10.00C
1084	P	Brown	⅞"	10.00C
1085	P	White	⅞"	10.00C
1116	Q	Walnut	⅞"	11.66C
1117	Q	Walnut	1"	13.33C
1135	R	Walnut	¾"	10.00C
1136	R	Walnut	⅞"	11.66C
1310	W	Black	¾"	8.35C
1311	W	Walnut	¾"	8.35C
1312	W	Ivory	¾"	8.35C
1320	W	Black	15/16"	8.35C
1321	W	Walnut	15/16"	8.35C
1322	W	Ivory	15/16"	10.00C
1331	X	Walnut	¾"	8.35C
1332	X	Ivory	¾"	10.00C

ICA KNOB ASSORTMENTS

ASSORTED
ICA
KNOBS

Walnut Bakelite Junior Assortment

50 Knobs. Contains 5 each of 10 popular type knobs listed above.

No.	Dealer Cost
1048	$5.90

MASTER ASSORTMENT

100 Knobs. Contains 12 different type popular knobs, including pointer knobs.

No. 1043............................**Dealer Cost $11.50**

ECONOMY ASSORTMENT

50 Knobs. Contains 25 each (assorted colors) of the modern bakelite bullet and crown shaped knobs. Suitable for wide variety of applications.

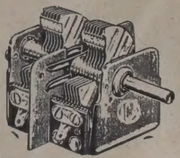
No. 1064............................**Dealer Cost $3.50**

SINCE 1921

insuline Corporation of America

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ICA MIDGET PRECISION CONDENSERS



Better mechanical design insures constancy of calibration and uniformity between units. Ball-bearings on both ends of shaft insure long life without wear or side play. Heavy brass springs make direct contact with rotor shaft, insuring a clean wiping contact at all times.

Single Gang Condenser

No.		Dealer Cost
533	135 mmfd.	$2.17

Two Gang Condenser

No.		Dealer Cost
538	135 mmfd.	2.58
534	365 mmfd.	2.58

Three Gang Condenser

No.		Dealer Cost
532	135 mmfd.	3.25
531	365 mmfd.	3.25

SUPERHETERODYNE TYPE

Designed for 455KC IF. RF section is 27 plates; 435 Mmfd. Oscillator Section is 19 plates; 173 Mmfd. Measurements similar to two gang condensers shown above.

Overall Width: 1 13/16"   Overall Height: 2"

Overall Length: 3 3/16"

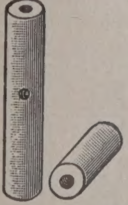
No. 545..............................**Dealer Cost $2.58**

ICA CERAMIC PADDING CONDENSERS

Compact, yet rugged Padding Condensers. Designed for aligning tandem condensers, short wave band switch coils, antenna trimmers, etc. Uses high grade Mica and Phosphor Bronze Spring contacts.

No.	Min. Cap.	Max Cap.	Dlr. Cost
611	4.0 mmfd.	40 mmfd.	$ .37
612	12.0 mmfd.	100 mmfd.	.37
613	70.0 mmfd.	350 mmfd.	.40
614	160.0 mmfd.	500 mmfd.	.40

CERAMIC RODS

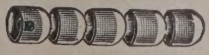


Made of Alsimag. Suitable for mounting insulators, condensers, coils, etc.

Available in two lengths.

No.	Length	Dia.	Tap.	Dlr. Cost
2310	1¼"	½"	6-32	$18.35C
2311	3¼"	½"	6-32	.25

CERAMIC BEAD INSULATORS



⅜" Diam.

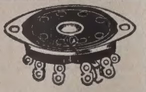
Used for construction of short concentric link lines.

No. 2315—(100 beads)........**Dealer Cost $.87**

ICA BASE-MOUNTING BAKELITE SOCKETS

No.		Dealer Cost
2480	4 Prong	$ .34
2481	5 Prong	.39
2482	6 Prong	.42
2483	7 Prong comb. large and small	.45
2489	8 Prong OCTAL	.50
2490	Contact for above Sockets	$2.08C

ICA MOLDED BAKELITE SNAP-ON SOCKETS



Octal—Loktal

Mounted in cadmium plated steel "Saddle." Equipped with 4 grounding lugs on saddle—Positive grip contacts.

No.

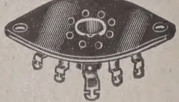
2470—Octal Socket......**Dealer Cost $12.00C**

Mtg Center 1½"—Chassis Hole 1⅛"

2471—Loktal Socket....**Dealer Cost 15.00C**

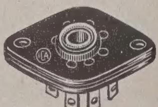
Mtg Center 1 5/16"—Chassis Hole 1"

ICA BAKELITE WAFER SOCKETS



No.		Dealer Cost
1118	4 Prong	$ 9.16C
1096	5 Prong	9.16C
1095	6 Prong	9.16C
1119	7 Prong, small	9.16C
1120	7 Prong, large	9.16C
1121	8 Prong OCTAL	11.66C
1123	Loktal Wafer	11.66C

BAKELITE WAFER SOCKETS



Wafer socket of punched bakelite for miniature seven pin button base tubes. Phosphor bronze contacts. Standard mounting centers.

No. 1122......................**Dealer Cost $10.00C**

BAKELITE WAFER SOCKET

Similar to No. 1122 above but with grounding strap.

No. 1124......................**Dealer Cost $10.00C**

MOLDED BAKELITE SOCKET

For Miniature Tubes

Black molded general purpose bakelite with mounting saddle.

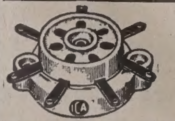
Standard mounting centers. Phosphor bronze contacts.

No. 2475......................**Dealer Cost $15.00C**

Same as above but mica filled.

No. 2476......................**Dealer Cost $18.00C**

ICA "INSULEX" BASE MOUNTING SOCKETS



Especially adapted for ultra short-wave work and transmitters.

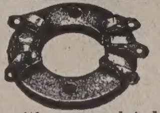
No.		Dealer Cost
290	4 Prong	$ .67
291	5 Prong	.67
292	6 Prong	.75
294	Comb. 7 Prong, large and small	.75
300	8 Prong OCTAL	.84

ICA "INSULEX" WAFER SOCKETS

An ideal low loss socket designed for ultra high frequency reception.

No.		Dealer Cost
2600	4 Prong	$ .30
2601	5 Prong	.30
2602	6 Prong	.34
2603	7 Prong, large	.37
2604	7 Prong, small	.37
2605	8 Prong OCTAL for new metal tubes	.38
2636	Contact for above Sockets	$3.33C

ACORN TUBE WAFER SOCKET



Of Navy approved ceramic with silver plated contacts. Can be easily inserted and removed and no amount of vibration will cause the tube to become loose.

No. 961..........................**Dealer Cost $ .60**

No. 2466—Contact only....**Dealer Cost 2.08C**

INSULEX INSULATORS

Made of white glazed Insulex . . . non-porous; low-loss.
All feed-thru types have cork washers.

STAND OFF INSULATORS

2300 2301 2302

2304

No.	Description	Height	Base Size	Dlr. Cost
2300	Little Pete	1"	½" x ⅞"	$10.00C
2301	Junior Pete	1⅜"	¾" x 1¼"	11.66C
2302	Big Pete	1⅞"	1" x 1½"	16.67C
2303	Beehive	2⅜"	2" Diam.	20.00C
2304	Jack Type	1½"	1" x 1½"	20.00C

FEED-THRU INSULATORS

2320 2321

2305 2306 2307

No.	Description	Ht.	Base Diam.	Mtg. Hole	Dlr. Cost
2305	Sub-Panel	1¾"	⅝"	5/16"	$15.00C
2306	Sub-Panel	2"	¾"	⅜"	20.00C
2307	Sub-Panel	2¾"	⅞"	7/16"	21.66C
2334	Large Sub-Panel	4"	1½"	⅝"	.53
2320	Jack Type	1 3/16"	¾"	7/16"	.27
2321	Jack Type	2 3/16"	⅞"	7/16"	.30

GIANT INSULEX INSULATORS

2332 2333

No.	Description	Ht.	Base Diam.	Mtg. Hole	Dlr. Cost
*2332	Feed thru	4"	2"	⅞"	.72
**2333	Feed thru	4"	2"	⅞"	.67

*With Wing Nuts   **With Screws and Nuts

Net

SINCE 1921

insuline Corporation of America

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ICA TOGGLE SWITCHES

Furnished in Nickel or Antique Bronze. Capacity 1 Amp. 250 Volts. 3 Amps. 125 Volts. Mfd. by H & H for ICA.

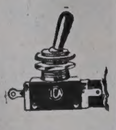
No.	Shank Length	Description	Finish	Dlr. Cost
1230	⅜"	S.P.S.T.	Nickel	$.50
1232	⅜"	S.P.S.T.	Bronze	.50
1233	¾"	S.P.S.T.	Bronze	.60
1235	¾"	S.P.S.T.	Nickel	.60
1236	⅜"	S.P.D.T.	Nickel	.63
1237	¾"	S.P.D.T.	Nickel	.72
1238	⅜"	D.P.S.T.	Nickel	.84
1365	⅜"	D.P.D.T.	Nickel	1.00
1366	¾"	D.P.D.T.	Nickel	1.12

BAT-HANDLE TOGGLE SWITCH

Made by H & H. Identical to toggle switches listed at left, except that handle is longer and shaped like a baseball bat.

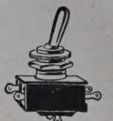
Less on and off plate.

Nickel plated only—15/32" shank.



No.	Description	Dealer Cost
1296	S.P.S.T.	$ .50
1297	S.P.D.T.	.63
1298	D.P.S.T.	.84
1299	D.P.D.T.	1.00

BAT HANDLE DOUBLE THROW SWITCH

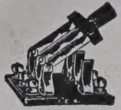


A sturdy double throw bat handle toggle switch featuring center "OFF" position. Made by H. & H. Has many uses: Television Antenna installations; for reversing motor direction; model railroads, etc.

Case Measurements: 1 13/16" L., 11/16" W., 1" H., 7/16" Shank.

No.		Dealer Cost
1386	Single Pole Double Throw	$1.08
1387	Double Pole Double Throw	1.65

ICA BAKELITE KNIFE SWITCHES

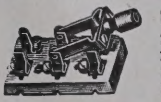


Hardware of brass, heavily nickel-plated. Mounted on highly polished bases of black BAKELITE. Firm contact assured.

No.	Description	Dlr. Cost	No.	Description	Dlr. Cost
1216	S.P.S.T.	$ .55	1220	3 P.D.T.	$1.33
1217	S.P.D.T.	.60	1221	4 P.S.T.	1.67
1218	D.P.S.T.	.75	1222	4 P.D.T.	2.00
1219	D.P.D.T.	.90	1364	5 P.D.T.	2.35
1360	3 P.S.T.	1.23			

ICA PORCELAIN KNIFE SWITCHES

Moisture-proof base. Recommended for outdoor use. Hardware of brass, heavily nickel plated.



No.	Description	Base Size	Dlr. Cost
235	S.P.S.T.	1¾"x1"	$.27
236	S.P.D.T.	2⅝"x1"	.34
237	D.P.S.T.	1¾"x1⅝"	.47
238	D.P.D.T.	2⅝"x1½"	.58

ICA SLIDER SWITCHES

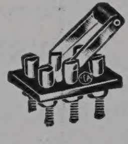
SMALL . . . COMPACT. Switch dimensions: 1½" x ½" x ¼". S.P.S.T. includes chrome mounting plate.

No.	Description	Dealer Cost
1255	S.P.S.T.	$21.68C
1259	S.P.D.T.	23.35C
1260	D.P.D.T.	.34
1264	D.P.S.T.	.30

MINIATURE BAKELITE SWITCHES

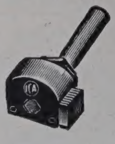
Can be mounted on panel or base. Black Bakelite base—highly nickel-plated brass parts with insulated handles.

No.	Description	Base Size	Dlr. Cost
2223	S.P.S.T.	1¼"x½"	$ .25
2224	S.P.D.T.	1¼"x½"	.42
2225	D.P.D.T.	1¼"x1"	.53
2226	D.P.S.T.	1¼"x1"	.50



ICA ROTARY SWITCHES

Rated 3 Amps. at 125 Volts. Over-all Length of shafts 1½". Made by H & H for ICA. Underwriters Approved.



No.	Threaded Shank	Description	Dealer Cost
1228*	⅜"	S.P.S.T.	$ .67
1229*	1"	S.P.S.T.	.82
1286.	⅜"	S.P.D.T.	.80
1287	1"	S.P.D.T.	.97
1288	⅜"	D.P.D.T.	1.25
1289	1"	D.P.D.T.	1.35

*Rated 3 Amps. at 250 V.

ICA HI-POWER SWITCH

Push Button Type

Designed to break primary circuit when rack door is open. D.P.S.T. Made by H & H for ICA. Capacity 12 Amp. 125 Volt. Overall size 1¾" long, ¾" wide, ¾" high, 7/16" shank.

No. 1280........Dealer Cost $1.58

ICA PUSH-BUTTON SWITCH

Single pole 2 circuit momentary switch. One circuit is "ON"; other normally "OFF." One Amp., 125 Volt, made by H & H for ICA. Shank ⅝" long.

No. 1282........Dealer Cost $1.05

ICA EXTRA HEAVY DUTY SWITCH

D.P.D.T. With Neutral Center

An extra large heavy duty, Double Pole, Double Throw Switch with neutral position in the center for use in heavy current circuits such as transmitters, power amplifiers, motors, etc. Contacts have fast "break" which reduces the tendency to arc. Rated at 10 Amps., 125 Volts. Size of switch case, 2⅛" long, 1" high, 1¼" wide. Mounting sleeve diameter ¾".

No. 1283 ....Dealer Cost $3.75

"ON-OFF" PLATE

For Toggle Switch

Nickel Plated

No.	Dlr. Cost
1300	$3.35C
Antique Bronze	
1300BR	3.35C

ICA POWER SWITCH

(Toggle Type)

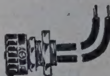
Characteristics and dimensions same as No. 1280 described above.

No. 1281
Dealer Cost $1.08

ICA ROTARY CANOPY SWITCH

Single pole switch ¼" shank with brown bakelite knob and 6" leads—1 ampere—250 volts.

No. 1257..Dealer Cost $ .42



GT AND GT/G TYPE TUBE SHIELDS

Latest type seamless, drawn shell type. Length 2¼".

No.		Dlr. Cost
1744	Open top* For tube diam. 1.218"	$10.00C
1745	Closed top* For tube diam. 1.218"	10.00C
1746	Open Top** For tube diam. 1.165"	10.00C
1747	Closed top**† For tube diam. 1.165"	10.00C

*For GT and GT/G tubes with large metal base.

**For GT tubes with small metal base.

†For Loktal tubes.

ICA COIL SHIELDS

With Detachable Base

A sturdy coil shield made of aluminum with a detachable base.

No.		Dealer Cost
1539	2⅛" x 3" High	$ .42
1540	2½" x 3½" High	.47
1549	3" x 3½" High	.50

FORM FIT TUBE SHIELDS

A tube shield that assures a snug, positive fit. Vertical grooves provide flexibility. Includes ground clip as illustrated. Protects tubes against excessive vibration.

No. 1727B—For GT; GT/G and Loktal tubes. Length 2½"................**Dealer Cost $10.00C**

No. 1729B—For GT and GT/G tubes. Length 2¾"................**Dealer Cost 10.00C**

ICA GRID CAP SHIELDS

(For Metal Tubes)

Fits firmly over grid cap, affording complete shielding. Slotted cap permits passage of grid wire.

No.		Dealer Cost
1552		$10.83C
1558	With Bakelite Insert	20.00C

ICA ALUMINUM TUBE SHIELD

For 55, 57, 68, etc. type tubes

No.		Dealer Cost
1708	1 1/16" mounting centers	$.30

ICA 807 TUBE SHIELD

For use with Transmitter Pentodes, and Tetrodes, to prevent oscillation. Can also be used on RK 20, RK 39 and 804 tubes.

No.	Dealer Cost
1545	$ .42

MINIATURE TUBE SHIELD AND CLIP

For miniature tubes with T5½ bulbs. Includes base clip. Length 1⅞" Mtg. Centers (base clip) ⅞" for standard miniature tubes.

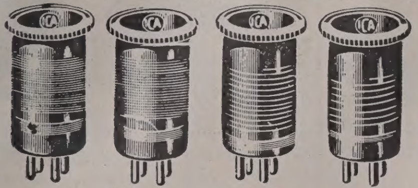
No. 1735.........Dealer Cost $10.00C

Net

SINCE 1921 **insuline** *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

SHORT-WAVE AND BROADCAST PLUG-IN COILS

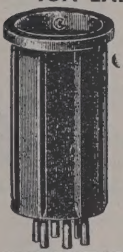


4 Prongs . . . 2 Windings

Wound on Low-Loss Bakelite Forms. Diam. 1¼"; height 2¼". Rim handle for easy changing. Uniformly spaced winding. Used with either 140 or 150 mmfd. tuning condenser.

No.	Dealer Cost
1471—Set of 4 short wave coils—from 9½ to 217 Meters	$2.50
1473—Set of 2 Broadcast coils—190 to 550 Meters	2.00

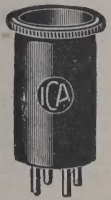
ICA LARGE LOW-LOSS "RIBBED" COIL FORMS



For use in 4, 5, and 6-prong sockets. Designed for easy grooving or threading. Size 3⅝ x 1⅝".

No.	Dealer Cost
1051—4-Prong	$ .45
1052—5-Prong	.45
1053—6-Prong	.50

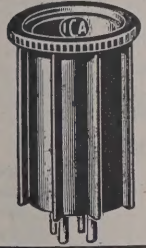
ICA SMALL BAKELITE COIL FORMS



Equipped with special rim on top making it easy to insert and pull out of socket. Black Bakelite. Ridge is grooved for color coding.

No.	Dealer Cost
1108B—4-Prong	$ .35
1113B—5-Prong	.37
1114B—6-Prong	.38

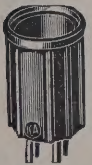
ICA TRANSMITTING COIL FORMS



Made of Low-Loss RX-47 Di-electric. Coil forms ribbed for air space winding. Knurled flange for easy handling. Supplied in standard bases, either 4, 5, or 6 prongs to fit standard sockets. Eight ¼" ribs insure low-loss winding.

No.	Dealer Cost
2670—4-Prong	$ .73
2671—5-Prong	.77
2672—6-Prong	.83

ICA SMALL RIBBED BAKELITE COIL FORMS

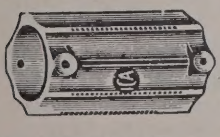


Rugged and durable, these coil forms are designed for long service. Measures 1⅜" diameter, 2¼" high with molded ribs for low-loss winding and special rim on top. There is a recess in the rim to insert the ICA Round Labels to signify wave lengths.

No.	Dealer Cost
2158—4-Prong	$ .35
2159—5-Prong	.40
2160—6-Prong	.40

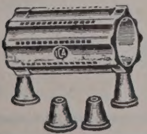
ICA GROOVED INSULEX TRANSMITTING COIL FORMS

Particularly suited for winding low-loss Inductors for Oscillators, R.F. Amplifiers, Short Wave Diathermy machines, etc. The forms are grooved to hold the turns in place and holes are provided for tapping at every other turn if desired. Raised bosses are provided for mounting supports. Grooved for 25 and 28 turns respectively with .143" spacing.



For 20 and 40 Meters

No.	Dealer Cost
2650—Without supporting legs	$1.17
2651—Complete with mounting legs and hardware	1.58



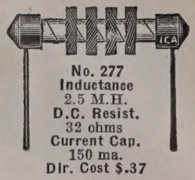
For 80 and 160 Meters

No.	Dealer Cost
2652—Without supporting legs	$2.00
2653—With supporting legs	2.25

INSULEX R.F. CHOKE COIL

HIGH FREQUENCY. Consists of four narrow sections each universally wound spaced on an Insulex form. Designed especially for high frequency receivers.

Low distributed capacity. Supplied with wire leads for mounting. May be mounted in grid leak clips.



ICA INSULEX R.F. CHOKES

Can be used in any circuit or position. Designed particularly for short wave but equally effective over the broadcast band. Insulex forms are used with a special Radio Frequency Lacquer for impregnation and ample moisture proofing. Solder lugs for firm electrical and mechanical contacts.

No.	Inductance	D.C. Resis.	Current Cap.	Dealer Cost
1777	2.5	30	150	$ .45
1775	5.5	57	150	.57
1774	10	73	150	.60
1772	30	136	125	.67
1773	60	196	125	.87
1771	80	222	125	.92

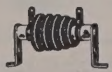
IRON CORE HIGH "Q" R.F. CHOKES

A high impedance choke coil with low distributed capacity winding on magnetic core, specially impregnated for high frequency purposes. Designed for minimum loss with smallest diameter and space requirements, and minimum D.C. resistance. Ideal for detector plate circuits and R.F. filtering systems in general.

No.	Ind. M.H.	D.C. Res. Ohms	Dealer Cost
6200	2.5	17	$1.07
6201	3.5	22	1.17
6202	5.5	28	1.17
6203	10	55	1.23
6204	30	83	1.43
6205	60	142	1.60
6206	80	168	1.70
6207	125	214	2.00

ICA TRANSMITTING R.F. CHOKES

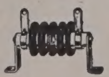
Tapered Sections



Wound on Insulex low-loss core. Has a continuous universal winding in five tapered sections. Designed for maximum impedance in amateur bands from 160 meters downward.

No.	Ind. M.H.	Cur.Ma.	Res. Ohms	Dealer Cost
266	2.8	1000	5	$2.00
267	5.3	600	12.5	1.83

HEAVY DUTY TRANSMITTING CHOKES



Heavy duty transmitting chokes designed for durable service. Extremely low power loss and distributed capacity. Coils securely fastened.

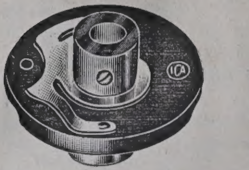
No.	Ind. M.H.	Cur. Cap. Ma.	D.C. Res. Ohms	Dealer Cost
280	2.5	1000	5	$1.83
278	5.6	600	12	1.67

Net

SINCE 1921

insuline Corporation of America

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

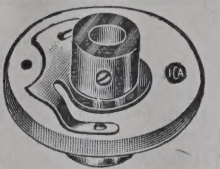


ICA BAKELITE FLEXIBLE SHAFT COUPLING

Flexible phosphor bronze spring contact mounted on a round bakelite disc. 1⅛″ diam. Has ¼″ bushing.

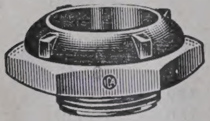
No. 2142................Dealer Cost $ .50

ICA INSULEX FLEXIBLE SHAFT COUPLING



Flexible phosphor bronze spring contact. Mounted on Insulex disc for efficient low-loss coupling. 1⅛″ diam. ¼″ bushing.

No. 2143................Dealer Cost $ .58



BAKELITE BUSHINGS

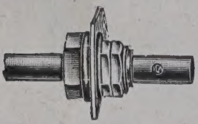
Molded bakelite bushings for complete insulation. Strong seamless threads. Heat resisting to 300°F. Complete with stamped lock nuts.

No.	Hole Size	Dealer Cost	No.	Hole Size	Dealer Cost
606	17/64″	$10.00C	609	9/16″	$11.68C
607	5/16″	10.00C	610 (Two holes)	7/32″	13.35C
608	13/32″	11.66C			

ICA INSULATED BUSHINGS

Equipped with knurled nut that can be tightened easily. Used as insulated grommet on condenser shafts, panel bearing, etc.

No.		Dealer Cost
670	Black. ⅛″ Hole, ⅜″ Diam., ⅜″ Long	$13.33C
671	Red. ⅛″ Hole, ⅜″ Diam., ⅜″ Long	13.33C
672	Black. ¼″ Hole, ½″ Diam., 7/16″ Long	16.68C
673	Red. ¼″ Hole, ½″ Diam., 7/16″ Long	16.68C

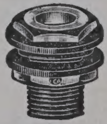


ICA PANEL BEARING ASSEMBLY

Can be used with either rigid or flexible couplings for mounting volume controls, condensers, etc., at a distance away from the panel. Will fit on panels up to 5/16″ thickness.

No. 1248—Overall length 3″................Dealer Cost $ .30
No. 1249—Overall length 6″................Dealer Cost .35

UNIVERSAL PANEL BEARING



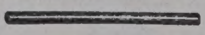
Designed to accommodate ¼″ shaft wherever a panel bushing is desired. Furnished with nut and insulating washers.

No. 1250................Dealer Cost $15.00C

ICA BRASS EXTENSION RODS

No.	Dealer Cost
2117—6″ L., ¼″ O.D.	$18.00C
2118—12″ L., ¼″ O.D.	$ .36

FENOLINE EXTENSION RODS

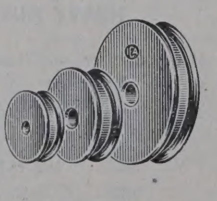


No.	Dealer Cost
2120—6″ L., ¼″ O.D.	$15.00C

ALUMINUM IDLER PULLEYS

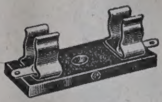
Precision made. Distortion free. Non-warping. Permits closer tolerances. Supplied in any quantity in any type — with or without shoulders. Listed here are typical sizes without shoulders, hole diam. .128″.

No.	O.D.	Cord Diam.	Dlr. Cost
601	⅜″	¼″	$3.35C
602	7/16″	5/16″	3.67C
603	½″	⅜″	4.00C
604	⅝″	½″	4.35C
605	¾″	⅝″	4.66C

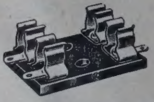


ICA BAKELITE BASE FUSE MOUNTINGS FOR 3 AG TYPE FUSES

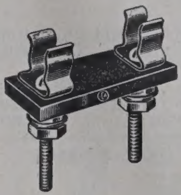
Flush Type Mounting



For radio or automotive fuses. Countersunk center hole for mounting. Equipped with soldering lugs.



No. 2340—Single Pole................Dealer Cost $13.33C
No. 7201—Double Pole................Dealer Cost 21.66C

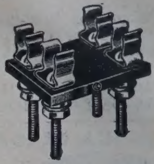


Panel Type Mounting

Equipped with 6-32 mounting screws.

No. 2341—Single Pole
Dealer Cost $16.67C

No. 7203—Double Pole
Dealer Cost $.27



FOR 8 AG TYPE FUSES

FLUSH MOUNT

No.	Dealer Cost
7202—Single Pole	$11.66C
7204—Double Pole	21.66C

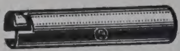
PANEL MOUNT

No.	Dealer Cost
7205—Single Pole	$15.00C
7206—Double Pole	15.00C

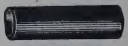
STANDARD FUSE HOLDERS

Top quality fuse holder and parts

2348



2360

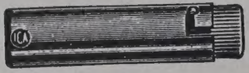


2364

	Dealer Cost
No. 2348—Standard fuse holder complete	$12.00C
No. 2360—Female sleeve only	3.00C
No. 2364—Fibre Insulator only	5.33M

JUMBO FUSE HOLDERS

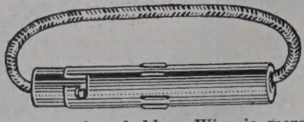
Fuse holders of various needed values



2349

2359

	Dealer Cost
No. 2349—SFE 30 Amperes (2⅝″ L. x ½″ d.)	$20.00C
No. 2346—SFE 20 Amperes (2½″ L. x ½″ d.)	20.00C
No. 2345—SFE 14 Amperes (2¼″ L. x ½″ d.)	20.00C
No. 2344—SFE 9 Amperes (2⅛″ L. x ½″ d.)	20.00C
No. 2359—Male sleeve only	3.75C
No. 2367—Bakelite bushing only	3.00C
No. 2358—Female sleeve only	5.00C



PRE-WIRED JUMBO FUSE HOLDER

Suitable for 3 A.G. 20 amp. or SFE 14 amp. fuse. Eliminates necessity of soldering when changing fuse holder. Wire is merely severed, stripped and placed in line.

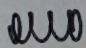
No. 2368................Dealer Cost $ .27

ANTENNA CONNECTOR . . . PARTS

2347

2362

2361



2363

	Dealer Cost
No. 2347—Antenna Connector Complete	$ 7.50C
No. 2362—Male part only (also part for 2348)	1.80C
No. 2361—Female sleeve only	2.10C
No. 2363—Spring only for 2347 and 2348	6.00M

SINCE 1921

insuline *Corporation of America*

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

ICA SHAFT COUPLINGS AND EXTENSION RODS

To increase lengths of shafts of different diameters. In two types—Brass . . . Fenoline.

Brass Couplings and Reducers

No.	Length	Hole	O.D.	Dlr. Cost
2105	¾″	¼″ coupler	7/16″	$15.00C
2106	¾″	⅜″ coupler	9/16″	15.00C
2107	¾″	⅜″ to ¼″ coupler	9/16″	15.00C
2111	1⅛″	¼″ to ¼″ shaft	7/16″	18.00C
2112	1⅛″	¼″ to ⅜″ shaft	9/16″	18.00C
2113	1⅛″	⅜″ to ¼″ shaft	7/16″	18.00C

ICA Fenoline Couplings and Reducers

No.	Length	Hole	O.D.	Dlr. Cost
2116	¾″	¼″ coupler	7/16″	15.00C
2109	¾″	⅜″ to ¼″ coupler	9/16″	15.00C
2110	1⅛″	¼″ to ¼″ shaft	7/16″	18.00C

Long Extension Couplings

Made of Brass with extra long extension.

No.	Length	I.D.	O.D.	Dlr. Cost
2123	1¾″	¼″	7/16″	$18.00C

BAKELITE AND FENOLINE TUBING

ICA tubing is strong mechanically, has extremely low electrical absorption and is highly resistant to moisture. Absolute perfection in winding of coils is assured by the use of ICA tubing—thus affording relief from complaints or failure in performance.

Finished in Natural and Black Colors
Small sizes up to one inch in Black only.

1/16″ Wall Thickness, Full Lengths.
Approximately 30 to 48″

BAKELITE			FENOLINE	
No.	Dlr. Cost Per Ft.	Size O.D.	No.	Dlr. Cost Per Ft.
100	$ .65	¼″	161	$ .58
101	.78	⅜″	162	.63
102	.83	7/16″	163	.70
103	.90	½″	164	.73
104	.97	⅝″	165	.77
105	1.07	¾″	166	.78
106	1.12	⅞″	167	.87
147	1.17	1″	134	.78
148	1.33	1¼″	135	.93
149	1.42	1½″	136	.95
150	1.55	1¾″	137	1.07
151	1.75	2″	138	1.17
152	1.80	2¼″	139	1.27
153	2.17	2½″	140	1.40
154	2.40	2¾″	141	1.67
155	2.75	3″	142	1.83
156	2.90	3¼″	143	1.97
157	3.10	3½″	144	2.32
158	3.10	3¾″		
159	3.80	4″		

STOCK SIZES OF BLACK AND BROWN FENOLINE TUBING

Individual lengths tubing in following diam.: 1″; 1¼″; 1½″; 1¾″; 2″; 2¼″; 2¾″; 3″; Wall thickness 1/16″.

No.		Dealer Cost
2131	3″ long—1″ O.D. to 3″ O.D.	$ .45
2132	4″ long—1″ O.D. to 3″ O.D.	.55
2133	6″ long—1″ O.D. to 3″ O.D.	.78

When ordering, specify exact diameter.

SPECIAL LENGTH BAKELITE TUBING

Cut to Order — Wall Thickness to 1/16″

Outside diameters range from 1″ to 4″. Prices on request. Other diameters and thicknesses quoted on request.

FENOLINE INSULATED GRID CAPS

Improved type for standard and transmitting tubes. Sturdy cadmium plated brass clip. Furnished with 12″ wire.

For 866 Transmitting Tubes

No. 683—Black..Dealer Cost $.42

For Standard Glass Receiving Tubes with small caps

No. 680—Red ....Dealer Cost $20.00C
No. 681—Black.............Dealer Cost 20.00C

RUBBER INSULATED GRID CAPS

For Transmitting Tubes

New improved type. Insulation made of special soft rubber over spring bronze.

For 866 Type Tubes

No.	Dealer Cost
870—With Leads	$ .25

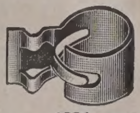
SPRING ACTION GRID CAPS

1553

1550

For all types of tubes. Positive contact. All grid caps are hot tinned ready for soldering.

No.	Dealer Cost
1550—For standard glass receiving tubes with small caps (.360 dia.)........	$7.50M
1551—For tubes with miniature caps (.250 dia.)	7.50M
1553—For glass tubes...........................	8.35M
1554—For glas stubes...........................	8.35M



1554

1551

ICA "INSULOID" RODS

Made of phenolic material of high electrical insulating properties and great tensile strength.

No.	Color	Size	Dlr. Cost
2175	Black	12″ x ¼″	$ .30
2176	Black	24″ x ¼″	.53
2179	Black	12″ x ⅜″	.42
2180	Black	24″ x ⅜″	.85
2183	Black	12″ x ½″	.57
2184	Black	24″ x ½″	1.13

BAKELITE RODS / **FENOLINE RODS**

Lengths of 18″ to 24″

BAKELITE RODS			FENOLINE RODS		
No.	Diam.	Dlr. Cost Per Ft.	No.	Diam.	Dlr. Cost Per Ft.
175	¼″	$ .87	168	¼″	$ .57
178	5/16″	1.05	169	⅜″	.77
176	⅜″	1.25	170	½″	.95
177	½″	1.65			

ICA FLEXIBLE SPAGHETTI TUBING

20 Foot Lengths

VARNISHED SPAGHETTI
ICA
TUBING

A flexible tubing in attractive colors. Will accommodate from No. 10 to No. 18 wires.

Furnished in one length—20 feet long on handy spools.

No.	Color		Dealer Cost
210	Red	Per Spool	$ .84
211	Yellow	Per Spool	.84
212	Brown	Per Spool	.84
213	Green	Per Spool	.84
214	Black	Per Spool	.84

500 Foot Spools, spaghetti tubing, same grade and colors as above. Specify color per spool.

No. 197...........................Dealer Cost $19.16

ICA SPAGHETTI TUBING

For No. 10 to No. 18 gauge wire. Guaranteed not to crack. Furnished in 30″ lengths.

No.	Color	Dealer Cost per length
182	Red	$10.00C
183	Yellow	10.00C
184	Brown	10.00C
185	Green	10.00C
186	Black	10.00C

SMALL SIZE SPAGHETTI TUBING

No.	Color	Dealer Cost
200	Red	$10.00C
201	Yellow	10.00C
202	Black	10.00C

LARGE SIZE SPAGHETTI TUBING

Supplied in 36″ lengths. Diameter 9/64″ I.D. x 3/16″ O.D.

No. 196—Supplied in black only
Dealer Cost—per length $.34

ICA GIANT SLEEVING

Made of high voltage insulation saturated cambric material. Inside diameter ⅜″. For Insulating Resistors, Small Condensers, Wire Cables, Leads, etc. 36″ lengths.

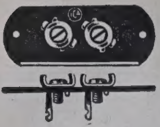
No. 198.................................Dealer Cost $.34

Net

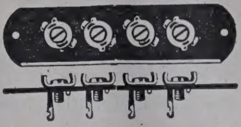
SINCE 1921

insuline Corporation of America

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS



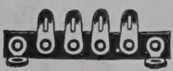
ICA TERMINAL STRIPS



Specially suited for amplifiers, mixers, receivers, etc. Made of 3/32″ heavy black Bakelite, engraved in white. Terminals are brass cadmium plated.

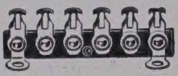
No.	Terminals	Marking	Mtg. Ctrs.	Size	Dealer Cost
2420	2	Plain	1½	⅞ x 2	$13.35C
2419	2	A & G	1½		13.35C
2418	2	Output	1½		13.35C
2417	2	Input	1½		13.35C
2414	3	Plain	2	⅞ x 2½	18.33C
2415	3	1, 2, 3	2		20.00C
2413	4	Plain	2½	⅞ x 3	23.32C
2408	4	1, 2, 3, 4	2½		.25
2405	5	Plain	3	⅞ x 3½	.28
2406	5	1, 2, 3, 4, 5	3		.32
2404	6	Plain	3½	⅞ x 4	.34
2402	6	1, 2, 3, 4, 5, 6	3½		.40
2412	7	Plain	4	⅞ x 4½	.42
2411	7	1, 2, 3, 4, 5, 6, 7	4		.45
2410	8	Plain	4½	⅞ x 5	.47
2409	8	1, 2, 3, 4, 5, 6, 7, 8	4½		.52
2424	9	Plain	5	⅞ x 5½	.52
2423	9	1, 2, 3, 4, 5, 6, 7, 8, 9	5		.57
2422	10	Plain	5½	⅞ x 6	.57
2421	10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	5½		.63

BAKELITE TERMINAL MOUNTING STRIPS



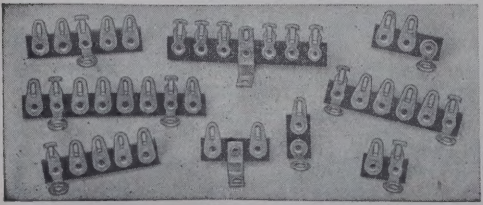
Type A

Mounting tie strips for fastening Resistors, Condensers, etc. Mounting Lug hole diameter .140″. Type A shows non-ground mounting lug. Type B shows combination grounding-mounting lug:



Type B

No.	Type	Terminals	Mtg. Centers	Mounting Lugs	Dealer Cost
2434	A	1	One Hole	1	$1.92C
2455	B	1		1	2.20C
2435	A	2		1	2.70C
2456	B	2		1	2.70C
2436	A	3	1½	2	4.75C
2457	B	3	1½	2	4.75C
2437	A	4	1⅞	2	5.75C
2458	B	4	1⅞	2	5.75C
2438	A	5	2¼	2	6.75C
2459	B	5	2¼	2	6.75C
2439	A	6	1⅞	2	8.50C
2460	B	6	1½	2	8.50C
2440	A	7	1½	2	9.25C
2461	B	7	1½	2	9.25C
2441	A	8	1⅞	2	10.50C
2462	B	8	1⅞	2	10.50C

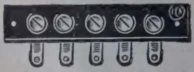


SPECIFICATION TERMINAL STRIPS

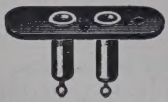
Special type terminal strips with terminals in any required position, including offset bracket type. Made to specifications. Send us your print.

BAKELITE TERMINAL STRIPS

Brown bakelite 1/16″ thick. Suitable light duty radio work, experimental purposes, etc.



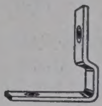
No.	Terminals	Mtg. Ctrs.	Dlr. Cost
2520	2	1 5/16	$ 9.00C
2521	3	1¾	12.00C
2522	4	2 3/16	15.00C
2523	5	2⅝	18.00C
2524	6	3 1/16	20.00C
2528 Terminal Lug & Screw only......			3.46C



TWIN JACK STRIP

With two terminals. Takes standard phone tips. Base width 11/16″. 1 11/16″ between Mounting holes.

No. 2443........................Dealer Cost $15.00C



Terminal Strip Offset Mounting Bracket

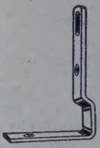
For more rigid mounting of terminal strips. Mounting hole for No. 6 screw.

No. 2430....Dlr. Cost $1.67C

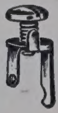
Terminal Strip Offset Mounting Bracket and Lug Combination

For sturdy mounting of terminal strips. Affords solder connection for ground. Mounting hole for No. 6 screw.

No. 2431........Dlr. Cost. $1.67C

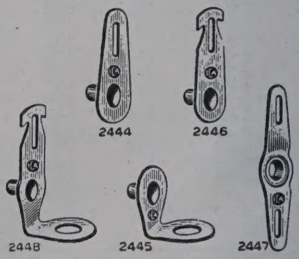


TERMINAL LUGS



No.	Dealer Cost
2425—Lugs only (less screws)	$4.03C
2426—Terminal Screws, ⅜″ L.	1.07C

TERMINAL LUGS

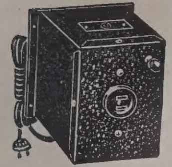


No.	Description	Dealer Cost
2444	—Terminal Lug	$5.00M
2445	—Mounting Lug—#6 hole	.83C - 5.00M
2446	—Notched Terminal Lug	.67C - 5.00M
2448	—Combination Term. and Mounting Lug—#6 hole	1.00C - 8.00M
2638	—Same as 2448—#8 hole	1.00C - 6.66M
2447	—Double lug with center eyelet	1.00C - 8.00M
2463	—Combination lug—eyelet type and bracket..	.83C - 5.00M

SINCE 1921 insuline Corporation of America

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

FILTERVOLT NOISE FILTER



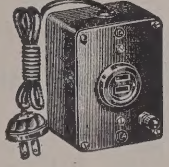
An efficient filter for disturbances caused by electrical appliances. For use with any all-wave or broadcast receiver.

Rated conservatively at 250 watts for 32, 110 and 220 volt AC or DC circuits. Can be installed either at the radio or at the source of disturbance.

Contains heavy duty R.F. chokes, large filter capacitor, and has a "PI" Filter circuit arrangement.

No. 338.............................**Dealer Cost $5.00**

ICA FILTERVOLT



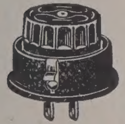
Improves extremely noisy radio reception due to interruptions in power line caused by electrical appliances, lights, etc.

No. 394

Dealer Cost $3.00

SIMPLEX FILTERVOLT

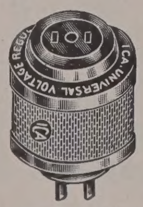
Eliminates Radio Noises Caused By—



- Electric Shavers
- Refrigerators
- Fans ● Elevators
- Motors, etc.

No. 90..............................**Dealer Cost $1.17**

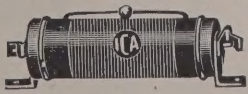
UNIVERSAL VOLTAGE REGULATOR



Voltage fluctuation often occurs not gradually but suddenly, thus bringing a tremendous strain on the tubes. This regulator protects tubes through scientific regulation of current fluctuations. Housing body and end rings are neatly constructed and of perforated japanned metal. For all Radio Sets, AC, DC.

No. 92..............................**Dealer Cost $1.17**

ICA 3-IN-1 RADIO TUNER



Functions as either an Antenna Tuner, Wave Trap, or Aerial Eliminator. Operates on any make or model radio set.

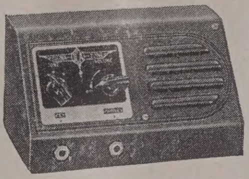
As an Antenna Tuner, it will improve the reception of a weak station. As a Wave Trap, it will separate interfering stations and improve selectivity. As an Aerial Eliminator, it makes unnecessary the outdoor aerial. Easily installed within a few minutes.

No. 93..................................**Dealer Cost $.60**

Complete with Instructions.

IMPROVED ICA DELUXE SIGNA-TONE

AUDIO OSCILLATOR — CODE PRACTICE SET — KEYING MONITOR



The ICA Signature is a perfected Audio Oscillator, having 3 different output frequencies and a continuously variable volume control. The Audio notes are similar to those of high quality commercial CW stations.

1. CODE PRACTICE SET—A number of phones and keys may be connected for intercommunication or for classroom or radio club instruction in code.

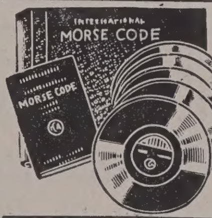
2. KEYING MONITOR—An invaluable aid in improving any ham's "fist." Will follow the "bug" at all speeds. No well-equipped station should be without this keying monitor. (A double pole keying relay is required for this function—one set of contacts for keying transmitter; other set for monitor.)

3. MODULATION SIGNAL—The steady note of the Signature is ideal for adjusting both the Modulator and modulated stages of your transmitter for 100% modulation.

4. SIGNAL TRACER—By feeding the output of the Signatone into each stage of your modulator and listening to the output of that stage, defects and "bugs" can easily be located. Complete with 50B5 and 35W4 tubes and self-contained speaker for 110 V AC-DC.

No. 4300—Dealer Net Cost...**$15.75**
No. 4301—Classroom Model (No Speaker)—Dealer Net Cost.......................... **13.50**

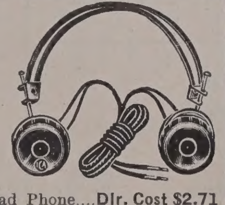
ICA UNBREAKABLE MORSE CODE RECORDS



Learn the International Morse Code Quickly, Easily — Uses EYE - EAR Method. The Complete Linguaphone Code Equipment consists of 5 Double-faced, electrically transcribed records in durable album. Contents: 3 Tables, 10 Lessons.

No. 1800—Complete ....**Dealer Cost $10.95**
No. 1800R—Record only ....**Dealer Cost 2.03**
No. 1800B—Booklet only ....**Dealer Cost .98**

ICA EAR PHONES



Complete With Head Bands

Made of molded Bakelite and light-weight nickel-plated metal. 2000 ohms.

No. 23—Double Head Phone....**Dlr. Cost $2.71**

EAR CUSHIONS

Made of soft rubber. Ideal for the amateur wireless operator, etc.

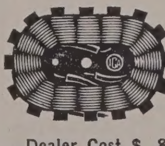
No. 195.........................**Dealer Cost $.84 pr.**

DOUBLE PHONE CORDS

No.		Dealer Cost
192	Tips on both ends	$ .64
193	Spades on one end, tips on other	.64

ICA TENNA-SCOPE LOOP

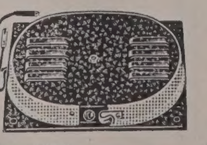
For Midgets or Portables



Eliminates necessity of outdoor or indoor antenna. Replaces the antenna coil in portable or midget sets. Easily assembled.

No. 4385...........................**Dealer Cost $ .83**

ICA TENNA-SCOPE

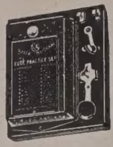


A new style built-in tuned radio antenna. Easily connected. Eliminates use of outside aerial and ground. Features: Better selectivity — Higher signal to noise ratio —Easily connected, no soldering.

No. 4380..........................**Dealer Cost $2.00**

ICA "TRIPLEX"

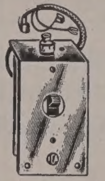
Radio & Telegraph Code Practice Set
Blinker Light
Radio Signal—Telegraph



No.		Dlr. Cost
70	Single Unit (less batteries)	$1.95
71	Double Unit (50 ft. wire)	4.12

ICA RECORD-PLAYER SWITCH

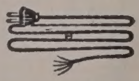
Replacement for RCA Switch 9824A



Recommended for quickly connecting Record Players, F.M. attachments, Television attachments, Microphones and similar devices into the audio amplifier of existing radio receivers.

No. 1740............................**Dealer Cost $1.55**

RESISTOR CORDS



A series of replacement resistor cords for practically all AC-DC requirements.

No.	Resistance-Ohms	Dlr. Cost
513	135	$ .84
514	160	.84
515	190	.84
516	220	.84
517	290	.84
518	340	.84
519	540	.92

UNIVERSAL RESISTOR CORD

Replacement Resistor Cord for all makes receivers. From 22 to 330 ohms on one cord. Instructions with each cord.

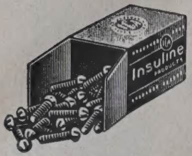
No. 205..............................**Dealer Cost $1.25**

SINCE 1921

insuline Corporation of America

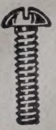
OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

RADIO HARDWARE



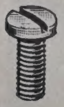
HARDWARE
5000

ICA offers a wide variety of radio hardware items suitable for practically any use in the radio-electronic and allied fields. ICA hardware is offered in standard package quantities or in handsome glass display jars for convenient storing.



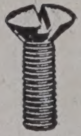
ROUND HEAD MACHINE SCREWS NICKEL-PLATED

Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description	Bulk Dlr. Cost
—	—	5504	1000	2-56 x ¼" long	$4.17M
5000	100	5500	1000	4-36 x ¼" long	4.17M
5001	100	5501	1000	4-36 x ½" long	4.17M
5002	75	5502	1000	4-36 x ¾" long	4.50M
5007	90	5507	1000	6-32 x ¼" long	4.42M
—	—	5511	1000	6-32 x ⅜" long	5.00M
5008	80	5508	1000	6-32 x ½" long	5.16M
5009	70	5509	1000	6-32 x ¾" long	5.50M
5010	50	5510	1000	6-32 x 1" long	6.50M
5014	75	5514	1000	8-32 x ⅜" long	5.42M
5015	70	5515	1000	8-32 x ½" long	6.00M
5017	40	5517	1000	8-32 x 1" long	7.50M
5022	60	5521	1000	10-32 x ½" long	7.50M



BINDING HEAD MACHINE SCREWS

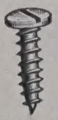
Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description	Bulk Dlr. Cost
—	—	5546	100	6-32 x 3/16" long	$9.00M
5030	80	5547	100	6-32 x ¼" long	9.00M
5031	75	5548	100	6-32 x ⅜" long	9.00M



OVAL HEAD MACHINE SCREWS NICKEL-PLATED

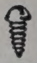
Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description	Bulk Dlr. Cost
5042†	40	5710†	100	10-32 x ⅝" long	$7.50M

†For Transmitting Racks.



PARKER-KALON SELF-TAPPING SCREWS

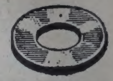
Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description	Bulk Dlr. Cost
—	—	5562	1000	No. 3x 3/16" long	$1.00C-$9.16M
5051	50	5555	1000	No. 4x ½" long	1.17C-10.00M
5052	50	5556	1000	No. 6x ¼" long	1.50C-10.00M
5053	46	5557	1000	No. 6x ⅜" long	1.50C-13.33M
5054	40	5558	1000	No. 7x ½" long	1.75C-15.00M
5055	35	5559	1000	No. 10x ¾" long	2.00C-18.33M



ESCUTCHEON PLATE SCREWS

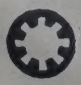
Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description	Bulk Dlr. Cost
5182	100	5677	1000	No. 1 x ¼" long	$11.00M

FLAT STEEL PLATED WASHERS



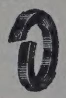
Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description	Bulk Dlr. Cost
5090	100	5595	1000	For No. 6 Screw	$2.50M
5091	100	5596	1000	For No. 8 Screw	2.50M
5092	100	5597	1000	For No. 10 Screw	2.50M
5093	100	5603	1000	For ¼" Screw	3.75M
—	—	5607	1000	For ⅜" Screw	4.17M

EVERLOCK LOCK WASHERS



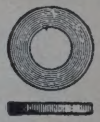
Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description	Bulk Dlr. Cost
5085	100	5592	1000	For No. 6 Screw	$3.33M
5086	90	5593	1000	For No. 8 Screw	3.75M
5087	80	5594	1000	For No. 10 Screw	4.17M

KANTLINK SPLIT TYPE LOCKWASHERS



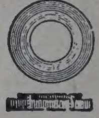
Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description	Bulk Dlr. Cost
5080	125	5589	1000	For 6-32 Screw-1/32" thick	$3.33M
5081	125	5590	1000	For 8-32 Screw-1/32" thick	3.33M
5082	100	5591	1000	For 10-32 Screw-3/64" thick	3.33M
5083	75	5602	1000	For ¼-32 Screw-1/16" thick	4.33M

FLAT FIBRE WASHERS



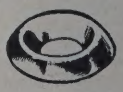
Jar* Cat. No.	Qty* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description Diam.	Thick.	Hole	Bulk Dlr. Cost
5100	125	5601	1000	5/16	1/16	3/32	$4.17M
—	—	5612	1000	⅜	1/16	⅛	4.83M
5102	90	5609	1000	½	1/32	5/32	5.00M
—	—	5626	1000	⅜	1/16	5/32	5.00M
5101	100	5605	1000	⅜	1/16	7/32	5.00M
5104	50	5610	1000	½	.020	5/16	5.00M
5105	50	5611	1000	⅝	1/32	⅜	6.42M

FIBRE SHOULDER WASHERS



Jar* Cat. No.	Qty* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description Overall Diam.	Shoulder Diam.	Overall Hgt.	Bulk Dlr. Cost
—	—	5618	100	5/16	3/16	3/32	$5.83M
5111	50	5620	100	7/16	7/32	3/32	6.66M
5110	50	5615	100	⅜	¼	5/64	5.83M
5114	50	5619	100	7/16	5/16	⅛	6.66M
5115	40	5616	100	½	5/16	1/16	5.83M
5112	50	5624	100	½	⅜	3/64	6.66M
5113	50	5628	100	⅝	½	3/32	8.35M

CUP WASHERS



Jar* Cat. No.	Qty* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description Hole Size	Bulk Dlr. Cost
5212	45	5712	100	No. 8	$5.00M
5213	20	5713	100	No. 10	$1.17C-$5.00M

All JARS ARE $.50 each, DEALER COST. BULK QUANTITIES AS SHOWN. ORDER BY Cat. No.

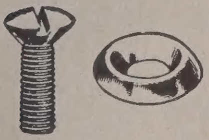
SINCE 1921 insuline Corporation of America
OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

PLATED STEEL HEXAGON NUTS

Jar* Cat. No.	Qty* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description	Bulk Dlr. Cost
5070	100	5572	1000	4-36 x ¼	$5.00M
—	—	5573	1000	4-36 x 3/16	5.00M
5074	80	5577	1000	6-32 x 5/16	5.50M
5071	90	5576	1000	6-32 x ¼	5.50M
5072	80	5580	1000	8-32 x 5/16	5.50M
5073	50	5584	1000	10-32 x ⅜	$ .85C- 6.66M
5075	12	5583	1000	¼-20 x 7/16	1.00C- 8.33M
—	—	5579	1000	¼-32 x ⅜	8.00M
5076	10	5575	1000	⅜-32 x ½	2.50C-22.50M

PLATED BRASS HEXAGON NUTS

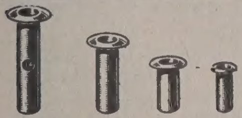
Jar* Cat. No.	Qty* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description	Bulk Dlr. Cost
—	—	5564	100	4-36 x 3/16	$ 5.83M
—	—	5566	100	6-32 x ¼	8.33M
—	—	5567	100	6-32 x 5/16	8.35M
—	—	5570	100	8-32 x 5/16	10.00M
—	—	5574	100	⅜-32 x ½	10.83M



RACK SCREW AND WASHER ASSORTMENT

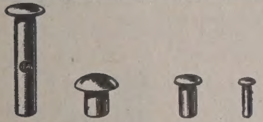
Packed in handy ICA jars. Includes 20 Oval Head Screws (10-32 x ⅝") and 20 Cup Washers (10-32).

No. 5210......................Dealer Cost $ .50



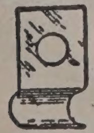
BRASS EYELETS

Jar* Cat. No.	Qty* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Diam. Shank	Length	Bulk Dlr. Cost
5172	80	5672	1000	.115	5/16	$6.00M
5171	90	5671	1000	.125	5/16	5.70M
5170	100	5670	1000	.132	3/16	5.10M



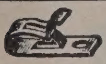
NICKEL PLATED TUBULAR STEEL RIVETS

Jar* Cat. No.	Qty* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Diam. Shank	Length	Bulk Dlr. Cost
—	—	5730	1000	⅛	5/32	$5.00M
5160	100	5663	1000	⅛	3/16	6.00M
5161	80	5664	1000	⅛	¼	6.00M
5162	70	5665	1000	⅛	5/16	6.30M



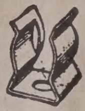
STEEL CABLE CLAMPS PLATED

Jar* Cat. No.	Qty* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description Length	Description Diam. Bend	Bulk Dlr. Cost
5200	35	5697	1000	¾	5/16	$1.33C-$12.00M
5201	30	5698	1000	15/16	9/16	1.67C- 15.00M



NICKEL PLATED SPRING CLIP

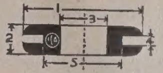
Jar* Cat. No.	Qty* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Description Width	Description Length	Bulk Dlr. Cost
5190	40	5691	100	3/16	11/16	$15.00M
5191	40	5692	100	5/16	13/16	16.67M
5192	15	5693	100	⅜	1	19.16M



MIDGET FUSE CLIPS

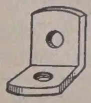
(For ¼" Glass Fuses)

Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkg.	Height	Length	Bulk Dlr. Cost
5180	35	5681	100	7/16"	¼"	$15.00M

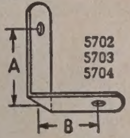


ICA FLEXIBLE RUBBER GROMMETS

Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	(3) Hole Size	(1) O.D.	(2) Thick-ness	(4) Slot	(5) Mtg. Width	Bulk Dlr. Cost
5120	15	5633	100	7/64	½	9/32	3/32	19/64	$2.92C
5121	12	5634	100	⅜	21/32	¼	1/16	7/16	3.08C
5129	15	5683	100	⅜	11/16	9/32	1/16	½	3.00C
5122	15	5635	100	¼	½	5/16	5/32	11/32	3.33C
5123	12	5639	100	7/32	7/16	3/16	1/16	11/32	2.42C
5125	10	5637	100	¼	⅝	⅜	1/16	13/32	2.75C
—	—	5641	100	½	1	⅜	5/32	¾	6.25C
—	—	5642	100	5/16	11/16	¼	1/16	½	3.08C
5127	12	5687	100	5/16	⅝	¼	1/16	⅜	2.75C
AN GROMMET (931-4-7)									
—	—	5684	100	¼	⅝	3/16	1/16	7/16	$5.90C


5705

ANGLE BRACKETS

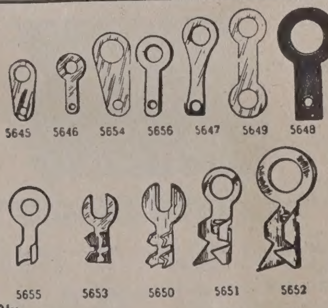


†One Hole Tapped — One Plain.

‡One Slot — One Hole.

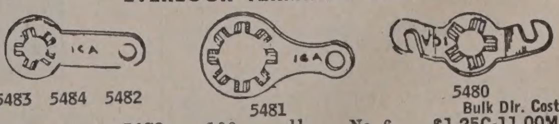
Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	A	B	Width	Bulk Dlr. Cost
5205	16	5702	100	9/32	9/32	5/16	$2.08C
5206	15	5703	100	⅜	¾	⅜	2.25C
5207	25	5704	100	9/32	1⅛	⅜	3.50C
—	—	5705	100	5/16	5/16	½ †	4.17C-28.85M
—	—	5706	100	⅜	9/16	⅜ ‡	2.08C
—	—	5707	100	⅝	13/16	⅜ ‡	2.67C

BRASS TINNED TERMINAL LUGS



Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkge.	Length	Hole Size	Bulk Dlr. Cost
—	—	5645	100	17/32	No. 8	$ .72C-$4.62M
—	—	5654	100	⅞	¼	.72C- 4.62M
5135	125	5646	100	½	No. 6	.67C- 5.00M
—	—	5656	100	11/16	No. 6	.56C- 4.01M
5136	100	5647	100	⅞	No. 10	.72C- 4.62M
5137	75	5649	100	15/16	No. 8	6.50M
5141	75	5648	100	1	5/16	6.00M
—	—	5655	100	11/16	No. 8	.80C- 4.81M
—	—	5653	100	9/16	No. 6	.80C- 4.81M
5138	100	5650	100	¾	No. 6	.80C- 6.00M
5139	75	5651	100	13/16	No. 10	1.04C- 7.21M
5140	50	5652	100	1 1/16	¼	1.44C-12.66M

EVERLOCK TERMINAL LUGS



						Bulk Dlr. Cost
—	—	5480	100	11/16	No. 6	$1.25C-11.00M
5145	50	5481	100	13/16	¼	1.12C- 8.08M
5146	60	5482	100	¾	No. 4	1.12C- 8.08M
5147	55	5483	100	¾	No. 6	1.12C- 8.08M
5148	50	5484	100	⅞	No. 8	1.12C- 8.08M

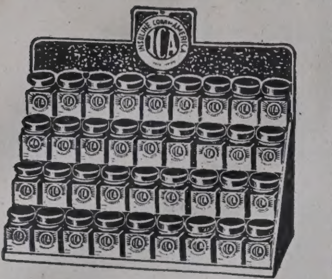
All JARS ARE $.50 each, DEALER COST. BULK QUANTITIES AS SHOWN. ORDER BY Cat. No.

SINCE 1921

insuline Corporation of America

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

DISPLAY "SALESMAN" MERCHANDISER OF HARDWARE AND RADIO ESSENTIALS



With this ICA display assortment you can now sell hardware in a packaged form. This assortment includes — all sizes Round Head Machine Screws — Nickel plated nuts to match — Parker-Kalon self-tapping screws — Kant-Link lock washers — Shake-Proof washers — plain washers — flat fibre washers — flexible grommets — lugs — eyelets — rivets — escutcheon plate screws — midget fuse clips — spade bolts — spring clips — clamps — angles — rack screws — and washers, etc.

EACH ITEM INDIVIDUALLY PACKED IN A GLASS DISPLAY JAR. Each jar contains an ample quantity of individual type and size hardware used by dealers, servicemen and amateurs. A complete radio hardware assortment, beautifully put up in these jars and stacked in a handsome durable metal rack which holds 36 jars.

No. 5275—DISPLAY RACK—Contains 36 jars. A representative assortment of radio hardware, such as screws — nuts — bolts — washers — grommets, etc. .... **Dealer Cost $18.00**

No. 5276—DISPLAY RACK—Contains 36 jars. A representative assortment of radio hardware and essentials such as fibre washers — lugs — metal washers — grommets — spring clips — fuse clips — angle brackets, etc. .... **Dealer Cost $18.00**

No. 5405—METAL DISPLAY AND UTILITY RACK—Consists of 4 shelves for storing 36 hardware jars — small parts and miscellaneous items. Measures 12" high by 17¾" wide by 8" deep .... **Dealer Cost $4.17**

UNIVERSAL RADIO HARDWARE ASSORTMENT

Contains 2 pounds of assorted hardware commonly used by servicemen, amateurs, experimenters, etc. Suitable for many types of radio, television, servicing, etc., jobs. Includes screws, nuts, bolts, rivets, eyelets, lugs, washers, etc.

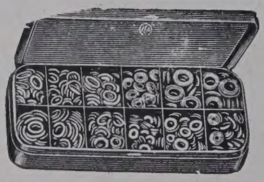
No.	Dlr. Cost
5250	$2.00

ICA ALL-PURPOSE RADIO HARDWARE AND ESSENTIAL EQUIPMENT

Packed in a handy indestructible metal utility case.

This DeLuxe assortment includes such items as knob set screws — escutcheon screws — Parker-Kalon self-tapping screws — rubber grommets — screws — nuts, etc.

No. 5251 .... **Dealer Cost $3.92**



ICA MASTER SCREW AND NUT ASSORTMENT

This assortment is contained in the ICA UTILITY METAL INDESTRUCTIBLE COMPARTMENT CASE. Contains a substantial quantity of all the popular sizes machine screws, wood screws, Parker-Kalon self-tapping screws and nuts to match.

No. 5252 .... **Dealer Cost $4.42**

ICA UTILITY GLASS JARS

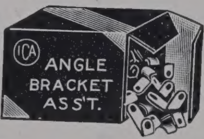
HARDWARE
5400

For use on service bench to store hardware, etc. 2½" high x 1½" deep.

No. 5400

Dealer Cost $9.00C

ICA ANGLE AND BRACKET ASSORTMENT



A complete assortment of 30 popular angles and brackets, nickel plated finish. This combination of angles and brackets has been carefully selected to fill a wide variety of requirements. Packed for ready availability.

No. 5800 .... **Dealer Cost $.60**

ICA RUBBER GROMMET ASSORTMENT

ICA
RUBBER
GROMMET
ASS'T.

Assortment contains popular sizes used in the Radio, Electrical and Television field. Carefully selected group to meet many requirements. Packed for ready use.

No. 5810 .... **Dealer Cost $ .60**
Contains 28 Rubber Grommets

No. 5811 .... **Dealer Cost $1.20**
Contains 60 Rubber Grommets

ICA FIBRE WASHER ASSORTMENT

ICA
FIBRE
WASHER
ASS'T.

A representative assortment of fibre washers both plain and shoulder, to fit all popular size screws and bolts. Suitable for wide range of uses. Packaged for ready use.

No. 5805 .... **Dealer Cost $.60**
Contains 100 assorted washers

ICA INSULATED AND BRASS SPACERS AND BUSHINGS

Used for raising sub panels, chassis, condensers, etc. For manufacturers, experimenters and laboratory use.

Made of High Quality Brass

No.	Diameter	Length	Dealer Cost per C
5760	¼"	¼"	$4.00
5761	¼"	⅜"	4.83
5762	¼"	½"	5.66
5763	¼"	¾"	6.58
5767	¼"	1"	7.50
5764	⅜"	¼"	5.83
5765	⅜"	½"	6.66
5766	⅜"	¾"	7.92
5768	⅜"	1"	10.83

Made of Fenoline Insulation

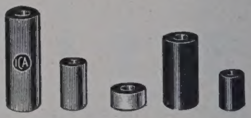
No.	Diameter	Length	Dealer Cost per C
5775	¼"	¼"	3.50
5776	¼"	⅜"	4.00
5777	¼"	½"	4.50
5778	¼"	¾"	5.50
5782	¼"	1"	6.50
5779	⅜"	¼"	4.00
5780	⅜"	½"	5.00
5781	⅜"	¾"	6.00
5783	⅜"	1"	7.50

Threaded Brass Bushings—¼" Diameter

No.		Length	Dealer Cost per C
5785	for 6/32 screw	¼"	4.83
5786	"	⅜"	5.66
5787	"	½"	6.66
5788	"	¾"	7.50
5794	"	1"	8.35
5790	for 8/32 screw	¼"	5.50
5791	"	⅜"	6.50
5792	"	½"	7.50
5795	"	1"	9.16

SPACER AND BUSHING ASSORTMENTS

Brass and Insulated

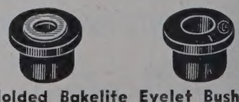


Assortment of 25 spacers and bushings in ¼ & ⅜. Diameters from ¼" to ¾". Ideal for raising sub panels, chassis, etc.

No.	Dealer Cost
5260—Insulated Assortment	$1.50
5261—Brass Assortment	1.50

Threaded Brass Bushing Assortments

5262—16 Assorted Brass bushings. Threaded for 6/32 from ¼" to ¾" lengths	1.50
5263—16 Assorted Brass bushings. Threaded for 8/32 from ¼" to ¾" lengths	1.50



Molded Bakelite Eyelet Bushing

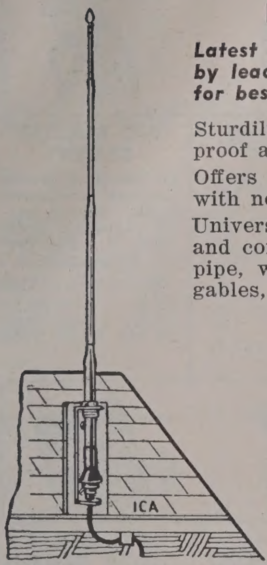
No.	Dealer Cost
2365—Suitable for either spacer or bushing. With brass eyelet	$2.92C
2366—Same as above, without eyelet	1.92C

SINCE 1921

insuline Corporation of America

OVER 3 DECADES OF QUALITY RADIO-TELEVISION PRODUCTS

MAST ANTENNAS



Latest type home antenna suggested by leading radio set manufacturers for best standard reception results.

Sturdily made of guaranteed rust-proof admiralty brass.

Offers clear, noise-free reception with no power-line interference.

Universal bracket allows permanent and convenient installation on soil pipe, window pipe, chimney, roof, gables, cornices, wall copings, etc.

Includes all accessories for Universal Mounting—Lead-in Wire; Ground Wire; Brackets; Lightning Arrester; Screws; Insulators, etc.

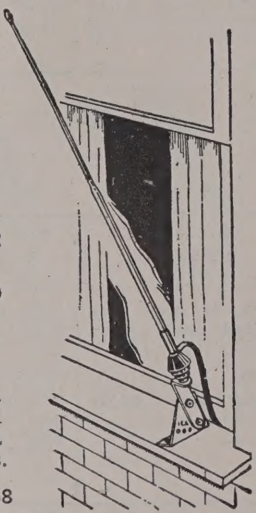
4 Sections—Extends to 12 Feet

No. 4516........Dlr. Cost $4.17

Individually boxed—10 to Standard Carton—Wt. 33 Lbs.

WINDOW ANTENNAS

Easily installed, sturdily made, rust-proof admiralty brass window antennas for homes, apartments, hotels!



Adjustable bracket at base permits focusing in any position for best results. Telescopic rods.

Completely assembled.

Includes mounting flange, insulator and lead-in strip. Individually boxed.

3 Sections—Extends to 96"

No. 4527B..........Dlr. Cost $2.92

3 Sections—Extends to 75"

No. 4529...........Dlr. Cost $2.50

Extra Length Window Antenna

4 Sections extends to 12 feet. Ideal for DX reception and rural sections where extra length needed for best results.

No. 4513...........Dlr. Cost $4.58

INSULINE AERIAL KITS

ANTENNA KIT

DE LUXE KIT

Carries all the essentials for a complete antenna installation. Highest grade materials with Underwriters' Approved Lightning Arrester. Includes:

100 ft. Heavy 7 Strand Aerial Wire, 26 gauge — 30 ft. Stranded Copper, Heavily Insulated, Weatherproof Lead-in Wire — 10 ft. Ground Wire, 22 gauge — Ground Clamp — Lead-in Strip — Underwriters' Approved Lightning Arrester — 2 Porcelain Insulators — 2 Nail-it Knobs — Handsome 4-color Box.

No. 654-N..Dealer Cost $1.95

SPECIAL KIT

A quality Antenna Kit that includes all the necessary elements for an efficient aerial set-up. Kit contains:

100 ft. Heavy 7/26 Aerial Wire — 30 ft. Stranded Copper Heavily Insulated, Weatherproofed Lead-in Wire — 10 ft. No. 22 Ground Wire — 2 Porcelain Insulators — Ground Clamp — Lead-in Strip — Lightning Arrester — Handsome 4-color Box complete with instructions.

No. 653-N..Dealer Cost $1.87

CAPITALIZER KIT

Contains high-grade components for fine performance. Includes:

100 ft. Aerial Wire, 7 Strand, 26 gauge — 30 ft. Insulated Lead-in Wire — Underwriters' Approved Lightning Arrester — 2 Porcelain Insulators — Ground Clamp — Lead-in Strip — Handsome 4-color Box.

No. 651..Dealer Cost $1.08

JUNIOR KIT

A utility Kit for satisfactory reception. Kit contains:

100 ft. 7/26 Aerial Wire — 30 ft. Insulated Lead-in Wire — 2 Porcelain Insulators — Ground Clamp — Lead-in Strip — Handsome 4-color Box with instructions.

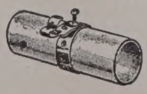
No. 649..Dealer Cost $ .90

LIGHTNING ARRESTER

Black porcelain, measures 3¾" in length. Non-grounding and weather-proofed. Individually packed.

No. 336
Dealer Cost $.27

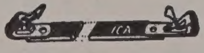
GROUND CLAMP



For a quick but firm connection to ground rod or pipe of varying diameters from ¾" to 2½". Equipped with adjustable screw and convenient clip for fast contact.

No. 223...........................Dealer Cost $8.35C

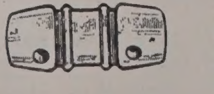
WINDOW LEAD-IN STRIP



Flexible metal strip, ½" wide, with Duco varnished covering. Fully insulated. Convenient clips soldered to ends.

No. 1504.......................Dealer Cost $11.68C

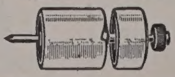
PORCELAIN INSULATOR



Glazed porcelain insulator that will not crack or absorb moisture. Offers highest measure of strain safety.

No. 227
Dealer Cost $6.66C

"NAIL-IT" KNOB



Made of durable glazed porcelain. Will not crack or absorb moisture.

No. 229...........................Dealer Cost $9.00C

ICA AIRCRAFT TYPE INSULATOR

A strain insulator made of Insulex. Particularly adaptable for aircraft, automobile and TV installation. Two ¼" mounting holes. Distance between holes ¾".

No. 2325.........................Dealer Cost $7.83C

Net

GENERAL G-C CEMENT RADIO CEMENTS FOR ALL PURPOSES

RADIO SERVICE CEMENT

G-C RADIO SERVICE CEMENT

The best Cement for repairing radios and speakers. Excellent for repairing and replacing torn cones. Vibration-proof, water-proof and fast drying. Brushes attached.

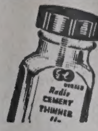
No.		List
30-2	2-oz.	$0.65
34-2	Tube	.55
30-4	4-oz.	1.10
30-6	6-oz.	1.55
30-8	8-oz.	1.95
30-16	16-oz.	3.65

RADIO SERVICE SOLVENT

G-C RADIO SERVICE SOLVENT

Best Solvent for loosening cement on speaker cones, frames, etc. Will dissolve all cements on speakers. Brush attached.

No.		List
31-2	2-oz.	$0.55
31-4	4-oz.	.95
31-6	6-oz.	1.10
31-8	8-oz.	1.40
31-16	16-oz.	1.95



G-C CEMENT THINNER

Made of same solvents as G-C Service Cement. Best thinner for all cements.

No.		List
28-2	2-oz.	$0.55
28-4	4-oz.	.95
28-8	8-oz.	1.40
28-16	16-oz.	1.95

Radio Cement

G-C SPEAKER CEMENT

Best grade cement put up in handy tubes. For radio and speaker repairs. Water-proof, vibration-proof, fast drying.

No.		List
34-2	2-oz. Tube	$0.55

PLASTIC CEMENT

G-C PLASTIC CEMENT

For cementing broken plastic cabinets, knobs, dial and crystal assemblies, grille cloth, etc. Fast drying. Brush attached.

No.		List
32-2A	2-oz.	$0.65
32-8A	8-oz.	1.95
32-16A	16-oz.	3.65

BAKELITE CEMENT

G-C BAKELITE CEMENT

For cementing bakelite to bakelite and bakelite to other materials. For repairing knobs, cabinets, panels, for inserts in moldings, attaching labels to plastics, etc. Brush attached.

No.		List
32-2	2-oz.	$0.70
32-8	8-oz.	2.40
32-16	16-oz.	4.55

VINYLITE CEMENT

G-C VINYLITE CEMENT

Clear transparent adhesive, air drying. For cementing metals, plastics, paper, leather, etc. Used also as thermoplastic cement for non-porous materials. Sets on cooling. Brush attached.

No.		List
58-2	2-oz.	$0.65
58-8	8-oz.	1.90

GENERAL CEMENT
Model Cement

G-C HOUSEHOLD & MODEL CEMENT

Best cement for model makers, household, and office use. For airplanes, railroads, ships, toys, etc. Will cement wood, paper, plastics, metal, china, ceramics, etc. Fast drying, water-proof. Brush attached.

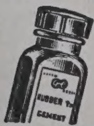
No.		List
45-2	2-oz.	$0.50
45-3	Tube	.50

FABRIC TO METAL CEMENT

G-C FABRIC TO METAL CEMENT

For cementing cloth and felt to metal or plastics. Best for grille cloth, phono turntable felts, upholstering, fabrics, etc. Fast drying, water-proof.

No.		List
22-4	4-oz.	$0.75
22-8	8-oz.	1.35
22-16	16-oz.	2.45



G-C GRAY RUBBER CEMENT

General purpose for cloth, paper, rubber, etc. Has great tackiness and adhesion for radio, shop, auto, or hobby use.

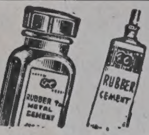
No.		List
23-8	8-oz.	$1.40
23-16	16-oz.	2.50

GRILLE CLOTH FABRIC CEMENT

G-C GRILLE CLOTH CEMENT

Rubber base cement for grille cloth, leatherette, fabric, upholstering, etc. Will not penetrate, stain, or shrink.

No.		List
38-4	4-oz.	$0.75
38-8	8-oz.	1.35
38-16	16-oz.	2.45



G-C RUBBER TO METAL DIAL DRIVE CEMENT

For cementing rubber drives to shafts, rubber mountings, gaskets, hose, weather stripping, for radios, refrigerators, autos, etc.

No.		List
35-2	2-oz.	$0.65
35-3	Tube	.55
35-4	4-oz.	1.10
35-8	8-oz.	1.90
35-16	16-oz.	3.65

G-C WOOD GLUE

New white resin water-proof glue for radio cabinets, furniture, chairs, etc. Will not injure finish. Extra strong.

No.		List
39-2	2-oz.	$0.65
39-4	4-oz.	1.10
39-8	8-oz.	1.35
39-16	16-oz.	2.15

RESISTOR CEMENT

G-C ELECTRICAL AND RESISTOR CEMENT

Heat-proof cement, hardens like porcelain. Same as on resistors, flat irons, etc.

No.		List
27-2	2-oz.	$0.65

FILM CEMENT

G-C FILM CEMENT

New improved cement for all safety and nitrate film. Sets fast. Brush attached.

No.		List
33-1	1-oz.	$0.50

ACRYLIC CEMENT

G-C ACRYLIC CEMENT

Welds and cements lucite, plexiglass, and other acrylic materials. Strong, fast drying. Brush attached.

No.		List
40-2	2-oz.	$0.65

LABEL CEMENT

G-C LABEL CEMENT

Sticks labels to anything — metal, glass, wood, tin, bakelite, plastics, etc. Good for cementing labels to bins, racks, waterproofing labels, etc.

No.		List
46-2	2-oz.	$0.65
46-8	8-oz.	1.90

Ask Your Distributor for Complete GC 64-Page

GENERAL CEMENT

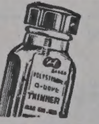
Catalog —FREE— or Write Us

No. 10 THINNER

G-C No. 67 PAINT THINNER

For Ruf-Koat, Krome-Koat, B-K Cement, Insulating Varnish, Rubber Cements, and ordinary paints.

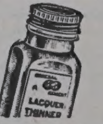
No.		List
67-2	2-oz.	$0.55
67-4	4-oz.	.95
67-8	8-oz.	1.35
67-16	16-oz.	1.90



G-C Q-DOPE THINNER

Will cut and dissolve Q-Dope and other polystyrene coil dopes and cements. Will soften and weld polystyrene rods tubes, sheets, etc.

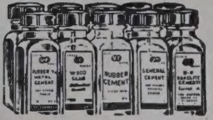
No.		List
41-2	2-oz.	$0.55
41-4	4-oz.	.95
41-8	8-oz.	1.35



G-C LACQUER THINNER

Will thin all lacquers, lacquer enamels, telephone black or gray, touch-up lacquers, airplane dopes, model cements, etc.

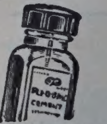
No.		List
29-2	2-oz.	$0.55
29-4	4-oz.	.95
29-8	8-oz.	1.40
29-16	16-oz.	1.95



G-C CEMENT SAMPLER KIT

What kind of cement shall I use? Get this kit and experiment with all types of cements available. Cements for all applications included so you can try them yourself for your application. 10 — 2-oz. bottles in Kit.

No.		List
345	Kit	$6.60



G-C PLI-O-BOND CEMENT

Sticks anything to anything. Cold setting, rubber-like, thermoplastic cement that dries rapidly with a flexible and very strong bond. For iron, steel, plastics, glass, cloth, plastic fabrics, etc.

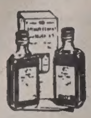
No.		List
43-2	2-oz.	$0.80
43-8	8-oz.	1.90
43-16	16-oz.	3.65

GENERAL CEMENT RADIO CHEMICALS

G-C COIL DOPE KIT

For high frequency coils, ultra low loss. Contains 2-oz. bottle Polystyrene Q-Dope, 2-oz. Thinner, and 2 brushes. The best!

No.		List
888	Kit	$1.10



G-C CEMENT & SOLVENT KIT

"Handy to carry with you." Contains bottle G-C Radio Cement and G-C Solvent, with brushes.

No.		List
343	Kit	$0.85

G-C CONTACT & ATTENUATOR KIT

For cleaning and lubricating attenuator, tunners, contacts, all-wave switches, condenser bearings, etc. Eliminates noise and prevents corrosion.

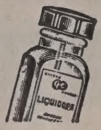
No.		List
777	Kit	$1.25

INSULATING AND DIPPING VARNISH

G-C INSULATING & DIPPING VARNISH

For treating field coils, noisy or buzzing transformers and chokes. Air dries to a tough insulating film. Can be brushed or dipped.

No.		List
56-2	2-oz.	$0.65
56-4	4-oz.	1.05
56-8	8-oz.	1.65
56-16	16-oz.	2.75



G-C LIQUIDOPE

All wave nitrocellulose base dope for coils. Air dries fast to tough film, that insures toughness and firmness. Use for sealing, doping, supporting coils, etc.

No.		List
36-2	2-oz.	$0.65
36-8	8-oz.	1.90
36-16	16-oz.	3.30

G-C Q-DOPE

Liquid polystyrene ultra low loss coil dope for RF, UHF, and VHF components. Will not change R.F. circuit values. Performs — 70°F to 160°F. Also use as Polystyrene Cement.

No.		List
37-2	2-oz.	$0.65
37-4	4-oz.	1.10
37-8	8-oz.	1.90
37-16	16-oz.	3.30

FUNGUS VARNISH

G-C FUNGUS VARNISH

Used on radio equipment and instruments to insulate and prevent fungus growth in moist or humid climates. Air dry, brush or spray.

No.		List
57-2	2-oz.	$0.65
57-8	8-oz.	1.65
57-16	16-oz.	2.75

CONTACT AND CRYSTAL CLEANER

G-C CONTACT & CRYSTAL CLEANER

Extra pure cleaner. Fast drying for cleaning contacts and crystals. Will not injure delicate parts.

No.		List
127-2	2-oz.	$0.55
127-4	4-oz.	.95
127-8	8-oz.	1.10
127-16	16-oz.	1.65

Electronic CONTACT CLEANER

G-C RED ELECTRONIC CONTACT CLEANER

The best and only all-purpose cleaner. Dissolves the dirt and removes corrosion. Leaves protective film on contacts to prevent corrosion.

No.		List
210-2	2-oz.	$0.55
210-4	4-oz.	.95
210-8	8-oz.	1.25
210-16	16-oz.	2.20

RADIO CLEANER

G-C RADIO CHASSIS CLEANER

Clean the chassis and make extra money on every repair job. Satisfy your customer. For radio chassis, panels, testers, etc. Non-explosive cleaner.

No.		List
123-8	8-oz.	$0.95
123-16	16-oz.	1.50
123-G	1 Gal.	5.25

CARBON TETRA-CHLORIDE

G-C CARBON TETRA-CHLORIDE

100% pure for cleaning and degreasing electrical contacts, controls, motors. Absolutely safe — will not burn. Also kills bugs, roaches, ets.

No.		List
211-2	2-oz.	$0.55
211-4	4-oz.	.85
211-8	8-oz.	1.10
211-16	16-oz.	1.95
211-G	1 Gal.	6.90

CONTACT DOPE

G-C CONTACT DOPE

Ideal cleaner and lubricant for switches, controls and contacts. Resists corrosion and oxidation. Eliminates noise.

No.		List
1213	Tube	$0.45
1214	2-oz.	.65

CARB-O-TET

Specially made from 100% Carbon-Tet materials.

215-G 1 Gal.

CARBON CONTROL CLEANER

G-C CARBON CONTROL CLEANER

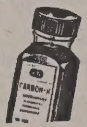
Fix noisy carbon controls without taking apart. Just squirt cleaner along shaft and job is done. Save money. Applicator supplied.

No.		List
212-2	2-oz.	$0.65

G-C GRAFOLINE

Noiseless lubricant for air exposed switch contacts, rheostats, relays, wire volume controls, tube prongs, etc. Increases current capacity of switch controls. Cleans also.

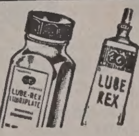
No.		List
120-2	2-oz.	$0.65



G-C CARBON-X

New improved formula. Fix those old noisy carbon controls, touch up noisy spots on worn controls. Brush in bottle.

No.		List
1204	1-oz.	$0.85
1205	2-oz.	1.10



G-C LUBE-REX

Lubriplate — white lubricant for push buttons, phonographs, Philco mystery controls, guns, fishing reels, dials, etc. Prevents corrosion, repels water.

No.		List
1206	2-oz. Tube	$0.65
1209	2-oz. Bottle	.65

SILICONE COMPOUND

G-C SILICONE COMPOUND

"The miracle moisture and water-proofing compound for Television and FM"

A permanent waterproofing material for TV and FM leads.

No.		List
8100	1-oz. Tube	$1.65
Dealer's Net		.99

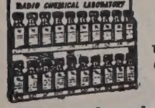
SOLDERING SOLUTION

G-C LIQUID SOLDER FLUX

Non-corrosive flux for radio and electrical work. Solders faster, smoother.

No.		List
42-2	2-oz.	$0.65
42-8	8-oz.	1.90

G-C CHEMICAL LABORATORY



Complete assortment of 20 popular radio chemicals and cements in 2-oz. bottles put up on steel rack. Very neat for the radio bench and home work shop. Steel Rack FREE.

No. 997 Lab List $12.80
Dealer's Net: 7.68

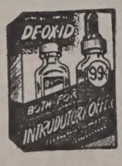
G-C DELUXE CHEMICAL LAB

Practical larger laboratory of popular chemicals and cements to fit needs of average shop — 2-oz., 4-oz., and 8-oz. bottles. Larger bottles of more popular items. Steel rack is FREE.

No. 998 Lab List $17.10
Dealer's Net: 10.26

G-C DE-OX-ID KIT

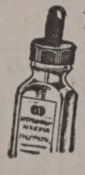
"Ideal for Television Controls"



Handy kit contains 2 oz. of De-Ox-Id and hypodermic injector in box.

No. 8460 Kit List $2.25

G-C ELECTRONIC HYPODERMIC NEEDLE INJECTOR

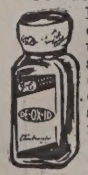


A handy applicator on the hypodermic principle; for injecting cleaners and oils into tight places. Supplied with 2-oz. bottle.

No.		List
8383	Hypodermic Needle	$0.75

G-C DE-OX-ID*

"Television Contact Cleaner"



Liquid chemical for all electronic contacts and controls. It cleans, lubricates, and preserves. Recommended for volume and tone controls, relay contacts, push-buttons, etc. Dissolves corrosion and oxidation.

No.		List
19-1	1-oz.	$0.85
19-2	2-oz.	1.60
19-16	16-oz.	12.50

* Net

GENERAL G-C CEMENT PAINTS—KITS—COMPOUNDS

RUF-KOAT
WRINKLE VARNISH

KRYSTAL-KOAT
CRYSTALIZING
LACQUER

G-C RUF-KOAT WRINKLE VARNISH

Air Dry or Bake

The only finish that will air dry and give professional wrinkle job without baking. Same as used by leading manufacturers. Apply and let dry. Colors: Black, Gray, Brown, Green, Red and Blue. (Specify Color.)

No.		List
60-2	2-oz.	$0.65
60-4	4-oz.	1.10
60-8	8-oz.	1.90
60-16	16-oz.	3.30

G-C KRYSTAL KOAT CRYSTAL LACQUER

Makes beautiful floral pattern when dry. Strictly air drying. For chassis, panels, decorations on metal, etc. Colors: Black, Gray, Brown, Green, Red, Blue and Clear. (Specify Color.)

No.		List
63-2	2-oz.	$0.65
63-4	4-oz.	1.10
63-8	8-oz.	2.15
63-16	16-oz.	4.10

TELEPHONE BLACK

G-C TELEPHONE BLACK OR GRAY

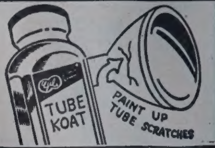
High grade lacquer enamel covers well, dries fast. Black is satin ebony finish similar to telephones. Gray is pleasing shade. For panels, racks, parts, etc. (Specify Color.)

No.		List
62-2	2-oz.	$0.65
62-8	8-oz.	1.90
62-16	16-oz.	3.30

G-C TELEVISION HIGH VOLTAGE CORONA DOPE

Used by manufacturers and service men to prevent corona shorts on high voltage circuits in Television sets. Easy to apply, air-drying. It has very excellent high voltage insulating qualities.

No.		List
47-2	2-oz.	$1.20
47-8	8-oz.	3.90
47-16	16-oz.	7.50


TUBE KOAT
PAINT UP TUBE SCRATCHES

G-C TELEVISION TUBE KOAT

A black conductive coating for outside of glass TV tubes and for interior of cabinets to ground high potential, built up for TV tubes.

No.		List
49-2	2-oz.	$1.20
49-8	8-oz.	3.90
49-16	16-oz.	7.50

KROME KOAT
ALUMINUM PAINT

G-C KROME-KOAT ALUMINUM PAINT

Fast drying, ready mixed, leaves chrome-like finish. For PA equipment, speakers, chassis, towers, antennas, etc.

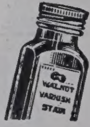
No.		List
61-2	2-oz.	$0.65
61-4	4-oz.	1.05
61-8	8-oz.	1.90
61-16	16-oz.	2.75

PORCELAIN GLAZE

G-C PORCELAIN GLAZE

Fills in nicks and dents on porcelain and duco refrigerators, sinks, washing machines, etc. Fill in and let dry.

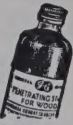
No.		List
911	2-oz.	$0.70
911-16	16-oz.	4.25


WALNUT
VARNISH
STAIN

G-C SPIRIT VARNISH

Fast drying walnut spirit varnish for touching up nicks and scratches. Will not raise the finish.

No.		List
161-2	2-oz.	$0.65
161-4	4-oz.	1.10
161-8	8-oz.	1.90


PENETRATING STAIN
FOR WOOD

G-C PENETRATING STAIN

Spirit type stain, penetrates and will not injure finish. Cover scratches, dents, darken corners on cabinets, etc. Walnut and Mahogany. Specify.

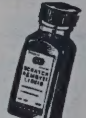
No.		List
162-2	2-oz.	$0.55
162-4	4-oz.	.95
162-8	8-oz.	1.55

MICROPHONE

G-C MICROPHONE CARBON GRANULES

Polished pure carbon granules for microphones.

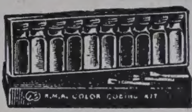
No.		List
1281	100 Size	$1.10
	Highest Sensitivity	
1282	80 Size	1.10
	Best for General Use	
1283	60 Size	1.10
	Best for Hard Use — Sound Trucks, etc.	


SCRATCH
REMOVER
LIQUID

G-C SCRATCH REMOVER LIQUID

New liquid! Removes scratches instantly. Simply wipe over scratches. Handy to have in tool box.

No.		List
917	2-oz.	$0.55
923	½-oz.	.33


R.M.A. COLOR CODING KIT

G-C RMA COLOR CODING KIT

Complete kit of all standard RMA colors to code resistors, condensers, parts, etc. Chart included. Ten bottles.

No. 677 List $2.15

COLOR CODING KIT

G-C TOUCH UP CODING KIT

Five bottles, 4 colors and solvent for coding and sealing parts, adjustments, wires, etc. Red, Green, Blue, Yellow and Solvent.

No. 675 List $1.10

DIAL LITE COLORING

G-C DIAL LITE COLOR KIT

Long lasting coloring for dials signals, lamps, panels, hobby work, etc. Red, Green, Blue, Amber, Purple and Solvent in kit.

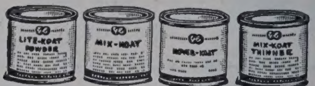
No.		List
66-6	Kit	$1.20
66-5	Kit no purple	1.05
66-2	2-oz. (Specify color)	.65
66-16	16-oz. (specify color)	2.75

LUMINOUS
LITE-KOAT FINISH KIT

G-C LUMINOUS KITS

Complete kits of luminous paint that glows in the dark. Many uses in shop and home. See it at night. Easy to use — apply and let dry.

No.		List
184-0	DeLuxe kit contains Powder, Mix-Koat, Top Koat and Brush,	$3.05
184-1	Regular kit contains Powder, Mix - Koat and Brush.	$1.80


LITE-KOAT POWDER
MIX-KOAT
KOVER-KOAT
MIX-KOAT THINNER

G-C LUMINOUS MATERIALS

LITE-KOAT POWDER

No.		List
185-1	1-oz.	$1.05

KOVER-KOAT

To protect and cover luminous material.

No.		List
187-2	2-oz.	$0.65

MIX-KOAT

To mix with powder.

No.		List
186-2	2-oz.	$0.65
186-8	8-oz.	1.60

MIX-KOAT AND KOVER-KOAT THINNER

No.		List
188-2	2-oz.	$0.65

G-C DIAL OIL

Made with graphite. Special for lubricating dials, drives, and fine mechanisms. Long lasting.

No.		List
1245	4-oz.	$0.55

REFRIGERATOR OIL

G-C REFRIGERATOR AND APPLIANCE OIL

Non-gumming oil for household appliances and small motors. The best general purpose oil.

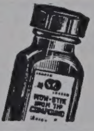
No.		List
1250	4-oz.	$0.55

Soldering
PASTE
No 1207

G-C SOLDERING PASTE

The best non-corrosive paste for radio and electrical work. Solders faster and smoother.

No.		List
1207	2-oz. can	$0.45


NON-STICK IRON TIP COMPOUND

G-C NON-STICK IRON TIP COMPOUND

Prevents soldering iron tips from burning into iron. Saves your iron and tips.

No.		List
1201	2-oz.	$0.65

G-C SILVER PRINT

"Same as used for Printed Circuits"

"No more wires" when you use G-C Silver Print. It is the same "Pure Silver" compound as used by manufacturers in Printed Circuit design. You need G-C Silver Print to repair those Printed Circuits, to touch up the circuit around eyelets, rivets, parts, etc. It is also handy for experimenters, engineers, laboratories, etc. Yes, it is a Pure Silver compound and it's air drying.

GENERAL G-C CEMENT
SILVER PRINT
GENERAL CEMENT MFG. CO.

No.		List
21-2	1-Troy oz.	$6.60

GENERAL G-C CEMENT CABINET REPAIR KITS—POLISHES

FRENCH EMULSION

G-C FRENCH EMULSION

Best pad lubricant to use with French Varnish Polishing Method.

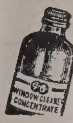
No.		List
164-4	4-oz.	$0.85

FRENCH VARNISH

G-C FRENCH VARNISH

Used by craftsmen to repair furniture and blend in the finish. Can be applied with pad, brush or spray. Dries fast.

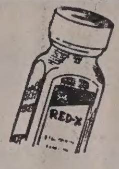
No.		List
160-2	2-oz.	$0.65
160-4	4-oz.	1.10
160-8	8-oz.	1.90



G-C WINDOW CLEANER CONCENTRATE

Mix with quart of water and make your own high-grade window cleaner. Makes glass sparkle.

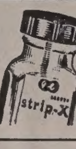
No.		List
122-5	6-oz.	$0.55



NEW G-C RED-X CORONA DOPE

Prevent corona shorts on high voltage TV circuits with this all-new G-C product. Easy to apply. Air dries faster. Excellent high voltage insulating qualities.

No.		List
50-2	2 oz.	$1.20



G-C STRIP-X

Strips enamel from magnet wire. Dip wire in and wipe insulation off—ready for soldering.

No.		List
26-2	2-oz.	$0.65

G-C CONE RECONDITIONER

Apply to old dried out cones to restore plasticizer and bring back original tones.

No.		List
25-8	8-oz.	$1.05
25-16	16-oz.	1.80

RUBBING OIL

G-C RUBBING OIL

Rub down newly finished or repaired cabinets to produce rich satin sheen finish.

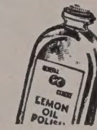
No.		List
163-16	16-oz.	$0.95

TOPS
SELF Polishing WAX

G-C FLOOR WAX

High - grade heavy duty commercial self-polishing floor wax. Gives hard, durable finish.

No.		List
97-G	1 Gal.	$7.20



G-C LEMON OIL POLISH

Inexpensive polish for removing dust, finger marks, treating dust rags, mops, etc. Picks up dust.

No.		List
91-8	8-oz.	$0.65
91-16	16-oz.	.95

Scratch Remover Polish

Scratch Remover Polish

G-C SCRATCH REMOVER POLISHES

DARK

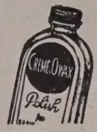
Polish contains stains to remove scratches. Sell to housewives.

No.		List
92-2	2-oz.	$0.50
92-8	8-oz.	.65
92-8-L	8-oz. Lab size	.65
92-16	16-oz.	1.10

LIGHT

For light woods; polishes and removes scratches at same time. Popular with housewives.

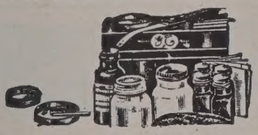
No.		List
93-2	2-oz.	$0.50
93-8	8-oz.	.65
93-16	16-oz.	1.10



G-C CREME-O-WAX POLISH

White non-staining hard wax base polish produces a hard glossy finish. Excellent for radios, pianos, refrigerators, furniture, etc.

No.		List
95-2	2-oz.	$0.50
95-8	8-oz.	.65
95-8-L	8-oz. Lab. size	.65
95-16	16-oz.	1.10



G-C REFRIGERATOR PATCH KIT

"New Improved Kit"

Supplies everything necessary to repair porcelain or Duco nicks, dents, or scratches. Kit contains bottle of pure white lacquer enamel and bottles of Yellow, Blue, Brown, and Black tinting colors, solvent, spatula, porcelain patch stick, sandpaper, and brushes. Useful on refrigerators, washers, ranges, table tops, etc. Directions included.

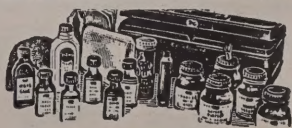
No. 902 **List $4.80**

G-C DELUXE CABINET REPAIR KIT

"New Improved Kit"

Comes in handy metal box. Contains ten shades of shellac sticks, bottles of light and dark oil stain, bottles of metal shading varnish, polish, General Skratch Stik, alcohol lamp (with alcohol), spatula, small brushes, steel wool, sandpaper, and wiping cloth. Everything necessary for a practical repair job. No special skill required. Directions included.

No. 901 **List $6.00**

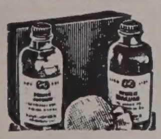


G-C MASTER DELUXE CABINET REPAIR KIT

"New, Most Complete Kit"

A complete cabinet repair kit put in a permanent metal box. All finishes supplied are spirit soluble and will not cut or damage surrounding finishes on cabinets, etc. Kit contains 10 shellac sticks, alcohol lamp, French varnishes, rubbing felt and fluid, enamels, glue, steel wool, sandpaper, polish, directions, etc. Nothing else needed! The best buy on the market!

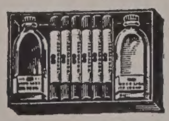
No. 900 **List $10.95**



G-C FRENCH VARNISH KIT

Kit for French polishing. Only way to blend repairs with adjoining finish. Kit includes varnish, emulsion, pad, and instructions.

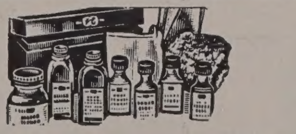
No. 160-C List $1.55



G-C MAGIC SCRATCH KIT

Combination of 6 shades fillers and light and dark scratch fluid. Easy to use on emergency jobs.

No. 915 List $1.55

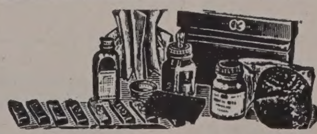


G-C MASTER CABINET TOUCH-UP KIT

"Ideal Quick Touch-Up Kit"

A complete, fast touch-up kit for repairing scratches and dents. Works on wood and plastic cabinets. The spirit finishes will not cut into the adjoining surface or injure surrounding finish. Contains French varnish, emulsion, colored enamels, stains, polishes, and filler. Sandpaper, steel wool, rubbing cloth and directions included. Brushes attached to caps of all finish bottles. Put up in metal box.

No. 907 **List $3.60**



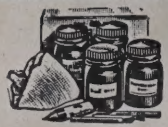
G-C RADIO-REFRIGERATOR CABINET PATCH KIT

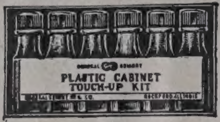
"New Improved Kit"

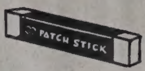
A kit of the shellac patch sticks to fill all needs. Patches wood, plastics, bakelite and porcelain. Nine shellac sticks for the light and dark shades of wood, and black and white, alcohol lamp (with alcohol), spatula, steel wool, sandpaper and wiping cloth are packed in the metal box. Directions included.

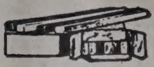
No. 903 **List $4.40**

GENERAL G-C CEMENT GRILLE CLOTH—FLOCK KITS









G-C TOUCH-UP KIT

Practical for touching up small scratches and dents. Includes light and dark varnish and spirit stains, filler, cloth, brushes, etc.

No.		List
905	Kit	$1.20

G-C PLASTIC TOUCH-UP KIT

Kit contains 6 colors touch-up lacquer enamels to fix up plastic and colored cabinets. Walnut, Ivory, Black, Red, Blue, Green, and brushes.

No.		List
910	Kit	$1.55

G-C PORCELAIN PATCH STICK

Made for white porcelain refrigerators, sinks, ranges, fixtures, etc. Simply melt into nick and smooth off.

No.		List
908	Stick	$0.45

G-C SHELLAC STICK KIT

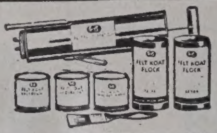
Handy assortment of 10 colors to take care of any shade of wood. Same as in G-C Kits.

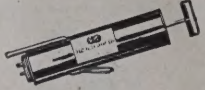
No.		List
925	Kit	$2.00

G-C SHELLAC STICKS

High grade sticks for filling dents and nicks in wood cabinets and furniture. Sticks 7″ long.

No.	List	No.	List
929 Lt. Walnut	$0.55	979 Dk. Oak	$0.55
930 Dk. Walnut	.55	980 Transparent	.55
933 Black	.55	981 Lt. Transp.	.55
934 White	.55	982 Walnut	.55
935 Maple	.55	983 Mahogany	.55
978 Lt. Oak	.55	984 Blonde Maple	.55





FELT-KOAT UNDERCOAT

RUBBER UNDERCOAT

FELT-KOAT THINNER

G-C FELT KOAT FLOCK KIT

New G-C kit with special blower gun. Distributes flock evenly and applies a thick velvet-like coat. Kit is complete with gun, brown and ivory flock, brown and ivory undercoat, thinner, brush, etc. Gives professional job on turntables, cabinets, grilles, tool boxes, toys, signs, etc. Has thousands of applications.

No.		List
180-2	Kit	$12.65

G-C FELT KOAT KITS

Complete flock kit with flock undercoat, thinner and brushes and shaker type can for applying flock. Colors: Brown, Blue, Taupe, Black, Red, Green and Gold. (Specify Color).

No.		List
180-0	DeLuxe Kit	$3.30
180-1	Reg. Kit (No brush or thinner)	2.35

G-C FLOCK BLOWER GUN

It's easy to apply flock and be sure to get a good job with the G-C Patented Gun. Gun can also be used for dusting and cleaning.

No.		List
180-3	Gun	$4.80
180-4N	Cleaning Nozzle for Gun	.70

G-C FLOCK UNDERCOAT

Material is first applied on surface to be flocked. Then flock is applied. Used on metal, wood, paper, etc. Colors: Brown, Taupe, Blue, Black, Ivory, Red, Green, Silver and Gold. (Specify Color).

No.		List
180-4	4-oz.	$1.20
180-8	8-oz.	2.15
180-16	16-oz.	3.30

FLOCK SIZING THINNER

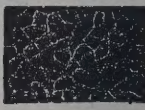
For #180 Undercoat.

181-4	4-oz.	$0.50
181-8	8-oz.	.65
181-16	16-oz.	.95

FELT COAT FLOCK

Skratch STIK

TELEVISION LENS & TUBE CLEANER



G-C FELT-KOAT FLOCK

Genuine Rayon Flock, $\frac{1}{16}$″ length fibers accurately cut, give beautiful even finish. One pound covers approximately 90 sq. ft. Colors: Brown, Taupe, Blue, Black, Ivory, Red, Green, Silver, and Gold. (Specify Color).

No.		List
180-5	2-oz. Can	$1.20
180-6	½-lb. Bag	3.60
180-7	1-lb. Bag	6.05

G-C GENERAL SCRATCH STICK

Removes scratches. Simply run over scratches and they will disappear. Handy to carry in your pocket or tool box for emergency repairs. Also sell to housewives.

No.		List
909	Scratch Stik	$0.45
909-D	Display 12 Stiks	5.40

1-A SKRATCH STIK DEAL — WIRE DISPLAY FOR DEALERS

Dealers and servicemen — Display the No. 1-A Skratch Stik deal in your shop or store and sell Skratch Stiks to your customers. Every home and office needs one. You can earn extra profit with this self-selling display.

No. 1-A Deal 12 Skratch Stiks Wire
List $5.90
Dealer's Net 3.54*

G-C TELEVISION LENS AND TUBE CLEANER

Specially prepared cleaner for Television Lens and Tubes. Eliminates marks and spots and makes tube and lens crystal clear.

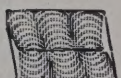
No.		List
216-8	8-oz.	$0.85
216-16	16-oz.	1.40

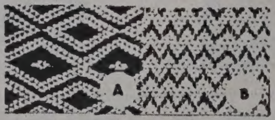
G-C INSTRUMENT FABRIC

Leatherette fabric to cover cabinets and instruments. Same as used by manufacturers. Colors: Black and Brown. (Specify Color).

No.		List
966	18″x32″	$1.80
967	Any length, per yard	3.35

Speaker GRILLE CLOTH





G-C CABINET SPEAKER GRILLE CLOTH

Beautiful modern patterns of Brown, Gold and light colors to match Walnut, Mahogany and Ivory cabinets. Specify "Ivory" when ivory is wanted.

No.	Size	List
940	18″ x 20″	$1.50
941	9″ x 18″	.65
942	12″ x 12″	.70
943	14″ x 18″	.75
944	24″ x 13″	1.00
945	18″ x 13″	.75
946	8″ x 8″	.33
947	9½″ x 10″	.33
948	6″ x 6″	.28

No.	Size	List
954	5″ x 10″	$0.39
949-1	1-Yd. Pkgs., 40″ Wide	6.30
949-1R	40″ Wide Cont. lgth., per yd.	6.00
949-2R	50″ Wide Cont. lgth., per yd.	6.85
950	Roll 9″ x 12″	.55

G-C TELEVISION GRILLE CLOTH

New television metallic grille cloth specially made for TV cabinets.

No.	Size	List
8656	18″x24″	$2.50
8657	24″x36″	4.75
8658	36″x36″	7.50
8659	36″ wide x yards	7.25

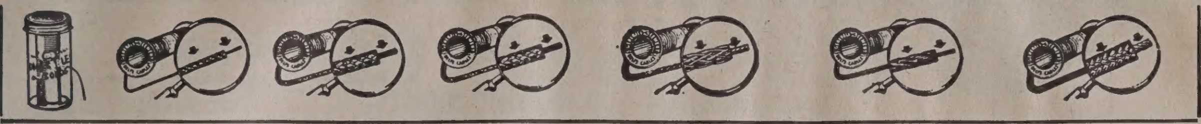
G-C METAL FLOCKED GRILLE SCREEN

Very popular. Both sides flocked with rayon over galvanized metal screen. Used on radios, P.A. speakers, intercoms, auto radios, etc. Waterproof, durable. Colors: Brown, Ivory, Maroon.

No.	Size	Color	List
951-1	8″ x 11″	Brown	$0.95
951-3	8″ x 11″	Ivory	.95
951-5	8″ x 11″	Maroon	.95
952-1	18″ x 24″	Brown	3.20
952-3	18″ x 24″	Ivory	3.20
952-5	18″ x 24″	Maroon	3.20
953-1	36″ x 36″	Brown	9.85
953-3	36″ x 36″	Ivory	9.85
953-5	36″ x 36″	Maroon	9.85

* Net

GENERAL G-C CEMENT RADIO DIAL CORDS and CABLES



THE THREE MOST POPULAR CORDS USED

G-C No. 75 STANDARD THIN NYLON CORD

.028″ diam. Most popular; used on 95% of sets. Braided nylon over fibre glass core. In plastic container.

No.	Spool	List
75-25	25 ft.	$1.40
75-50	50 ft.	2.65
75-100	100 ft.	4.95
75-11	Env.	.45

G-C No. 75-A EXTRA THIN NYLON CORD

.025″ diam. Used on RCA, GE, Strom.-Carl., etc. Braided nylon over fibre glass core. In plastic container.

No.	Spool	List
75A-25	25 ft.	$1.40
75A-50	50 ft.	2.65
75A-100	100 ft.	4.95
75A-11	Env.	.45

G-C No. 74 MEDIUM NYLON CORD

.040″ diam. Very popular; used by RCA, Philco, GE, etc. Braided nylon over fibre glass core. In plastic container.

No.	Spool	List
74-25	25 ft.	$1.40
74-50	50 ft.	2.65
74-100	100 ft.	4.95
74-11	Env.	.45

G-C No. 70 BRAIDED BRONZE CABLE

.040″ diam.; used on radio dials, instruments and for aircraft reel-in antenna cable. Phosphor bronze braided over fibre glass core for strength. In plastic container.

No.	Spool	List
70-25	25 ft.	$1.40
70-50	50 ft.	2.65
70-100	100 ft.	4.95
70-11	Env.	.45

G-C No. 71 42-STRAND BRONZE CABLE

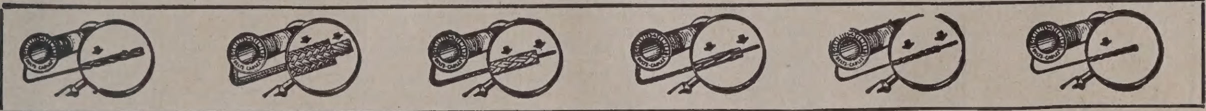
.040″ diameter; 42 strands twisted phosphor bronze over fibre glass core. Radio dials, aircraft reel-in antennas, etc. Durable and flexible. In plastic containers.

No.	Spool	List
71-25	25 ft.	$1.40
71-50	50 ft.	2.75
71-100	100 ft.	4.95
71-11	Env.	.45

G-C No. 73 HEAVY NYLON CORD

.062″ diameter; used on Philco, Majestic, Brunswick, etc. Very strong, chemically treated to prevent slipping. In plastic container.

No.	Spool	List
73-25	25 ft.	$1.65
73-50	50 ft.	3.05
73-100	100 ft.	5.50
73-11	Env.	.45



G-C No. 76 SPECIAL THIN BRONZE CABLE

.025″ diam. braided bronze as used on GE, RCA, and others. Also for flexible connections on speakers, cones, etc. In plastic container.

No.	Spool	List
76-25	25 ft.	$1.40
76-50	50 ft.	2.65
76-100	100 ft.	4.95
76-11	Env.	.45

G-C No. 73-X EXTRA HEAVY NYLON CORD

.072″ diameter. Extra heavy cord as used by Philco and others. Chemically treated to prevent slipping. In plastic container.

No.	Spool	List
73X-25	25 ft.	$1.65

G-C No. 78 BRAIDED LINEN CORD

.040″ diameter, same as used on Emerson radios, instruments, drawing boards, etc. Extra strong and durable. In plastic container.

No.	Spool	List
78-25	25 ft.	$1.40
78-50	50 ft.	2.65
78-100	100 ft.	4.95
78-11	Env.	.45

G-C No. 79 MONEL METAL CABLE

.035″ diam. Strong and durable, non-corrosive cable for radio dials and instruments. Preferred by many to bronze cable. In plastic container.

No.	Spool	List
79-25	25 ft.	$1.40
79-100	100 ft.	4.95

G-C No. 80 EXTRA THIN METAL CABLE

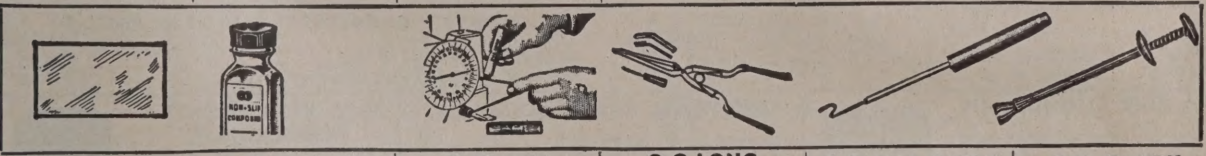
.015″ diameter. Very strong twisted steel cable. Popular on foreign and export receivers, instruments, dials, etc. In plastic container.

No.	Spool	List
80-25	25 ft.	$1.40
80-100	100 ft.	4.95

G-C No. 82 EXTRA THIN PHOSPHOR BRONZE CABLE

.012″ diam. twisted of 7 strands .004″ phosphor bronze. Used on dial instruments and Army and Navy Radar Equipment. In plastic container.

No.	Spool	List
82-25	25 ft.	$1.40
82-100	100 ft.	4.95



G-C PLASTIC CRYSTAL

Clear plastic crystal in flat sheet. For radio dials, clocks, dashboards, etc. Can be cut to size, fitted and cemented in place.

No.		List
92	8″ x 10″	$1.60

G-C NON-SLIP COMPOUNDS

Powder Compound

For dials, cords, pulleys, belts. Prevents slipping.

No.		List
1210	2-oz.	$0.55

Liquid

Penetrating liquid shrinks fibers, prevents slipping on dial cord and belts.

No.		List
1215	2-oz.	$0.60

G-C CORD DRESSING

Easy way to treat slipping cords. Simply rub on stick and job is done. Prevents and stops slipping.

No.		List
1212	Stick	$0.28

G-C LONG NOSE PLIERS

Very handy pliers to reach into places and hold parts. It's very handy for installing radio dial cords. Available in straight nose and curved nose styles.

No.		List
5192	Straight Nose Pliers	$0.95
5193	Curved Nose Pliers	.95

G-C DIAL CABLE TOOL

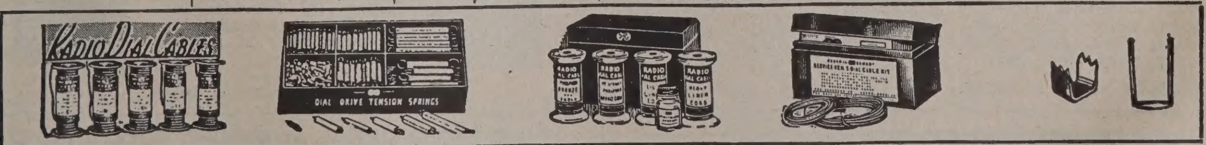
Handy tool to aid in stringing new dial cord and replacing cables slipped off pulleys and drums. It's like an extra hand. Speeds up the job.

No.	List
5096	$0.85

G-C HANDY PICK-UP TOOL

Very handy for every one. Picks up pieces in hard-to-get-at places. Will hold and start screws, nuts, etc. Will pay for itself in short time.

No.	List
5089	$1.65



G-C DIAL CABLE RACK

Very handy, includes popular cables. Hangs on wall or on bench. Handy measuring rule or sign. Kit includes rack and five 25 ft. spools each Nos. 71, 73, 74, 75 and 76 cables.

No.	List
7-A-25	$7.15

G-C DIAL SPRING KITS

Handy kit of springs as used on dial cord drives. Six sizes included.

No.		List
1054-E	10 Assorted	$0.45
1054-SE	10 Small Springs	.45
1055	Kit 25 Asst. Springs	1.30
1056	Kit 100 Asst. Springs	4.85

G-C No. 77-SK DIAL CORD KIT

Contains four 25 ft. spools most popular cord; 75-25, 74-25, 76-25, 71-25, and free assortment of dial cord clamps and eyelets.

No.		List
77-SK	Cable Kit	$5.25

G-C No. 78-SK DIAL CORD KIT

Combination kit in 10 ft. lengths of all G-C Dial Cables. Each in separate envelope, packed in leatherette box. Handy for servicemen and experimenters.

No.		List
78-SK	Cable Kit	$5.10

G-C DIAL CORD CLIPS

Handy clip and eyelet assortment used to fasten to ends of dial cords, etc. Required on every set.

No.		List
1028-E	Assortment	$0.45

G-C SERVICEMEN'S DIAL BELT KITS

General Cement Belts are approved replacements for all sets. They are made of best quality material and will not stretch. They are specially treated to prevent slipping. They are the best. Sizes available for all sets. They are easy to install as they are made to fit. No adjustments necessary.

BELTS — 25c List Each

Servicemen! Have an assortment of belts on hand for prompt replacement. Kits contain only the more popular belts used. KIT INCLUDES ATTRACTIVE STEEL BOX—BELT SCALE AND COMPLETE LISTING OF OVER 1100 MODELS.

G-C SERVICEMEN'S KITS

	List Price
No. G- 25—Kit of 25 popular belts	$ 7.50
No. G- 50—Kit of 50 popular belts	14.75
No. G-100—Kit of 100 (includes every size)	25.00

INSTRUCTIONS — FOR MEASURING BELTS

To determine size of belt. if the old belt is available, cut the belt and measure for stretched out length. This will be "cut length" of belt.

If old belt is not available or is worn out so that it cannot be properly measured, stretch a thin thread around belt pulleys on set. (Be sure to use thin thread as a thick cord will give an inaccurate reading.) Measure the thread, it will be our "circumference around pulleys." In measuring belts always remember that the **circumference around pulleys** is not the same as **stretched out or cut length.** A belt when cut, develops approximately 3/16" extra length when stretched out, depending on thickness of belt.

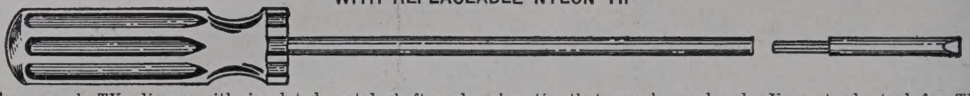
G-C RADIO BELT SPECIFICATIONS

LISTED AS PER BELT SIZE

Circumference Around Pulleys	Cut Length	G-C Belt No.
5 7/16"x¼"	5⅝"x¼"	195
6-23/32"	6-29/32"	101
6-55/64"	7-3/64"	161
6-57/64"	7-5/64"	102
6-15/16"	7-1/8"	158
7-1/64"	7-13/64"	157
7-1/4"	7-7/16"	106
7-9/32"	7-15/32"	156
7-13/32"	7-19/32"	177
7-15/32"	7-21/32"	103
7-1/2"	7-11/16"	105
7-35/64"	7-23/32"	155
7-11/16"	7-7/8"	107
7-3/4"	7-15/16"	174
7-15/16"	8-1/8"	111
8-1/64"	8-13/64"	104
8-1/32"	8-7/32"	159
8-3/32"	8-9/32"	113
8-3/16"	8-3/8"	172
8-13/64"	8-25/64"	162
8-15/64"	8-27/64"	114
8-25/64"	8-37/64"	110
8-1/2"	8-11/16"	109
8-21/32"	8-27/32"	108
8-39/64"	8-51/64"	153
8-43/64"	8-55/64"	112
8-11/16"	8-7/8"	160
8-13/16"	9"	167
9-1/16"	9-1/4"	117
9-13/64"	9-25/64"	115
9-19/64"	9-31/64"	163
9-5/16"	9-1/2"	116
9-17/32"	9-23/32"	119
9-7/8"	10-1/16"	123
9-59/64"	10-7/64"	127
10-1/16"	10-1/4"	126
10-1/4"	10-7/16"	164
10-17/64"	10-29/64"	124
10-19/64"	10-31/64"	128
10-23/64"	10-35/64"	118
10-3/8"	10-9/16"	122
10-25/64"	10-37/64"	125
10-1/2"	10-11/16"	152
10-41/64"	10-53/64"	129
10-11/16"	10-7/8"	121
10-45/64"	10-57/64"	120
10-27/32"	11-1/32"	180
10-61/64"	11-9/64"	133
10-31/32"	11-5/32"	132
11"	11-3/16"	135
11-5/64"	11-17/64"	130
11-9/64"	11-21/64"	131
11-5/32"	11-15/32"	137
11-3/16"	11-3/8"	171
11-9/32"x5/16"	11-15/32"x5/16"	131 W
11-3/8"	11-9/16"	134
11-25/64"	11-37/64"	136
11-7/16"	11-5/8"	173
11-21/32"	11-27/32"	194
11-3/4"	11-15/16"	141
11-13/16"	12"	143
12"	12-3/16"	138
12-1/32"	12-7/32"	154
12-3/32"	12-1/4"	142
12-7/32"	12-13/32"	140
straight belt	12-7/16"-str. belt	193
12-9/32"	12-15/32"	139
12-15/32"	12-21/32"	144
12-1/2"	12-11/16"	178
12-39/64"	12-51/64"	145
12-13/16"	13"	168
13-3/16"	13-3/8"	146
14-7/32"	14-13/32"	186
14-27/64"	14-39/64"	147
14-33/64"	14-3/4"	148
14-57/64"	15-5/64"	151
15-1/64"	15-13/64"	149
15-17/64"	15-29/64"	187
15-7/16"	15-5/8"	183
15-13/16"	16"	182
straight belt	16" - str. belt	192
15-61/64"	16-9/64"	150
16-19/64"	16-31/64"	170
16-27/64"	16-39/64"	184
16-15/16"	17-1/8"	185
17-1/16"	17-1/4"	165
17-13/32"	17-19/32"	169
17-37/64"	17-49/64"	179
17-5/8"	17-13/16"	190
18-1/2"	18-11/16"	189
18-9/16"	18-3/4"	181
19-7/16"	19-5/8"	166
19-47/64"	19-59/64"	188
21-5/16"	21-1/2"	175
22-35/64"	22-47/64"	176
22-19/64"	22-61/64"	191

G-C NEW NYLON TELEVISION LONG REACH ALIGNER

"WITH REPLACEABLE NYLON TIP"



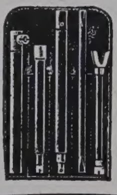
Handy new long reach TV aligner with insulated metal shaft and nylon tip that can be replaced. Very sturdy tool for TV work. 12" long overall.

No.		List Price
8607	TV Tool	$ 1.80
8607-D	Display of 12	21.60

NYLON REPLACEMENT TIP FOR No. 8607

No.		List Price
8608-E	Envelope 1 Tip	$0.30
8608-D	Display 20 Envelopes	6.00

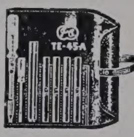
G-C NX ALIGNING KIT



Popular approved Army-Navy Kit for all sets. Fourteen tools. Contains Nos. 5004, 5011, 5017, 5015, 5016, and leatherette case.

No.		List
5020	Kit	$7.15

G-C TE-45A NEUTRALIZING KIT



Approved by U. S. Signal Corps. All popular balancing tools to make an all purpose kit. Contains two each Nos. 5051, 5052, and one each Nos. 5019, 5003, 5000, and 5" screwdriver in roll-type leatherette case.

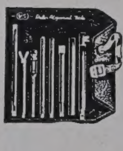
No. 5021 Kit **List $7.45**

G-C VEST POCKET ALIGNING KIT

Easy-to-carry all-purpose kit. Four tools with telescoping parts making them equivalent to six. Contains Nos. 5012, 5000, 5003, 5004 and leatherette case.

No.		List
5022	Kit	$3.30

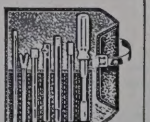
G-C ALL-PURPOSE ALIGNMENT TOOL KIT



Seventeen tools designed into nine basic tools some of which telescope into each other. Roll-type leatherette case. Includes Nos. 5001, 5003, 5004, 5011, 5016, 5017, 5053, 5056, 5057.

No. 5023 Kit **List $6.90**

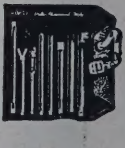
G-C DELUXE ALIGNMENT KIT



Fourteen most popular tools including Flexible Shaft Screwdriver and Tuning Wand, designed into seven basic tools. Contains Nos. 5002, 5004, 5011, 5014, 5016, 5017, 5019. In leatherette roll-type case.

No. 5026 Kit **List $8.25**

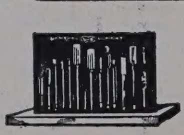
G-C STANDARD TELEVISION ALIGNMENT TOOL KIT



Here's a popular low-priced alignment kit that has the latest essential tools for Television Sets. Specially engineered for Television Sets. A real value in this kit. Nine essential tools in roll-type case.

No.		List
8455	TV Kit Complete	$7.65

G-C TELEVISION ALIGNMENT TOOL KITS

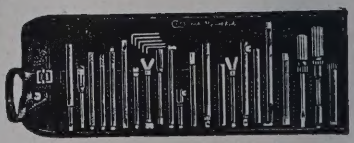


G-C Television Tools are the best quality tools you can buy. They are made specially for Television work and are all designed to give you long service. The steel tips are all extra thin and are of the best grade hardened steel that will give you service.

Kit contains 16 essential Tools.

No.		List
8280	TV Kit in Leatherette Case	$12.90
8281	Kit supplied with Bench Stand	12.90

G-C PROFESSIONAL ALIGNMENT TOOL KITS



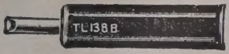
Complete kits. Be prepared to service every set with these DeLuxe Alignment Kits. In a handy roll-type leatherette case or a steel partitioned box. Kit contains 30 Tools.

No.		List
5024	Kit in Roll-Type Case	$21.95
5025	Kit in Steel Box	21.95

GENERAL G-C CEMENT ALIGNMENT TOOLS—KITS

The Best Tools for TV — Tools have Extra Thin Spring Steel Tips for Long Life

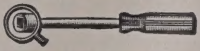
G-C TELEVISION ALIGNMENT TOOL



Special short sturdy tool with a fine metal screwdriver blade to adjust Television and FM sets while they are in the cabinet. Only 2⅝" long over-all.

No.		List
5066	TV Tool	$0.55

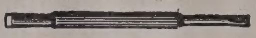
G-C TELEVISION ALIGNING WRENCH



New Television tool with ⅛" square socket wrench, 3/16" shaft with insulated handle. Approximately 6" long.

No.		List
5080	Television Wrench	$0.85

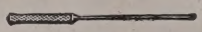
G-C K-TRAN TOOL
Ideal Television Tool



Specially designed for K-Tran and I.F. transformers. Made of bone fibre, screw driver on both ends.

No.		List
5097	Tool	$0.85

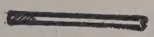
G-C TELEVISION CHANNEL TUNING TOOL



Designed for Television receivers, for making channel adjustments, etc. Completely insulated, non-metallic tool with long ⅛" narrow blade. Over-all length of tool approx. 7". Made of bone fibre.

No.		List
8195	TV Tool	$0.80

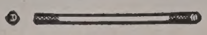
G-C TELEVISION AND FM TUNING TOOL



Special short tool with fine recessed screwdriver tip for Television and FM adjustments. Makes those difficult adjustments when set is installed in console. Only 2½" long. Made of bone fibre.

No.		List
8196	TV Tool	$0.55

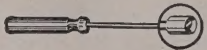
G-C TELEVISION CORE ALIGNER



For Motorola, Stewart-Warner, Belmont, etc., using Stackpole or other stud type cores that are not slotted. Made of hard fibre 6" long with a milled steel insert on one end and a thin screw driver blade on other end.

No.		List
8271	Core Aligner	$0.80

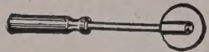
G-C TELEVISION I.F. OSCILLATOR ALIGNER



For I.F. and oscillator adjustments. Fits all makes of sets, RCA, G-E, Philco, Admiral, etc. Made of plastic handle and steel shaft. Blade is extra thin spring steel for long life.

No.		List
8272	TV Osc. Tool	$1.10

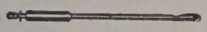
G-C TELEVISION ALL-PURPOSE ALIGNER



Specially made for TV I.F. adjustments, with a plastic handle and a hard fibre shaft. Very thin spring steel tip is recessed so the tool will guide itself over the screws.

No.		List
8273	TV Aligner	$1.10

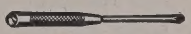
G-C TELEVISION LONG REACH ALIGNER



Made for Admiral, Zenith, RCA, and other sets to adjust nested iron cores and make front end adjustments. The blades are extra thin, made of bone fibre and are extra long.

No.		List
8274	Long Reach Aligner	$1.10

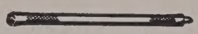
G-C TELEVISION ZENITH UNIVERSAL ALIGNER



Designed for Zenith and other sets. Made of bone fibre and plastic handle, it has a thin fibre screw driver on one end and a recessed extra thin spring steel tip on the other end.

No.		List
8275	TV Universal Aligner	$0.80

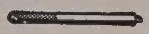
G-C TELEVISION DUPLEX ALIGNER



All-purpose TV aligner for trimmers and I.F. transformers. Made of bone fibre with extra thin spring steel tips. One end has a projected tip, the other end has a recessed tip.

No.		List
8276	Duplex Aligner	$0.80

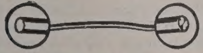
G-C TELEVISION "*Shorty*" DUPLEX ALIGNER



For trimmer and I.F. transformers where space is limited. Bone fibre with extra thin hardened spring steel tips. One end has a projected metal tip, the other end is recessed.

No.		List
8277	TV Shorty Aligner	$0.80

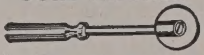
G-C TELEVISION TUNING WAND



Made of extra thin flexible plastic material to fit small coil openings in TV sets. Brass insert on end reduces inductance and iron core on other end increases the inductance.

No.		List
8278	TV Tuning Wand	$0.80

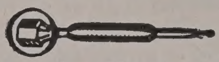
G-C TELEVISION CORE ALIGNER



For hard-to-reach places in TV sets. Tool has a recessed steel milled slot to fit over the Stackpole and other type stud cores that are not slotted. Steel insert is pinned in a fibre shaft for extra strength.

No.		List
8279	TV Core Aligner	$1.10

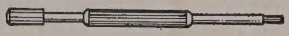
G-C NEW ZENITH TV WRENCH AND ALIGNER
NYLON TOOL



New plastic molded special tool made specially for Zenith TV sets. One end has a plastic hex wrench and the other end a small screw driver tip.

No.		List
8282	Zenith TV Tool	$0.80

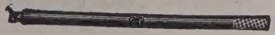
G-C NEW! TELEVISION 2-IN-1 ALIGNMENT TOOL



Made of molded nylon has a hex wrench on each end. For Zenith, Admiral, Hoffman, G.E., R.C.A., and others using the hex type slug tuners.

No.		List
8606	Tool	$0.50

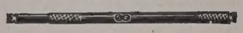
G-C ALIGNMENT SCREW DRIVER



Low Inductance Metal Tip Screw Driver made of Genflex—strong, completely insulated. Very popular all-around alignment tool. Two sizes—¼" and 7/32" diameter.

No.		List
5000	¼" Diam. x 6" Tool	$0.45
5088	7/32" Diam. x 6" Tool	.45

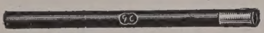
G-C DUPLEX ALIGNMENT SCREW DRIVER



Low Inductance Metal Tip on both ends made of Genflex material. One end is ¼" and other end is turned down to 7/32" diameter for small holes. Strong, completely insulated tool.

No.		List
5001	Tool	$0.85

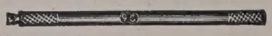
G-C "STRATO" TUNING WAND



Made of Genflex rod with brass cylinder on one end and iron core on other end, used for adjusting and checking coils. By inserting iron core end you increase the inductance and inserting brass end lowers inductance.

No.		List
5002	Tool	$1.10

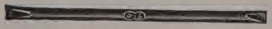
G-C RCA ALIGNING TOOL



Made of ¼" Bone Fibre, narrow screw driver on one end and screw nib inserted on other end. Used on RCA sets and others for coil and push-button adjustments.

No.		List
5003	Tool	$0.85

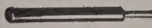
G-C NO-METAL INSULATING ADJUSTMENT SCREW DRIVER



Made of black Bone Fibre. Indispensable for aligning all-wave sets. Will give long service. Ends can be re-ground.

No.		List
5004	7" Long	$0.45
	Low-Loss Polystyrene Type—Ideal for U.H.F. Sets	
5008	7" Long	.45

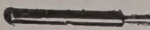
G-C INSULATED HEX WRENCH AND DRIVER



Combination hex wrench and insulated screw driver. The screw driver may be extended from handle to provide extra long length. No metal parts, this is an all-fibre tool.

No.		List
5005	Extends from 7-13"	$0.85
5006	Extends from 11-17"	1.10

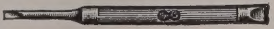
G-C NON-EXTENSION TYPE WRENCH & DRIVER



Same as No. 5005 except screw driver is permanently attached in wrench. Length not adjustable. Over-all length 6".

No.		List
5007	Tool	$0.45

G-C DUPLEX NO-METAL ALIGNMENT SCREW DRIVER

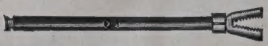


Made of Hard Bone Fibre or Polystyrene—¼" blade on one end and ⅛" blade on other. 6" long. A dual purpose alignment screw driver. Ends can be re-ground.

No.		List
5009	Bone Fibre—6"	$0.45
5010	Polystyrene—6"	.45

GENERAL G-C CEMENT ALIGNMENT TOOLS—KITS

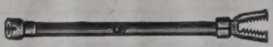
G-C ALLIGATOR WRENCH AND SCREW DRIVER



For RCA, Philco and others. Made of 7/32" Bone Fibre and strong metal wrench on one end and metal screw driver tip on other end.

No.		List
5011	Tool	$0.55

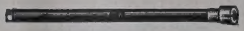
G-C ALLIGATOR AND WRENCH ALIGNING TOOL



Made of 7/32" Bone Fibre with alligator on one end and ¼" metal Hex Wrench on other end. Very popular tool.

No.		List
5012	Tool	$0.55

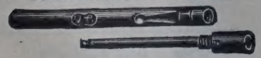
G-C WRENCH & SCREW DRIVER ALIGNING TOOL



Made of 7/32" Bone Fibre with ¼" Hex Wrench on one end and Screw Driver with metal nib on other end. This is a very handy alignment tool and wrench.

No.		List
5013	Tool	$0.95

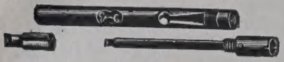
G-C 4-in-1 ALIGNMENT TOOL



This is the most popular alignment tool for most receivers. Made of Bone Fibre, combination tool. Consists of Screw Driver with metal nib, ¼" Hex Wrench slotted and 5/16" Hex Wrench on other end.

No.		List
5014	Tool	$0.95

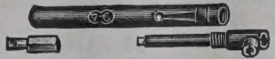
G-C 5-in-1 ALIGNMENT TOOL



Similar to our 5014 except supplied with heavy duty metal screw driver.

No.		List
5015	Tool	$1.50

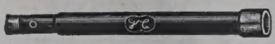
G-C 6-in-1 ALIGNMENT TOOL



Bone Fibre, combination tool. Consists of Screw Driver with metal nib, 5/16" Hex Wrench, ¼" Hex Side Wrench and ¼" Hex End Wrench slotted.

No.		List
5016	Tool	$1.50

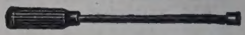
G-C DUPLEX INSULATED WRENCH ALIGNMENT TOOL



Made of Bone Fibre with ¼" Hex Metal Wrench one end and 5/16" Hex Metal Wrench on other end.

No.		List
5017	Tool	$1.40

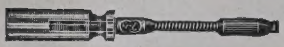
G-C TELEVISION AND PUSH-BUTTON TOOL



Required to adjust Push-Button Tuners. Socket Screw Driver made of best steel.

No.		List
5018	Tool	$0.85

G-C FLEXI-DRIVER

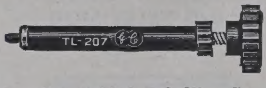


"Around-the-Corner" screw driver for radio work. Approved by U. S. Army and Navy.

No.		List
5019	Tool	$2.20

BAKELITE NEUTRALIZING TOOL

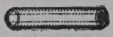
U. S. Army TL-207



Genuine Molded Bakelite. Combination screw driver and 5/16" Hex Wrench. Approved by U. S. Army Signal Corps.

No.		List
5027	Tool	$2.50

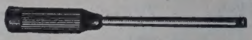
HEX INSULATED FIBRE ALIGNING WRENCHES



Hexed full length inside, so end can be cut off when worn.

No.	Length	Hex Size Across Flat	Diam.	List
5051	5"	5/16"	7/16"	$0.33
5052	5"	¼"	⅜"	.28
5053	6"	¼"	⅜"	.40
5054	8"	¼"	⅜"	.45
5055	12"	¼"	⅜"	.55

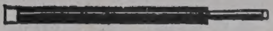
G-C SCREW DRIVERS



Insulated screw drivers for radio work. No. 5056 for radio knobs. No. 5057 regular type for all-around radio use.

No.	Blade	List
5056	3" x ⅛" (Small)	$0.30
5057	3" x 3/16" (Large)	.95

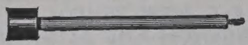
G-C TELEVISION AND TRIMMER TOOL



Handy tool to adjust smallest size trimmer condensers. Screw driver is 7/32" diameter and will fit small holes. Other end has a reinforced 5/16" hex nut wrench.

No.		List
5067	Trimmer 6" Long	$1.10

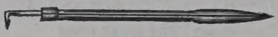
G-C TEST MALLET, SCREW DRIVER & TUBE TAPPER



Handy tool made with insulated screw driver on one end and rubber mallet on other end. Very handy for tapping tubes to find shorted or intermittent tubes.

No.		List
5081	Tool	$0.70

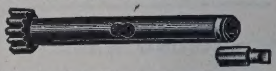
G-C TEST PROBE



Handy new test probe to "dig in" and find the trouble. Fibre point on one end. Metal hook on other end. Excellent for locating loose connections and shorted parts.

No.		List
5082	Tool	$0.65

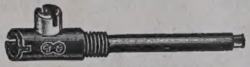
G-C BAKELITE 5/16" HEX WRENCH-SCREW DRIVER



Molded bakelite insulated wrench for radio work. 5/16" hex has reinforced brass collar to prevent breakage. 9/16" dia. x 5" long.

No.		List
5083	Tool	$0.55

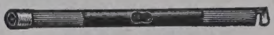
G-C BALANCING TOOL



A short neutralizing tool for work in close quarters. Sets can be adjusted without removing from cabinets. A very handy tool.

No.		List
5084	Tool	$0.65

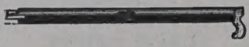
G-C ALIGNMENT WRENCH FOR PHILCO, RCA, ETC.



Excellent for neutralizing air trimmers on many models, RCA-Victor, Philco and others. Has 5/16" Hex Wrench on one end and metal hook on other end.

No.		List
5085	Tool	$1.65

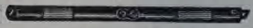
G-C ALIGNMENT TOOL FOR PHILCO, RCA, ETC.



For neutralizing air trimmer condensers on all model sets. Made of 7/32" Fibre. Metal clip on end.

No.		List
5086	Tool	$0.65

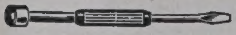
G-C TELEVISION AND PUSH-BUTTON TOOL



A specially- designed tool for adjusting iron core I.F. and R.F. transformers, coils, alignment condensers, and push-button tuners. Used on Bendix, RCA, and others. Metal tip on one end, other end recessed tip.

No.		List
5087	Tool	$0.85

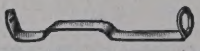
G-C TELEVISION AND TRIMMER TOOL



Specially made for adjusting neutralizing padding condensers and iron core tuners and coils.

No.		List
5091	Tool	$0.85

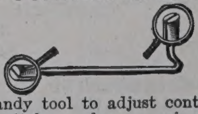
ZENITH PUSH-BUTTON WRENCH



Special wrench necessary to use in adjusting Zenith push-button radios.

No.		List
5094	Zenith Wrench	$0.20

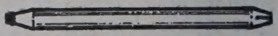
G-C CONTACT ADJUSTER



A handy tool to adjust contacts on switches, relays on pin ball machines and radio sets.

No.		List
5095	Contact Adjuster	$0.22

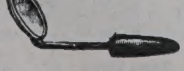
G-C GENERAL ELECTRIC ALIGNMENT TOOL



Handy alignment tool made of clear plastic. Has metal tip one end and a recessed tip on other end. Tool 6" long, ⅜" diameter. Tip ⅛" wide.

No.		List
8609	Tool	$1.00

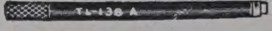
G-C INSPECTION MIRROR



No.		List
5090	Inspection Mirror	$0.55

G-C NEUTRALIZING AND ALIGNING TOOL

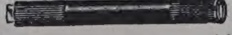
U. S. Army TL-138-A



No.		List
5098	Tool	$1.10

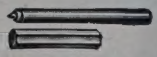
G-C NEUTRALIZING AND ALIGNING TOOL

Approved by U. S. Army & Navy



No.		List
5099	Tool	$1.40

G-C CABLE EYELET TOOL



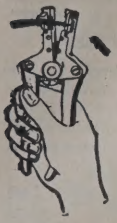
No.		List
741	Tool	$1.10

U-102

GENERAL G-C CEMENT WIRE STRIPPERS—TESTLITES

G-C STANDARD SPEEDEX WIRE STRIPPER

Fast operating precision made hand tool for stripping insulation from all types of wire. Very easy to operate. Strips 750 to 1000 wires per hour. Used by girls or men. All blades are interchangeable and easily replaced.

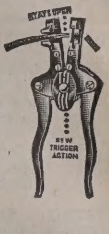


Standard Models

No.	Wire	List
733	12 to 20	$6.60
733-A	14 to 30	6.60
733-B	10 to 18	6.60
733-C	8 to 10	6.60
733-D	16,18,20,22	6.60
733-E	14, 16, 18	6.60
733-F	10, 12, 14	6.60
733-G	For #18 P.O. S.J. or parallel wire	$6.60
733-H	For the new 300-ohm television and FM transmission line	6.60
733-I	For 10, 12, 14, 16, 18, 20, 22 wire	6.60

G-C AUTOMATIC SPEEDEX WIRE STRIPPER

Similar to standard models except has the "stay open feature" with the new Speedex "Trig-O-Matic Action." Automatically holds jaws open until wire is removed, and prevents bending or crushing of fine wires. Has on-off mechanism so tool can be used as standard model if desired.

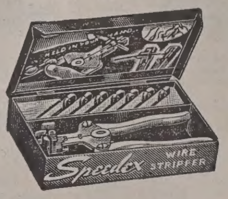


Automatic Models

No.	Wire	List
744	12 to 20	$8.25
744-A	14 to 30	8.25
744-B	10 to 18	8.25
744-C	8 to 10	8.25
744-D	16,18,20,22	8.25
744-E	14, 16, 18	8.25
744-F	10, 12, 14	8.25
744-G	For #18 P.O. S.J. or parallel wire	$8.25
744-H	For the new 300-ohm television and FM transmission line	8.25
744-I	For 10, 12, 14, 16, 18, 20, 22 wire	8.25

G-C SPEEDEX WIRE STRIPPER KIT

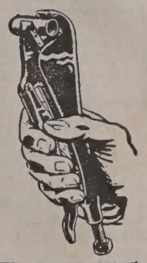
Wire stripper complete with seven different size blades put up in a specially designed permanent steel box. For wires No. 8 to No. 30.



No.		List
733-K	Standard Stripper Kit, with blades	$15.60
744-K	DeLuxe Automatic Stripper Kit, with blades	17.25

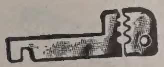
G-C SHUR-GRIP PLIER WRENCH

IT UNLOCKS WITHOUT SNAPPING THE FINGERS. Jaws are forged from alloy steel and specially heat-treated for toughness and durability. It is a high quality tool.



No.		List
767	7″ Shur-Grip	$4.35
770	10″ Shur-Grip	5.50

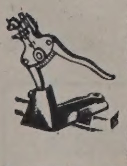
G-C SPEEDEX REPLACEMENT BLADES



Fit standard and automatic models. Blades interchangeable.

No.		List
3W	12 to 20	$1.50
3W-A	14 to 30	1.50
3W-B	10 to 18	1.50
3W-C	8 to 10	1.50
3W-D	16, 18, 20, 22	1.50
3W-E	14, 16, 18	1.50
3W-F	10, 12, 14	1.50
3W-G	Blades for parallel No. 18 P.O.S.J. or similar	1.50
3W-H	Blades for the new 300-ohm television and FM twin transmission line	1.50
3W-I	10, 12, 14, 16, 18, 20, 22 wire	1.50

G-C SPEEDEX STRIPPER BENCH HOLDER

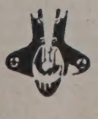


Bench type holder for any model Speedex Wire Stripper. Converts a hand operated tool to a bench type and increases production up to 2,500 wire strippings per hour. Steel.

No. 755 Bench Holder **List $4.15**

G-C SPEEDEX TRIG-O-MATIC PLATE

(Patent Pend.)

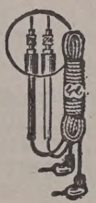


Converts any standard model Speedex Stripper to an Automatic Model. Easy to install.

No.		List
756	Trig-O-Matic Plate, only	$2.20

G-C MASTER TEST LEADS

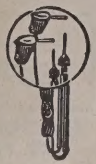
The best test leads you can buy, 50″ long, 6000-volt, heavy duty test prods, solderless type. Extra flexible leads run through the handles and are fastened under the knurled collar on the tips. Available with either the attached angle tips or the straigh solderless type tips.



No.		List
5050	With Solderless type Straight Tips	$1.65
8459	With Angle type Test Tips	1.90

G-C NEEDLE POINT TEST LEADS

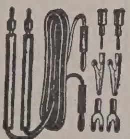
Heavy duty 6000-volt test leads, 50″ long, made with unbreakable plastic handles 6″ long with needle type chuck and needle to penetrate insulation. Available with either the attached angle tips or the straight solderless type tips.



No.		List
8461	With Solderless Straight Tips	$1.65
8462	With Angle type Test Tips	1.90

G-C UNIVERSAL TYPE TEST LEADS

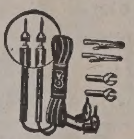
Heavy duty 6000-volt leads 50″ long, made with unbreakable plastic handles 6″ long with solderless type tips. Other end comes with standard banana plugs, interchangeable with spade lugs, phone tips, and alligator clips. Supplied complete.



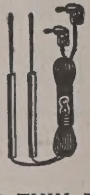
No.		List
8463	Universal Test Leads	$2.75

UNIVERSAL TYPE TEST LEADS WITH NEEDLE POINT PRODS

Heavy duty 6000-volt leads 50″ long, made with unbreakable plastic handles 6″ long. Equipped with needle point chucks and needles to pierce insulation. Other end comes with standard banana plugs, interchangeable for spade lugs, phone tips, and alligator clips. Supplied complete.



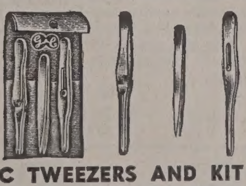
No.		List
8464	Universal Needle Test Leads	$2.75



G-C THIN TYPE TEST LEADS

This is a handy pair of test leads for hard-to-reach places. Made with slim, plastic handles with long, slim insulated test rods attached. Made with 50″ of 6000-volt test lead wire Comes equipped with angle type phone tips.

No.		List
8465	Thin Type Test Leads	$1.75

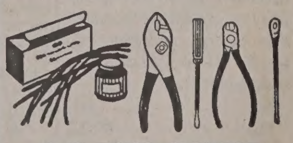


G-C TWEEZERS AND KIT

For the shop or laboratory to pick up and examine small parts, start screws and nuts, to get in hard-to-get spots, stringing dial cord, fastening springs, etc.

No.		List
7950	Tweezer Kit, beautiful leatherette case and one each tweezers described below	$3.55
7946*	6½″ Self-closing tweezer. Opens when squeezed. Serrated, blunt points	0.90
7947*	6½″ Heavy-duty type with slide lock feature. Holds wires or parts tight like an extra finger. Serrated, blunt points	1.30
7948*	4½″ Precision Tweezer. Narrow pointed ends for delicate work.	0.60

*Standard Jobber's quantity: 12 tweezers on display card — Add suffix "-D"

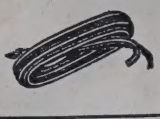


G-C TOOL HANDLE INSULATING TUBES

A new idea for insulating your handle tools. A supply of special insulating tubing in assorted sizes is included in kit to insulate all types of handles on pliers, cutters, screw driver blades, etc. You simply soak the tubing for a few minutes in G-C Service Solvent and the tubing will swell. Slip it over the handles and allow it to dry. It will shrink on drying and give it a professional appearance. (G-C Service Solvent is not included in kit.)

No.		List
8118-E	Env. Asstd. Tubing	$0.45
8118-D	Display of 20 Env.	9.00

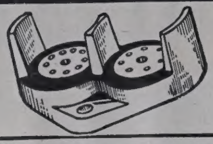
GENERAL G-C CEMENT TEST PRODS—PLUGS—TIPS



G-C TEST LEAD WIRE

Ideal long-life replacement wire, extra flexible, 6000 volt insulation. Red and Black (Specify color).

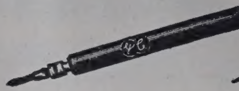
No.		List
5049	Env. 1 Red, 1 Black, 50″ long,	$0.65
5049-C	100-ft.	6.60
5049-M	1000-ft.	38.50



G-C DUPLEX TUBE PIN STRAIGHTENER

The handiest tube pin straightener for both miniature and jumbo miniature tubes of the 7 and 9 pin types. Pins on both types can be straightened by inserting in proper receptacle. Precision constructed steel dies molded in colorful plastic. Be prepared to save those tubes.

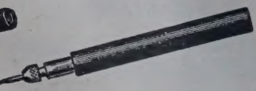
No.		List
8655	Duplex Pin Straightener	$ 2.50
8655-D	Display of 12 No. 8655	30.00



G-C LOW-LOSS DELUXE TEST PRODS

New polished low-loss material. Non-breakable. Moisture resistant. Withstands high voltages. Solderless type, brass nickel-plated.

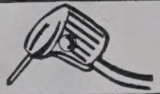
No.		List
5045	Red	$0.50
5046	Black	.50



G-C NEEDLE POINT TEST PRODS

Adjustable chuck tip for needle. 6″ polished plastic handles in Red or Black. Brass nickel-plated chuck removable. Includes needle. (Specify color).

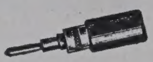
No.	List
7701	$0.50



G-C TEST LEAD ANGLE TIP

New, attractive, fully insulated, molded plastic angle phone tip plugs. Will take wires up to .140 diameter.

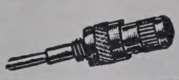
No.		List
8149	Red, each	$0.50
8150	Black, each	.50



G-C INSULATED TEST PROD TIPS

Unbreakable polished plastic insulated handles. Solderless connectors, brass nickel-plated.

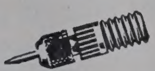
No.		List
5061	Red	$0.25
5061-E	Env. 2	.50
5062	Black	.25
5062-E	Env. 2	.50



G-C TEST PROD TIPS

Solderless type, brass nickel-plated. Non-insulated. Wire fastens easily.

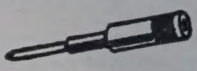
No.	List
5060	$0.18



G-C PHONO NEEDLE POINT TEST PROD CHUCK

Threaded chuck fits ¼-20 threaded hole. Needle removable. Brass nickel-plated. Includes needle.

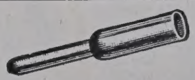
No.	List
7702	$0.22



G-C HEAVY DUTY PHONE PLUG

Standard type as used on test prods, leads, etc. Fits snugly in ¼″ hole. Brass nickel-plated.

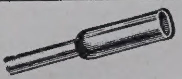
No.	List
7706	$0.17



G-C SOLID STANDARD PHONE TIP

Solid brass type made to RMA specifications. Bright nickel-plated.

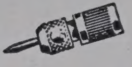
No.		List
6321-E	Env. 8	$0.45
6321-G	Pkg. 144	7.40



G-C STANDARD PHONE TIP

Made of drawn brass with hole through center for easy soldering of wire at tip. Bright nickel-plated.

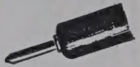
No.		List
6320	Env. 12	$0.45
6320-G	Pkg. 144	3.55
6629	Jar 30	.75



G-C PHONO NEEDLE POINT TEST PROD CHUCK

Push on type fits snugly in ¼″ hole. Brass nickel-plated.

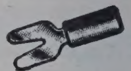
No.	List
7703	$0.22



G-C INSULATED PHONE TIP PLUG

Fits standard phone tip jacks. Polished non-breakable low-loss plastic insulated handles. Brass, nickel-plated tip. Minimum contact exposure.

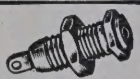
No.		List
7710	Red	$0.20
7711	Black	.20



G-C INSULATED SPADE LUG

Tapered spade lug fits all screws or terminal strips up to No. 10. Insulated female end fits banana plugs.

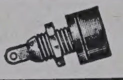
No.		List
7712	Red	$0.20
7713	Black	.20



G-C PHONO TIP JACKS

Standard type with phosphor bronze spring contacts. Fits ¼″ hole and panels up to ⅜″ thick. Brass parts nickel-plated.

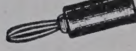
No.	List
7714	$0.15



G-C INSULATED PHONE TIP JACKS

Standard insulated type phosphor bronze spring contacts. ⅜″ insulated head. Fits ¼″ hole and panels up to ¼″ thick. Brass parts nickel-plated.

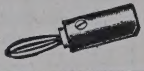
No.		List
7715	Red	$0.20
7716	Black	.20



G-C SPLIT BANANA PLUG

Insulated solderless type with polished insulated handles. Metal parts nickel-plated.

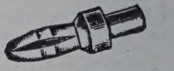
No.		List
7730	Red	$0.33
7731	Black	.33



G-C SET SCREW TYPE BANANA PLUG

Insulated set screw type. Polished insulated plastic handles. Nickel - plated metal parts.

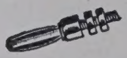
No.		List
7732	Red	$0.25
7733	Black	.25



G-C SMALL BANANA PIN PLUGS

Approved silver-plated plugs with straight shank. Can be riveted or soldered. For wires, multiple plugs, etc.

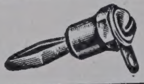
No.		List
6400	Env. 10	$0.45



G-C SPLIT BANANA PLUG

Standard size with 6-32 threaded shank. Use on plug-in coils, terminal strips, etc. Complete with lug and nut. Brass nickel-plated.

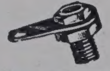
No.	List
7736	$0.15



G-C SPLIT BANANA PLUG

Standard size with 6-32 female thread on end. Supplied with screw and solder lug. Brass nickel-plated.

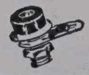
No.	List
7737	$0.15



G-C BANANA JACK

Standard size banana pin jack. Fits ¼″ hole up to ⅜″ thick panel. Nut and lug supplied. Brass nickel-plated.

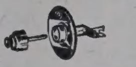
No.	List
7740	$0.15



G-C INSULATED BANANA JACK

Standard size with polished plastic insulators. Fits ¼″ hole, up to ⅜″ thick panel. Nut, lug, and insulators supplied. Brass, nickel-plated.

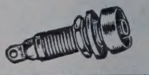
No.		List
7741	Red	$0.20
7742	Black	.20



G-C RCA PHONO PIN PLUG AND JACK

RCA types used on many type receivers. Also used as auto antenna connectors.

No.		List
1742	Mdgt. Plg.	$0.10
1742-E	Env. 4	.40
1743	Midget Jck.	.15
1743-E	Env. 3	.40



G-C INSULATED BANANA PLUG OR PHONE TIP JACK

Standard size insulated combination jack. Brass nickel-plated with phosphor bronze spring contacts. Fits ¼″ hole, panels up to ⅝″ thick.

No.		List
7744	Red	$0.33
7745	Black	.33

GENERAL G-C CEMENT RADIO SOCKETS—PLUGS—JACKS

G-C STANDARD TUBE SOCKETS

BAKELITE SOCKETS

High quality molded bakelite sockets with plated bronze contacts. Three grounding lugs on base of each socket. 1½″ mounting centers.

No.		List
1528	8-prong Octal	$0.17
1528-L	8-prong Loctal	.28

WAFER SOCKETS

No.		Mntg. Center	List
1534	4-prong	1½″	$0.15
1535	5-prong	1½″	.15
1536	6-prong	1½″	.15
1537	7-pr. Small	1½″	.15
1537-L	7-pr. Large	1½″	.18
1538	8-pr. Octal	1$\frac{5}{16}$″	.18
1538-2	8-pr. Octal	1½″	.18
1538-L	8-pr. Loctal	1$\frac{5}{16}$″	.20

G-C MINIATURE TUBE SOCKETS

BAKELITE MINIATURE SOCKET

For Miniature Tubes

High quality molded bakelite socket with metal saddle mounting. Made with phosphor bronze plated contacts for 7-prong tubes. Standard ⅞″ mounting centers.

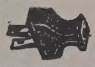
No.		List
1540	Bakelite Socket	$0.25

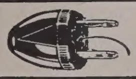
WAFER MINIATURE SOCKET

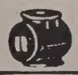
For Miniature Tubes

High grade bakelite sockets for new miniature tubes. Phosphor bronze contacts, for 7-prong tubes. Standard ⅞″ mtg. centers.

No.		List
1541	Wafer Socket	$0.15
1542	Wafer Socket with grounding strap	.17







G-C 860 CAP

Spring action flat brown bakelite cap. Approved brass blades.

No.		List
860	Cap	$0.28

G-C 861 CAP

Spring action, finger grip rubber caps. Approved, screw terminal brass blade.

No		List
861	Cap	$0.28

G-C 865 CAP

Modern flush type rubber cap. Easy to assemble. No exposed screws or wires.

No.		List
865	Cap	$0.28

G-C 867 PLUG

Popular screw plug for standard sockets.

No.		List
867	Plug	$0.19

G-C CUBE TAP

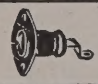
New type spring action cube tap with 3 outlets always available.

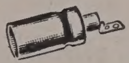
No.		List
862	Brown	$0.33

G-C CORD CONNECTOR

Brown bakelite with bronze contacts.

No.		List
863	Brown	$0.28





G-C SURFACE BLOCK

3-plug. Bakelite outlet for extension cords. Can fasten to wall or base.

No.		List
866	Brown	$0.55

G-C AUTO ANTENNA PLUG

Shielded connector plug as used on Motorola and other auto radios.

No.	List
1740	$0.15

G-C ANTENNA CONNECTOR JACK

Shielded jack to fit the 1740 plug for auto antenna and phonograph connection.

No.	List
1741	$0.25

G-C PHONO PLUG

For all phonographs and auto radio connections; RCA, Zenith, Philco and others.

No.		List
1742		$0.10
1742-E	Env. of 4,	.40

G-C PHONO JACK

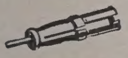
Used for phonograph attachments. To be used with 1742 plug.

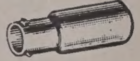
No.		List
1743		$0.15
1743-E	Env. of 3,	.40

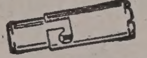
G-C EXTENSION JACK AND CONNECTOR

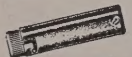
For extending radio ant. cables and phono attachments. Fits 1740 or 1742 plugs.

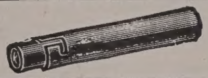
No.	List
1744	$0.20

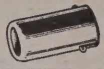












G-C MOTOROLA LEAD ADAPTER

Adapter plug used to adapt bayonet type connector to Motorola type.

No.	List
1745	$0.40

G-C ADAPTER SHELL

Used to change the Motorola fitting to bayonet type connector.

No.	List
1746	$0.15

G-C ANTENNA CONNECTOR

Used for connections on auto antenna and ground lines.

No.	List
1747	$0.15

G-C JUMBO FUSE HOLDER

14 amp. fuse holder, 2¼″ long x ½″ diameter.

No.	List
1748	$0.30

G-C FUSE CONNECTOR

Regular Type

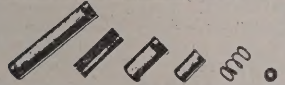
Used on auto radios and other equipment. Completely assembled.

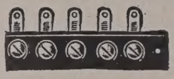
No.	List
1749	$0.18

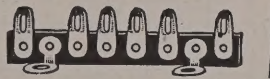
G-C ANTENNA CONNECTOR END

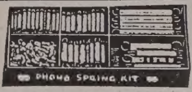
To be used with regular antenna connectors. With bushing.

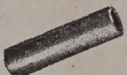
No.	List
1750	$0.11











G-C REPLACEMENT PARTS FOR ANTENNA AND FUSE CONNECTORS

	No.		List
(a)	1791	Sleeve of Fuse Connector	$0.06
	1791-G	Box of 144 No. 1791	7.90
(b)	1792	Sleeve of Antenna Connector	.06
	1792-G	Box of 144 No. 1792	5.50
(c)	1793	End piece for Antenna and Fuse Connector	.05
	1793-G	Box of 144 No. 1793	7.90
(d)	6720	Auto Fuse Insulator Sleeve	.05
	6720-G	Box of 144 No. 6720	4.40
(e)	1796	Spring for Antenna and Fuse Connector	.02
	1796-G	Box of 144 No. 1796	1.55
(f)	1795	Bakelite Bushing	.05
	1795-G	Box of 144 No. 1795	4.40

G-C TERMINAL STRIPS

SCREW TYPE

Laminated bakelite strips, rigidly constructed, terminals will not turn and short.

No.	Contacts	List
1772	2	$0.18
1773	3	.27
1774	4	.36
1775	5	.45
1776	6	.54
1777	7	.63
1778	8	.72
1779	9	.81
1780	10	.90

SOLDER TYPE

Mounted on laminated bakelite strips. Lugs securely fastened and will not turn.

No.	Contacts	List
1781	1	$0.05
1782	2	.06
1783	3	.07
1784	4	.11
1785	5	.12
1786	6	.13
1787	7	.14
1788	8	.15
1789	9	.18
1790	10	.20

G-C PHONO SPRING KIT

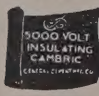
Kit contains assorted springs same as are used on phono turntables. With this kit you can replace the broken or weak spring without waiting or delay in service.

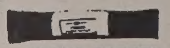
No.		List
6478	Kit of 50	$2.75
6479	Kit of 100	4.85

G-C AUTO FUSE INSULATOR SLEEVE

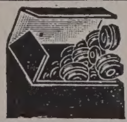
Insulating sleeve to fit regular fuse holders.

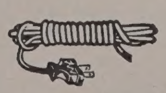
No.		List
6720-E	Env. of 16,	$0.45

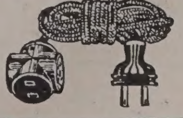




"FISH PAPER"







G-C INSULATING CAMBRIC

10,000 Volts

Yellow varnished cambric. .010″ thick.

No.		List
549	Roll over 210 sq. in.	$0.85
548	36″ x 36″, yd., any length	4.40

G-C LAMINATED BAKELITE PANELS

$\frac{1}{16}$″ thick. Black.

No.		List
590	6″ x 6″ x $\frac{1}{16}$″	$0.65
591	6″ x 12″ x $\frac{1}{16}$″	1.20
592	12″ x 12″ x $\frac{1}{16}$″	2.40

G-C FYBEROID "FISH PAPER"

Fish paper has many uses around the shops for repair jobs where electrical insulation is required. .010″ — 240 sq. in. roll.

No.		List
560	Roll	$0.55

G-C RUBBER KIT ASSORTMENT

Handy kit to keep in the shop. Contains various sizes of rubber grommets, chassis mounts, etc. An exceptional buy.

No.		List
7600	Rubber Kit	$1.00

G-C RADIO CORD SETS

Handy replacement cord sets, ready to attach to radio sets and appliances. Approved Brown parallel wire with plugs attached.

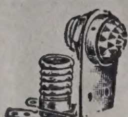
No.		List
885	6 ft.	$0.50
886-P	7½ ft.	.65

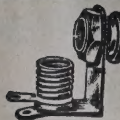
G-C EXTENSION CORDS

G-C extension cords are made of approved wire ready to use with a plug on one end and a 3-way tap on the other end. Brown.

No.		List
887	6 ft.	$1.00
889	7½ ft.	1.10

GENERAL G-C CEMENT SIGNAL LIGHTS — CONNECTORS — CLIPS





G-C ONE-INCH JEWEL SIGNAL LIGHT

For signal devices of all types. Bulbs change from the front; for socket bases as listed below. One-inch mounting hole. Jewel colors: Red, Green, Amber, and Opal. (Specify Jewel Color).

No.	Socket	Jewel	List
7901	110-V Cand.	Facett	$1.55
7902	110-V Cand.	Smooth	1.55
7903	Min. Bayonet	Facett	1.55
7905	Min. Screw	Facett	1.55

G-C ¾-INCH JEWEL SIGNAL LIGHT

All purpose signal light with facetted jewels in colors of Red, Green, Blue, Amber. $\frac{11}{16}$″ mounting hole. Jewel removed from front. (Specify Jewel Color).

No.	Socket	List
7907	Min. Screw	$0.90
7908	Min. Bayonet	.90
7909	110-V. Candel.	.90

G-C ½-INCH JEWEL SIGNAL LIGHT

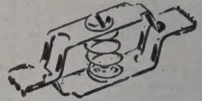
Popular signal light, requires only $\frac{7}{16}$″ mounting hole. Facetted jewel removed from front. Colors: Red, Green, Blue, Amber, Opal, Clear. (Specify Jewel Color).

No.	Socket	List
7910	Min. Screw	$0.39
7911	Min. Bayonet	.45
7912	110-V. Candel.	.45

G-C PANEL JEWELS

Complete assemblies in 1″, ¾″, and ½″ diameters. Fit panels up to ¼″ thick. Brass nickel-plated. Colors: Red, Green, Blue, Amber, Opal, Clear. (Specify Jewel Color).

No.	Dia.	Jewel	Mtg. Hole	List
7913	½″	Facett	$\frac{7}{16}$″	$0.28
7914	½″	Smooth	$\frac{7}{16}$″	.28
7915	¾″	Facett	$\frac{11}{16}$″	.65
7916	1″	Facett	1″	1.20



G-C CLIP-ON PILOT LIGHT SOCKETS

Clip up and clip down types for replacements. Cadmium-plated.

No.	Type	List
7920	Min. Screw Clip Up	$0.17
7921	Min. Screw Clip Down	.17
7922	Min. Bay. Clip Up	.19
7923	Min. Bay. Clip Down	.19
7924	110-V. Cand. Clip Up	.22
7925	110-V. Cand. Clip Down	.22

G-C BRACKET-TYPE PILOT LIGHT SOCKETS

Sturdy bracket-up or bracket-down type. Cadmium-plated.

No.	Type	List
7926	Min. Screw Bracket Up	$0.17
7927	Min. Screw Bracket Down	.17
7928	Min. Bay. Bracket Up	.19
7929	Min. Bay. Bracket Down	.19
7930	110-V. Candel. Bracket Up	.22
7931	110-V. Candel. Bracket Down	.22

G-C UNMOUNTED PILOT LIGHT SOCKETS

Cadmium plated. Ideal for replacements or special assemblies.

No.	Type	List
7932	Min. Screw Base	$0.17
7933	Min. Bayon. Base	.16
7934	110-V. Candelabra	.18

G-C PILOT LAMP INSTALLER

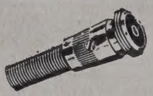
Makes it easy to install miniature dial bulbs, neon and candelabra lamps in hard-to-get-at- places. All rubber.

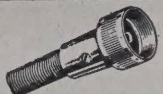
No.		List
7935	Installer	$0.55

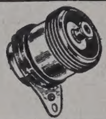
G-C DOUBLE ALLIGATOR CLIP

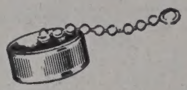
Brand New! A clip on both ends. Handiest connector made for joining wires, making temporary circuits, repairs; for tests, experiments, etc. Cadmium-plated.

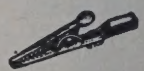
No.		List
7758-E	Env. 2	$0.45











G-C MALE MICROPHONE CONNECTOR

Completely shielded, sturdy, single contact connector. Brass, bright chrome-plated. Steel spring cord protector.

No.		List
7940	Connector	$0.50

G-C FEMALE MICROPHONE CONNECTOR

Single contact female type used with No. 7940, 7941 and 7943 connectors. Complete, brass chrome-plated.

No.		List
7942	Connector	$0.60

G-C MICROPHONE CHASSIS UNIT CONNECTOR

Single contact male connector for chassis. Used with type 7942 female connector. Supplied complete. Brass nickel-plated.

No.		List
7941	Connector	$0.39

G-C MICROPHONE CONNECTOR

Single contact, closed circuit type, prevents open circuit noises when microphone is disconnected. Chassis type, use with type No. 7942 female connector. Brass, nickel-plated.

No.		List
7943	Connector	$0.60

G-C MICROPHONE CONNECTOR CAP

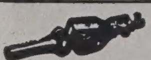
Chrome plated cap with anchor chain for all connectors. Seal against dirt and prevent thread damage.

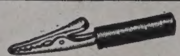
No.		List
7944	Connector Cap	$0.55

G-C INSULATED ALLIGATOR CLIP

Solder type with Red or Black insulated sleeve. Strong spring. Nickel plated.

No.		List
5064	Red Clip	$0.22
5064-E	Env. of 2,	.45
5065	Black Clip	.22
5065-E	Env. of 2,	.45





G-C CROCODILE CLIP

Set screw type. Teeth nest together to assure perfect contact with wires, etc. Cadmium-plated.

No.		List
7757	Clip	$0.33

G-C WEE-PEE-WEE CLIP

Very small and thin nosed with set screw for wire. Phosphor bronze. Ideal for coil work.

No.		List
7755	Clip	$0.33

GC PEE-WEE CLIP

Popular test clip. Interlocking jaws assure positive contact. Set screw type.

No.		List
7756	Clip	$0.13

G-C ALLIGATOR CLIP

Solder type, non-insulated. Strong spring for positive contact. Nickel-plated.

No.		List
5063	Clip	$0.13
5063-E	Env. of 3,	.45

G-C ALLIGATOR CLIP

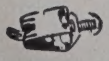
Wire fastens under set screw. Handy for all types of connectors. Cadmium-plated.

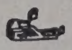
No.		List
7752	Clip	$0.20

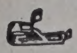
G-C SCREW TYPE INSULATED ALLIGATOR CLIP

Very popular. Bright polished handles. Set screw for wire.

No.		List
7750	Blk, Clip	$0.28
7751	Red Clip	.28







G-C AMMETER CONNECTOR

Easily clips to the ends of screws. Positive fast connector.

No.		List
6307	Each	$0.13
6307-G	Box144	17.20

G-C FAHNESTOCK CLIPS (Also see other listing Page U-115)

G-C SMALL CLIP

½″ long by $\frac{7}{32}$″ wide. Handles up to No. 16 wire. No 6 Mtg. Hole.

No.		List
6301	Each	$0.04
6301-G	Box144	2.35

G-C MEDIUM CLIP

¾″ long by $\frac{5}{16}$″ wide. Handles up to No. 14 wire. No. 6 Mtg. Hole.

No.		List
6302	Each	$0.04
6302-G	Box144	2.55

G-C LARGE CLIP

1$\frac{1}{16}$″ long by ⅜″ wide. No. 8 Mtg. Hole.

No.		List
6303	Each	$0.05
6303-G	Box144	3.70

G-C MEDIUM SOLDER LUG CLIP

¾″ long by $\frac{5}{16}$″ wide. No. 6 Mtg. Hole.

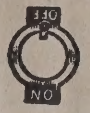
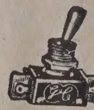
No.		List
6306	Each	$0.05
6306-G	Box 144	3.50

G-C DOUBLE CLIP

1½″ long by $\frac{5}{16}$″ wide. No. 6 Mtg. Hole.

No.		List
6304	Each	$0.15
6304-G	Box144	19.90

GENERAL G-C CEMENT SWITCHES – SPAGHETTI TUBING

G-C PUSH-ON PUSH-OFF SWITCH

For vacuum cleaners, appliances, test equipment. Made by H & H for G-C. Rated at 3 amps., 125 volts. Nickel Plated.

No.		List
1338	S.P.S.T.	$1.90

G-C BAT HANDLE SWITCH WITH WIRE LEADS

For vacuum cleaners, appliances, radio sets, etc. Made by H & H for G-C. Rated at 3 amps., 125 volts. Nickel Plated.

No.		List
1335	S.P.S.T.	$1.25

G-C ON-OFF PLATE

Will fit the G-C, H & H, Cutler-Hammer and other makes of standard switches.

No.		List
1329	On-Off Plate	$0.06

G-C BAT HANDLE TOGGLE SWITCH

Tear drop handle general purpose switch. Made by H & H for G-C. 3 amps., 125 volts. Nickel Plated.

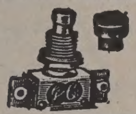
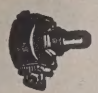
No.		List
1330	S.P.S.T.	$0.85
1331	S.P.D.T.	1.10
1332	D.P.S.T.	1.60
1333	D.P.D.T.	1.85

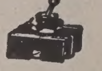
G-C TOGGLE SWITCHES

Ball handle general purpose switch. Made by H & H for G-C. 3 amps., 125 volts. Nickel Plated.

No.		List
1300	S.P.S.T.*	$0.85
1301	S.P.S.T.†	1.10
1302	S.P.D.T.*	1.10
1303	S.P.D.T.†	1.35
1304	D.P.S.T.*	1.60
1305	D.P.S.T.†	1.85
1306	D.P.D.T.*	1.85
1307	D.P.D.T.†	2.10

* ½″ Shank Length.
† ¾″ Shank Length.



G-C PUSH BUTTON SWITCH

Two circuit, "slow make and quick break" momentary contact switch. One circuit normally on, other off; pushing button reverses circuits in use. Made by H & H for G-C. 3 amps., 125 volts. Shank ⅝″ long.

No.		List
1340	Switch	$1.65

PUSH BUTTON
For 1340 Switch
Red or Black (Specify)

No.		List
1343	Button	$0.35

G-C ROTARY SWITCHES

Best grade enclosed rotary switches. Made by H & H for G-C. 3 amps., 125 volts. Shafts 1½″ long.

No.		List
1320	S.P.S.T.*	$1.10
1321	S.P.S.T.†	1.25
1322	S.P.D.T.*	1.35
1323	S.P.D.T.†	1.75
1324	D.P.S.T.†	1.85
1325	D.P.D.T.*	2.05
1326	D.P.D.T.†	2.50

* ⅜″ Shank Length.
† 1″ Shank Length.

G-C NEUTRAL CENTER SWITCH

Handy radio, appliance and tester switch with 3 positions, On-Off-On. Rated 15 amps., 110 volts; 15/32″ shank. Nickel Plated.

No.		List
1308	S.P.D.T.	$1.80
1309	D.P.D.T.	3.00

G-C EXTRA HEAVY DUTY POWER SWITCH

Three position for motors, projectors, transmitters, movie equipment, etc. Made by H & H for G-C. 10 amps., 125 volts. Neutral off in center. Size 2″ x 1″ x 1⅝″, shank ¾″ diameter.

No.		List
1352	D.P.D.T.	$6.25
1353	3-P.D.T.	9.15
1354	4-P.D.T.	12.25

G-C HEAVY DUTY POWER SWITCH

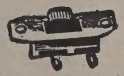
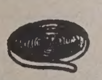
Push button, D.P.S.T. safety switch for transformers, racks, transmitters, refrigerators and high frequency work Made by H & H for G-C. 12 amps., 125 volts. Nickel Plated.

No		List
1351	D.P.S.T.	$3.00

G-C HEAVY DUTY POWER SWITCH

D.P.S.T. toggle power switch for motors, appliances, projectors, etc. Made by H & H for G-C. 12 amps., 125 volts. Nickel Plated.

No.		List
1350	D.P.S.T.	$2.10

G-C Sleeving
Sleeving
Sleeving
Assorted

RADIO SPAGHETTI

G-C SLIDE SWITCHES

For phonographs, tone controls, auto lights, electric trains, etc. ½″ wide x 1⅛″ center mounting.

No.		List
1355	S.P.S.T.	$0.35
1357	S.P.D.T.	.35
1358	D.P.S.T.	.45
1359	D.P.D.T.	.35

G-C RADIO FRICTION TAPE

This narrow ⅜″ tape was particularly made for radio work. It eliminates waste and tearing of tape. It saves time and is handy to carry with you.

No.	Roll		List
870	65 ft.	⅜″	$0.60
871	65 ft.	¾″	1.15

G-C PLASTIC TUBING KITS

Handy kits of assorted colors and sizes. Ideal for experimenters and servicemen.

No.		List
635	Kit of 25 ft. Asstd.	$1.00
635-D	Display 8 No. 635	8.00

G-C ASSORTED SPAGHETTI KIT

An assortment of 7½″ lengths of spaghetti sleeving. 26 lengths to the kit. Sizes include from No. 17 wire to ⅜″ I.D. A very handy bundle to have for repair jobs.

No.		List
550	Kit 26 Lengths	$0.70

G-C SPAGHETTI ASSORTMENT

"A Box Full of Spaghetti"

Here's a buy you can't beat on a spaghetti assortment. A variety of sizes and colors are included of high grade varnish tubing. Put up in attractive box.

No.	List
551	$1.40

G-C SPAGHETTI ON SPOOLS

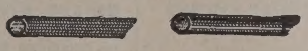
"Approved by ASTM"

5000-Volt Dielectric Strength

Best grade varnished tubing put on convenient 20-ft. spools. Will fit wire from No. 12 to No. 18. Colors: Black, Red, Yellow, Green, Blue. Specify color.

No.	Spool	List
499	20-ft.	$2.15

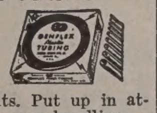
G-C COATED SLEEVING



Best grade varnished sleeving. Dielectric strength 2000 volts. Colors: Black, Red, Yellow, Green, Brown. Specify color.

No.	Size	List
525	No. 20, fit 20 wire	$0.15
528	No. 17, fit 18 wire	.17
531	No. 14, fit 14 wire	.20
533	No. 12, fit 12 wire	.22
537	⅛″ I.D.	.28
540	3/16″ I.D.	.33
543	¼″ I.D.	.45
546	⅜″ I.D. (resist. size)	.75
547	7/16″ I.D.	1.00

G-C GENFLEX PLASTIC TUBING
"MADE OF EXTRUDED PLASTIC"

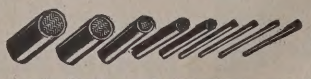


High grade extremely flexible plastic tubing for Radio and Electronic Insulation work. Resistant to cold or heat. High dielectric strength, average 8,000 volts. Put up in attractive individual boxes for easy handling. Colors: Black, Red, Green, Clear (Specify)

No.	Wire	Std. Pkg.	List
603	18	20 ft.	$1.00
605	16	20 ft.	1.00
607	14	20 ft.	1.00
609	12	20 ft.	1.00
611	10	15 ft.	1.00
613	8	15 ft.	1.00
616	6	10 ft.	$1.00
617	4	10 ft.	1.00
620	2	10 ft.	1.00
625	Fits over 300-ohm Twin Line	8 ft.	1.00

All sizes available in continuous lengths on special order of 1,000 feet or more.

G-C RADIO SPAGHETTI

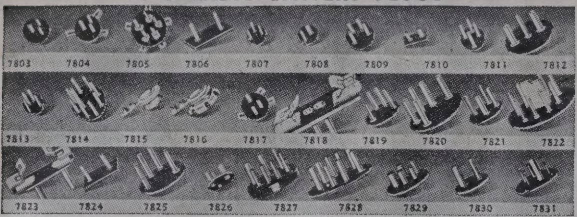


Best grade Radio and Television spaghetti. Smooth coated, with best varnishes. Very flexible. 5000 volt dielectric. Approved by ASTM. Colors: Black, Red, Yellow, Green, Brown. Specify color. 30″ lengths.

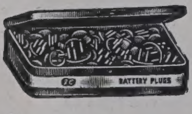
No.	Size	List
500	No. 20, fit 20 wire	$0.20
503	No. 17, fit 18 wire	.20
506	No. 14, fit 14 wire	.22
508	No. 12, fit 12 wire	.28
512	⅛″ I.D.	.39
515	3/16″ I.D.	.55
518	¼″ I.D.	.65
521	⅜″ I.D. (resist. size)	.85
522	7/16″ I.D.	1.05
523	½″ I.D.	1.30

GENERAL G-C CEMENT BATTERY PLUGS—KITS—STAPLES

G-C RADIO BATTERY PLUGS



Part No.	Voltage	For Burgess No.	For Eveready No.	For R.C.A. No.	For Philco No.	For Ray-O-Vac No.	List Price
7803	45 "B" Large	A30, B30, M30, Z30	482, 738, 762	VS012, VS013, VS014, VS015	P210, P305	430P, P7830, P5303	$0.12
7804	Same as No. 7826, except has Fahnestock Clips.						.39
7835	Same as No. 7829, except has Fahnestock Clips.						.55
7806	4½ "A"	G-3	746	VS002	P100	P-83A	.12
7807	45 "B" Small	A30, B30, M30, Z30	482, 738, 762	VS012, VS013, VS014, VS015	P210, P305	430P, P7830, P5303	.12
7808	1½ "A"	4F, 4FL, 6F, 8F, 8FL, TE	741, 742, 743, 1052P	VS004, VS005, VS007, VS008	P94, P96, P8F1	P94A, P94L, PX, P96A, P98A, P98L	.12
7809	1½ "A"-90 "B"	17GD60, 5DA60, 6TA60	758	VS022, VS043	P60D11L	AB82, 10793	.14
7810	6 "A"	2F4, 2F4L, F4PI, T5	A509, 718, 744, 747	VS009, VS010, VS011	P4F4R	P694A, P696L, P698A, P698L	.12
7811	6 "A"-90 "B"	2F4B60, etc.					.17
7812	7½ "A"	G-5	687	VS003		P85A	.14
7813	1½ "A"-63-90 "B"	6FA60, 4GA41, 4GA42		VS037	P60A-4L, P41A4G	AB419	.14
7814	7½ "A"-90 "B"	G5A42, F5A60		VS038	P87, P841	AB794	.28
7815	67½ "B"	XX30, XX45	455, 467	VS016, VS056		P4367	.10
7816	67½ "B"	XX30, XX45	455, 467	VS016, VS056		P4367	.12
7817	Same as No. 7803, except has Fahnestock Clips.						.39
7818	Same as No. 7808, except has Fahnestock Clips.						.28
7819	6 "A"-75 "B"	G4B50, etc.					.17
7820	6 "A"-90 "B"	F4B60		VS048			.22
7821	6 "A"-90 "B"	2F4A60		VS044	P60A8F4	AB694	.14
7822	9 "A"-90 "B"	4FA60					.28
7823	Same as No. 7824, except has Fahnestock Clips.						.28
7824	3 "A"	20F2	X125	VS025	P8024	P9403	.12
7825	"AB" Batt. Packs	Usalite	AB5671		P60A110		.20
7826	4½ "C"	2370PI	X771	VS030	P3D	P231W	.17
7827	135 "B"-9 "C"				37-08, 3738, etc.		.28
7828	135 "B"-13½ "C"				34, 34A, 39, 39A		.39
7829	22½ "C"	5156PI	768	VS031	P15B5	P5151	.24
7830	2 prong large with one thin and one thick. Popular on Portables.						.17
7831	9 "A"-90 "B"	F6A60, G6M60	753, 754	VS018, VS019	P841A	AB878, AB994	.28



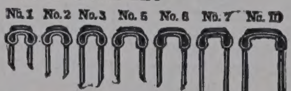
G-C RADIO BATTERY PLUGS

For all plug-in radio batteries. It pays to have an assortment to be ready for all repairs. Plugs as listed above. Complete with box and handy reference chart.

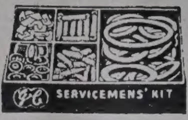
No.		List
7801	100 Asstd. Plugs, Metal Box	$13.20
7800	50 Asstd. Plugs, Cardboard Box	7.15

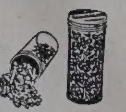
G-C INSULATED BELL STAPLES

Saddle-type insulated staples for holding wires in place and out of the way.



No.		List
	Fig. 1, $\frac{3}{16}$" x ½"	
1751	Box 50, No. 1	$0.28
1752	Box 100, No. 1	.45
	Fig. 2, $\frac{3}{16}$" x ⅝"	
1753	Box 50, No. 2	.28
1754	Box 100, No. 2	.45
	Fig. 3, $\frac{3}{16}$" x ¾"	
1755	Box 50, No. 3	.28
1756	Box 100, No. 3	.45
	Fig. 5, ¼" x ⅝"	
1757	Box 50, No. 5	.28
1758	Box 100, No. 5	$0.45
	Fig. 6, ¼" x ¾"	
1759	Box 100, No. 6	.50
	Fig. 7, ¼" x ⅞"	
1760	Box 100, No. 7	.50
	Extra Large Cable Size Fig. 10, ⅜" x ¾"	
1761	Box 100, No. 10	.85





Radio Hardware

G-C DIAL AND KNOB REPAIR KIT

Handy assortment of knob springs, set screws, dial springs, idler pulleys and drive rubbers in box.

No.		List
1015	70-pc. Kit,	$2.50
1016	150-pc. Kit,	4.95

G-C PLASTIC JAR HARDWARE ASSORTMENT

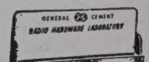
Approximately 1000 assorted screws, nuts, washers, springs, clamps, eyelets, grommets, terminals, etc. No cast-offs — only regular hardware. Plastic jar with screw cap.

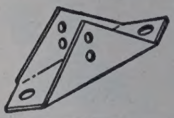
No.		List
6064	1000 Asstd.	$1.80
6056-E	Env. 100 Asstd.	.45

G-C HELL BOX

A grand assortment of useful hardware; screws, nuts, lugs, clips, washers, clamps, etc. Thousands of items needed every day. Metal hinged box.

No.	List
6500	$3.55





G-C STEEL HARDWARE RACK

Steel racks, hold No. 4002 2 oz. glass bottles or plastic jars. Attractively finished. Welded construction. Heavy steel. Two sizes.

No.	Size	List
4010	20 Jars	$2.75
4012	40 Jars	4.95

G-C STEEL STOCK BOXES

Slide-in drawer type cabinet box for parts. Made so can be stacked. Attractive finish, steel welded construction with handle. Size 13½" long, 6" wide, 4" high.

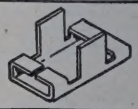
No.	List
4001	$3.55

G-C No. 8621 PIVOT MOUNT BASE

New pivot swing up base for antenna masts. Made of heavy gauge steel, zinc plated. Will hold masts up to 1¼" diameter.

No.		List
8621	Pivot Base	$0.50

Standard Jobbers Carton 100 units



G-C VENTILATING PLUGS

To ventilate chassis, amplifier, racks, transmitters, etc. Snaps into 1-inch hole. Plated.

No.		List
1709-E	Env. 4	$0.45

G-C PLASTIC HARDWARE JARS

4 oz. size wide mouthed plastic jar with screw type cap. Ideal for hardware.

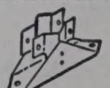
No.	List
4000	$0.33

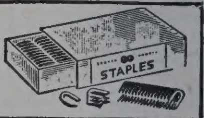
G-C STRAP CLIP

Strap clips make it easy to permanently couple strapping on chimney brackets without bolts and nuts. Also handy for coupling and extending steel strapping. Plated to prevent rust.

No.		List
8648-C	Box 100	$10.00
8648-M	Box 1000	$90.00

Jobbers Standard Carton 100 Clips





G-C SOLDER IRON TIPS

Best grade hard-drawn copper, bright plated to resist corrosion. Heats fast and holds heat.

No.	Tip	List
724	¼" x 3"	$0.45
725	$\frac{5}{16}$" x 4½"	.55
726	⅜" x 4½"	.60
727	$\frac{7}{16}$" x 4"	.75

G-C No. 8622 PIVOT SWING MOUNT

New pivot swing up mount that will hold mast up to 1¼" diameter. Made up of heavy gauge steel, zinc plated to prevent rust.

No.		List
8622	Pivot Swing Up Mount	$0.95

Standard Jobbers Carton 100 units

G-C STAPLE DRIVER STAPLES

Hardened steel staples in cartridge form to fit staple drivers. Lacquer coated.

No.		List
430	Box 250	$0.65

TV LINE TACKS

For holding 300-ohm lead wire to base boards, etc.

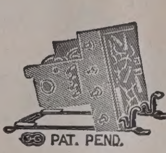
No.		List
8020-E	Env.30	$0.45
8020-G	Box144	1.35

GENERAL G-C CEMENT SERVICE AIDS—TOOLS—SHIMS

G-C CHASS-EZ

(Pat. Pending)

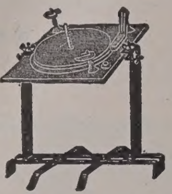
New wonder tool makes the Serviceman's job easier. Its simplicity is its chief merit. Chassis can be installed on "Chass-Ez" in five seconds. All one unit — no extra bolts or nuts to adjust. Heavy steel, riveted construction, nicely plated.



No.	List
5207	$4.00
Dealer's Net Only	2.40

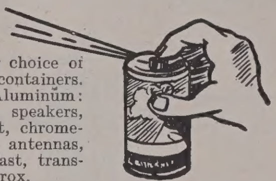
G-C PHONO TURNTABLE STAND

New improved model, adjustable and inexpensive. Adaptable to all turntables. Raises the turntable 15 inches above bench and can be pivoted on the swivel joints for easy examination or repairs. Sturdy steel construction. Plated.



No.	List
5205	$8.05
Dealer's Net Only	4.89

G-C PLASTIC SPRAY-KOAT

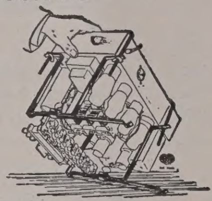


No brush—no muss—no fuss. Your choice of two fine finishes in handy spray containers. Just press the special nozzle cap. Aluminum: Coat and protect antenna masts, speakers, PA equipment, etc.; dries to bright, chrome-like finish. Plastic: Corrosion-proof antennas, connectors, all metals, etc.; dries fast, transparent. Cover 100 square feet approx.

No.	List
No. 8660—Aluminum	$1.95
No. 8665—Plastic	$1.95

G-C RADIO CHASSIS GUARDS

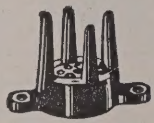
Inexpensive guards that protect the chassis and tubes when servicing. Set can be turned in any position. Easily applied and adjustable to all sets. Permanent plated metal construction.



No.	List
709	$2.75
Dealer's Net Only	1.65

G-C MINIATURE TUBE PIN STRAIGHTENER

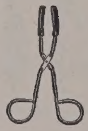
Saves tubes! Straightens without damage the pins on the fragile miniature tubes such as 1S5, 6AK5, 9002, etc. Just insert tube between guide pillars into precision base die and tube prongs are straightened and properly spaced. All metal.



No.		List
5191	For 7-pin tubes	$1.00
8105	For 9-pin tubes	1.00

G-C TUBE AND PARTS EXTRACTOR

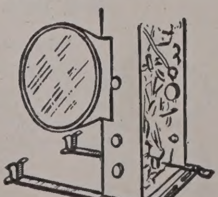
U. S. Signal Corps part No. TL 201. Handy prong tool for extracting tubes and picking up parts. Rubber cushions on prongs.



No.		List
5092	Tube Extractor	$1.65

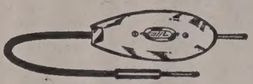
G-C TELEVISION SAF-T-RACK

A simple, sturdy rack to use in repairing heavy television chassis. Simple set it on the rack and tilt it on side. The sturdy hooks will hold the chassis on its side so you can work on it. It will prevent the tubes from being damaged.



No.		List
8045	Saf-T-Rack	$5.45

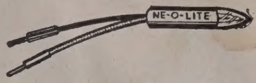
G-C DANDY TEST LITE



New neon test lite for checking radios, television sets, fuses, circuits, etc. Simple, safe and dependable for tracing all kinds of trouble. Use on voltages of 60 volts AC to 550 volts AC or DC.

No.		List
8585	Dandy Lite	$ 1.00
8585-D	Display 12 #8585	12.00

G-C NE-O-LITE



A simple, safe, electrical circuit tester for voltages from 60 volts AC to 550 volts AC or DC. Used for radio, electrical and automotive testing. Molded plastic.

No.		List
5100	Ne-O-Lite	$0.60
5112-D	Display 12 #5100	7.20

G-C NE-O-LITE WIRE

Wire same as used on Ne-O-Lite Testers, # 18 stranded, rubber covered with a red or black braid, varnished. For ignition wiring, motor wiring, etc. Red or Black — Specify color.

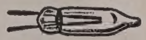
No.		List
5113	100 ft.	$4.15

G-C RESISTOR FOR NEON LAMP

Required resistor when using No. 717 neon lamp on voltages of 60 to 550 volts AC or DC. Connect in series.

No.	List
718	$0.11

G-C NEON GLOW LAMPS



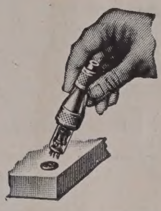
NE-T2 lamp as used in testers, appliances, as pilot light, etc.

No.	List
717	$0.28

G-C AMO MINIATURE TUBE PULLER

(Pat. Pending)

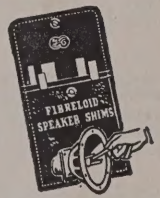
Prevents burned fingers and broken tubes. Makes it easy to remove and install tubes such as 6AG5, 50B5, etc. Works on suction and vacuum principle. Operates just by pressing on the tube and to release, just press the release button. Tube protected by rubber sleeve. Gets where your fingers can't reach. Permanent metal.



No.		List
5093	For 7-pin tubes	$1.65
8106	For 9-pin tubes	1.65

G-C FIBRELOID SPEAKER SHIMS

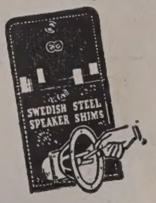
Shims made of tough and flexible fibreloid. Non-magnetic. 4 each of 5 sizes — twenty in all: Sizes, .005", .0075", .010", .0125", and .015". Color coded. Supplied in gold lettered leatherette snap case with instructions.



No.		List
702	Kit	$0.70

G-C SWEDISH STEEL SPEAKER SHIMS

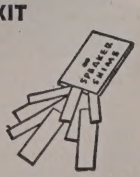
Makes it easier to center speaker voice coil. Permanent flexible Swedish steel. 4 shims each of 4 sizes coded for identification: .004", .006", .008" and .010" thick. Supplied in gold stamped leatherette partitioned snap case. Complete with instructions.



No.		List
701	Kit	$0.75

NEW! G-C SPEAKER SHIM KIT

For every type of speaker adjustment. A generous supply of Fibreloid and bronze shim stock in the various widths and thicknesses needed for speakers. Non-magnetic material. Stock can be cut to exact requirements. A long-lasting assortment. Complete instructions.



No.		List
7720	Kit	$2.20

RECORDING WIRE
STATIC CHASER — TOOL KITS

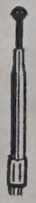
G-C RECORDING WIRE

For all wire recorders. Includes plastic leads. Permanent recordings which can be replayed indefinitely. Finest quality reproduction on stainless steel wire. Standard RMA spool fits Webster, Air King, Sears Roebuck, etc.

No.	Leaders with Spools	List
5171	1-hr. Spool	$4.50
5172	½-hr. Spool	2.75
5173	¼-hr. Spool	1.85
5174	Leaders only, for Armour type recorders, per pair	.22
5176	Empty Rewind Spool	1.00
5175	Envelope Nylon Webster Cord	.45

G-C REPLACEMENT AUTO AERIALS

FORD ROOF AERIAL
Ford-Mercury Part No. 51A-18813-A1



Replacement aerial for all Ford and Mercury Roof Aerials of 1941-42-46-47-48 that operate from behind the dividing post of the windshield. Made of Admiralty brass tubing with stainless steel extension rod, triple chrome plated Free sliding with positive contacts insure noise-free reception. Easy to install, fits without changes, replaces original aerial. Comes complete with knob and set screw.

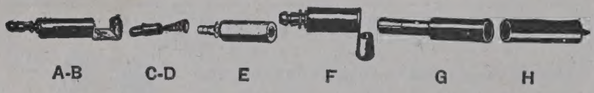
No.		List
7056	Ford Roof Aerial	$2.45

BUICK REPLACEMENT ANTENNA
Buick Part No. 980,688

Standard Buick Roof Aerial Mast. The replacement mast for Buick Roof Aerials on models 1940 through 1949. Easy to replace — merely tightens into position with a set screw. Admiralty brass tubes with a stainless steel top rod. Chrome-plated. Each mast individually packed in a paper tube. Standard packing — 10 tubes to a carton.

No.		List
7057	Buick Antenna Mast	$3.00

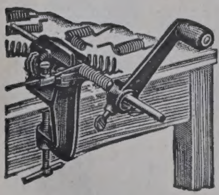
G-C IGNITION SUPPRESSORS



A rugged long-life assortment of bakelite auto radio ignition suppressors. Resistance, 10,000 ohms (V-8 types, 50,000 ohms). Resistors, moisture-proofed to eliminate variations due to weather changes. Impervious to heat, oil, moisture and mild acids. All metal parts brass. Good for more than 50,000 miles.

	No.		List
(a)	1501	Bracket Type	$0.33
(b)	1502	Ford V8	.33
(c)	1503	Ford V8 Brush Type, 33, 34, 35 Cars	.33
(d)	1504	Ford V8 Brush Type, 36 to 40 Cars	.33
(e)	1505	Screw Type, Universal	$0.33
(f)	1506	Snap-On Type	.33
(g)	1507	Distributor Type	.33
(h)	1508	Cable type for Splicing Cables	.33

G-C SPRING MAKER
(Pat. Pending)



Makes all types of coil springs — compression or extension types — with any number of coils or degree of wire pitch. Designed for simple adjustment and operation with any size spring wire. Necessary wherever springs must be made fast or to special specifications. Liberal supply spring wire furnished with each winder. Fastens to any bench.

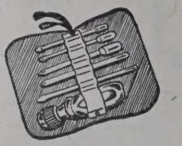
No.		List	Dealer's Net
5209	Spring Winder and Asst. Spring Wire	$24.90	$14.94*
5210	Replacement Asst. Spring Wire	2.75	1.65*

G-C MASTER-TONE RECORDING TAPE

The new G-C plastic back master-tone recording tape available in two sizes, for commercial and home use. Comes in a plastic wheel which stops rapidly. Has low surface friction, high frequency response, and is uniform from reel to reel. No magnetic weak spots.

No.		List
5180	1270 foot reel	$5.50
5181	640 foot reel	3.50

G-C SCREW DRIVER SET



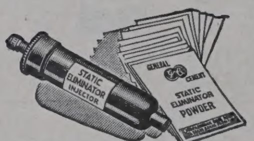
A handy screw driver set in a leatherette case with five interchangeable blades. Unbreakable handle with flanged aluminum screw chuck.

Blade Sizes

1—cabinet	⅛ x 3¼
1—cabinet	3/16 x 3¾
1—mechanic	¼ x 5½
1—recessed head No. 1	3/16 x 4¼
1—recessed head No. 2	⅛ x 4¼

No.	List
8615	$2.65

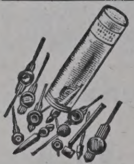
G-C STATIC POWDER AND INJECTOR GUN



It really works, cuts down auto radio static. Inject powder in tubes, and eliminate wheel tire static. Easy to apply. Powder also cuts down tire trouble by eliminating those pin-point tube leaks caused by tire static discharge. Powder blown into tube with G-C Injector Gun. Every car should be treated with G-C Static Chaser Powder.

No.		List
5604	Injector Gun, only	$1.80
5605	Packet Static Powder for 5 tires (1 car)	1.10
5606	Kit, one No. 5604 Injector, and one No. 5605 Powder	2.75

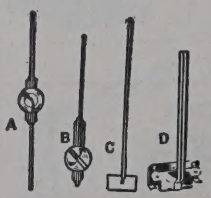
G-C DIAL POINTER KIT



A complete kit of 10 assorted dial pointers. Pointers come in a clear transparent plastic case which keeps the pointers in perfect condition.

No.	List
6810	$3.25

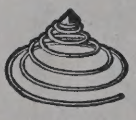
G-C DIAL POINTERS



Popular replacement pointers.

	No.		List
(a)	6801	3" Rotary Pointer for ¼" shaft, gold	$0.39
(b)	6802	5" 360° Rotary Pointer for ¼" shaft, gold and red	.39
(c)	6803	2" Slide Pointer, red translucent	.39
(d)	6804	2¼" Slide Pointer, white enamel	.33

G-C HUB CAP STATIC SPRINGS

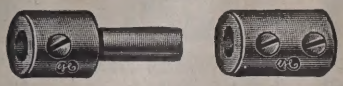


Eliminate wheel static noise developed by poor electrical contact between front axle and wheels. Springs have riveted metal points for firm, smooth contact. Plated.

No.		List
1058	Each	$0.13
1059	Box, 24 Springs	3.00

* Net

GENERAL G-C CEMENT WRENCH KITS—TOOL SETS—BUSHINGS



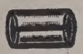
G-C SHAFT COUPLINGS, EXTENSIONS AND REDUCERS

BRASS FITTINGS

No.		List
6701	¼" to ¼" coupling....	$0.25
6702	¼" to ⅜" coupling....	.30
6703	¼" to 3/16" coupling..	.25
6704	⅜" to ⅜" coupling....	.30
6705	¼" hole to ¼" shaft extension	.30
6710	⅜" hole to ¼" shaft extension and reducer ...	.30
6712	¼" x 6" brass shaft....	.20
6713	¼" x 12" brass shaft...	.35
6716	¼" hole x ¼" round shaft x 4" long	.35

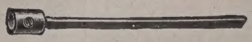
INSULATED FITTINGS

No.		List
6721	¼" to ¼" coupling....	$0.25
6722	¼" to ⅜" coupling....	.30
6725	¼" hole to ¼" shaft extension	.30
6734	¼" x 6" fibre shaft....	.30
6735	¼" x 12" fibre shaft...	.55
6737	¼" x 12" bakelite shaft	1.00



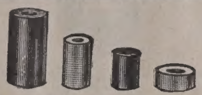
G-C REDUCING BUSHINGS

No.		List
6751-E	¼" to 3/16" reduction, 8 in Env.	$0.45
6751-G	144 No. 6751 (Gross)	7.15



G-C SHAFT EXTENSIONS

No.		List
6755	¼" x 4½" Long Flat Shaft Extension	$0.40
6716	¼" x 4½" Long Round Shaft Extension	.35



G-C BRASS AND INSULATED SPACERS AND BUSHINGS

No.	Assortments	List
6617	Hardware Lab. Jar 12 Assorted Spacers and Bushings	$0.75
6760-E	Env. 12 Asst. Ins. Spacers	.45
6762	15 Asst. Threaded Brass Bushings 6-32 thread, ¼" to ¾" lg.	1.40
6763	15 Asst. Threaded Brass Bushings 8-32 thread, ¼" to ¾" lg.	1.40
6775-E	Env. 12 ¼" x ¼" Ins. Spacers	.45
6761-E	Env. 12 Asst. Metal Spacers	.45

BRASS

No.	O.D.	Length	List
6765	¼"	¼"	$0.05
6767	¼"	½"	.06
6768	¼"	¾"	.07
6769	⅜"	¼"	.06
6770	⅜"	½"	.07
6771	⅜"	¾"	.08

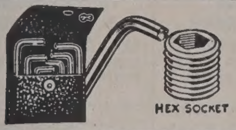
INSULATED

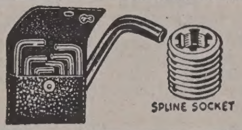
No.	O.D.	Length	List
6775	¼"	¼"	$0.05
6776	¼"	⅜"	.06
6777	¼"	½"	.06
6778	¼"	¾"	.09
6779	⅜"	¼"	.06
6780	⅜"	½"	.07
6781	⅜"	¾"	.08

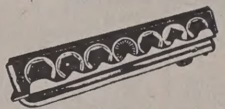
THREADED BRASS BUSHINGS

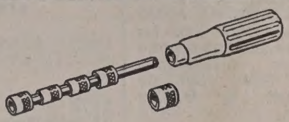
No.	O.D.	Thread Size	Length	List
6785	¼"	6-32	¼"	$0.06
6786	¼"	6-32	⅜"	.08
6787	¼"	6-32	½"	.09
6789	¼"	6-32	¾"	.10

No.	O.D.	Thread Size	Length	List
6790	¼"	8-32	¼"	$0.06
6791	¼"	8-32	⅜"	.08
6792	¼"	8-32	½"	.09
6793	¼"	8-32	¾"	.10









G-C ALLEN-HEX WRENCHES AND KITS

Made of alloy steel properly hardened. Used on knobs, dials, phono needles, motors, pulleys, etc.

No.		List
5030	Env. 4 Asstd. Wrenches	$0.55
5029	Kit 6 Asstd. Wrenches in Leatherette Case	.85
5029-A	Env. 3 Hex Key Wrenches for No. ¼" to ⅜" Set Screws	.55
5031	No. 4	.13
5032	No. 5	.13
5033	No. 8	.13
5034	No. 10	.13
5035	¼"	.13
5036	5/16"	.14
5037	⅜"	.14

G-C BRISTO-SPLINE WRENCHES AND KITS

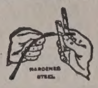
Very popular "Bristo" or "Spline" type wrenches as used on phono needles, motors, pulleys, knobs, etc. Made of alloy steel, properly hardened.

No.		List
5069-E	Env. 4 Asstd. Wrenches	$0.55
5070-E	Kit 6 Asstd. Wrenches in Leatherette Case	.85
5071	No. 4	.13
5071-A	No. 5	.13
5072	No. 6	.13
5073	No. 8	.13
5074	No. 10	.13
5075	¼"	.13

G-C 8-PIECE VEST POCKET SET

Handiest tool! Seven sockets, ¼", 5/16", 11/32", ⅜", 7/16" hex; ⅜" round knurled, ¼" square, complete with 4" L handle.

No.	List
712	$1.75



G-C WIRE STRIPPER

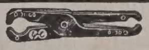
5-in-1 tool. Wire stripper, scraper, cutter, screwdriver, and wire winder all in one. Tempered steel.

No.	List
757	$0.45

G-C 6-PIECE SLIP-ON WRENCH SET

Handle holds five sockets, sizes ¼", 5/16", 11/32", ⅜", and 7/16". Easily assembled. Tempered steel, plated.

No.	List
715	$2.20

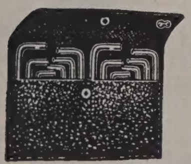


G-C FUSE PULLERS

For cartridge fuses. Heavy duty construction of high dielectric material.

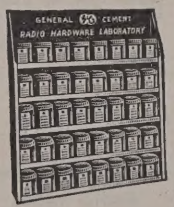
No.		List
5525	Midget size, for fuses ¼" x ½"	$0.65
5526	Large size, for fuses ½" x 1½"	1.35

G-C ALLEN-BRISTO WRENCH KIT



Complete wrench kit for hex and spline type screws. Double snap button case of durable leatherette. Fit No. 2 to ⅜" screws.

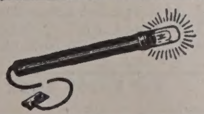
No.	List
5028	$1.80



G-C ELECTRONIC HARDWARE LABORATORIES

Complete assortment of hardware. Rack contains several thousand essential electronic hardware items. Packed in clear jars with screw caps. Assortments as below: Free Steel Rack!

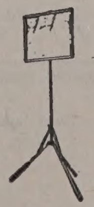
No.		List	Dealer's Net
6604	DeLuxe Hardware Laboratory, 40 jars	$30.00	$18.00*
6601	20 jar assortment	15.00	9.00*



G-C INSPECTION LITE

Operates on 110-120 volts AC or DC. Cord approximately 6 ft. long.

No.		List
705	Inspection Light	$2.15
704	Replacement Bulb for No. 705	.19
704-S	Clear Plastic Shield	.19



G-C THIRD EYE DELUXE TELEVISION MIRROR

A DeLuxe mirror, complete with telescoping stand. Absolutely no distortion. Glass 12" x 10" in metal frame. Stand is adjustable.

No.	List
8390	$7.25

* Net

GENERAL G-C CEMENT RADIO KNOBS—KITS

MAJESTIC BAKELITE KNOBS

Popular pattern. Set screw type. ⅞″ diam., ¼″ shaft.

No.		List
1100	Walnut	$0.18
1100-I	Ivory	.22

ROYAL BAKELITE KNOBS

Beautiful pattern. Set screw type. ⅞″ diam., ¼″ shaft.

No.		List
1105	Walnut	$0.18
1105-I	Ivory	.22

YANKEE BAKELITE KNOBS

Set screw type. ¾″ and 1″ diam., ¼″ shaft.

No.		List
1109	¾″ Wln.	$0.18
1110	1″ Walnut	.18
1109-I	¾″ Ivory	.22
1110-I	1″ Ivory	.22

MODERN LARGE KNOB

Knurl shaft or set screw types. 1⅛″ diameter.

No.		List
	Knurl Shaft Type	
1176	Walnut	$0.13
	Set Screw Type	
1177	Walnut	.18

NEW LARGE KNOB

Knurl shaft or set screw types. 1⅛″ diameter.

No.		List
	Knurl Shaft Type	
1178	Walnut	$0.13
	Set Screw Type	
1179	Walnut	.18

POPULAR LARGE KNOB

Knurl shaft or set screw types. 1 3/16″ diameter.

No.		List
	Knurl Shaft Type	
1180	Walnut	$0.13
	Set Screw Type	
1181	Walnut	.18

MIDGET BAKELITE KNOBS

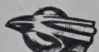
Set Screw Type

For small sets. 11/16″ diam., ¼″ shaft.

No.		List
	Pointer Type	
1115	Walnut	$0.13
1116	Ivory	.14
1117	Red	.14
1118	Black	.13

For small sets. 11/16″ diam., set screw ¼″.

No.		List
	Non-Pointer Type	
1111	Walnut	$0.13
1112	Ivory	.14
1113	Red	.14
1114	Black	.13



STREAMLINE POINTERS

The most popular pointer knob. ¼″ shaft, set screw type 1¼″ long.

No.		List
1136	Black	$0.17
1136-W	Walnut	.18
1137	Red	.20
1137-I	Ivory	.22

A very popular pointer knob. ¼″ shaft, set screw type, 2″ long.

No.		List
1135	Black	$0.22
1135-W	Walnut	.26
1138	Red	.26
1138-I	Ivory	.29

MODERN POINTER BAR KNOBS

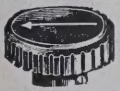
Brass Bushing

For intercomms and instruments. Black. Set screw, ¼″ shaft, 2¾″ long.

No.		List
1130	Black	$0.42
1130-W	Walnut	.42

For intercomms and instruments. Black finish. Set screw, ¼″ shaft, 1⅝″ long.

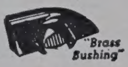
No.		List
1131	Black	$0.39
1131-W	Walnut	.39



INSTRUMENT KNOB

A heavy duty knob for communication equipment, instruments. ¼″ brass insert, set screw. 1¾″ O.D. x ⅞″.

No.		List
1175	Black	$0.39



STREAMLINE POINTERS

Brass Bushing

Brass insert. ¼″ shaft, set screw. 1¼″ long.

No.		List
1170	Black	$0.28
1170-W	Walnut	.28
1172	Red	.33
1172-I	Ivory	.33

Brass insert. ¼″ shaft, set screw. 2″ long.

No.		List
1171	Black	$0.33
1171-W	Walnut	.33
1173	Red	.40
1173-I	Ivory	.40

POPULAR BAR KNOB

For intercomms, instruments, appliances. Bakelite with set screw. ¼″ hole, 1⅝″ long.

No.		List
1132	Walnut	$0.22

POPULAR PLASTIC KNOB

15/16″ diameter with ½″ shank extension for ¼″ knurled shaft.

No.		List
1153	Walnut	$0.13
1154	Ivory	.14

ATTRACTIVE PLASTIC KNOB

15/16″ diameter, flush type for ¼″ knurled shafts.

No.		List
1155	Walnut	$0.13
1156	Ivory	.14

MIDGET TYPE PLASTIC KNOB

¾″ diam., ⅜″ shank for ¼″ knurled shafts.

No.		List
1157	Walnut	$0.13
1158	Ivory	.14

MIDGET TYPE PLASTIC KNOB

¾″ diam. flush type for ¼″ knurled shafts.

No.		List
1159	Walnut	$0.13
1160	Ivory	.14

ACORN PLASTIC KNOB

¾″ diam., ⅛″ shank for ¼″ knurled shafts.

No.		List
1182	Walnut	$0.13
1183	Ivory	.14

PUSH-ON KNURL KNOB

15/16″ diam. flush type for ¼″ knurled shafts.

No.		List
1184	Walnut	$0.13
1185	Ivory	.14

PUSH-ON KNURL KNOB

15/16″ diam., ½″ shank for ¼″ knurled shafts.

No.		List
1186	Walnut	$0.13
1187	Ivory	.14

POINTER TYPE PLASTIC KNOB

15/16″ diam., ½″ shank for ¼″ knurled shafts.

No.		List
1188	Walnut	$0.13
1189	Ivory	.14

MIDGET TYPE PLASTIC KNOBS

23/32″ diam., ½″ shank for ¼″ knurled shafts.

No.		List
1197	Walnut	$0.13
1198	Ivory	.14

23/32″ diam., flush shank for ¼″ knurled shafts.

No.		List
1193	Walnut	$0.13
1194	Ivory	.14

SPRING AND D-SHAFT KNOBS

Spring type. 15/16″ diam. Fits ¼″ flat shafts.

No.		List
1151	Walnut	$0.13
1152	Ivory	.14

D- or flat shaft type. ⅝″ diam.

No.		List
1161	Walnut	$0.13
1162	Ivory	.15

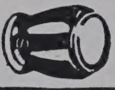
SPRING AND D-SHAFT KNOBS

D- or flat shaft type. ¾″ diam.

No.		List
1163	Walnut	$0.13
1164	Ivory	.15

D- or flat shaft type. 1″ diam.

No.		List
1165	Walnut	$0.15
1166	Ivory	.17



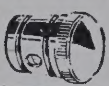
G-C AUTO RADIO KNOBS

13/16″ diam. x 11/16″ high. For ¼″ and 3/16″ shafts. Brass bushing with set screw.

No.		List
	¼″ Shaft	
1191	PearlGray	$0.33
1192	Maroon	.33
	3/16″ Shaft	
1167	Pearl Gray	.39
1168	Maroon	.39

Set screw type auto radio knob. 13/16″ diam. x ⅞″ high. For either ¼″ or 3/16″ shafts with bushing.

No.		List
1195	PearlGray	$0.33
1196	Maroon	.33



G-C AUTO RADIO KNOBS

Chrome plated. For ¼″ and 3/16″ shafts. Set screw mounting.

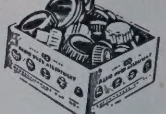
No.		List
1169	¼″	$0.33
1174	3/16″	.33

G-C KNOB SET SCREW ASST.

Handy set screw assortments for radio knobs, shafts, pulleys. 6-32, 8-32, and 10-32.

No.		List
1060	50 Asst.	$1.20
1061	100 Asst.	2.00
1062-E	15 Asst.	.45
6605	30 Asst.	.75

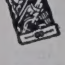
G-C RADIO KNOB KITS



Popular plastic knobs in assorted kits, all kinds of knobs included.

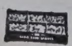
No.	Quantity	List
1140	35 Asstd. Push-on Buttons	$4.35
1141	28 Asstd. Spring Knobs	4.35
1142	24 Asstd. Set Screw Knobs	4.35
1143	30 Asstd. All Type Knobs	4.35
1144	12 Asstd. Auto Radio Knobs, for ¼″ and 3/16″ shafts	4.35

G-C KNOB ASST.



No.		List
1120	35 Asst. All Types Knobs	$1.85
8026	60 Auto Radio Button Knobs	1.85

G-C KNOB SPRING KITS



No.		List
1049-E	Env. 20 Asstd.	$0.45
1050	Kit 35	1.10
1051	Kit 100	1.90
6619	Jar 35 Asstd.	.75

G-C KNOB FELTS

Used behind knobs.

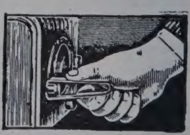
No.		List
1065-E	Env. 50	$0.45
6641	Jar 70	.75

G-C KNOB BUSHINGS

Reduce from ¼″ to 3/16″. For auto radios.

No.	List
6751	$0.45

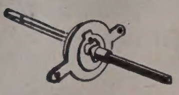
G-C RADIO KNOB PULLER

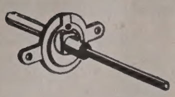


Very handy in removing knobs that are hard to pull off. Simply slip behind knob and pull off. Saves the cabinet and the knobs.

No.	List
1063	$0.45

GENERAL G-C CEMENT *PHONO NEEDLES and ACCESSORIES*





G-C TV "Smoother" TUNER DETENTS

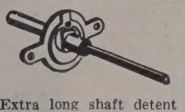
The Best Quality Detents for Replacements. Quality Engineered to Last.

Popular short shafted detent. Replaces RCA Part No. 71463 used on RCA, Admiral, Air King, Capehart, DeWald, Garod, Fada, Emerson, Packard-Bell, etc.

No.	List
8600	$2.80

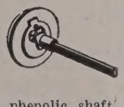
Long shaft detent. Replaces RCA Part No. 72743 used on RCA Models 8TS30, 721TCS, 730TCS, 730TV2, etc.

No.	List
8601	$3.15



Extra long shaft detent for replacing Admiral Part No. 76B14. Used in Admiral Series No. 30-A and No. 8C, etc. Also on sets using RCA tuner type 201E1—Part No. 71531.

No.	List
8602	$4.15



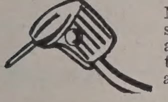
All phenolic shaft type detent used to replace RCA Part No. 73440. Used as a replacement on RCA tuners types 73435, 74571, and 74941. Used on RCA models in the 8T, 9T, 6TC, 8TR, 8TV, 9TC, 9TW series.

No.	List
8603	$4.75

Similar all phenolic shaft type detent to G-C No. 8603. Used to replace RCA Part No. 75162.

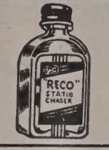
No.	List
8604	$4.00

G-C TEST LEAD ANGLE TIP



New, attractive, fully insulated, molded plastic angle phone tip plugs. Will take wires up to .140″ diameter.

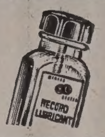
No.		List
8149	Red, each	$.55
8150	Black, each	.55



G-C "RECO" STATIC CHASER

Developed specially for vinylite records, it eliminates static electricity on plastic records and keeps records dust free. Also stops crackling and static discharge noises. Simply wipe it on and the job is done. Can be used on any type records.

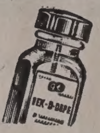
No.		List
48-2	2-oz.	$0.75



G-C RECORD-LIFE LUBRICANT

Simply wipe record with "Record-Life" and the needle will glide over the record smoothly. Prevents record and needle wear; also eliminates noises and scratching sounds. Use also for making records.

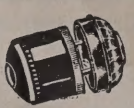
No.		List
125-1	1-oz.	$0.50
125-2	2-oz.	.65
125-4	4-oz.	1.10
125-6	6-oz.	1.50



G-C REK-O-DOPE

Required lubricant when recording and cutting records. All purpose, it cools, cleans, lubricates, and hardens grooves when cut. Rek-O-Dope will give better tone and longer life.

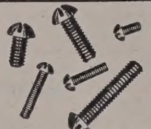
No.		List
126-1	1-oz.	$0.50
126-2	2-oz.	.65
126-4	4-oz.	1.10
126-6	6-oz.	1.50



G-C CORD CONNECTOR

Handy cord connector to connect phono motors to radio sets, for appliances, vacuum cleaners, sewing machines, etc.

No.	List
868	$0.70



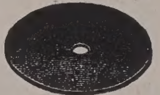
G-C PICK-UP AND CARTRIDGE SCREW ASST.

Contains small size screws and bushings such as used on cartridges of pick-up arms.

No.		List
6000-E	60 Screws,	$0.45

CARTRIDGE MTG. SCREWS

No.		List
6005-E	Env. 60 4-36 x ¼″	$0.45
6005-AE	Env. 60 4-40 x ¼″	.45



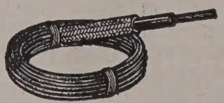
G-C RECORD TURNTABLE FELT

Re-cover phono turntables with ready cut felts. Dark brown.

No.	Dia.	List
1292	7⅞″	$0.50
1296	8⅞″	.65
1293	9⅞″	.70
1294	11⅞″	.85
1295	15⅞″	1.45

Brown Felt — By The Yard

No.		List
1298	36″ Wide. per yd.	6.50



G-C SHIELDED PHONO PICK-UP WIRE

Handy package of single conductor shielded wire as used on phono pick-ups, etc. Enough wire for several jobs in package.

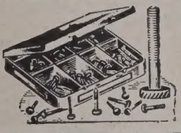
No.		List
1738-E	Envelope	$0.45

RECORD CLEANING PAD

G-C RECORD CLEANING PAD

Specially treated soft felt pad for cleaning and removing dust from records. Saves records.

No.		List
1290	4″ x 4″	$0.28
1291	6″ x 6″	.50



G-C PHONO NEEDLE STYLUS SCREWS

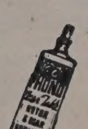
Here's the hard-to-get replacement thumb set screws for pick-up arms and recording heads!

No.		List
1052	15 Asst. Stylus Screws	$ 1.90
1052-E	Env. 7 Asst. Screws	.45
1053	100 Asst. Stylus Screws	12.10

Individual Phono Screw Specifications

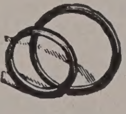
		Env. of	
P1-E	For Shure Brothers, etc.	3	.45
P2-E	For Astatic, RCA, Seeburg, Webster, etc.	4	.45
P3-E	For Astatic, Stromberg-Carlson, Universal, Webster, etc.	4	.45
P4-E	For Rek-O-Cut, Webster, etc.	3	.45
P5-E	For RCA, etc.	3	.45
P6-E	For RCA, etc.	4	.45
P7-E	For Webster, etc.	3	.45
P8-E	For Shure Brothers, etc.	3	.45
P9-E	For RCA, Astatic, Webster, etc.	3	.45
P10-E	For Audex, etc.	3	.45

G-C STA-PUT PHONO-GEAR LUBRICANT



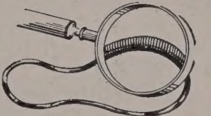
New "STA-PUT" lubricant for phonomotors, gears, shafts, etc. Will not run or drip—it "Stays Put." Recommended by RCA, G-E, and others.

No.		List
1223	Tube	$0.65
122-2	2-oz.	.65



G-C RADIO AND TELEVISION DRIVES

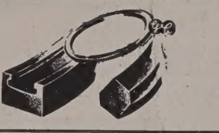
No.		List
1024-SE	Env. Asst. 5 Small	$0.45
1024-LE	Env. Asst. 5 Large	.45
1024-E	Env. Asst. 10 Dial	.90
1025	Box 25 Asst. Drives	1.65
1026	Box 100 Asst.	6.60
1	AK Small	.11
2	AK Large	.11
3	Stewart-Warner	.11
4	Kennedy, Wells-G.	.11
5	Stewart-Warner	.11
6	RCA	.11
7	Stewart-Warner	.11
8	Stewart-Warner	.11
9	Atwater-Kent	.11
10	Stewart-Warner	.11
11	Lge. Atwater-Kent	.28

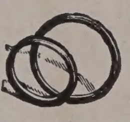


G-C RCA TELEVISION TUNING BELT

New belt for RCA Television Tuner. Used on models series numbers 8 TC, 8 TK, 9 TC, etc. (Belt Part No. 73465).

No.		List
195	Tuner Belt	$0.30



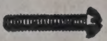


G-C PHONO TURNTABLE DRIVES

No.	Type	List
14	Small drive belt for dual and 3-speed units, Admiral, Philco, G-I, V-M, etc.	$0.15
14-E	Envelope 3 No. 14 Drives	.45
14-B-E	Large belt for Trav-ler Model A, etc.	.45
14-F	RCA cam drive tire for RP-178, etc.	1.00
14-J	Narrow idler drive tire for V-M 405, 800-D, etc.	.25
14-J-E	Env. 2 No. 14-J	.45
14-K	45 RPM Drive for Milwaukee Stamping Units	.15
14-K-E	Env. 3 No. 14-K Drives	.45
14-L	Special molded RCA 45-RPM drive. For RCA-RP-178, RP-168, 45 RPM Models, etc.	1.00
16	For General Industries. RX-LX and Silvertone	.28
16-E	Env. 2 No. 16 drives	.45
17	Popular for Alliance, Motorola, V-M, Admiral, Philco, Zenith, Trav-ler, etc.	$0.28
17-E	Env. 2 No. 17 drives	.45
18	RCA, etc., drives	.17
18-E	Env. 3 No. 18 drives	.45
19	Philco, RCA, etc., drives	.11
19-E	Env. 4 No. 19 drives	.45
20-E	Detrola rubber drive	.45
20-1-E	Detrola spring drive	.55
21-A	General Electric Model drive	.17
21-A-E	Env. 2 No. 21-A drives	.45
22	Large V tire for RCA, RP-176, RP-177, 809-J, etc.	1.10
23	Rim drive for RCA, RP-176, RP-177, 809-J, etc.	.22
23-E	Env. 2 No. 23 drives	.45
24-E	Admiral and Crescent 3¾″ OD drives	.45
24-A-E	Admiral and Crescent, etc., 3¼″ OD drives	.45
24-B-E	Admiral, Crescent, etc., 3⅛″ OD drive	.45

GENERAL G-C CEMENT Electronic Hardware

G-C ROUND HEAD MACHINE SCREWS



Steel — Nickel Plated

No.	ENVELOPE	List
296-E	40 Asst. Machine Screws	$0.45
6038-E	50 Asst. Screws and Nuts	.45
7129-E	50 Asst. 2-56 Screws and Nuts	.45
6001-E	45 Asst. 4-36 Screws	.45
6002-E	45 Asst. 6-32 Screws	.45
6003-E	40 Asst. 8-32 Screws	.45
6004-E	30 Asst. 10-32 Screws	.45
6005-E	60 4-36 x ¼" Screws	.45
6006-E	50 4-36 x ½" Screws	.45
6008-E	40 6-32 x ¼" Screws	.45
6009-E	35 6-32 x ½" Screws	.45
	GLASS JAR	
6610	75 Asst. 4-36 and 6-32 Screws	.75
6611	60 Asst. 8-32 and 10-32 Screws	.75
6005	100 4-36 x ¼" Screws	.75
6008	90 6-32 x ¼" Screws	.75
6009	85 6-32 x ½" Screws	.75

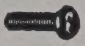
G-C BRASS ROUND HEAD MACHINE SCREWS

Brass — Nickel Plated

No.		List
8500-E	Env. 30 Asst. Screws	$0.45

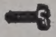
G-C PHILLIPS TYPE ROUND HEAD MACHINE SCREWS

Steel — Nickel Plated



No.		List
8510-E	Env. 30 Asst. Screws	$0.45

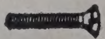
G-C BINDING HEAD MACHINE SCREWS



Steel — Nickel Plated

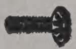
No.		List
7150-E	Env. 50 Asst. Screws	$0.45

G-C OVAL HEAD RACK & CABINET SCREWS



No.	ENVELOPE	List
6039-E	30 Asst. Rack Screws & Washers	$0.45
6543-E	20 10-32 x ¾" Rack Screws	.45
	GLASS JAR	
6628	45 Asst. Screws & Washers	.75

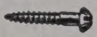
G-C ORNAMENTAL HEAD SCREWS



Steel — Statuary Bronze — for speakers, baffles, etc.

No.	ENVELOPE	List
1094-E	15 Asst. Screws	$0.45
	GLASS JAR	
6631	50 Asst. Screws	.75

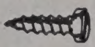
G-C WOOD SCREWS



Round Head — Steel — Nickel Plated

No.	ENVELOPE	List
6110-E	30 Asst. Sizes	$0.45
	GLASS JAR	
6633	45 Asst. Sizes	.75

G-C SHEET METAL SCREWS



Hex Head — Slotted — Nickel Plated — Self Tapping Type — With Point "A" Tip

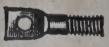
No.	ENVELOPE	List
297-E	25 Asst. Sheet Metal Screws	$0.45
6092-E	25 No. 6 x ⅜" Sheet Metal Screws	.45
6093-E	25 No. 6 x ½" Sheet Metal Screws	.45
6095-E	20 No. 8 x ⅜" Sheet Metal Screws	.45
6096-E	20 No. 8 x ½" Sheet Metal Screws	.45
	GLASS JAR	
6608	50 Asst. No. 4 & No. 6 Screws	.75
6609	45 Asst. No. 8 & No. 10 Screws	.75
	AUTO SHEET METAL SCREWS	
8102	20 No. 8 x ¼" Screws	.45

G-C ESCUTCHEON SCREWS

Round head, slotted type statuary bronze plated. For mount dial and indicator plates, etc.

No.	ENVELOPE	List
1090-E	30 Asst. Escutcheon Screws	$0.45
	GLASS JAR	
6632	50 Asst. Escutcheon Screws	.75

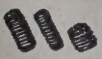
G-C SPADE BOLTS



Steel — Nickel Plated

No.	ENVELOPE	List
6080-E	20 Asst. Spade Bolts	$0.45

G-C KNOB SET SCREWS

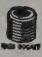


Slotted Head Type—Cup Point — Hardened Steel

No.	ENVELOPE	List
1062-E	15 Asst. Set Screws	$0.45
6061-E	15 Asst. 6-32 Screws	.45
6062-E	15 Asst. 8-32 Screws	.45
6063-E	15 Asst. 10-32 Screws	.45
	GLASS JAR	
6605	30 Asst. Set Screws	.75

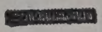
G-C ALLEN HEX SET SCREWS

Steel — Hardened — Headless



No.	ENVELOPE	List
7190-E	5 Asst. 4-30 Screws	$0.45
7195-E	5 Asst. 6-32 Screws	.45
7200-E	5 Asst. 8-32 Screws	.45

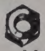
G-C THREADED STEEL ROD



Steel running thread in 6-32 and 8-32 sizes.

No.	ENVELOPE	List
6665-E	Asst. 6-32 and 8-32 Rods	$0.45

G-C HEXAGON NUTS



Steel — Nickel Plated

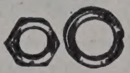
No.	ENVELOPE	List
293-E	35 Asst. Hex Nuts	$0.45
6041-E	40 4-36 Hex Nuts	.45
6042-E	35 6-32 Hex Nuts	.45
6043-E	30 8-32 Hex Nuts	.45
6044-E	25 10-32 Hex Nuts	.45
	GLASS JAR	
6606	60 Asst. 4-36 & 6-32 Hex Nuts	.75
6607	60 Asst. 8-32 & 10-32 Hex Nuts	.75
6045	80 4-36 Hex Nuts	.75
6046	75 6-32 Hex Nuts	.75
6047	60 8-32 Hex Nuts	.75

G-C BRASS HEX NUTS

Nickel Plated

No.	ENVELOPE	List
7245-E	40 6-32 Hex Nuts	$0.45
7248-E	25 8-32 Hex Nuts	.45

G-C MOUNTING NUTS

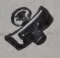


Steel — Nickel Plated

For toggle switches, rotary switches, volume controls, etc.

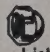
No.	ENVELOPE	List
6050-E	12 Asst. Nuts	$0.45
	GLASS JAR	
6615	25 Asst. Nuts	.75

G-C TIMMERMAN SPEED NUTS



No.	ENVELOPE	List
6055-E	30 Asst. Speed Nuts	$0.45
	GLASS JAR	
6630	60 Asst. Speed Nuts	.75

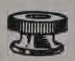
G-C ACORN NUTS



Solid Brass — Nickel Plated

No.	ENVELOPE	List
6030-E	12 Asst. Acorn Nuts	$0.45
	GLASS JAR	
6627	18 Asst. Acorn Nuts	.75

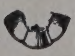
G-C THUMB NUTS



Brass — Nickel Plated

No.	ENVELOPE	List
6654-E	10 Asst. Thumb Nuts	$0.45

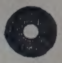
G-C WING NUTS



Nickel Plated

No.	ENVELOPE	List
6658-AE	10 Asst. Wing Nuts	$0.45

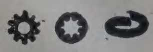
G-C METAL WASHERS



Steel — Nickel Plated

No.	ENVELOPE	List
6150-E	80 Asst. Metal Washers	$0.45
	GLASS JAR	
6612	135 Asst. No. 4 & No. 6 Washers	$0.75
6614	100 Asst. No. 8 & No. 10 Washers	.75

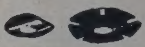
G-C LOCK WASHERS



Internal, external, and split types lock washers. For all purposes.

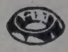
No.	ENVELOPE	List
1717-E	65 Asst. All Types	$0.45
7320-E	60 Asst. Internal Type	.45
7350-E	60 Asst. External Type	.45
6502-E	60 Asst. Split Type	.45
	GLASS JAR	
6614	90 Asst. All Types	.75

G-C SPRING TYPE FRICTION WASHERS



No.	ENVELOPE	List
6190-E	25 Asst. Sizes	$0.45

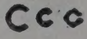
G-C CUP FINISHING WASHERS



Nickel Plated

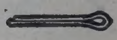
No.	ENVELOPE	List
6159-E	40 Asst. Cup Washers	$0.45
6039-E	30 Asst. Rack Screws & Washers	.45
	GLASS JAR	
6628	45 Asst. Rack Screws & Washers	.75

G-C "C" WASHERS



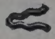
No.	ENVELOPE	List
6180-E	50 Asst. C-Washers	$0.45
	GLASS JAR	
6636	85 Asst. C-Washers	.75

G-C COTTER PINS



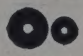
No.	ENVELOPE	List
6440-E	60 Asst. Cotter Pins	$0.45
	GLASS JAR	
6642	90 Asst. Cotter Pins	$0.75

G-C HAIR PIN COTTER SPRINGS



No.	ENVELOPE	List
6475-E	50 Asst. Cotter Springs	$0.45
	GLASS JAR	
6637	75 Asst. Cotter Springs	.75

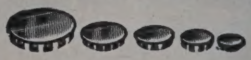
G-C FIBRE WASHERS



Best grade hard fibre — flat and extruded types.

No.	ENVELOPE	List
6512-E	30 Asst. Flat & Extruded Washers	.45
6520-E	40 Asst. Extruded Washers	.45
	GLASS JAR	
6634	85 Asst. Flat Fibre Washers	.75

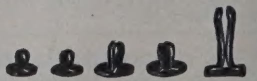
G-C SNAP BUTTON HOLE PLUGS



Popular size hole plugs used in radio, experimental, electrical work, etc. Just snap in hole.

No.	ENVELOPE	List
1716-E	8 Asst. Hole Plugs	$0.45

G-C SNAP-IN TRIMOUNTS

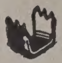


To hold small parts in place, etc. Just snap into place.

No.	ENVELOPE	List
1719-E	25 Asst. Trimounts	$0.45
1727-E	18 Large Size Trimounts	.45
	GLASS JAR	
6620	45 Asst. Trimounts	.75

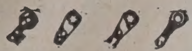
GENERAL G-C CEMENT *Electronic Hardware*

G-C DIAL CORD CLIPS



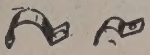
No.	ENVELOPE	List
6220-E	35 Asst. Cord Clips	$0.45
	GLASS JAR	
6621	75 Asst. Cord Clips	$0.75

G-C SOLDERING LUGS



No.	ENVELOPE	List
1019-E	30 Asst. Soldering Lugs	$0.45
	GLASS JAR	
6618	75 Asst. Soldering Lugs	.75

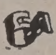
G-C CABLE HOLDER CLAMPS



Steel, nickel plated clamps for cables ⅛" to ½". Standard mounting holes.

No.	ENVELOPE	List
6250-E	20 Asst. Cable Clamps	$0.45
	GLASS JAR	
6644	40 Asst. Cable Clamps	.75

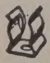
G-C GRID CAPS



Assortment of popular types for glass and metal tubes.

No.	ENVELOPE	List
6290-E	12 Asst. Grid Caps	$0.45
	GLASS JAR	
6635	25 Asst. Grid Caps	.75

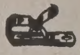
G-C FUSE CLIPS



For ¼" glass fuses. No. 6 mounting hole.

No.	ENVELOPE	List
6311-E	10 Fuse Clips	$0.45

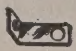
G-C FAHNESTOCK CLIPS



Nickel plated clips for fastening wires, etc.

No.	ENVELOPE	List
6300-E	12 Asst. Fahnestock Clips	$0.45
	GLASS JAR	
6639	30 Asst. Fahnestock Clips	.75

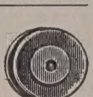
G-C ANGLES & BRACKETS



Nickel plated angles and brackets of assorted shapes.

No.	ENVELOPE	List
6260-E	15 Asst. Angles & Brackets	$0.45

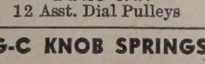
G-C DIAL PULLEYS



Free running brass pulley for dials, etc.

No.	ENVELOPE	List
6057-E	6 Asst. Dial Pulleys	$0.45
	GLASS JAR	
6638	12 Asst. Dial Pulleys	$0.75

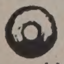
G-C KNOB SPRINGS



For all types of knobs using springs. All fully tempered.

No.	ENVELOPE	List
1049-E	16 Asst. Knob Springs	$0.45
	GLASS JAR	
6619	35 Asst. Knob Springs	.75

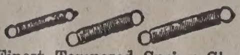
G-C RADIO KNOB FELTS



Soft felt pads to fit behind radio knobs, ¼" hole.

No.	ENVELOPE	List
1065-E	50 Knob Felts	$0.45
	GLASS JAR	
6641	70 Knob Felts	.75

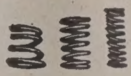
G-C DIAL DRIVE AND TENSION SPRINGS



Finest Tempered Spring Steel

No.	ENVELOPE	List
1054-E	10 Asst. Dial Drive Springs	$0.45
1054-SE	10 Asst. Small Dial Drive Springs	.45
6420-E	10 Asst. Small Tension Springs	.45
6421-E	8 Asst. Large Tension Springs	.45
6480-E	10 Asst. Small Phono Springs	.45
6481-E	8 Asst. Large Phono Springs	.45
	GLASS JAR	
6616	15 Asst. Dial Drive Springs	.75

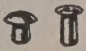
G-C COMPRESSION SPRINGS



For push-button tuners, switching mechanisms, dials, etc.

No.	ENVELOPE	List
6430-E	20 Asst. Small Springs	$0.45
6431-E	15 Asst. Large Springs	.45

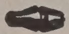
G-C RIVETS AND EYELETS



Popular sizes used to mount tube sockets, parts, etc.

No.	ENVELOPE	List
1027-E	55 Asst. Rivets & Eyelets	$0.45
1028-E	60 Asst. Eyelets & Dial Cable Clamps	.45
6900-E	55 Asst" Eyelets	.45
6850-E	60 Asst. Rivets	.45
	GLASS JAR	
6622	85 Asst. Rivets & Eyelets	.75

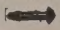
G-C CORD STRAIN RELIEFS



Fits P.O.S.J. Cord. Fits ¼" hole.

No.	ENVELOPE	List
6675-E	4-Cord Strain Reliefs	$0.45

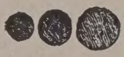
G-C ESCUTCHEON PINS



Decorative bronze — for fastening dial escutcheons, etc.

No.	ENVELOPE	List
6670-E	100 Asst. Escutcheon Pins	$0.45

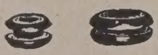
G-C VOICE COIL DUST FELTS



Assorted sizes to fit popular voice coil openings.

No.	ENVELOPE	List
1079-E	25 Asst.Felts	$0.45
	GLASS JAR	
6640	50 Asst. Felts	.75

G-C RUBBER GROMMETS



Black, soft rubber, oil and solvent resistant.

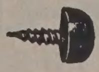
No.	ENVELOPE	List
1039-E	15 Asst. Rubber Grommets	$0.45
1041-E	12 3/16" ID x 5/16" OD Grommets	.45
1042-E	10 ¼" ID x ⅛" OD Grommets	.45
1043-E	10 ⅜"ID x ½" OD Grommets	.45
	GLASS JAR	
6626	20 Asst. Soft Grommets	.75
6625	25 Asst. Grommets	.75

G-C PURE GUM RUBBER GROMMETS

For tuner mountings, etc.

No.	ENVELOPE	List
7580-E	12 Asst. Pure Gum Grommets	$0.45

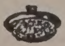
G-C RUBBER FEET



Asst. sizes. Supplied with wood screws.

No.	ENVELOPE	List
1075-AE	8 Asst. Feet	$0.45

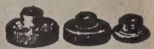
G-C CHASSIS FELT FEET



Quality type supplied with machine and sheet metal screws

No.	ENVELOPE	List
1086-E	4 Asst. Felt Feet	$0.45

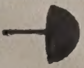
G-C RUBBER CHASSIS MOUNTS



Live rubber to absorb shock. Assorted sizes.

No.	ENVELOPE	List
1038-E	10 Asst. Chassis Mounts	$0.45

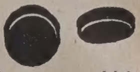
G-C TACK BUMPERS



⅜" Bumper with tack molded in place.

No.	ENVELOPE	List
1075-E	10 Tack Bumpers	$0.45
	GLASS JAR	
6624	18 Tack Bumpers	.75

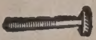
G-C FELT PADS



Soft felt pads to glue on bottom of cabinets, etc.

No.	ENVELOPE	List
1069-E	40 Asst. Felt Pads	$0.45
	GLASS JAR	
6623	60 Asst. Felt Pads	.75

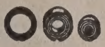
G-C PHONO STYLUS SCREWS



Assorted sizes to fit most record players.

No.	ENVELOPE	List
1052-E	7 Asst. Stylus Screws	$0.45

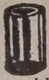
G-C BUSHINGS AND SPACERS



Brass and insulated types for insulating and spacing radio parts.

No.	ENVELOPE	List
6760-E	12 Asst. Insulated Spacers	$0.45
6761-E	12 Asst. Metal Spacers	.45
	GLASS JAR	
6617	12 Asst. Metal & Insulated Spacers	.75

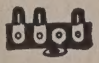
G-C REDUCING BUSHINGS



Split type bushing for auto radio knobs, etc. Reduces from ¼" to 3/16".

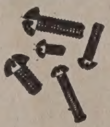
No.	ENVELOPE	List
6751-E	8 Bushings	$0.45

G-C TERMINAL STRIP ASSORTMENT



No.	ENVELOPE	List
6855-E	4 Asst. Terminal Strips	$0.45

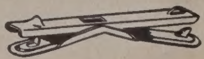
G-C PICK-UP AND CARTRIDGE SCREW ASSMT.



Asst. of hard to get screws for mounting pick-up cartridges.

No.	ENVELOPE	List
6000-E	60 Asst. Screws, Small Size	$0.45

NEW! G-C TELEVISION 300-OHM WIRE STRIPPER



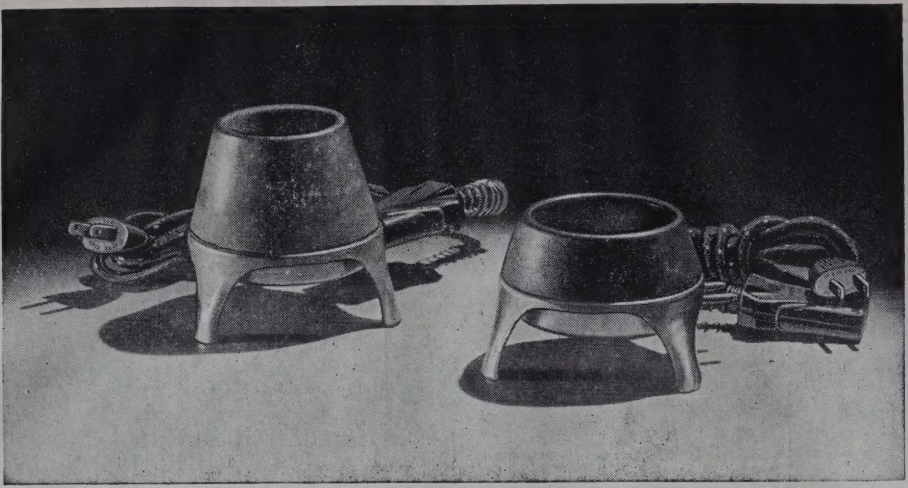
A handy pocket size tool for stripping, slitting, and skinning any 300-ohm wire. Every television installer and service man needs this tool. Steel, cadmium plated.

No.		List
8400	TV Stripper	$1.65

SPECIAL NOTICE TO QUANTITY USERS

All G-C hardware as supplied in the assortments on these pages is available in specific sizes and types in packages of a gross and a thousand at attractive prices. Also, on large quantities for industrial users, etc., quantity prices will be quoted. See your Distributor or write the factory for specific information.

LECTROHM SOLDER POTS



FOR PRODUCTION-LINE TINNING OF SMALL WIRES and PARTS

- ***Individual Pots for Each Operator***
- ***Sturdy Construction***
- ***Two Sizes — 1¾ and 2 lb. Capacity***

Here at last is an electric solder pot good for long life in production-line tinning yet inexpensive enough for only occasional use. Available in 1¾ and 2 lb. capacities, these pots are ideal for continuous operation in radio, motor and other electrical equipment plants where individual solder pots are required. By using a rheostat, Lectrohm Solder Pots can be used from 100 watts, for melting waxes and compounds, to 450 watts for maintaining solder at 850° F. Only small amounts of solder need be melted at a time, depending upon your requirements.

Lectrohm Solder Pot is composed of cast iron pot mounted by a single screw on a cadmium-plated steel stand. Single-heat, porcelain nickel-chrome heating element (easily and inexpensively replaced) heats the pot. The unit operates on 110 v. AC or DC but can be had for any specified voltage. Furnished with 6′ Underwriters' approved cord and attachment plug. Spare elements of special wattages are available.

SPECIFICATIONS

No.	Solder Cap. in Lbs.	Height Overall	Diam.	Cup Depth	Wattage	Element
200	1¾	2¾″	2⅜″	⅞″	200	A
250	2	3¾″	2″	1¾″	250	B

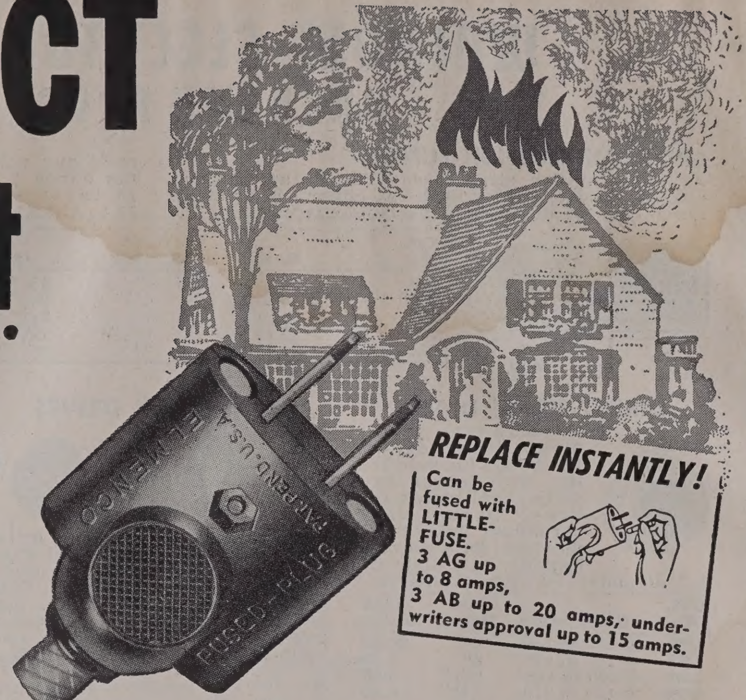
Price either pot $4.98. Spare replacement elements $1.42 each

LECTROHM

INCORPORATED

CHICAGO 30, ILLINOIS

PROTECT against • • • • • • • • Fire hazards!



REPLACE INSTANTLY!
Can be fused with LITTLE-FUSE.
3 AG up to 8 amps,
3 AB up to 20 amps; underwriters approval up to 15 amps.

LIST PRICE
39¢
Less Fuses

ELMENCO

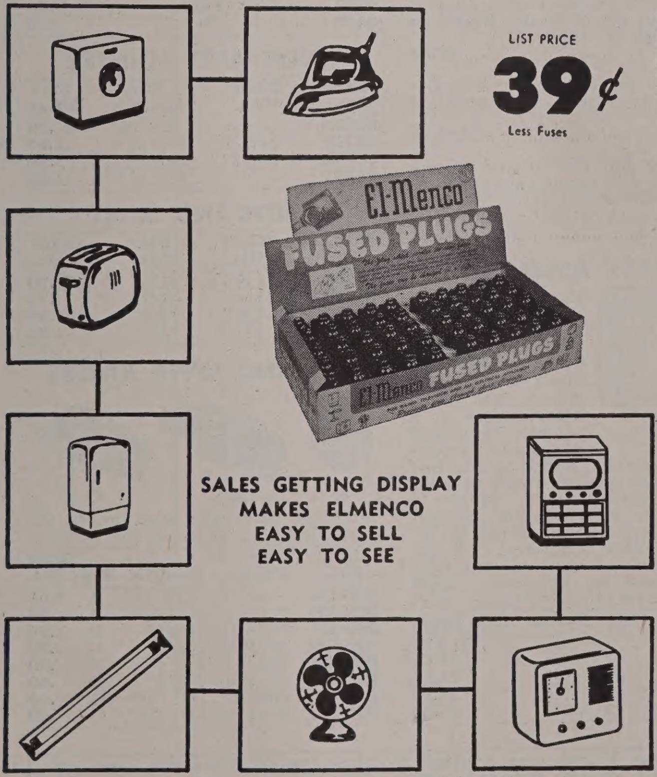
FUSED PLUGS

COMPLETE PROTECTION!

The Elmenco Fused Plug is like any standard plug, is light in weight, but easier to handle because of finger grips. However, it contains 2 small fuses which provides complete protection against damage to the appliance and to the main line. The blown fuse is easy to remove and simple to replace. Fits any standard wall outlet.

NEW MARKETS! GREATER VALUE!

Approved by Underwriters Laboratories and used by many of the largest manufacturers of radio and electronic equipment, battery chargers, washing machines, curling irons, lighting equipment, automatic relay equipment, motors of every description, and practically every other type of product that consumes electricity.
Every wired home, office and store is a prospect.



SALES GETTING DISPLAY
MAKES ELMENCO
EASY TO SELL
EASY TO SEE

Contact your jobber today. Write us for detailed information giving us your Jobbers name.

MANUFACTURED BY

ELMENCO PRODUCTS CO.

103 LAFAYETTE ST., N. Y. 13, N. Y.

We list a few of the larger consumers of the ELMENCO FUSED PLUG

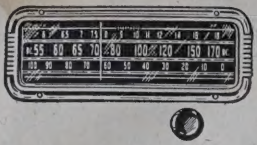
- Auto-Lite
- Bell Telephone Labs.
- Bulldog Electric
- Cambridge Instrument
- Canaday Cooler
- Dictaphone
- Dila-Therm
- Eagle Electric
- Eastman Kodak
- Electro-Physical Labs.
- General Electric
- Gerlat Lighting
- I. B. M.
- Buick Motors
- Philco
- R. C. A.
- Sylvania
- Thomas Edison
- Webster-Chicago
- Western Electric
- Westinghouse

WALDOM ELECTRONICS, Inc.

CRONAME PRODUCTS

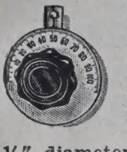
CRONAME CROFLEX TUNERS

Available in five sizes these dials fit any normal chassis. Locate tuning knobs at either end or along lower edge of dial. Place variable condenser at almost any point behind the dial. Hub with adapter fits either ⅜" or ¼" shaft. Pilot socket supplied. Bronze escutcheon and edgelit glass scale, calibrated 55 to 170 AM and 6 to 18 MC.



Cat. No.	Ratio	Pointer Travel	Escutcheon Outside	Escutcheon Inside	List Each
231	13 to 1	4"	2¼" x 4¾"	1¾" x 4¼"	$ 7.70
232	16 to 1	4 11/16"	2 9/16" x 6 1/16"	1 9/16" x 5⅛"	8.00
233	18 to 1	5½"	3 5/32" x 6⅝"	2" x 5¾"	8.30
234	23 to 1	6¾"	3 1/16" x 8 7/16"	1⅞" x 7¼"	8.70
236	31 to 1	9"	4" x 11 1/16"	2⅞" x 9⅜"	13.55

DIRECT DRIVE DIALS

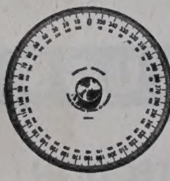


Standard type, deluxe direct drive dials. Knobs are black bakelite with brass inserts. Dial plates are heavy brass, with chromium finish. Indicators for accurate reading. All dials fit ¼" diameter instrument shafts.

Cat. No.	Calibration	Dial Diam.	List Price
292	0-100 in 180°	4"	$4.50
293	0-100 in 270°	4"	4.50
294	0-100 in 180°	2¾"	3.50
295	0-100 in 270°	2¾"	3.50
302	0-100 in 360°	4"	4.50
303	0-100 in 360°	2¾"	3.50
27068	0-100 in 180°	1¾"	2.00
27069	0-100 in 270°	1¾"	2.00

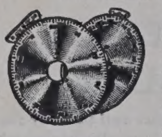
AZIMUTH DIAL

Precision Test Dial



No. 27010. Calibrated in degrees through full 360°. Outer numerals read 0 to 360 in clockwise direction; inner numerals 0 to 360 in counterclockwise direction. Etched on heavy brass with black graduations and figures on hand-spun chromium background. Hub has two set screws and fits ⅜" shaft. Diameter of dial is 6"; diameter of indicator is ½".
List Price $9.95

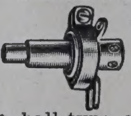
ACCESSORY DIALS



These dials are for attachment to the knobs illustrated. Of heavy etched brass with chromium finish. Calibration lines and numerals are filled with black enamel. are furnished with KD-1 and KD-2 single-line indicators; all the others have spring-mounted vernier indicators. Packed in individual envelope complete with indicator and all necessary screws for attaching dial to knob and indicator to panel.

Cat. No.	Cal.	Dia.	Use Knob	List Price
KD-1	180°	1¾"	6537	$1.65
KD-2	270°	1¾"	6537	1.65
KD-3	180°	2¾"	6549	2.75
KD-4	270°	2¾"	6549	2.75
KD-5	360°	2¾"	6549	2.75
KD-6	180°	4"	6550	3.50
KD-7	270°	4"	6550	3.50
KD-8	360°	4"	6550	3.50

PLANETARY DRIVES



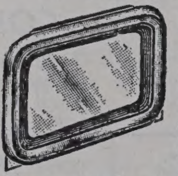
The ball-type planetary drive units on this page are useful whenever a compact device is needed for reduced-speed operation. Ratio approximately 5 to 1. May be used as auxiliaries or incórporated in new construction. All units have hubs to fit ¼" instrument shafts.

No. 599 is a precision device used for both military and civilian production. Can be used as a single-speed drive by omitting knob on the high-speed sleeve.
List Price $8.00

No. 27067 same as No. 599 described above except for threaded sleeve.
List Price $12.65

No. 6665 Knob fits either of the units above. Larger knob is anodized aluminum. Smaller knob is black butyrate with brass insert.
List Price $1.25

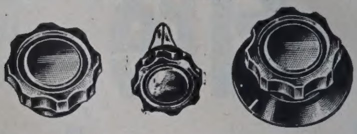
TV MASK ASSEMBLIES



Commercial television mask and escutcheon assemblies for the most popular sized TV tubes. Each complete kit consists of a mask, tempered glass and decorative escutcheon. Suitable for use in either conversion work or custom-built installations. Mask is heavy gauge aluminum, green-sprayed finish. Front glass is ¼" thick, specially tempered. All escutcheons are of durable construction finished in attractive gold finish. For rectangular tubes only.

Cat. No.	Description	List Price
CK-14	14" Kit	$13.50
CK-16	16" Kit	16.50
CK-17	17" Kit	16.50
CK-20	20" Kit	24.85
CK-21	21" Kit	29.50

FLUTED KNOBS



Black full-fluted knobs of compression-molded Bakelite. With ¼" brass inserts and slotted head set screws.

PLAIN KNOBS

Cat. No.	Dia.	List Price
6537	1⅛"	$.40
6538	1⅜"	.45
6539	1⅝"	.50
6540	2⅜"	.70

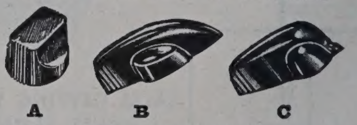
KNOB AND POINTER

Cat. No.	Knob Dia.	Ptr. Length	List Price
6566P	1-1/8"	25/32"	$ .75
6571P	1-3/8"	1-1/32"	1.00
6570P	1-5/8"	1-5/16"	.90
6559P	2-3/8"	1-11/16"	1.25

KNOB AND SKIRT

Cat. No.	Knob Dia.	Skt. Dia.	List Price
6545S	1⅛"	1½"	$ .70
6548S	1⅜"	1¾"	.75
6549S	1⅝"	2 1/16"	.80
6550S	2⅜"	3"	1.05

BAR AND LEVER KNOBS



Made of Butyrate with brass insert and slotted head set screws.

Cat. No.	Color	Length	Fig.	List Ea.
BK-1B	Black	11/16"	A	$.55
BK-1W	Walnut	11/16"	A	.55
BK-2B	Black	1-1/4"	B	.30
BK-2W	Walnut	1-1/4"	B	.30
BK-3B	Black	2-1/4"	B	.40
BK-3W	Walnut	2-1/4"	B	.40
BK-4B	Black	1-31/32"	C	.40
BK-4W	Walnut	1-31/32"	C	.40

List prices shown are subject to usual trade discounts, and are subject to change without notice. For detailed and complete information see our general catalog.

WALDOM ELECTRONICS, INC.

Chicago 10, Illinois

Manufacturers of Field Coils and Replacement Cones

Thank You!

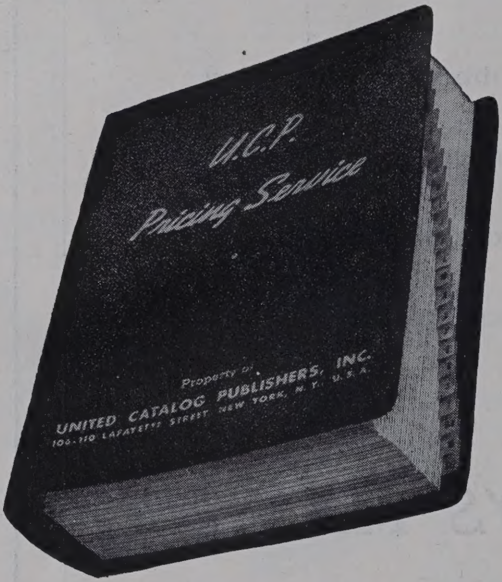
When writing for additional information or when ordering from sources of supply listed in this book, please mention

RADIO'S MASTER

PRICES

Prices of manufacturers and suppliers' products listed in **RADIO'S MASTER** are subject at all times to change without notice — they should not be considered final.

Get quick on-the-spot quotations from your distributor who subscribes to our perpetual up-to-the-minute **PRICING SERVICE.**


U.C.P.
Pricing Service
Property of
UNITED CATALOG PUBLISHERS, INC.
106-110 LAFAYETTE STREET NEW YORK, N. Y. U. S. A.

Official Pricing System of radio - electronic - television parts and equipment. Supported by the industry: distributors, manufacturers, and their sales representatives.

•

Loose-leaf, flexible binder. Contains over 1100 pages.

•

Published by
UNITED CATALOG PUBLISHERS, INC.
106-110 Lafayette Street
New York 13, N. Y.

DELIVERY

Delivery is often dependent on the availability of raw **materials.** So check with your distributor for delivery information.

RADIO'S MASTER

Seventeenth Edition

GENERAL INDEX

— A —

Section & Page

- AC-DC Antenna Wire ... S-11, 15, 23
- AC-DC Power Inverters ... M-34 to 37
- AC-DC Resistance Cords ... S-38, 47; U-89
- Adapters, Cathode Ray Tube Testing ... F-20, 93, 119; K-28
- Adapters, Dry Wall Flush Socket ... K-19
- Adapters, FM- for AM Receivers ... J-61
- Adapters, Magnetic Pickup ... B-13
- Adapters, Phone Plug ... S-41; T-6, 36; U-74
- Adapters, Tube Checker ... T-5
- Adapters, TV Tube Extension ... S-41; U-73
- Adapters, Voltage Adjusters—Foreign ... N-53
- *Adjust-A-Cone* Speakers ... C-4, 5
- *Adjust-A-Volt* Variable Transformers ... N-81
- **Advance Electric & Relay Co.** ... L-21 to 23
- *Aerocon* Capacitors ... P-121

- **Aerovox Corporation**
  - Capacitors ... P-116 to 132
  - Resistors ... R-47 to 49

- Aircraft and Marine Crystals ... K-37 to 41
- Aircraft Dynamotors, Magmotors ... M-42, 44, 53
- Aircraft Fuses ... G-15
- Aircraft Wires and Shielding ... S-5 to 7, 15, 52
- Alarms, Burglar ... L-35
- Alignment, Neutralizing Tools ... T-3, 17; U-40, 68, 77 to 80, 100 to 102

- **Alliance Manufacturing Co.**
  - Antenna Rotator ... S-74
  - Phono Motors ... E-26

- Alligator Clips ... M-16; S-32, 33; U-66, 76, 106
- Alnico V Speakers ... Section C
- Alpha Counting Devices, Survey Meters ... E-23; F-16, 66, 67
- **Alpha Metals, Inc.** ... U-16
- **Alpha Wire Corporation** ... S-1 to 13
- **Alprodco, Inc.** ... K-32

- **Altec Lansing Corporation**
  - Amplifiers ... B-1
  - Microphones ... D-1
  - Speakers ... C-3
  - Transformers (Peerless Division) ... N-60 to 62

- Amateur Equipment (see specific headings, such as *Communication Receivers, Transmitters, Oscillators, etc.*)
- Amateur Testing Equipment ... F-24; J-26, 59
- Amateur Type Tubes ... A-1, 4, 6, 7, 13, 15, 21, 24, 25, 32
- *American Beauty* Soldering Irons ... U-1
- **American Electrical Heater Co.** ... U-1
- **American Microphone Co.** ... D-24 to 27
- **American Phenolic Corp. (Amphenol)** ... T-1 to 11
- **American Radio Relay League (ARRL)** ... H-9
- **American Television & Radio Co. (ATR)** ... M-30 to 37
- Ammeters ... F-25, 35 to 39, 48 to 59, 69
- **Amperex Electronic Corp.** ... A-24

- **Amperite Company, Inc.**
  - Ballast Tubes ... R-50
  - Microphones and Stands ... D-28, 29
  - Thermostatic Delay Relays ... L-30

- *Amphenol* (American Phenolic Corp.) ... T-1 to 11
- Amplifiers and Systems ... Section B; also C-28; E-28; F-102; J-61; K-1
  - Cases, Cabinets, Racks ... B-13, 34; J-38, 39, 83, 91
  - Foundation Chassis ... J-38, 39, 84, 91, 93, 98
  - Industrial and School Systems ... B-13, 16, 20, 21
  - Kits ... N-21, 61
  - Mixers ... B-8, 9, 20
  - Mobile Amplifiers ... B-4, 10, 14, 16, 22, 26, 33
  - Musical Instrument Amplifiers ... B-11
  - Noise Suppressors ... B-7; D-8, 17; J-59; N-4, 45, 77, 79
  - Phono Amplifiers, Systems ... B-5, 10, 11, 15, 16 to 19, 26
  - Portable Amplifiers ... B-5, 8 to 12, 18, 19, 22, 26, 27, 3[illegible] E-28
  - Pre-amplifiers, Boosters ... B-1, 7, 15, 20, 33; K-1
  - Printed Electronic Circuits ... P-81
  - Production Comparator ... B-6
  - Recording Amplifiers ... E-1, 2, 7, 12, 13
  - Remote Control Amplifiers & Boxes ... B-1, 7, 13, 17
  - Restaurant Amplifier ... B-11
  - Transmitter, Amateur Power Amplifiers ... J-28, 65

Section & Page

- Analyzer Adapters ... T-5
- Analyzers (see also Testing Instruments) ... Section F
- Angles and Brackets ... J-37; S-34; T-37; U-44, 63, 72, 91, 92, 115
- Antenna Accessories (see also TV)
  - AC-DC Antenna Wire ... S-11, 38
  - Coils ... J-49, 50, 56, 60; N-93 to 96
  - Insulators ... J-73; K-21; P-81; S-36 to 40, 65, 70, 81, 83; T-9; U-73, 93
  - Lead-in Strips, Ground Clamps, Rods ... M-17; S-38 to 40, 50, 65, 69, 80, 83; U-93
  - Lightning Arresters ... K-28; S-38, 40, 73, 79, 80, 83, 91; T-9; U-93
  - Matching, Coupling Transformers, etc. ... J-49; K-14; N-92; S-79
  - Mounting Accessories ... K-12, 13, 19 to 21, 24 to 32; S-39, 40, 59, 65, 69, 70, 72, 73, 80, 81, 83; T-9; U-73, 108
  - Nail-it Knobs ... S-38; U-93
  - Roof Patching Compound ... S-70
  - Spring Adjusters ... S-38
  - Spring Wire Clips ... S-36; U-45, 71, 91, 106, 115
  - Switches, Changeover, etc. ... K-12, 19, 33; S-79
  - Tuner ... U-89
  - Turnbuckles ... S-40, 70; U-73
  - Wire and Cable ... J-73; S-11, 15, 23, 29, 30, 38, 47, 50, 70, 80; U-71

- Antenna Adapters for Ham Rigs ... J-62, 65
- Antenna Changeover Relays ... L-22, 32
- Antenna Compass, TV ... F-33
- Antenna Couplers, TV ... J-25; K-12, 14, 19; S-79, 81
- Antenna Manuals ... Section H
- Antennas and Systems ... K-15, 29 to 34; S-55 to 106; U-93
  - Auto Antennas ... K-33; S-55, 60, 83, 90, 97; U-110
  - Conical Antennas ... K-29 to 31; S-61, 68, 69, 81, 86 to 88, 91, 99
  - Indoor Antennas, TV ... K-33; S-61, 81, 82, 84, 85, 91, 96, 99, 106; T-10
  - Kits ... K-6; S-11, 38, 40, 47, 69, 91; U-93
  - Loop Antennas ... J-49; U-89
  - Loopsticks ... K-22
  - Master Antenna Distribution Systems ... K-15, 34; S-95
  - Masts, Radiators, Towers ... K-13, 32; S-72, 76, 81, 100; T-9
  - Mobile, Transmitter, Police Antennas ... S-56, 63, 64, 83, 89, 103 to 105
  - Motorcycle Antennas ... S-56
  - Rotating Antennas ... J-67; S-62, 64, 98; T-11
  - Television and FM Antennas ... K-15, 29 to 34; S-57 to 106; T-10
  - Window Antennas & House Masts ... S-55, 81, 88, 91; 102; U-93
- *Antennascope* (Eldico of N. Y., Inc.) ... J-65
- Appliance Noise Filters ... J-48, 49, 61; N-95; P-8, 31, 129; U-89
- Appliance Testers ... F-24, 34 to 38, 60, 97
- **Arco Electronics, Inc. (El-Menco Capacitors)** ... P-62 to 69
- **Argos Products Co.** ... K-7
- **Astatic Corporation** ... D-2 to 9
- **Astron Corporation** ... P-86 to 89

- **Atlas Sound Corporation**
  - Speakers, Horns, etc. ... C-24, 25
  - Stands ... D-30, 31

- *ATR* (American Television & Radio Co.) ... M-30 to 37
- Attenuators, Audio, etc. ... L-10, 11, 17; R-8, 11, 22, 36
- **Audak Co., Inc. (Audax)** ... E-20, 21
- Audio Chokes ... Section N
- **Audio Devices, Inc.** ... E-40, 41
- **Audio Engineering,** publication ... H-21
- Audio Filters ... B-7; D-8, 17; J-59; N-4, 45, 77, 79
- Audio Graph Sheets ... E-23
- Audio Oscillators ... F-67, 73; J-59, 62; U-89
- Audio Reactors ... Section N
- Audio Sweep Frequency Generator ... E-23
- Audio Sweep Frequency Transcription ... E-23
- Audio Transformers ... Section N; also B-13, 20; C-6, 7, 10, 13, 21, 25, 42; D-8, 29; E-22
- *Audiodiscs, Audiopoints, Audiotape* ... E-40, 41
- **Aurora Equipment Co., Equipto Division** ... U-28
- Auto Radio Accessories:
  - Antenna and Fuse Connectors ... G-17; T-36; U-45, 65, 86, 105
  - Auto Antennas ... K-33; S-55, 60, 83, 90, 97; U-110
  - Battery Eliminators ... F-119; M-15, 19, 27, 33; N-16; S-60, 97
  - Capacitors, Filters ... P-5, 6, 48, 73, 132; S-38
  - Knobs ... U-112

Section & Page

- Auto Radio Accessories (Cont.)
  - Lead-in Adapters ... U-65
  - Panel Lamps ... A-11, 13; M-6
  - Pin Plug and Jack Sets ... S-31; T-36; U-43, 70, 75, 104
  - Power Supplies, Packs ... M-15, 19, 22, 23, 27, 33; N-16; S-60, 97
  - Speakers, Replacement, Rear Seat, etc. ... C-6, 33, 41, 42, 43
  - Suppressors, Ignition ... P-6; R-3, 33; S-38; U-110
  - Tire Static Neutralizing Kits ... U-52, 110
  - Vibrators ... M-18, 20, 25, 32, 38, 39
  - Vibrator Transformers, Exact Duplicate ... N-11
  - Volume and Tone Controls ... Section R
  - Wheel and Hood Static Eliminators ... U-110
  - Wire, Cable, Shielding ... S-1, 4, 5, 15, 26, 28, 49
- Automatic Line Voltage Regulators, Plug-in ... R-8; S-80; U-89
- Automatic Voltage Regulators, Controls, Reducers ... M-28, 29, 46 to 52; N-16, 26, 32
- Autotransformers, Autoformers ... M-28, 46; N-16, 26, 32, 46, 48, 49, 53, 54, 55, 64, 65, 71, 83, 88, 91, 112

— B —

- Baffles, Enclosures for Speakers ... B-34; C-3, 11, 17, 25 to 28, 31, 36; J-40; K-7
- **Baker Manufacturing Co.** ... S-72
- Ballasts (Voltage Regulator Tubes) ... A-6, 7, 12, 15, 20, 31; R-7, 50; S-80
- Banana Plugs, Jacks ... J-44, 78; S-32, 33; U-36, 37, 66, 68, 74, 75, 104
- Band Expanders for Communication Receivers ... J-22, 23, 25
- Band Switches and Assemblies ... J-56, 57; L-3
- *Bandmaster* Transmitters ... J-19
- **Barker & Williamson, Inc.** ... J-56 to 59
- Barrier Type Terminal Strips ... T-26 to 28; U-64
- Bases, Bottom Plates for Metal Chassis ... J-37, 38, 86, 91, 95
- Batteries, Dry ... M-1 to 14
- Battery and Test Clips ... M-16, 17; S-32, 33; U-66, 71, 106
- Battery Chargers, Boosters ... F-119; M-15, 22, 23
- Battery Connectors, Straps ... T-39
- Battery Eliminators ... F-119; M-15, 19, 27, 33; N-16; S-60, 97
- Battery Mini-Max Strips ... U-70
- Battery Plugs ... T-35; U-108
- Battery Testers, Meters ... F-1, 36, 43, 44, 46, 55, 57, 59, 88
- Beam Benders for TV Tubes ... C-6; K-11

- **Beam Instruments Corporation**
  - *Best Products* Thermocouples ... F-109
  - *Cossor* Oscillographs ... F-108
  - *Sterling* Cables ... S-44
  - *Tannoy* Loudspeaker System ... C-38

- **Belden Manufacturing Co.** ... S-15 to 21
- **Bell Sound Systems, Inc.** ... B-2 to 5
- **Berlant Associates ("Concertone")** ... E-11
- *Best Products* Thermocouples ... F-109
- Binaural Headsets ... D-38
- Binaural Recording Units ... E-13
- Binary Scalers ... F-16, 66
- Binding Posts ... J-1; M-47; T-39; U-66, 76
- **Birnbach Radio Co., Inc.** ... S-24 to 43
- Blast Filter for Microphones ... D-17
- **Bliley Electric Co.** ... K-36, 37
- **Blonder-Tongue Laboratories, Inc.** ... K-34
- **Blum & Co., Inc., Julius** ... S-54
- **Bogen Company, Inc., David** ... B-14 to 16
- Bolts, Nuts, Screws, Washers ... S-35, 36, 39; U-43 to 48, 63, 70, 90 to 92, 108, 114, 115
- Books and Manuals ... Section H; also C-21; E-41; F-17; G-19, 20; J-64; L-36; M-44; P-129, 132; R-20; T-7
- **Boonton Radio Corporation** ... F-75 to 79
- Boosters & Pre-amplifiers for Amplifiers ... B-1, 7, 15, 20, 33; K-1
- Boosters for TV Reception ... D-2, 23; J-62; K-5, 9, 15, 17, 18, 23, 28, 34; S-73, 76, 81, 94, 102
- Box Shields, Metal ... J-38
- **Brach Mfg. Corp., Div. General Bronze** ... K-14
- Brackets and Angles ... J-37; S-34; T-37; U-44, 63, 72, 91, 92, 115
- Brackets, Chassis Mounting ... J-36, 37, 85, 91, 92, 95, 98
- **Bradley Laboratories, Inc.** ... G-24
- Break-in Relays ... L-25, 32
- Bridges:
  - Capacitor ... F-30; P-32
  - Capacitor-Resistor ... F-119; P-126
  - Fault-Location ... R-39
  - Incremental Inductance, Comparison ... F-83, 85, 119; G-24
  - Megohm ... F-110
  - Standing Wave Ratio ... J-27
  - Wheatstone ... F-110; R-39

Section & Page

- **British Industries Corporation**
  - *KT66* Audio Tube ... A-35
  - *Leak* Amplifier ... B-17
  - *Wharfedale* Speakers ... C-34, 35

- Broadcast Audio Cable ... S-18, 19, 44
- **Browning Laboratories, Inc.** ... F-101 to 105
- **Brush Development Co.** ... D-32, 33
- **Bud Radio, Inc.** ... J-36 to 44
- **Burgess Battery Company** ... M-2 to 5
- Burglar Alarms, Photo Electric ... L-35
- **Burlington Instrument Co.** ... F-51 to 54
- Bus Bar Wire ... S-9, 15, 26, 29
- Bushings, Spacers ... J-29, S-36; T-37; U-45, 63, 71, 86, 92, 111, 115
- **Bussmann Mfg. Co. (*Buss* Fuses)** ... G-12, 13
- Buttons—Plug, Snap, Ventilating, etc. ... T-37; U-48, 108, 114
- Buzzers for Telegraph Keys ... J-77
- Bypass (Bathtub) Capacitors ... P-3, 41, 42, 49, 61, 71, 87, 93, 120, 123, 126

— C —

- Cabinet Mouldings, Handles, etc. ... J-40, 87; U-53
- Cabinet Patching & Finishing Materials, Kits ... U-51, 52, 96, 97, 98
- Cabinet Rack Dollies, Casters, etc. ... J-40, 83, 90
- Cabinets & Cases—Amplifier, Receiver, Instrument ... B-13, 34; J-38, 39, 83, 91
- Cabinets & Cases, Speaker ... C-3, 11, 17, 28, 31, 36; J-40, 84; K-7, 35
- Cabinets, Racks, Panels—Metal ... J-36 to 41, 83 to 98
- Cabinets, Radio Phonograph ... K-35
- Cabinets, Sloping Front ... J-39, 83, 84, 93, 97
- Cabinets, TV ... K-1, 35
- Cabinets, Utility ... J-39, 40, 83, 85, 91, 93, 98; U-28
- Cable (see *Wire*)
- Cable Clamps ... S-35, 40; T-37; U-48, 63, 72, 91, 115
- Cable Connectors ... G-8; K-20; T-3, 7, 15 to 25, 34, 39, 41
- Calculators ... H-9; R-43
- Calibrators—Frequency, Signal, Sweep ... F-2, 7, 10, 15, 29, 99
- Calibrators, Voltage ... F-65, 98
- Call and Paging Systems ... B-13, 20
- *Calrod* Soldering Irons ... U-4
- **Cannon Company, C. F.** ... D-37
- **Cannon Electric Company** ... T-16 to 21
- Capacitor Analyzers, Decades, Bridges ... F-30, 74, 86, 96; P-32, 50
- Capacitor Color Codes ... P-10, 40
- Capacitor Mounting Hardware ... J-55; P-11
- Capacitor Selector, Motor-Starting ... P-3
- Capacitors, Fixed ... Section P
  - Auto Radio ... P-5, 6, 48, 73, 132; S-38
  - Bypass, Bathtub ... P-3, 41, 42, 49, 61, 71, 87, 93, 120, 123, 126
  - Ceramic ... J-66; P-6, 7, 8, 24, 25, 46, 56, 57, 69, 74 to 79, 127, 128
  - Electrolytic, Dry ... P-1 to 6, 12 to 18, 20, 36 to 41, 51 to 55, 71, 72, 88, 98 to 104, 116 to 120
  - Exact Replacements for Model 630 Receivers ... P-104
  - Feed-thru, Stand-off, etc. ... J-66; P-7, 30, 48, 57, 76, 127
  - Filters, Noise, Interference ... B-7; D-8, 17; J-48, 49, 58, 59, 61, 66, 67; N-4, 45, 77, 79; P-8, 30, 31, 48, 50, 73, 129; U-89
  - Fluorescent Lighting ... P-31, 50, 73, 129
  - Metallized—Paper ... P-21, 43, 86, 87, 90 to 97, 124 to 126
  - Mica, Bakelite, etc. ... P-8 to 10, 26 to 29, 44 to 46, 58, 62 to 65, 130 to 132
  - Mica, Silvered ... P-44, 63, 64, 77, 132
  - Miniature ... P-6, 24, 47, 54, 57, 60, 62, 73, 79, 89, 105, 115, 121
  - Motor—Starting ... P-4, 31, 34, 40, 50, 71, 126
  - Photoflash, Energy Storage ... P-20, 33, 49, 53, 122
  - Plastic, Molded ... P-3, 19, 41, 47, 56, 60
  - Plug-in, Twist-Prong, etc. ... P-1, 13 to 15, 37 to 39, 51 to 53, 72, 88, 102 to 104, 116 to 118
  - Printed Electronic Circuits ... P-57, 80
  - Resonant ... P-30, 48, 132
  - Selenium Rectifier ... P-15
  - Television ... Section P
  - Temperature Coefficient ... P-75, 78, 128
  - Transmitting ... P-8 to 10, 23, 27 to 29, 44 to 46, 49, 65, 79, 123, 124, 131
  - Tubular ... P-4 to 6, 12, 18 to 22, 36, 41, 47, 48, 60, 66, 73, 78, 79, 86 to 89, 92, 94 to 99, 105 to 107, 121 to 128
  - Vacuum Tube Types, H.V. ... A-27; J-33, 35
  - Wet Electrolytic Replacements ... P-3, 16, 39

Section & Page

Capacitors, Variable J-9 to 13, 32, 41, 42, 45 to 47, 51 to 54, 58, 68 to 71; U-83
  Neutralizing, Padding J-11, 32, 42, 46, 52; P-67, 68; U-83
  Receiving, Tuning J-12, 13, 42, 45 to 47, 51, 68, 70, 71
  Transmitting J-9, 10, 32, 41, 47, 51 to 54, 58, 69, 70, 71
  Trimmer P-6, 68, 76, 77, 79
  Vacuum Tube Types A-27; J-33, 35
Carbofilm Resistors R-49
Carbon Granules for Microphones U-96
Carbon Microphones D-2, 10, 15, 17, 20
Carbon Resistors R-15, 31, 48, 49
Carbon Tetrachloride U-51, 95
Cardioid Microphones D-1, 2, 10, 16, 22, 24, 26
Cardwell Mfg. Corp., Allen D. J-51 to 55
Carling Electric, Inc. L-15
Carrying Cases B-34; E-36; F-39; J-39, 84; K-7, 23, 28
Carter Motor Company M-42 to 45
Carter Parts Company L-16, 17
Cartridges, Pickups Section D; also E-1, 15, 18, 19, 22
Cat Whiskers K-6
Cathode Ray Oscillographs, Oscilloscopes Section F; also J-26
Cathode Ray Tube Mounting Accessories J-29; T-1
Cathode Ray Tube Testers F-20, 44
Cathode Ray Tube Testing Adapters F-20, 93, 119; K-28
Cathode Ray Tubes A-6, 7, 15
Cements—Radio Repair, Coil, Speaker, etc. J-7; T-8; U-49, 94

Centralab Div. Globe Union, Inc.
  Capacitors P-78, 79
  Printed Electronic Circuits P-80, 81
  Steatite Insulators P-81
  Switches L-6, 7
  Volume Controls R-28, 29

Ceramic Capacitors J-66; P-6, 7, 8, 24, 25, 46, 56, 57, 69, 74 to 79, 127, 128
Ceramic Coil Forms J-27
Ceramic-Element Microphones, Pickups D-2 to 9, 14, 17
Ceramic Sockets J-8; T-33
Ceramicon Capacitors J-66; P-74 to 76
Cetron Tubes A-22, 23
Challenger Sound Equipment B-16
Chart Frames J-8
Chassis, Brackets, Panels—Metal J-36 to 39, 85 to 98
Chassis Mounts, Rubber U-44, 62, 115
Chassis Punches for Cutting Holes T-1; U-30, 31, 76
Chassis Supports for Service Work U-109
Chatham Electronics Corp. A-25
Chemical Kits, Chemicals, Compounds S-66, 70; U-50 to 52, 95
Chicago Industrial Instrument Co. F-1
Chicago Transformer Div. Essex Wire Corp. N-76 to 81
Chisholm-Ryder Co., Inc., Premax Div. S-63 to 65
Chokes—Audio, Filter, Swinging, AC-DC Section N
Chokes—R.F., Plate, Power Line, etc. J-6, 30, 43, 48, 50, 61, 73; K-22; N-95, 96; P-8; R-15, 26, 43; U-85
Cinaudagraph Company C-42, 43
Cinch-Jones Sales Div. Cinch Mfg. Co. T-32 to 37
Circle-Cutting Tools F-120; U-30, 31, 76
Circuit and Industrial Control Relays L-23, 28, 33
Circuit Symbol Rubber Stamps F-120
Circuit Testers, Analyzers Section F
Clamp Volt-Ammeter F-50
Clarkstan (Pacific Transducer Corp.) E-22, 23
Clarostat Mfg. Co., Inc. R-4 to 9
Cleaning Fluids, Materials U-50, 51, 95, 97, 98
Clifton Conduit Co., Inc., Pierceway Div. S-51
Clips:
  Alligator M-16; S-32, 33; U-66, 76, 106
  Battery and Test M-16, 17; S-32, 33; U-66, 71, 106
  Dial Cord U-42, 63, 99, 115
  Fuse G-13, 16, 17; U-46, 63, 91, 115
  Inductor J-55, 76
  Lead-in Wire, for TV S-66; U-41
  Spring Wire, Fahnestock S-36; U-45, 63, 71, 91, 106, 115
  Tube Grid and Cap J-4, 5, 31, 75; S-35, 41; T-5, 34, 37; U-46, 63, 73, 87, 115

Coaxial Cable S-10, 14, 26, 44; T-8
Coaxial Relays L-21
Coaxial Speakers C-10, 22, 30, 33, 41, 43, 44
Code Phono Records for Learners J-64; U-89
Code Practice Oscillators J-25; U-89
Coil Assemblies J-12, 56, 57
Coil Dope, Cement J-7; T-8; U-49, 95
Coil Forms and Mountings J-7, 8, 27, 31, 58; T-8; U-85
Coil Materials J-58
Coil Replacement Windings, Primaries J-60
Coil Shields J-8; U-84

Section & Page

Coils:
  Antenna J-49, 50, 56, 60; N-93, 94, 95, 96
  Broadcast, S.W., Transmitting J-49, 50, 60; N-93, 94, 95; U-85
  Choke J-6, 30, 43, 48, 50, 61, 73; K-22; N-95, 96; P-8; R-15, 26, 43; U-85
  Exciter, Inductor, Tank J-8, 29, 56 to 59, 76; N-45, 101 to 104
  FM J-60, 61; N-93
  Hybrid and Repeat N-38, 98
  I.F. Transformers J-7, 31, 49, 50, 60, 61; K-11; N-92 to 96
  Oscillator, Phono, Test J-7, 49, 50, 60, 61; N-93, 95, 96
  Plug-in J-27; U-85
  R.F. J-7, 50, 60, 61; N-93 to 96; U-85
  Television J-48, 49; K-10, 11, 16; N-92
  Toroidal J-59; N-20, 44, 45, 101 to 104
  Wave Traps J-49, 61, 62, 66; N-92; S-80
Cold Zone Temperature Testers F-34, 60, 61
Color Codes P-10, 40; S-6, 7
Color Coding Kit U-96
Coloring Lacquer for Light Bulbs U-51, 96
Columbia Products Co., Div. Shakespeare Co. S-103
Communication Receivers J-14 to 22, 63, 64
Compression Springs U-46, 62, 115
Conant Laboratories G-26
Concertone Tape Recorders E-11
Condenser Products Company P-82 to 85
Condensers (see *Capacitors*)
Con-Fer-Phone Intercoms B-25
Conical Antennas K-29 to 31; S-61, 68, 69, 81, 86 to 88, 91, 99
Connector Caps and Chains G-8; T-5, 6, 19; U-69, 106
Connectors Section T
  Army-Navy T-7
  Auto Antenna, Fuse G-17; T-36; U-45, 65, 86, 105
  Cable G-8; K-20; T-3, 7, 15 to 25, 34, 39, 41
  Chassis G-8; S-41; U-37, 69
  Cord A-38; T-16 to 21; U-105, 113
  Couplings, Extenders, Reducers R-13, 21, 29; S-36; U-71, 87, 111
  Heat Radiating, for Transmitting Tubes A-27; J-43
  Heavy Duty Power and Radio Section T
  Microphone G-8; S-41; T-6, 19, 20; U-69, 75, 106
  R.F. T-7, 41
  Twin Lead, for TV K-20; S-66; T-9; U-73
Consolidated Radio Products Co. C-44
Consolidated Wire & Associated Cos. S-45 to 49
Constant Impedance Controls, Attenuators L-17; R-8
Constant Voltage Transformers M-48 to 52; N-33
Contact Cleaning Fluids U-50, 95
Contact Pickups & Mikes for Musical Instruments D-17, 21, 29, 32
Continental Carbon, Inc. R-31 to 33
Continental Electric Co. (Cetron) A-22, 23
Controlled Reluctance Microphones, Cartridges D-10, 15
Converters, Bandspread, etc. J-22, 23, 25
Converters, Power Packs M-20 to 23, 26 to 29, 34 to 37, 41, 47; N-16, 33
Converters, Rotary Power J-24; M-42 to 45, 53
Converters, UHF K-8, 18
Copper Oxide Rectifiers G-23, 24, 26
Copper Sulfide Rectifiers M-21
Copperweld Steel Company S-50
Cord Connectors, Plugs A-38; D-35; T-16 to 21; U-105, 113
Cord Strainreliefs U-44, 115

Cornell-Dubilier Electric Corporation
  Antennas S-97 to 99
  Capacitors P-12 to 32
  Vibrators and Converters M-24 to 26

Cornish Wire Co., Inc. S-22, 23
Cossor Oscillographs F-108
Cotter and Hairpins U-44, 62, 114
Couplers, Antenna J-25; K-12, 14, 19; S-79, 81
Couplings, Insulated, Flexible J-5, 29, 44, 46, 55, 73; U-37, 86
Couplings, Insulated, Non-Flexible J-5, 55; U-71
Coyne Books H-11
Crest Transformer Corporation N-54, 55
Crocodile Test Clips C-16; U-106
Croname Products U-118
Crossover Networks, Speaker C-10, 16, 23, 29, 30, 35
Crystal Detectors K-6
Crystal Diodes—Germanium, Microwave A-1, 3, 13, 16, 31
Crystal Microphones, Pickups, Cartridges Sections D and E
Crystal Oscillators, Calibrators, Markers F-1, 2, 7, 10, 15, 17, 22, 23, 42, 65, 95, 98, 99, 114, 117; K-38
Crystal Receiving Sets K-6
Crystal Sockets J-8, 73; K-20; T-4, 32, 39
Crystals F-97, 117; K-6, 36 to 41
Cube Taps, Electrical A-38; U-105

Section & Page

Cup Washers U-47, 90, 114
Cup Washers U-47, 63, 90, 114
Cutting Needles E-4, 39, 41, 42, 43, 48, 52
Cutting Pliers .... U-21 to 27
Cutting Tools, Circle F-120; U-30, 31, 76

— D —

DC-AC and DC-DC Power Converters .... M-20 to 23, 26 to 29, 34 to 37, 41, 47 to 52
Dandees Capacitors P-119
Davies Molding Company, Harry U-34
Decades, Capacitance F-86, 111; P-32
Decades, Inductor F-86
Decades, Resistance F-111; R-5, 38
Decals for Electronics, Receivers, etc. J-62; U-53
Decibel Meters B-6; F-24, 37, 48, 54
Decimeter, Inc. J-62
Deflection Yokes, TV K-10, 16; N-2, 27, 66, 89
De-Tec-Tronic Laboratories, Inc. L-33
Detents and Switches for TV Tuners S-39, 71; U-113
Diacone Speakers C-3
Dial Cable, Cords, Belts S-12, 30; U-41, 62, 99, 100
Dial Cable Adjuster Tools U-78, 99
Dial Cable Clips U-42, 63, 99, 115
Dial Crystals, Replacement U-42, 99
Dial Drive Accessories T-37; U-42, 62, 99, 108
Dial Drive Cements, Compounds U-49, 94, 99
Dial Drive Springs U-46, 62, 99, 108, 115
Dial Knobs, Pointers J-2, 79; K-33; L-5, 20; T-37; U-32, 33, 34, 62, 82, 110, 112
Dial Knob Springs T-37; U-62, 63, 108, 115
Dial Lamps, Bulbs A-11, 13; M-6
Dial Light Assemblies, Jewels .... G-1 to 11; J-80 to 82; U-69, 106
Dial Light Coloring Lacquers, Kits U-51, 96
Dial Light Co. of America, Inc. (Dialco) .... G-1 to 10
Dial Light Installer & Remover Tools G-10; U-106
Dial Light Sockets, Brackets G-9, 10; J-82; U-69, 106
Dial Locking Devices J-2, 29
Dial Oil U-50, 96
Dial Plates J-79; L-5, 18; R-13; U-82
Dial Pulleys T-37; U-86, 115
Dials—Instrument, Tuning, Vernier, etc. J-3, 28, 79; U-82, 118
Diathermy Cable S-9, 27
Diathermy Tubes .... Section A
Diffusion Vacuum Pump A-27
Disc Ceramic Capacitors P-8, 24, 56, 69, 75, 78, 127
Disc Neutralizing Capacitors J-11, 32, 54
Discs, Recording E-4, 39, 41, 42, 61
Distortion Meters F-86; J-59
Distributor Suppressors, Auto R-3, 33; S-38
Dome Light Filter Capacitors, Auto P-6, 48
Drake Electric Works, Inc. (Soldering Irons) U-2, 3
Drake Manufacturing Co. (Pilot Light Assemblies) G-11
Drawer Slides for Metal Drawers U-53
Drawers, Snap-on U-35
Drills, Masonry, Star S-39
Drives for Radio and Phono, Rubber U-43, 62, 113
Dry Batteries .... M-1 to 14
DuMont Laboratories, Inc., Allen B. A-36
Duotone Company, Inc. .... E-49 to 51
Duranite Capacitors P-121
Dust Cap-and-Chains for Connectors, etc. G-8; T-5, 6, 19; U-69, 106
Dust Felts for Speaker Voice Coils U-43, 63, 115
Dykanol Capacitors P-22, 23
Dynamic Microphones .... Section D
Dynamotors J-24; M-44, 45

— E —

Earphones .... D-33 to 38; K-6; U-89
  Diaphragms D-35
  Ear Cushions D-35; U-89
  Earphone Cords D-35; S-38; U-89
Eby Sales Company .... R-1 to 3; T-38 to 40
Editors & Engineers, Ltd. (Books) H-16
Eico Test Equipment .... F-116 to 119

Section & Page

Eitel-McCullough, Inc. (Eimac Tubes) A-26, 27
Elapsed Time Meters F-54, 64, 69
Eldico of New York, Inc. .... J-64 to 66
Electrical Connecting Devices .... Section T; also A-38; U-105
Electrical Extension Cords, Sets A-38; S-20, 28; U-73, 105
Electric Eye Units .... L-13, 33 to 35
Electric Soldering Iron Co., Inc. (Esico) U-8
Electro Dynamic Speakers .... Section C
Electro Mechanical Instrument Co. (Emico) F-55
Electro Products Laboratories, Inc. M-27
Electrodynamometers F-24
Electro-graphic Recorder F-120
Electrolytic Capacitors, Dry .... Section P
Electronamic Test Equipment F-43, 44
Electronic Instrument Co., Inc. (Eico) .... F-116 to 119
Electronic Measurements Corp. .... F-87 to 89
Electronic Transformer Co., Inc. N-34
Electrons, Inc. A-33
Electro-Voice, Inc. .... C-30, 31; D-16 to 18; K-15
Electrovox Co., Inc. (Walco Products) .... E-43 to 45
Electrox Rectifiers, Battery Eliminators G-23; M-15
El-Menco Capacitors (Arco Electronics, Inc.) .... P-62 to 69
Elmenco Products Company U-117
El-Tronics, Inc. F-66, 67
Emico Panel and Test Meters F-55
Enamel Remover U-51
Enamels, Lacquers, Paints, Varnishes J-9; U-51, 95, 96, 97
Energy Storage, Photoflash Capacitors P-20, 33, 49, 53, 122
Equalizer Amplifiers B-7; D-8; E-16; K-1
Equalizers, Tone D-8; E-16, 17, 22, 37; K-1
Equipto Div. Aurora Equipment Co. U-28
Erie Resistor Corporation .... P-74 to 77
Ersin Multicore Solder U-14, 15
Escutcheon Pins U-47, 63, 115
Esico Soldering Irons U-8
Espey Manufacturing Co., Inc. K-2, 3
Essex Wire Corp., Chicago Transformer Div. .... N-76 to 81
Eveready Batteries, Flashlights .... M-6 to 9
Exciter Coils, Tanks, Forms J-8, 29, 56, 76
Expansion Shields, Lag Screw S-39
Expansion Springs U-46, 62
Extension Cord Sets A-38; S-20, 28; U-73, 105
Eyelets, Rivets U-44, 63, 72, 77, 95, 115
  Tools and Punches T-15; U-77, 102

— F —

Fabric for Cabinets and Instruments U-98
Fabric Cement U-49
Fahnestock and Spring Wire Clips S-36; U-45, 63, 71, 91, 106, 115
Fairchild Recording Equipment Corp. E-1
Faraday Shields, Links J-58, 76
Fault Location Bridge R-39

Federal Telephone & Radio Corp.
  Rectifiers G-20, 21
  TV Lead-in Cables S-14

Feeder Line Spreader Insulators J-1, 73, 81; S-37; T-9
Felt Feet, Pads U-115
Felt Flock Spray Kits and Materials U-53, 98
Felts for Phono Turntables U-43, 113
Felt Washers for Knobs, etc. U-45, 63, 115
Fibre Insulating Washers U-45, 63, 71, 90, 92, 114
Field-Coil Speakers .... Section C
Field Strength Meters F-7, 13, 30; J-25
Filament Transformers .... Section N
Filter Capacitors .... Section P
Filter Chokes—Line, R.F., etc. J-6, 30, 43, 48, 50, 61, 73; K-22; N-95, 96; P-8; R-15, 26, 43; U-85
Filter Chokes, Reactors—Audio .... Section N
Filter Selector, Analyzer P-129
Filter, Sound Effects N-47
Filters—Interference, Noise B-7; D-8, 17; J-48, 49, 58, 59, 61, 66, 67; N-4, 45, 77, 79; P-8, 30, 31, 48, 50, 73, 129; U-89
  Appliance J-48, 49, 61; N-95; P-8, 31, 129; U-89
  Audio B-7; D-8, 17; J-59; N-4, 45, 77, 79
  Automotive Noise Suppression P-5, 6, 48, 73, 132; S-38
  Fluorescent Lighting N-95; P-31, 50, 73, 129
  Industrial, Heavy Duty P-8, 31, 129
  Pickup, Phono D-8
  Resonant P-30, 48
  Television J-48, 49, 58, 62, 66; K-11, 12, 23; N-3, 67, 92; P-30, 48, 129; S-80
  Wave Traps J-49, 61, 62, 66; N-92; S-80

Section & Page

- Fixture Wire, Lamp Cords ... S-4, 10, 20, 23, 26, 28
- Flash Tubes ... A-1
- Flashlight and Lantern Batteries ... M-1, 2, 6, 11, 14
- Flashlights and Lanterns ... M-3, 6
- Flexible Couplings, Insulated ... J-5, 29, 44, 46, 55, 73; U-37, 86
- Flexible Resistors ... R-6
- Flexible Screw-Drivers ... U-77, 102
- Flexible Shafts ... J-73; S-36
- Flexible Varnished Tubing and Spaghetti ... S-12, 30, 52, 66; U-87, 107
- Flock Finishing Spray Materials and Kits ... U-53, 98
- Floor Wax ... U-97
- Fluorescent Lighting Capacitors, Suppressors N-95; P-31, 50, 73, 129
- FM Adapter for AM Receivers (*Receptor*) ... J-61
- FM and TV Antennas ... K-15, 29 to 34; S-57 to 106; T-10
- FM Books, Manuals ... Section H
- FM Coils ... J-60, 61; N-93
- FM Radio Kits and Units ... J-62; K-2, 3, 8
- FM-AM Tuners ... F-101; J-61; K-1
- Focus Coils, TV ... C-6; K-11, 16; N-2, 27, 66, 89
- Foot Switch ... L-13
- Foundation Chassis for Amplifiers ... J-38, 39, 84, 91, 93, 98

- **Freed Transformer Co., Inc.**
  - Laboratory Test Equipment ... F-82 to 86
  - Transformers, Inductors, etc. ... N-98 to 116

- Frequency Calibrators ... F-2, 7, 10, 15, 29, 99
- Frequency Meters, Testers, Standards ... F-7, 14, 24, 62, 63, 64, 78; J-26, 59, 66; K-38
- Frequency Multipliers ... J-58
- Frequency Records to Check Response ... E-23; U-43
- Frequency Shifter ... J-27
- Friction Tape ... U-107
- Fungus Varnish, Lacquer ... U-51, 95
- Furniture Polishes, Varnishes, Oils, Kits ... U-51, 52, 96, 97
- Fuse Pullers, Extractor Posts ... G-13, 16; U-111
- Fused Plugs ... U-117
- Fuses ... G-12 to 17
  - Connectors, Retainers, Clips ... G-13, 15, 16, 17; S-34; U-45, 46, 63, 65, 66, 86, 91, 105, 115
- *Fusetron* Fuses ... G-12, 13

— G —

- Gain and Fader Controls, P.A. ... Section R; also L-17
- Galvanometers ... F-37
- **Garrard Sales Corporation** ... E-33 to 36
- Gas and Oil Gauge Filter Capacitors, Auto ... P-6, 48, 132
- Gas Pressure Measuring Tubes ... A-1
- *Geiger-Mueller* Tubes ... A-16, 17
- Genemotors ... M-42
- **General Cement Mfg. Co.** ... U-94 to 115
- **General Control Co.** ... L-12, 13
- **General Dry Batteries, Inc.** ... M-10, 11

- **General Electric Company**
  - Capacitors ... P-33 to 35
  - Phono Parts and Accessories ... E-18
  - Soldering Irons ... U-4, 5
  - Speakers ... C-2
  - Switches and Relays ... L-31
  - Test Equipment for TV, Industrial, Broadcast ... F-16, 17
  - Transformers and Reactors ... N-97
  - Tubes, Receiving and TV ... A-2, 3
  - Tubes, Transmitting and Industrial ... A-4, 5

- **General Industries Company** ... E-29 to 32
- General Purpose Relays ... L-14, 23, 31, 32
- Generator Capacitors, Suppressors—Auto ... P-6, 48, 73, 132; R-33
- Generators, Rotary Power ... J-24; M-42 to 45, 53
- Generators, Signal ... Section F
- *Genescope* Signal-Generator-Oscilloscope ... F-27
- Germanium Crystal Diodes ... A-1, 3, 13, 16
- *Gernsback* Books ... H-19
- *Ghirardi* Books, Manuals ... H-12
- *Glasohm* Insulated Flexible Resistors ... R-6
- Glass and Porcelain Insulators—Antenna ... S-38, 65; U-93
- Glass and Plastic Jars for Hardware ... U-48, 92, 108
- *Glasseal* Capacitors ... P-115
- *Glassmike* Capacitors ... P-84, 85
- Glide Slope Test Set ... F-79
- Glow Modulator Tubes ... A-1

Section & Page

- Glue—Cabinet Repair, Wood ... U-49, 94
- **Gothard Manufacturing Co.** ... M-53
- **Gramer Transformer Corp.** ... N-33
- Graph Sheets for Audio Engineers ... E-23
- **Gray Research & Development Co., Inc.** ... E-37
- **Grayburne Corporation** ... K-22, 23
- **Greenlee Tool Company** ... U-30, 31
- *Greenohm* Resistors ... R-8, 9
- Grid Bias Cells ... K-9
- Grid Caps and Clips, Tube ... J-4, 5, 31, 75; S-35, 41; T-5, 34, 37; U-46, 73, 87, 115
- Grid Dip Meters ... F-7, 14; J-25, 26, 65
- Grille Cloth and Screening ... U-53, 98
- Grommets, Rubber ... U-44, 62, 70, 91, 92, 105, 115
- Ground and Lead-in Wire ... S-8, 11, 15, 19 to 28, 70
- Ground and Pipe Clamps ... M-17; S-40, 50, 69; U-93
- Ground Rods ... S-39, 50, 65, 80, 83; U-93
- **Guardian Electric Mfg. Co.** ... L-24, 25
- Guy Wire ... K-33; S-10, 30, 50, 70

— H —

- H-Pads (Printed Circuits) for Antenna Installations ... P-81
- Hacksaws ... U-41
- **Halldorson Company** ... N-66 to 75
- **Hallicrafters Company** ... J-14 to 21
- **Hammarlund Mfg. Co., Inc.** ... J-45 to 47
- *Hamswitches* ... L-3, 6
- Hardware, Small ... S-35, 36; T-15, 37; U-36, 37, 43 to 48, 54 to 63, 70 to 72, 90 to 92, 108, 111, 114, 115
- Harmonic Distortion Meter ... F-86
- **Harvey Hubbell, Inc.** ... T-14, 15
- **Harvey-Wells Electronics, Inc.** ... J-24
- Headphones ... D-33 to 38; K-6; U-89
  - Diaphragms ... D-35
  - Ear Cushions ... D-35; U-89
  - Headphone Cords ... D-35; S-38; U-89
- Hearing Aid Accessories:
  - Batteries ... M-1, 14
  - Battery Testers ... F-55, 59
  - Capacitors ... P-6
  - Earphones and Headsets ... D-34, 37
  - Outlet Boxes and Controls ... D-34
  - Plugs, Jacks, Sockets ... L-8; T-5, 34, 39; U-46
  - Printed Electronic Circuits ... P-81
  - Transformers ... N-42, 43
- Heat Dissipating Connectors for Tubes ... A-27; J-43
- **Hexacon Electric Company** ... U-6, 7
- **Hickok Electrical Instrument Co.** ... F-90 to 100
- High Frequency Relays ... L-23, 25, 32
- High Frequency Speakers and Horns ... Section C
- High Voltage Probes—TV, etc. ... F-5, 6, 33, 45, 97, 115, 116; U-80
- **Hi-Lo TV Antenna Corporation** ... S-96
- Hookup Wire ... S-6, 7, 8, 19 to 28, 45, 48
- Horns, Projectors, Trumpets ... Section C
  - Adapters, Connectors ... C-16, 18, 25
  - Driver Units ... C-3, 12, 14, 15, 17, 18, 24, 29, 30
  - Stands, Brackets, Mounting Fixtures ... C-16, 25
- *Hushatone* Pillow Speaker ... D-33
- Hybrid and Repeat Coils ... N-38, 98
- *Hypex* Speaker Projectors ... C-12
- **Hytron Radio & Electronics Co., Div. Columbia Broadcasting** ... A-20
- *Hyvol* Capacitors ... P-123

— I —

- **I.D.E.A., Inc.—Regency Division** ... K-17
- Idler Pulleys ... T-37; U-86, 115
- I.F. Transformers ... J-7, 31, 49, 50, 60, 61; K-11; N-92 to 96
- Ignition Batteries ... M-1, 2, 9, 11, 14
- Ignition Cable, Shielded ... S-5, 15, 28
- Ignition Pliers ... U-22, 27
- Ignition Suppressors ... P-6; R-3, 33; S-38; U-110
- Ignitrons (Pool-Cathode Tubes) ... A-5, 6, 7, 31, 34
- Incremental Inductance Bridge ... F-83
- Indicating Instruments, Meters ... F-6, 24, 25, 35 to 38, 48, 51 to 58, 69 to 71, 99
- Indicators—Panel, Signal ... G-1 to 7, 11; J-80 to 82

Section & Page
Indicators, Temperature....F-34, 60, 61
Indicators, Volume Level....B-6; F-24, 37, 48, 54
Indoor Antenna Wire, Ac-Dc....S-11, 15, 23
Indoor TV Antennas....K-33; S-61, 81 to 85, 91, 96, 99, 106; T-10
Inductors—Coils....J-8, 56, 57, 76; N-101 to 104
    Clips for Inductors....J-55, 76
Inductors—Variable, Rotary....J-58, 59, 76; N-45
Inductuner Tuning Device, TV....K-9
Industrial Circuit Testers....Section F
Industrial Condenser Corporation....P-70 to 73
Industrial Hardware Mfg. Co. (See Eby Sales Co.)
Industrial Instruments, Inc.....F-110, 111
Input Transformers....Section N
Inspection Lites, Mirrors....U-41, 102, 111
Instrument Rectifiers....G-18 to 26; M-21
Instruments and Meters, Panel....F-6, 24, 25, 37, 38, 48, 51 to 58, 69 to 71, 99
Instrument Switches....L-7, 10, 18
Insulated Staples, Saddle Type....S-40; U-108
Insulated Tubing for Tool Handles....U-41, 103
Insulated Wiring Nails....S-40, 66; U-108
Insulating Fibre Washers....U-45, 63, 71, 90, 92, 114
Insulating Materials, Sheets....J-87; S-53, 54, 66; U-105
Insulating Tubing, Spaghetti....S-12, 30, 52, 66; U-87, 107
Insulating Varnish....U-51
Insulators—Steatite, Lucite, Ceramic, etc.
    Antenna....J-73; K-21; P-81; S-36 to 40, 65, 70, 81, 83; T-9; U-73, 93
    Beads....J-81; P-81; U-83
    Beehive, Standoff....S-36, 37, 65
    Bowls, Bushings....J-1, 72, 81; P-81
    Feeder Spreader....J-1, 73, 81; S-37; T-9
    Lead-in....S-36
    Nail-it Knobs....S-38; U-93
    Standoff, Cone Type....J-1, 72; S-37; U-83
    Standoff, Screw Eye....K-27; S-40, 70, 81, 83; T-9; U-73
    Strain, Airplane....J-1; P-81; S-36, 37; U-73, 93
    Threaded Brass and Steel Rods....J-72; S-36; U-47, 71, 114
    Thru-panel, Feed-thru....J-1, 72, 81; S-37; U-36, 83
    Tubes, Rods, Pillars....J-1, 73, 81; S-36, 37; U-83

Insuline Corporation of America
    Antennas and TV Accessories....S-90, 91
    Cabinets, Racks, Panels....J-83 to 87
    Hardware, Tools, Service & Amateur Aids....U-74 to 93

Interchangeable Relays....L-24
Intercommunication Systems....B-16, 24, 25, 30, 31; C-35
Intercom Wire....S-2, 3, 18, 19, 23, 28, 47, 49
Interference Filters....B-7; D-8, 17; J-48, 49, 58, 59, 61, 66, 67; N-4, 45, 77, 79; P-8, 30, 31, 48, 50, 73, 129; U-89
Interference Filter Selector....P-129
Interlock Self-Locking Electrical Connectors....T-14, 15
Intermodulation Meter....F-12
International Rectifier Corporation....G-25
International Resistance Co.....R-15 to 27
Interstage Coupling Plates (Printed Circuits)....P-80
Interstage Coupling Unit (*Videocoupler*)....L-5
Inverters, Power....M-34 to 37
Ion Traps, TV....C-6; K-11; R-8
Irish Magnetic Recording Tape....E-63
Iron Testers....F-60
Isolation Transformers....F-5; N-16, 26, 53, 55, 59, 64, 65, 71, 80, 88

— J —

Jack Shields....J-8
Jack Switches....L-3, 17
Jacks and Plugs....D-34, 35; J-1, 44, 78; L-4, 8, 9, 16; S-31, 32, 33; T-4, 15; U-36, 37, 66 to 68, 74, 75, 104, 105
Jacks and Plugs—Military, JAN, SC, etc....L-4, 8, 9; T-7, 41; U-46, 68, 74
Jacks, Circuit....J-43; L-4; U-37
Jacks, Extension....L-4, 8; T-36
Jacks, Long and Short Frame....L-4, 8, 16, 17
Jacks, Panel Mounting....J-43; L-4; U-75
Jacks, Tip....J-78; S-32; T-4, 36, 39; U-66, 68, 104
Jackson Electrical Instrument Co.....F-72 to 74
James Vibrapowr Company....M-18
Jars, Glass and Plastic—for Hardware....U-48, 92, 108

J-B-T Instruments, Inc.
    Switches....L-18 to 20
    Test Equipment....F-60 to 64

Section & Page
Jennings Radio Mfg. Co.....J-33 to 35
Jensen Industries, Inc. (Needles)....E-62
Jensen Manufacturing Co. (Speakers)....C-8 to 13
Jewel Lights and Assemblies....G-1 to 11; J-80 to 82; U-69, 106
Jewelers Pliers....U-24
J.F.D. Manufacturing Co., Inc.....S-80, 81
Johnson Company, E. F.....J-67 to 82
Jones, Howard B.—Div. Cinch Mfg. Co.....T-22 to 31

— K —

Kay Electric Company....F-15
Kenotrons (Vacuum Rectifier Tubes)....A-5, 30
Kenyon Transformer Co., Inc.....N-82, 83
Kester Solder Company....U-13
Keying Break-ins and Monitors....J-23, 65; U-89
Keying Relays....L-22, 25, 32
Keys and Practice Sets, Telegraph....J-77; L-36; U-89
Keystone Electronics Corp.....U-37
Kinescopes (TV Tubes)....A-3, 9, 11, 13, 15, 20, 36 to 40
Klystrons (Tubes)....A-1, 17
Knife-Throw Switches....S-31; U-73, 84
Knights Company, James....K-38
Knob Puller Tools....U-112
Knobs & Pointers—Dial, Instrument, etc....E-23; J-2, 79; K-33; L-5, 20; T-37; U-32, 33, 34, 82, 110, 112, 118
    Knob Felt Washers....U-45, 63, 115
    Knobs for Auto Radios....U-112
    Set Screws and Springs....T-37; U-46, 47, 62, 63, 108, 112, 114, 115
Knockout Punches and Cutters....T-1; U-30, 31, 76
Kraeuter & Company, Inc.....U-22 to 25
Kwikheat Mfg. Co.....U-9

— L —

L-Pads (Attenuators)....L-17; R-8, 11, 36
Laboratory and Industrial Test Equipment....F-7 to 18, 45, 47, 66, 67, 75 to 86, 90, 98, 102 to 105, 110, 111; J-26
Lacquers, Enamels, Paints, Varnishes....J-9; U-51, 95, 96, 97
Ladders, Magnesium....S-69
Lamp Cords and Fixture Wire....S-4, 10, 20, 23, 26, 28
Lamps, Dial and Panel....A-11, 13; M-6
Lansing Sound, Inc., James B.....C-17
Lapel Microphones....D-4, 10, 23, 32
LaPointe Plascomold Corp.....S-75 to 79
Latching Impulse Relays....L-22, 27, 28, 32
Lead-in and Ground Wire....S-8, 11, 15, 19 to 28, 70
Lead-in Strips....S-38; U-93
Leak Amplifier....B-17
Lectrohm, Inc.....R-44, 45; U-116
Lever-Action Switches....L-2, 6, 9, 12, 20
Lewis and Kaufman, Inc.....A-32
Light Concentrator for Close Work....E-23
Lightning Arresters....K-28; S-38, 40, 73, 79, 80, 83, 91; T-9; U-93
Limit Switches....L-13, 31
Line Cord Resistors....S-38, 47; U-89
Line Voltage Regulators, Plug-in....R-8; S-80; U-89
Line Voltage Regulator Transformers & Controls M-48 to 52; N-16, 26, 32, 46, 49, 53, 55, 59, 71
Linear Detector....J-59
Link Coils, Inductors....J-8, 56, 57, 76; N-101 to 104
    Jack Bars and Assemblies....J-57, 76
    Plug-in Links....J-58, 76
Littelfuse, Inc.....G-14 to 17
Litz Wire....S-15
Lock Washers....S-35; U-45, 63, 72, 90, 114
Locks for Dials....J-2, 29
Loop Antennas....J-49; U-89
Loopsticks....K-22
Lowell Manufacturing Co.....C-26, 27
Lubricants....U-50, 95, 113
Luggage Fabric....U-98
Lugs—Terminal, Soldering, Tinned....S-35; T-15, 37; U-36, 37, 46, 62, 70, 72, 88, 91, 115
Luminous Paints, Powders, etc....U-96
Lysco Manufacturing Co., Inc.....J-25

— M —

Section & Page
McGohan, Inc., Don ... B-32 to 34
MacMillan Company ... H-18
Magic Eye Assemblies & Accessories ... J-29; T-1
Magmotors ... M-42, 44
Magnecord, Inc. ... E-12, 13
Magnesium, Copper Sulfide Rectifiers ... M-21
Magnesium Ladders ... S-69
Magnet Wire ... S-18, 29, 45, 46
Magnetic Tape Recorders ... B-2; E-1, 4, 5, 11 to 14, 29
Magnetrons (Tubes) ... A-17, 24

Maguire Industries—Thordarson-Meissner Div.
  Meissner Products ... J-60, 61
  Thordarson Products ... N-30 to 32

Mallory & Co., Inc., P. R.
  Capacitors ... P-1 to 11
  Controls, Rheostats, Resistors ... R-10 to 14
  Switches, Jacks, Plugs ... L-2 to 5
  Tuning Unit, UHF Converter, Grid Bias Cells ... K-8, 9
  Vibrators, Rectifiers, Power Supplies ... M-20 to 23

Manuals, Service and Instruction ... Section H; also C-21; E-41; F-17; G-19, 20; J-64; L-36; M-44; P-129, 132; R-20; T-7
Marine Speakers, Horns ... Section C
Marion Electrical Instrument Co. ... F-68 to 71
Marker Generators ... F-2, 15, 16, 17, 22, 23, 42, 65, 99, 114, 115
Masco Sound Systems and Intercoms ... B-18 to 27
Masonry Drills ... S-39
Mast Clamps, Straps, Bases, Couplers ... K-12, 13, 24 to 32; M-17; S-40, 65, 69, 80, 81, 83; T-9; U-73, 108
Master Mobile Mounts, Inc. ... S-104, 105
Masts and Towers, Antenna ... K-13, 32; S-72, 76, 81, 100; T-9
Measurements Corporation ... F-7 to 14
Measuring Instruments ... Section F
Megacycle Meters ... F-7, 14
Megohm Bridge ... F-110
Megohmmeters ... F-35, 42, 50, 82, 110
Meissner Products, Thordarson-Meissner Div. ... J-60, 61
Melamine Insulated Terminals, Resistor Boards ... U-36
Mercury-Switch Relays ... L-32
Merit Coil & Transformer Corp. ... N-84 to 96
Metal Cabinets, Racks, Panels ... J-36 to 41, 83 to 98
Metal Trim, Moulding, Handles ... J-40, 87; U-53
Metallized Paper Capacitors ... P-21, 43, 86, 87, 90 to 97, 124 to 126
Meter Cases ... J-40, 84, 93
Metered Transformers ... N-64, 65
Meters and Instruments ... Section F
Meters, Elapsed Time ... F-54, 64, 69
Meters, Frequency ... F-7, 14, 24, 62, 63, 64, 86, 104; J-59, 62
Meters, Grid Dip ... F-7, 14; J-25, 26, 65
Meters, Panel ... F-6, 24, 25, 37, 38, 48, 51 to 58, 69 to 71, 99
Meters, Pocket ... F-19, 33 to 36, 50, 57, 59, 113, 118
Meters, Recording Level, Decibel, Noise ... B-6; F-24, 37, 48, 54
Meters, Resistance ... F-57, 58, 67
Mica Capacitors ... P-8, 9, 10, 26 to 29, 44 to 46, 58, 62 to 65, 130 to 132
Mica Capacitors, Silvered ... P-44, 63, 64, 77, 132
Microammeters ... F-4, 25, 35 to 38, 48, 52, 53, 69, 70, 71, 100
Microphones—Cardioid, Crystal, Dynamic, Velocity, Contact, Lapel, etc. ... Section D; also B-34; K-6
  Adapters, Swivels ... D-1, 4, 31
  Base Flanges, Extension Rods ... D-31
  Cable and Wire ... S-1, 15, 16, 22, 27, 48
  Carbon Granules ... U-96
  Connectors ... G-8; S-41; T-6, 19, 20; U-69, 75, 106
  Plugs and Jacks ... D-34, 35; L-4; U-74, 75
  Stands ... Section D
  Switches ... D-15; T-6
  Third Hand, Chest Plate, etc. ... D-1, 23
  Transformers ... Section N; also D-15, 17
Microwave Tubes, Crystal Diodes ... A-1, 31
Middletown Manufacturing Co. ... J-92, 93
Midget Relays ... L-21, 23, 29, 32
Millen Mfg. Co., Inc., James ... J-26 to 32
Miller Company, J. W. (Coils) ... J-48 to 50
Miller Mfg. Co., Inc., M. A. (Needles) ... E-46 to 48
Milliammeters, Millivoltmeters ... F-25, 35 to 38, 48, 52 to 59, 69, 70, 71, 100
Mini-Max Strips for Batteries ... U-70
Minnesota Mining & Mfg. Co. ... E-64
Minute Man Products, Inc. ... J-94, 95
Mirroscope Oscilloscope ... F-29
Mitchell Industries, Inc.—Vasco Division ... U-12
Modulation Monitors, Meters ... F-12, 65, 104; K-38
Molded Plastic Tubular Capacitors ... P-3, 19, 41, 47, 56, 60
Monitor TV Antenna Towers ... S-72
Monitoradio (Radio Apparatus Corp.) ... J-63

Section & Page
Moody Machine Products Co., Inc. ... U-29
Morse Code Learner's Phono Records ... J-64; U-89
Mosley Electronics ... K-19 to 21
Motorcycle Antennas ... S-56
Motors, Small Power ... E-26
Motors, Turntables for Phonos & Recorders ... E-3, 8, 9, 26, 30 to 36
Motor-Starting Capacitors ... P-4, 31, 34, 40, 50, 71, 126
Motor-Starting Relays ... L-23, 29
Mueller Electric Company ... M-16, 17
Mul-Tel TV Antennas, Couplers ... K-14
Multicore Sales Corporation ... U-14, 15
Multimeters, Multitesters ... Section F
Multiple Conductor Cable ... S-1, 3, 4, 16, 17, 27, 44, 49
Multiple Leaf Relays ... L-27
Murray Hill Books (see *Rinehart Books, Inc.*)
Musical Instrument Amplifiers, Microphones B-11; D-17, 21, 29, 32
Mutual Conductance Tube Testers ... F-31, 43, 44, 49, 87, 90 to 93

— N —

Nail-it Knobs ... S-38; U-93
Nails, Insulated Wiring ... S-40, 66; U-63, 108
Name Plates ... U-65, 82
National Carbon Company (Eveready) ... M-6 to 9
National Company, Inc. ... J-1 to 13
National Electronics, Inc. ... A-34
National Union Radio Corp. ... A-12, 13
Needle Nose Pliers ... U-21 to 26, 99
Needles—Cutting, Recording ... E-4, 39, 41, 42, 43, 48, 52
Needles—Phono Pickup, Playing ... C-1; D-9, 13, 18; E-4, 18, 20, 22, 38 to 57, 62
Neon Testers, Low and High Voltage ... U-109
Networks, Crossover—for Speakers ... C-10, 16, 23, 29, 30, 35
Neutralizing, Aligning Tools ... T-3, 17; U-40, 68, 77 to 80, 100 to 102
Neutralizing Capacitors ... J-11, 32, 42, 46, 52, 54
Newcomb Audio Products Co. ... B-8 to 13
Nobleloy Metallic Film Resistors ... R-32
Noise Filters, Silencers ... B-7; D-8, 17; J-48, 49, 58, 59, 61, 66, 67; N-4, 45, 77, 79; P-8, 30, 31, 48, 50, 73, 129; U-89
Noise Level Indicators ... B-6; F-24, 37, 48, 54
Noise Suppressors, Auto Ignition ... P-6; R-3, 33; S-38; U-110
Nuclear Instruments, Counters, etc. ... E-23; F-16, 66, 67
Null Indicators, Detectors ... F-71, 84
Nut Drivers, Wrenches ... U-17, 19
Nuts, Bolts, Screws, Washers ... S-35, 36, 39; U-43 to 48, 63, 70, 90 to 92, 108, 114, 115

— O —

Oak Electronics Co. ... K-18
Oelrich Publications ... H-20
Ohmite Manufacturing Co. ... R-40 to 43
Ohmmeters and Megohmmeters ... F-35, 42, 50, 82, 110
Ohm's Law Calculator ... R-43
Oil and Gas Gauge Filter Capacitors, Auto ... P-6, 48, 132
Oil Burner Suppressors ... P-8, 31; R-33
Orradio Industries, Inc. ... E-63
Oscillator Coils ... J-7, 49, 50, 60, 61; N-93, 95, 96
Oscillators, Audio ... F-67, 73; J-59, 62; U-89
Oscillators, Code Practice ... J-25; U-89
Oscillators, Signal Generators ... Section F
Oscillators, Test ... F-21, 74
Oscillators, UHF ... F-7, 11, 13, 15
Oscillators, Variable Frequency ... J-25, 27, 67
Oscillographs, Oscilloscopes ... Section F; also J-26
  Accessories, Amplifiers, Calibrators ... F-29; J-26
  Cathode Ray Tubes ... A-6, 7, 15
Output Meters ... B-6; F-24, 37, 48, 54
Output Transformers ... Section N
Oven Temperature Testers ... F-60
Overload and Underload Relays ... L-24, 25, 32
Oxford Electric Corporation ... C-32, 33

— P —

P. A. Controls ... Section R; L-17
P. A. Systems, Units ... Section B
P. A. Wire and Cable ... S-1 to 5, 18, 19, 22, 28, 49

Section & Page
Pacific Transducer Corp. (formerly Clarkstan)....E-22, 23
Packaged Wiring Systems....S-51
Padding Capacitors....J-11, 42; P-67, 68; U-83
Paging and Call Systems....B-13, 20
Paints, Enamels, Lacquers, Varnishes....J-9; U-51, 95, 96, 97
Panel Bearings, Assemblies....J-42, 73; S-36, 71, 86
Panel Boring Tools....F-120; T-1; U-30, 31, 76
Panel Indicators....G-1 to 7, 11; J-80 to 82
Panel Lamps....A-11, 13; M-6
Panel Marking Transfers....J-28
Panel Meters....F-6, 24, 25, 37, 38, 48, 51 to 58, 69 to 71, 99
Panels, Aluminum....J-87, 91, 95
Panels, Bakelite....J-87; U-105
Panels—Desk, Door, Grille....J-36, 37, 91, 98
Panels, Masonite....J-86, 87
Panels, Metal Rack....J-37, 86, 93, 95, 98
Panels, Meter....J-37, 87, 93
Paper Capacitors....Section P
Parasitic Beams for Antenna Rotator....J-67
Park Metalware Co. (see *XceLite*)
Par-Metal Products Corp.....J-88 to 91
Patch Cords....D-35
Peerless Electrical Products Div. Altec Lansing....N-60 to 62
Peerless Products Industries....S-85
Penn Television Products Co.....K-12, 13
Pentron Corporation....E-14
Perma-Power Company....M-19
Permanent Magnet Speakers....Section C
Permo, Inc.....E-52 to 59
Permoflux Corporation....C-36, 37; D-38
Petersen Radio Co., Inc.....K-39 to 41
Phanotrons (Rectifier Tubes)....A-5, 30
Phillips Screw Drivers....U-17 to 19
Philmore Mfg. Co., Inc.....K-6
Phone Cords....D-35; S-38; U-89
Phone Headsets....D-33 to 38; K-6; U-89
Phone Plug Adapters....S-41; T-6, 36; U-74
Phone Plugs, Connectors, Jacks....D-34, 35; J-40; L-4, 8, 16; S-32; T-36, 41; U-63, 66, 74, 75, 104, 113
Phone Tips, Jacks....S-32, 33; T-36; U-43, 63, 66, 68, 74, 75, 104, 113
Phonographs, Transcription Players....B-12, 34; E-6, 7, 9, 36
  Cabinets, Cases....E-36
  Needles, Playback....C-1; D-9, 13, 18; E-4, 18, 20, 22, 38 to 57, 62
  Phono Plugs, Jacks....S-31; T-36, 39; U-43, 63, 70, 104, 105
  Phono Wire, Shielded....S-1, 5, 20, 26, 28, 47; U-113
  Pickups (see *Pickups*)
  Record Changers....E-27, 28, 34, 35; also B-34
  Scratch Filter....B-13
  Springs and Set Screws, Pickup....U-43, 63, 105, 113, 115
  Stroboscope Discs....E-22; U-43
  Turntable Drives and Felts....U-43, 113
  Turntables, Motors, Assemblies....E-3, 8, 9, 26, 30 to 36
Phono Turntable Repair Stand....U-109
Phosphor Bronze Aerial Wire....S-11, 29
Phosphor Bronze Dial Cable....S-12, 30; U-99
Phosphor Bronze Fuse Clips....G-16
Photo Electric Cells....A-22; G-25; K-18
Photo Electric Relays....L-13, 33 to 35
Photo Electric Units, Alarms, Counters....L-13, 33 to 35
Photocell Cable....S-1, 20, 27
Photofact Radio Data Service....H-10
Photoflash Capacitors....P-20, 33, 49, 53, 122
Photoflash Power Transformers....N-53, 91
Photoflash Relays....L-29
Phototubes....A-6, 7, 22, 28
Pick-a-Shaft Controls....R-4 to 6
Pickering & Co., Inc.....E-15 to 17
Pickups, Phono and Transcription....C-1; D-5 to 8, 13, 27; E-1, 17, 18 to 22, 37
  Adapters....B-13
  Cartridges....Section D; also E-1, 15, 18, 19, 22
  Springs, Set and Mounting Screws....U-43, 47, 63, 105, 113, 115
  Tone Equalizers....D-8; E-16, 17, 22, 37; K-1
Pic-Sync Tape Recorders....E-1
Pierceway Div. Clifton Conduit Co., Inc.....S-51
Pillow Speakers....D-33, 36
Pilot Lamps, Bulbs....A-11, 13; M-6
Pilot Light Installer & Remover Tools....G-10; U-106
Pilot Lights and Assemblies....G-1 to 11; J-80 to 82; U-69, 106
Pin Plug and Jack Sets for Auto, Phono, etc. S-31; T-36; U-43, 70, 75, 104
Pin Straightener Tools for Tubes....U-104, 109
Pipe and Ground Clamps....M-17; S-40, 50, 69; U-93
Plastic Cement for Repairs....U-49, 94
Plastic Dial Crystals....U-60, 99
Plastic Jars and Boxes for Hardware....U-48, 108
Plastic Molded Paper Tubular Capacitors....P-3, 19, 41, 47, 56, 60
Plastic Tubing....S-30, 41, 52, 54, 66; U-87, 107
Plasticon Capacitors....P-82 to 85

Section & Page
Plate Transformers....Section N
Pliers....T-15; U-21 to 27, 99, 103
Plier-Wrench....U-103
Pliotrons (High Vacuum Tubes)....A-4, 29, 30
Plug Caps....T-4, 35
Plug-in Coils and Forms....J-27; U-85
Plug-in Resistors, Tube Type....A-6, 7, 12, 15, 20, 31; R-7, 50; S-80
Plug-in, Twist-Prong Capacitors....P-1, 13 to 15, 37 to 39, 51 to 53, 72, 88, 102 to 104, 116 to 118
Plugs and Jacks....D-34, 35; J-1, 44, 78; L-4, 8, 9, 16; S-31, 32, 33; T-4, 15; U-36, 37, 66 to 68, 74, 75, 104, 105
Plugs, Bakelite and Rubber Handle....A-38
Plugs, Battery....T-35; U-108
Plugs, Cord....D-35; T-17 to 21
Plugs, Fused....U-117
Plugs, Receptacles, Sockets....Section T; also K-20
Plugs, Snap Button....T-37; U-48, 62, 114
Plugs, Soft Rubber....S-10, 40
Plugs, Solderless....U-66, 74, 75
Plugs, Speaker....T-5, 39
Plugs, TV Camera....T-21
Plugs, Ventilating Hole....T-37; U-48, 62, 108
Pocket Meters, Testers....F-19, 33 to 36, 50, 57, 59, 113, 118
Pocketscopes....F-107
Police & Mobile Transmitter Antennas....S-56, 63, 64, 83, 89, 103 to 105
Policalarm (Radio Apparatus Corp.)....J-63
Polyphase Reproducers, Heads....E-20
Polysterene Cement and Coil Dope....J-7; T-8; U-49, 95
Polysterene Coil Forms, Insulators....J-7, 31
Polysterene Rods, Tubing, Sheets....S-54
Potentiometers, Rheostats....Section R; also F-1; L-17
Potter & Brumfield....L-26 to 29
Power Conversion Equipment....Section M; also G-18 to 26
Power Cords....S-10, 20, 41, 80; U-73
Power Level Indicators....B-6; F-24, 37, 48, 54
Power Plugs, Connectors, Receptacles....Section T
Power Rectifiers....G-18, 19, 22, 24, 25
Power Relays....L-26, 29
Power Resistors....Section R
Power Rheostats....R-6, 40
Power Speakers....Section C
Power Supplies, Packs....B-1, 6; D-1; F-17, 83, 84, 102, 120; J-26, 28; M-15, 19 to 23, 26 to 29, 33, 41, 47; N-16; S-60, 97
Power Supplies, Rotary....J-24; M-42 to 45, 53
Power Supply and Square Wave Modulator....F-102
Power Switches....S-31; U-65, 84, 107
Power Transformers....Section N
Powerstat Variable Transformers....M-46
Pre-amplifiers, Boosters—for Amplifiers....B-1, 7, 15, 20, 33; K-1
Pre-amplifiers, Boosters—for TV....D-2, 23; J-62; K-5, 9, 15, 17, 18, 23, 28, 34; S-73, 76, 81, 94, 102
Pre-amplifiers for Pickups, Cartridges....E-16, 18
Preamplifiers for Receivers, Transmitters....J-23, 27
Precise Development Corp.....F-114, 115
Precise Measurements Co.....F-120
Precision Apparatus Co., Inc.....F-40 to 47
Precision Capacitors, Drive Units....J-12, 54
Precision Resistors....R-27, 32, 38, 42, 49
Premax Products Div. Chisholm-Ryder Co., Inc.....S-63 to 65
Premier Metal Products Co....J-96 to 98
Preselectors, Boosters for Communication Receivers....J-23
Presto Recording Corporation....E-2 to 5
Printed Electronic Circuits....P-57, 80, 81
  Silver Print for Repairing Circuits....U-96
Probes, R.F....F-5, 42, 97, 115, 116; U-68, 80
Probes, TV, High-Voltage....F-5, 6, 33, 45, 97, 115, 116; U-80
Projectors, Horns....Section C
Pulleys, Idler....T-37; U-86, 115
Pulse Generators....F-7, 8, 15, 115
Pulsescopes....F-106
Pump, Diffusion, Vacuum....A-27
Punches, Dies—Chassis, Panel, Socket....T-1; U-30, 31, 76
Punches—Rivet, Eyelet....T-15; U-77, 102
Push and Push-Button Switches....L-3, 7, 9, 16, 17; S-31; U-65, 84, 107
Pushback, Hookup Wire....S-6 to 8, 19 to 28, 45, 48
Pyramid Electric Company....P-90 to 115
Pyranol Capacitors....P-33 to 35
Pyrometers....F-61

—Q—

Quam-Nichols Company....C-4 to 6
Q-Meters, Indicators....F-75, 76, 82
Quietone Interference Filters....P-31
QX Checker....F-76

— R —

Section & Page

- Racks—Relay, Cabinet .... J-36, 83, 88 to 92, 96, 97
- **Racon Electric Co., Inc.** .... C-14 to 16
- **Radcraft Publications, Inc.** H-19
- **Radelco Manufacturing Co.** S-82, 83
- **Radiart Corporation**
  - Antennas .... S-60 to 62
  - Vibrators, Power Supplies, Converters .... M-38 to 41
- Radiation Counter Tubes A-16, 17
- Radiation Monitor F-16
- *Radio Amateur Handbook* (ARRL) H-9
- **Radio Apparatus Corporation** J-63
- **Radio City Products Co., Inc.** F-80, 81
- **Radio Corporation of America**
  - Antennas and Accessories S-73
  - Batteries M-1
  - Pickups, Crystal, Replacement C-1
  - Speakers C-1
  - Technical Literature, Tube Manuals H-14, 15
  - Television Components K-10, 11
  - Test and Measuring Equipment .... F-2 to 5
  - Tubes—Amateur Type A-6, 7
  - Tubes—Industry, Communicative, Broadcasting A-6, 7
  - Tubes—Receiving and TV A-8, 9
- **Radio Craftsmen, Inc.** K-1
- *Radio Handbook* (Editors & Engineers Ltd.) H-16
- **Radio Mfg. Engineers, Inc.** J-22, 23
- **Radio Merchandise Sales, Inc. (RMS)** .... K-28 to 31
- **Radio Receptor Co., Inc.,** Seletron Division G-22
- Radio-Telephone, Two-Way J-21
- *Rakscope* Oscilloscopes F-107
- **Ram Electronics Sales Co.** K-16
- **Rauland Corporation** A-40
- **Ray-O-Vac Co., Specialty Battery Division** .... M-12 to 14
- **Raytheon Mfg. Co., Equipment Sales Div.** M-52
- **Raytheon Mfg. Co., Receiving Tube Div.** .... A-14 to 17
- Reactors—Audio, Filter .... Section N
- Receivers, AM, FM, etc. B-12; J-63; K-3, 5
- Receivers, Communication .... J-14 to 22, 63, 64
- Receivers, Crystal K-6
- Receiving Kits, Chassis—AM-FM J-62; K-2, 3
- Receiving Kits, Chassis—TV K-1, 4, 5
- Receiving Tubes .... Section A
- Receptacles, Sockets, Plugs .... Section T; also J-4, 8, 30, 73 to 75, 82; K-19, 20; S-36, 41; U-69, 70, 73, 83, 105, 106
- *Recitalist* Hi-Fidelity Phonograph E-6
- Record Changer Bases, Cases J-85; K-7
- Record Changers .... E-27, 28, 34, 35; also B-34
- Record Cleaners, Preservers U-113
- Record Player Attachment, 3-Speed K-33
- Record Players, Phono and Transcription B-12, 34; E-6, 7, 9, 36
- Recorders and Playback Equipment .... E-1 to 14; also B-2
  - Audio Sweep Frequency Transcription E-23
  - *Chip-Chaser* E-41
  - Cutting Heads D-8, 12, 33; E-1, 21
  - Discs and Needles E-4, 18, 39, 41, 42, 43, 48, 52, 61
  - Equalizers and Filters D-8; E-16, 17, 22, 37; K-1
  - Frequency Records for Checking Response E-23; U-43
  - Mechanisms, Assemblies, Chassis E-8, 10, 29, 32
  - Meters, Volume B-6; F-24, 37, 48, 54
  - Microscope Groove Analyzer E-22
  - Motors, Turntables E-3, 8, 9, 10, 32, 36
  - Needle Force Gauge E-22
  - Recording Amplifiers E-1, 2, 7, 12, 13
  - Stroboscope Discs E-22; U-43
  - Tape Drive Mechanisms E-5, 11
  - Tape for Recording .... E-39 to 42, 58, 60 to 64; U-110
  - Tape Recorders .... B-2; E-1, 4, 5, 11 to 14, 29
  - Tape Splicing Block L-11
  - Thermo Stylus Kit E-1
  - Transcription Pickups E-1, 17, 18, 21, 37
  - Transcription Record-Players .... B-12, 34; E-1, 2, 3, 9 ,10, 36
  - Transformers, Crystal Recorder Output N-8, 37, 40, 41
  - Wire, Stainless Steel E-42, 59; U-110
- **Recordisc Corporation** E-42
- **Recoton Corporation** E-38, 39
- Rectangular Plugs and Sockets .... T-5, 22 to 25
- Rectifier Tubes .... Section A
- Rectifier Tube Tester F-16
- Rectifiers, Copper Oxide, Instrument G-23, 24, 26
- Rectifiers, Magnesium Copper Sulfide M-21
- Rectifiers, Power, High Voltage G-18, 19, 22, 24, 25
- Rectifiers, Selenium .... A-1, 3; G-19 to 22, 26; K-18, 33; M-21

Section & Page

- Re-entrant Speakers, Trumpets C-14, 15
- **Reeves Soundcraft Corporation** E-60, 61
- Refrigerator Cabinet Patch Kits U-97
- **Regency Division I.D.E.A., Inc.** K-17
- Regulators, Line Voltage, Plug-in R-8; S-80; U-89
- Regulator Transformers, Controls .... M-48 to 52; N-16, 26, 32, 46, 49, 53, 55, 59, 71
- **Rek-O-Kut Company** .... E-6 to 10
- Relay Racks, Panels, etc. .... J-36, 37, 83, 90 to 98
- Relays
  - Antenna Changeover for Transmitters L-22, 32
  - Break-in L-25, 32
  - Circuit and Industrial Controls L-23, 28, 33
  - Coaxial L-21
  - General Purpose L-14, 23, 31, 32
  - High Frequency and R.F. L-23, 25, 32
  - Interchangeable L-24
  - Keying L-22, 25, 32
  - Latching, Impulse L-22, 27, 28, 32
  - Mercury-Switch Mercury Contact L-32
  - Midget L-21, 23, 29, 32
  - Motor-Starting and Control L-23, 29
  - Multiple Leaf L-27
  - Overload and Underload L-24, 25, 32
  - Photo Electric, Sensitive .... L-21, 33 to 35
  - Photoflash L-29
  - Power, Heavy Duty, etc. L-26, 29
  - Remote Control L-24, 26, 31, 32
  - Shockproof L-29
  - Telephone Type L-21, 27
  - Time Delay, Thermostatic Delay L-22, 24, 30, 32
- Remote Control Box for Amplifiers B-1, 7, 13, 17
- Remote Control Relays L-24, 26, 31, 32
- Repair Cements U-49, 94
- Repair Kits for Cabinets U-52, 97, 98
- Resistance Analyzers, Indicators, Meters, Decades F-57, 58, 67, 111; P-50; R-5, 38, 39
- Resistor Boards, Melamine U-36
- Resistors, Fixed and Adjustable .... Section R
  - Carbon, Composition, etc. R-15, 31, 48, 49
  - Flexible R-6
  - Line Cord S-38, 47; U-89
  - Metal Film R-32
  - Precision R-27, 32, 38, 42, 49
  - Printed Electronic Circuits P-57, 80
  - Tube Type, Ballasts A-6, 7, 12, 15, 20, 31; R-7, 50; S-80
  - Vitreous Enamel .... R-14, 34, 35, 41, 44 to 48
  - Wire Wound .... L-17; R-1, 2, 7, 15, 23, 30 to 37, 41 to 48
- Restaurant Amplifier B-11
- Retainer Ring Tools for Socket Assembly T-1
- Retaining Rings and *C* Washers U-45, 63
- **Rex Corporation** S-52, 53
- **Rexolite Division Rex Corp.** S-53
- R.F. Chokes, Coils J-6, 30, 43, 48, 50, 61, 73; K-22; N-95, 96; P-8; R-15, 26, 43; U-85
- R.F. Connectors T-7, 41
- Rheostats—Potentiometers .... Section R; also F-1; L-17
- Rheostats, Power R-6, 40
- *Rhythmaster* Hi-Fidelity Phonograph E-6
- **Rider Publisher, Inc., John F.** .... H-1 to 8
- Right Angle Drives for Capacitors, Potentiometers, etc. J-5, 29
- **Rinehart Books, Inc.** H-12, 13
- Rivets, Eyelets U-44, 63, 72, 77, 91, 115
  - Punches for Rivets, Eyelets T-15; U-77, 102
- *RME* Receivers, etc. J-22, 23
- Rocket Tubes A-1
- Rods, Extension, Insulated, Brass U-71, 86, 87
- Rods, Polysterene S-54
- **Rogan Brothers** U-32, 33
- Roof-Patching Compound S-70
- Rotary Inductors J-58, 59, 76; N-45
- Rotary Power Supplies .... J-24; M-42 to 45, 53
- Rotary Switches .... L-2, 6 to 10, 18 to 20; R-5, 38, 40; S-31; U-65, 84, 107
- Rotator and Rotary Beam Antennas J-67; S-62, 64, 98; T-11
- Rotator TV-FM Cable S-10, 22, 28, 44, 46
- *Roto Ranger* Set Analyzer F-32
- Rubber and Bakelite Plugs A-38; S-10, 40
- Rubber Cement U-49, 94
- Rubber Chassis Mounts U-44, 62, 115
- Rubber Circuit Symbol Stamps F-120
- Rubber Drives for Radios, Phonos U-43, 62, 113
- Rubber Feet, Bumpers, Washers U-44, 62, 70, 115
- Rubber Grommets, Gaskets U-44, 62, 70, 91, 92, 105, 115
- Rubber Plugs, Unbreakable S-10, 40
- Ruggedized Tubes A-15, 25
- Running Time Meters F-54, 64, 69

— S —

Section & Page

- **Sams & Co., Inc., Howard W.** H-10, 11
- **Sangamo Electric Co.** .... P-36 to 46
- **Sarkes Tarzian, Inc.**
  - Rectifiers G-18, 19
  - TV Picture Tubes A-39
- Saws U-41
- Scale Printing Machine F-120

- **Schauer Manufacturing Corp.**
  - Battery Eliminators, Vibrator Analyzer M-15
  - Rectifiers G-23

- **Schott Co., Walter L. (Walsco)**
  - Hardware, Tools, Service Aids .... U-40 to 63
  - TV Antennas and Accessories .... S-66 to 71
- *Scotch* Sound Recording Tape E-64
- **Scott, Inc., Hermon Hosmer** B-6, 7
- Scratch Awl U-68
- Scratch Filters for Pickups, Records B-13
- Scratch Removers, Polishes U-51, 96, 97, 98
- Screw Drivers S-36; U-17, 18, 19, 29, 67, 102, 110
  - Flexible U-77, 102
  - Neutralizing, Alignment U-40, 68, 77, 78, 101, 102
- Screw-Eye Insulators K-27; S-40, 70, 81; T-9; U-73
- Screws, Nuts, Bolts, Washers .... S-35, 36, 39; U-43 to 48, 63, 70, 90 to 92, 108, 114, 115
  - Escutcheon Plate Screws U-47, 63, 90, 114
  - Machine Screws S-35; U-47, 63, 72, 90, 114
  - Ornamental Head Screws S-35; U-47, 63, 72, 114
  - Rack and Cabinet Screws S-35; U-47, 63, 72, 91, 114
  - Self-Tapping, Parker-Kalon Screws S-35; U-47, 63, 72, 90
  - Set Screws for Knobs, Pickups .... T-37; U-43, 46, 47, 63, 105, 108, 112 to 115
  - Wood Screws S-35; U-47, 114
- Screw Terminals, Strips T-15, 29, 30, 31, 36, 39; U-70, 88, 105
- Scriber for Marking Metal U-29
- Selector Switches L-2, 6, 18, 19, 20; R-38
- Selenium Rectifier Capacitors P-15
- Selenium Rectifiers .... A-1, 3; G-19 to 22, 26; K-18, 33; M-21
- *Seletron* Rectifiers G-22
- Service Aids, Miscellaneous .... Section U
- Service and Instruction Manuals .... Section H; also C-21; E-41; F-17; G-19, 20; J-64; L-36; M-44; P-129, 132; R-20; T-7
- Set Analyzers .... Section F
- Shaft Couplings, Insulated Flexible J-5, 29, 44, 46, 55, 73; U-37, 86
- Shaft Couplings, Insulated Non-Flexible J-5, 55; U-71
- Shaft Extenders, Reducers, Couplings R-13, 21, 29; S-36; U-71, 87, 111
- Shaft Locks J-2, 29, 55; U-36
- Shafts, Flexible J-73; S-36
- **Shakespeare Co., Columbia Products Division** S-103
- **Shallcross Manufacturing Co.** .... R-36 to 39
- **Sheldon Electric Co., Div. Allied Electric Products** A-38
- Shielding, Copper Braid S-5, 15, 22, 28
- Shields and Shield Cans
  - Box Shields J-38
  - Coil Shields J-8; U-84
  - Jack Shields J-8
  - Tube Shields J-8, 27, 29, 74; T-2, 33, 34, 38; U-71, 84
- Shims, Speaker U-42, 109
- **Shure Brothers, Inc.** .... D-10 to 15
- **Shurite Meters** F-56, 57
- Signal Calibrators F-2, 7, 10, 15, 29, 99
- Signal Generators .... Section F
- **Signal Indicator Corp. (Dial Light Co. of America)** .... G-1 to 10
- Signal Indicators .... G-1 to 7, 11; J-80 to 82
- Signal Tracer Testers F-3, 119
- Silicone Compounds S-66; U-95
- Silver Mica Capacitors P-44, 63, 64, 77, 132
- Silver Print for Printed Circuits U-96
- **Simpson Electric Company** .... F-26 to 39
- **Simpson Mfg. Co., Inc., Mark (Masco)** .... B-18 to 27
- Sine Wave Clipper J-59
- Sleeving—Coated, Saturated, etc. S-12; U-87, 107
- Slide-Type Switches R-3; S-31; U-65, 84, 107
- *Slipstick* Wavemeter J-62
- Small Power Motors E-26
- **Smith, Inc., Herman H.** .... U-64 to 73
- *Smith-Baldwin* Speakers C-44
- Smoke Indicator and Control, Photoelectric L-33
- Snap-Action Switches L-31
- **Snap-on Drawer Company** U-35
- **SNC Manufacturing Co., Inc.** .... N-56 to 59
- Socket Punches T-1; U-31, 76
- Socket-Switches K-19
- Socket-Turrets and Plug-in Units J-4; T-12, 13, 39
- Socket Wrenches U-41, 72, 77, 111

Section & Page

- Sockets .... Section T; also G-9, 10; J-4, 8, 30, 73 to 75, 82; K-19, 20; S-36, 41; U-69, 70, 73, 83, 105, 106
  - For Air System A-27
  - For Crystal Holders J-8, 73; K-20; T-4, 32, 39
  - For Dial Lights G-9, 10; J-82; U-69, 106
  - For Miniature Bulb Tester T-5
  - For Panel and Sub-Panel Assemblies .... T-1 to 4, 32, 33; U-83
  - For Plug-in Capacitors T-32
  - For Receiving Tubes J-4; T-1, 2, 12, 32, 38; U-70, 83, 105
  - For TV and Cathode Ray Tubes S-41; T-1, 34, 39; U-73
  - For TV Transmission-Line K-19
  - For Transmitting, Acorn, Industrial and Special Purpose Tubes J-4, 30, 74, 75; S-36; T-1; U-83
- **Sola Electric Company** .... M-49 to 51
- Solder, Solder Flux, Solder Paste .... U-13 to 16, 49, 95, 96
- Soldering, Terminal Lugs S-34; T-15, 37; U-36, 37, 46, 70, 72, 88, 91, 115
- Solderless Terminal Lugs S-34
- Soldering Irons, Guns, Pencils .... U-1 to 12, 77
  - Non-Stick Compound U-96
  - Replacement Tips .... L-5; U-1 to 11, 77, 108
  - Stands, Pots, Heat Controls .... U-1 to 8, 116
- Soldering Unit, Induction F-70
- Solvents and Thinners U-49, 94
- **Sorensen & Company** M-28, 29
- Sound Level Indicators B-6; F-24, 37, 48, 54
- Sound System Cable .... S-1 to 5, 19, 22, 28, 49
- Sound Systems .... Section B; also C-28; E-28; F-102; J-61; K-1
- **South River Metal Products Co., Inc.** .... K-24 to 27
- Spacers and Bushings, Metal and Insulating J-29; S-36; T-37; U-45, 63, 71, 86, 92, 111, 115
- Spade Lugs, Bolts S-32; U-44, 63, 66, 71, 76, 114
- Spaghetti Tubing S-12, 30, 52, 66; U-87, 107
- Spark Plug Suppressors, Auto P-6; R-3, 33; S-38; U-110
- Speakers, Horns, Projectors, Trumpets .... Section C; also B-34
  - Baffles, Cabinets, Enclosures .... B-34; C-3, 11, 17, 25 to 28, 31, 36; J-40; K-7
  - Cable, Wire S-2, 4, 27, 28, 47, 49
  - Carrying Cases B-34; J-40
  - Cement, Repair U-49, 94
  - Cone Reconditioning Fluids U-49, 97
  - Cords, Extension S-38
  - Dust Felts for Voice Coil U-43, 63, 115
  - Field Substitute Choke N-12
  - Grille Cloth and Screening U-53, 98
  - Networks, Crossover C-10, 16, 23, 29, 30, 35
  - Plugs T-5, 39
  - Shims U-42, 109
  - Stands and Supports C-16, 25
  - Transformers .... Sections C and N
  - Volume Controls, Power C-8
- **Specialties Manufacturing Co. (Spemco)** L-14
- **Specialty Battery Co., Div. of Ray-O-Vac** .... M-12 to 14
- Speed Nuts S-36; U-48, 63, 70, 114
- **Spirling Products Co., Inc. (Spico)** S-84

- **Sprague Products Company**
  - Capacitors .... P-47 to 61
  - Resistors R-30

- Spring (Friction) Washers U-45, 63, 114
- Spring Maker Machine U-110
- Springs, Expansion and Compression U-46, 62, 115
- Square Wave Generators, Modulators F-7, 13, 66, 102, 115
- *Stabiline* Voltage Regulators M-48
- *Staco* Relays and Transformers .... L-32; N-63 to 65
- *Stancor* Transformers .... N-1 to 16
- **Standard Electrical Products Co. (Staco)** .... L-32; N-63 to 65
- **Standard Transformer Corp. (Stancor)** .... N-1 to 16
- **Standard Wood Products Corp.** K-35
- Standing Wave Ratio Bridge J-27
- Standoff Insulators, TV Screw Eye, etc. K-27; M-17; S-40, 70, 81, 83; T-9; U-73
- Stands, Microphone .... Section D
- Stands and Supports, Speaker C-16, 25
- Staple Driver Staples U-41, 108
- Staple Driver Tool U-41
- Staples, Insulated—Saddle Type S-40; U-108
- Stepdown Line Cords S-47
- Stepdown Transformers M-28; N-16, 26, 32, 53, 55, 59, 64, 65, 71, 91, 112
- **Stephens Manufacturing Corp.** C-28, 29
- *Sterling* Cables (Beam Instruments Corp.) S-44
- **Sterling Manufacturing Co.** F-58, 59
- Stock Boxes, Steel and Plastic U-28, 35, 108
- Stroboscopes for Phono Turntables E-22; U-43
- Strobotrons (Tubes) A-1
- Subminiature Radio Tubes A-13, 15, 16
- **Superior Electric Co. (Seco)** .... M-46 to 48
- **Superior Instruments Co.** F-112, 113

Section & Page

- Suppressors, Noise.... B-7; D-8, 17; J-48, 49, 58, 59, 61, 66, 67; N-4, 45, 77, 79; P-8, 30, 31, 48, 50, 73, 129; U-89
  - Auto Ignition.... P-6; R-3, 33; S-38; U-110
  - Oil Burner.... P-8, 31; R-33
- **Supreme, Inc.** F-6
- Sweep Calibrators for Oscilloscopes.... F-65, 102
- Sweep Frequency Generators, TV, etc.... F-2, 15, 16, 17, 22, 23, 41, 65, 72, 94, 117
- Swinging Input Chokes, Reactors.... Section N
- **Switchcraft, Inc.**.... L-8, 9
- Switches
  - Antenna, Coaxial, etc.... K-12, 19, 33; S-79
  - Band, Band Selector.... J-56, 57; L-3
  - Canopy.... S-31; U-65, 84
  - Circuit-Opening L-2
  - Detent, TV.... S-39, 71; U-113
  - Foot L-13
  - General Purpose.... L-2, 6, 7
  - Ham Type.... L-3, 6
  - Instrument.... L-7, 10, 18
  - Jack L-3, 17
  - Knife-Throw.... S-31; U-73, 84
  - Lever Action.... L-2, 6, 9, 12, 20
  - Limit L-13, 31
  - Microphone D-15; T-6
  - Momentary Contact.... S-31; U-65
  - Plunger L-16
  - Power, Heavy Duty.... S-31; U-65, 84, 107
  - Push, Push-Button, Single.... L-3, 7, 9, 16, 17; S-31; U-65, 84, 107
  - Push-Button, Multiple.... L-3, 12
  - Record-Player, Phono U-89
  - R.F. L-10
  - Rotary Power, Tap, Non-Shorting.... L-2, 7, 10; R-40
  - Rotary Selector.... L-2, 6, 18, 19, 20; R-38
  - Rotary Snap, Toggle.... L-9; R-5; S-31; U-65, 84, 107
  - Slide Type.... R-3; S-31; U-65, 84, 107
  - Snap-Action, Spring-Return L-31
  - Socket K-19
  - Tap, Tap-Change.... L-10; T-5
  - Test.... L-2, 18; U-107
  - Toggle, Bat Handle, etc.... L-15; S-31; U-65, 84, 107
  - Transmitter L-7
  - Vacuum.... A-27; J-33, 35

- **Sylvania Electric Products, Inc.**
  - Test Equipment F-65
  - Tubes, Crystal Diodes, Rectifiers.... A-1

- Synchroscopes F-103; J-26

—T—

- T-Pads (Attenuators).... L-10, 17; R-8, 11, 36
- *Taco* Antenna Equipment.... S-92 to 95
- **Talk-A-Phone Company**.... B-30, 31
- *Tannoy* Loudspeaker System.... C-38
- Tap Switches.... L-10; T-5
- Tape-Disc Combination Recording Assembly.... E-29
- Tape for Recorders.... E-39, 40, 42, 58, 60 to 64; U-110
- Tape, Friction U-107
- Tape Recorders.... B-2; E-1, 4, 5, 11 to 14, 29
- Tape Recording Heads.... D-12
- **Taylor Tubes, Inc.**.... A-21
- **Tech Laboratories, Inc.**.... L-10, 11
- **Tech-Master Products Co.**.... K-4, 5
- **Technical Appliance Corp.** (Taco).... S-92 to 95
- **Tel-A-Ray Enterprises, Inc.**.... S-100 to 102
- Telegraph Keys and Practice Sets.... J-77; L-36; U-89
  - Accessories, Parts, Buzzers.... J-77
  - Monitors J-23, 65
  - Morse Code Linguaphone Records.... J-64; U-89
  - Oscillators, Code Practice.... J-25; U-89
  - Relays.... L-22, 25, 32
- Telephone Conversation Pickup.... D-38
- Telephone Type Relay Racks.... J-36
- Television Components, Accessories:
  - Anode Connectors and Extension Cords.... S-41; U-73
  - Antenna Compass F-33
  - Antennas and Accessories.... K-12 to 34; S-55 to 106; T-9; U-73, 108
  - Ballasts, Resistor Tubes.... R-7; S-80
  - Beam Benders for CR Tubes.... C-6; K-11; R-8
  - Boosters, Pre-Amplifiers.... D-2, 23; J-62; K-5, 9, 15, 17, 18, 23, 28, 34; S-73, 76, 81, 94, 102
  - Cabinets K-7
  - Cameras, Camera Plugs, Projectors.... E-37; F-108; T-21

Section & Page

  - Capacitors .... Section P
  - Changeover Antenna Switches.... K-12, 19, 33; S-79
  - Coils, Chokes.... J-48, 49; K-10, 11, 16; N-3, 67, 81
  - Controls—Volume, Focusing, etc.... Section R; also C-6; N-3
  - Conversion Kits for Larger Tubes.... K-16; N-88
  - Converters, Inverters, Power.... M-37
  - Couplers, Antenna.... J-25; K-12, 14, 19; S-79, 81
  - Detents, Detent Switches.... S-39; 71; U-113
  - Escutcheon Plates U-62
  - Field Strength Meters.... F-7, 13, 30; J-25
  - Filters, Glare K-33
  - Filters, Wave Traps, etc.... J-48, 49, 58, 61, 62, 66; K-11, 12, 23; N-3, 67, 92; P-30, 48, 129; S-80
  - Focus Coils.... C-6; K-11, 16; N-2, 27, 66, 89
  - Kits, Chassis.... K-1, 4, 5
  - Loom, Protective S-41
  - Manuals .... Section H
  - Master Antenna Distribution Systems.... K-15, 34; S-95
  - Mirrors for Adjusting TV Sets.... U-111
  - Open-Wire Line Accessories.... K-21
  - Open-Wire Transmission Line.... K-33
  - Power Connector and Safety Cords.... S-10, 20, 41, 80; U-73
  - Printed Circuits.... P-80, 81
  - Probes, High-Voltage.... F-5, 6, 33, 45, 97, 115, 116; U-80
  - Resistors, Voltage Dividers.... Section R
  - Speakers .... Section C
  - Standoff Insulators, Clamps, etc.... K-27; M-17; S-40, 70, 81, 83; T-9; U-73
  - Testing Equipment, Sweep Generators, etc.... Section F
  - Tools, Service Kits.... S-39; U-29, 40, 41, 68, 79, 80, 100 to 102, 109
  - Transformers.... N-1, 2, 3, 25, 26, 27, 31, 53, 55 to 58, 65, 66, 67, 81, 88, 89, 92; also F-2; K-10, 11, 16
  - Tube Brighteners M-19
  - Tube Masks, Plastic.... K-33; U-118
  - Tube Testers, Cathode Ray.... F-20, 44
  - Tube Sockets.... S-41; T-1, 34, 39; U-73
  - Tubes, Picture.... A-3, 9, 11, 13, 15, 20, 36 to 40
  - Tuning Units.... A-39; K-9
  - Turnbuckles S-40, 70; U-73
  - Twin Lead Wiring Nails & Connectors.... K-20; S-40, 66; T-9; U-63, 73, 108
  - Vertical Integrator Plates, Printed.... P-80
  - Viewing Lamp S-71
  - Wire and Cable.... S-10, 14, 17, 22, 41, 44, 46; T-9
  - Yokes, Deflection.... K-10, 16; N-2, 27, 66, 89
- Television Receiving Kits, Chassis.... K-1, 4, 5
- **Telex, Inc.** D-36
- **Tel-O-Tube Corp. of America**.... A-37
- **Telrex, Inc.**.... S-86 to 89
- Temperature Coefficient Capacitors.... P-75, 78, 128
- Temperature Indicators, Testers.... F-34, 60, 61
- Terminal and Soldering Lugs.... S-34; T-15, 37; U-36, 37, 46, 62, 70, 72, 88, 91, 115
- Terminal Clips, Plates, Strips.... J-1, 31; S-34; T-26 to 31, 36, 39; U-36, 37, 46, 62, 64, 70, 88, 105, 115
- Terminal Strips, Barrier Type.... T-26 to 28; U-64
- Terminal Posts, Assemblies.... J-1, 31; S-34; T-15, 36; U-36, 37
- Test Adapters T-5
- Test Clips.... M-16, 17; S-32, 33; U-66, 71, 106
- Test Leads, Prods, Handles.... F-39; J-44; S-33; T-14; U-38, 39, 67, 80, 81, 103, 104
- Test-Lites U-81, 109
- Test Oscillators.... F-21, 74
- Test Prod Couplers.... T-14
- Test Prod Wire.... S-9, 20, 23, 26, 49; U-81, 104
- Test Records for Adjusting Pickups, etc.... E-23; U-43
- Testing Instruments and Analyzers.... Section F; also J-26, 59; P-32, 50, 126; R-5, 38, 39
  - Amateur Testing Equipment.... F-24; J-26, 59
  - Appliance Testers.... F-24, 34 to 38, 60, 97
  - Audio Sweep Frequency Generator.... E-23
  - Battery Testers, Meters.... F-1, 36, 43, 44, 46, 55, 57, 59, 88
  - Capacitor Analyzers, Decades, Bridges.... F-30, 74, 75, 86, 96, 111; P-32, 50
  - Capacitor-Resistor Analyzers.... F-119; P-50, 126
  - Complete Lab. Bench & Rack Units.... F-3
  - Multimeters, Multitesters.... F-1, 6, 18, 19, 26, 32, 45, 49, 50, 68, 80, 113, 118
  - Neon Glow Testers.... U-109
  - Oscillators, Signal Generators.... F-6 to 11, 15, 16, 17, 22, 27, 32, 41, 42, 65, 72, 77 to 81, 88, 94, 95, 112, 113, 114, 117
  - Oscillographs, Oscilloscopes.... F-4, 6, 16, 17, 23, 29, 41, 65, 66, 72, 98, 99, 103, 105 to 108, 116; J-26
  - Resistor Analyzers.... F-111; P-50; R-5, 38, 39
  - Signal Tracers.... F-3, 119
  - Television Testers, Generators, etc.... F-2 to 6, 9 to 17, 21 to 30, 40 to 47, 65, 72, 81, 94, 95, 98, 99, 112 to 117, 120
  - Temperature Testers.... F-34, 60, 61

Section & Page

- Testing Instruments and Analyzers (Cont.)
  - Tube Testers, Checkers ... F-6, 16, 20, 31, 43 to 46, 49, 65, 73, 74, 80, 81, 87 to 93, 112, 119
  - Vibrator Analyzers, Testers ... M-15, 22
  - Voltage Breakdown Testers ... F-111
- Test Switches ... L-2, 18; U-107
- Tetrachloride Cleaning Fluids ... U-51, 95
- Thermocouples ... F-60, 109
- Thermostatic Delay Relays ... L-30

- **Thordarson-Meissner Division Maguire Industries**
  - Meissner Division Products ... J-60, 61
  - Thordarson Division Products ... N-30 to 32

- Threaded Brass and Steel Rods ... J-72; S-36; U-47, 71, 114
- Thyratrons (Rectifier Tubes) ... A-1, 4, 6, 7, 25, 28, 33, 34
- Time Delay Relays ... L-22, 24, 30, 32
- Timer Controls, Automatic ... L-13
- Tip Jacks, Plugs ... J-78; S-32; T-4, 36, 39; U-66, 68, 104
- Tire Static Neutralizing Kits ... U-52, 110
- Toggle Switches ... L-15; S-31; U-65, 84, 107
- Tone Arms ... D-5 to 8, 13, 27; E-1, 17, 18 to 22, 37
- Tone Controls ... Section R
- Tone Equalizers—Pickup, Recording ... D-8; E-16, 17, 22, 37; K-1
- Tools and Tool Kits ... Section U; also S-36; T-1, 15
  - Neutralizing, Alignment ... T-3, 17; U-40, 68, 77 to 80, 100 to 102
  - Television ... S-39; U-29, 40, 41, 68, 79, 80, 100 to 102, 109
- Toroidal Coils, Inductors ... J-59; N-20, 44, 45, 101 to 104
- Transcription Arms, Pickups ... E-1, 17, 18, 21, 37
- Transcription Players ... B-12, 34; E-1, 2, 3, 9, 10, 36
- Transformers, Chokes, Reactors ... Section N
  - Antenna Coupling, Matching ... J-49; K-14; N-92; S-79
  - Audio, Input, Output ... Section N; also B-13, 20; C-6, 7, 10, 13, 21, 25, 42; D-8, 29; E-22
  - Auto ... M-28, 46; N-16, 26, 32, 46, 48, 49, 53, 54, 55, 64, 65, 71, 83, 88, 91, 112
  - Bias Supply ... N-15, 49, 51, 58
  - Blocking Oscillator ... K-10, 11, 16; N-2, 3, 26, 27, 55, 66, 81, 89, 92
  - Cathode Ray Tube ... N-10, 24
  - Constant Voltage ... M-48 to 52; N-33
  - Crystal Recorder Output ... N-8, 37, 40, 41
  - Driver ... N-6, 29, 30, 38, 54, 68, 78 to 82, 89, 100, 108
  - Dry Disk Rectifier ... N-24
  - Filament ... N-2, 14, 19, 23, 24, 32, 39, 49, 51, 52, 55, 59, 60, 63, 66, 73, 75, 76, 80, 82, 88, 97, 111
  - Filter, Audio, Swinging Chokes ... Section N
  - High Fidelity Audio ... N-4, 5, 21, 70, 85, 98 to 100
  - Interstage Audio ... N-5, 7, 17, 28, 30, 37, 40, 41, 48, 54, 61, 62, 68, 81, 86, 99
  - Isolation ... F-5; N-16, 26, 53, 55, 59, 64, 65, 71, 80, 88, 91, 112
  - Microphone and Line ... N-5, 7, 28, 36, 46, 54, 70; also D-15, 17
  - Miniature, Hearing Aid, etc. ... N-20, 42, 47, 107
  - Mixing ... N-5, 17, 37, 40, 41, 99
  - Modulation ... N-13, 29, 30, 31, 37, 49, 50, 54, 57, 71, 78, 79, 82, 90
  - Photoflash Power ... N-53, 91
  - Plate Supply ... N-15, 37 to 41, 49, 60, 71, 72, 79, 82, 90, 97
  - Plate-Filament Combined ... N-10, 18, 19, 22, 25, 39, 51, 60, 72, 76, 83, 97
  - Plug-in Types ... B-13; N-43
  - Power ... N-1, 10, 11, 18 to 25, 32, 39, 40, 49 to 55, 58, 59, 63, 72, 73, 76, 80, 81, 87, 88, 110, 111, 114
  - Pulse ... N-97, 105
  - Reactors, Chokes—Audio ... N-3, 6, 19, 22, 23, 28, 32, 37, 39, 55, 56, 60, 62, 74, 76, 80, 83, 87, 90, 97, 105, 109, 110, 113
  - Speaker Matching ... Section C; also N-10, 50, 61, 62, 70, 81
  - Stepdown, Step-up ... M-28; N-16, 26, 32, 53, 55, 59, 64, 65, 71, 91, 112
  - Television ... N-1, 2, 3, 25, 26, 27, 31, 53, 55, 57, 58, 65, 66, 67, 81, 88, 89, 92; also F-2; K-10, 11, 16
  - Transceiver ... N-7, 28, 70
  - Tube Checker ... N-14
  - Variable Voltage ... M-28, 29, 46, 47; N-64
  - Vibrator-Power and Auto Radio ... N-11, 24, 25, 31, 58, 71, 91
  - Voltage Adjuster, Control ... M-48 to 52; N-16, 26, 32, 46, 49, 53, 55, 59, 71
- Transistors ... A-16
- Transmission Line, Cable ... K-33; S-2, 9, 17, 28; T-9
- Transmission Line Plugs, Sockets, Connectors ... K-19, 20; S-66; T-9; U-73
- Transmitters ... J-24, 25, 27, 28, 64
  - Kits ... J-64, 67
  - Metal Racks, etc. ... J-83, 88, 89, 96
  - Power, Speech Amplifiers ... J-28, 65
  - Power Supplies ... J-24, 65
  - Variable Frequency Oscillators ... J-25, 27, 67
- Transmitting Capacitors, Fixed ... P-8, 9, 10, 23, 27 to 29, 44 to 46, 49, 65, 79, 123, 124, 131

Section & Page

- Transmitting Capacitors, Variable ... J-9, 10, 32, 41, 47, 51 to 54, 58, 69, 70, 71
- Transmitting Chokes ... J-6, 30, 43, 48, 50, 61, 73; K-22; N-95, 96; P-8; R-15, 26, 43; U-85
- Transmitting Coils and Forms ... J-49, 50, 60; N-93, 94, 95; U-85
- Transmitting Relays ... L-22, 32
- Transmitting Tubes ... A-1, 4, 6, 7, 13, 15, 21, 24, 25, 32
- **Triad Transformer Mfg. Co.** ... N-17 to 29
- Triaxial Speakers ... C-10
- **Tricraft Products Co.** ... S-106
- **Trimm, Inc.** ... D-34, 35
- Trimmer Capacitors ... P-6, 68, 76, 77, 79
- Trimount Fasteners, Snap-in ... T-37; U-45, 62, 114
- *Tri-O-Matic* Phonos and Record Changers ... E-27
- **Triplett Electrical Instrument Co.** ... F-18 to 25
- Trumpets and Horns ... Section C
- *Tru-Sonic* Speakers ... C-28, 29
- Tube Carrying Cases, "Caddies" ... K-7, 23, 28
- Tube Checker Adapters ... T-5
- Tube Clips, Caps, Grips ... J-4, 5, 31, 75; S-35, 41; T-5, 34, 37; U-46, 63, 73, 87, 115
- Tube Extractor Tools ... U-77, 109
- Tube Heat Radiating Connectors ... A-27; J-43
- Tube Masks, Plastic, for TV ... K-33; U-62
- Tube Mounting Accessories, TV ... T-4
- Tube Pin Straightener Tools ... U-104, 109
- Tube Shields ... J-8, 27, 29, 74; T-2, 33, 34, 38; U-71, 84
- Tube Sockets, Receiving ... J-4; T-1, 2, 12, 32, 38; U-70, 83, 105
- Tube Sockets, TV and CR ... S-41; T-1, 34, 39; U-73
- Tube Sockets, Transmitting, etc. ... J-4, 30, 74, 75; S-36; T-1; U-83
- Tube Testers, Checkers ... F-6, 16, 20, 31, 43 to 46, 49, 65, 73, 74, 80, 81, 87, 88, 90 to 93, 112, 119
- Tube Tester Transformers ... N-14
- Tubes ... Section A
  - Cathode Ray ... A-6, 7, 15
  - Crystal Diodes ... A-1, 3, 13, 16
  - High Vacuum Capacitor Types ... A-24, 27; J-33, 35
  - Microwave ... A-1, 31
  - Phototubes ... A-6, 7, 22, 28
  - Receiving ... A-2, 3, 8, 10, 11, 12, 14, 20
  - Rectifier and Control ... A-1, 4, 5, 6, 7, 13, 17, 21, 23 to 34
  - Special Purpose ... A-1, 3, 6, 7, 11, 13, 17, 20, 31, 32
  - Subminiature ... A-13, 15, 16
  - Television Picture ... A-3, 9, 11, 13, 15, 20, 36 to 40
  - Transmitting, Amateur ... A-1, 4, 6, 7, 13, 15, 21, 24, 25, 32
  - Voltage Regulator, Resistor ... A-6, 7, 12, 15, 20, 31; R-7, 50; S-80
- Tubing—Flexible, Varnished, Spaghetti, etc. ... S-12, 30, 52, 66; U-87, 107
- Tubing, Insulated—for Tool Handles ... U-41, 103
- Tubing—Polysterene, Bakelite, Fibre ... S-30, 41, 52, 54, 66; U-87, 107
- Tubular Capacitors—Cardboard, Paper, Metal ... Section P
- Tuner Kits—P. A., Receiver ... J-49, 61
- Tuners—FM, AM, TV ... B-1; F-101; J-61; K-1, 2, 3, 9,
- **Tung-Sol Electric, Inc.** ... A-10, 11
- Tuning Dials ... J-3, 28, 79; U-82, 118
- Tuning Units, Assemblies ... J-12, 61; K-5, 8
- Tuning Wands ... U-40, 78, 79, 101
- Turnbuckles for Guy Wires ... S-40, 70; U-73
- **Turner Company** ... D-19 to 23
- Turntable Felts ... U-43, 113
- Turntable Repair Stand ... U-109
- Turntables and Motors, Phono, Recording ... E-3, 8 to 10, 26, 30 to 36
- Turret Assemblies for Band-Switching ... J-56, 57
- Turret Sockets and Assemblies ... J-4; T-12, 13, 39; U-37
- **T.V. Development Corporation** ... K-33
- Tweeter Speakers and Units ... C-16, 23, 35
- Tweezers and Tweezer Kits ... U-41, 103
- Twin Lead Wire for TV and FM ... S-10, 14, 17, 22, 41, 44, 46; T-9
- Twin Lead Wiring Nails, Connectors ... K-20; S-40, 66; T-9; U-73, 108

— U —

- UHF Antennas ... Sections K and S
- UHF Converters ... K-8, 18
- UHF Insulation ... S-53
- UHF Oscillators, Noise Meters, etc. ... F-7, 11, 13, 15
- Underload and Overload Relays ... L-24, 25, 32
- **Ungar Electric Tools, Inc.** ... U-10
- **Union Carbide & Carbon Corp.** (National Carbon Co.) ... M-6 to 9
- **United Technical Laboratories** ... U-38, 39
- **United Transformer Corporation** ... N-35 to 53
- **University Loudspeakers, Inc.** ... C-18 to 23
- **U. S. Engineering Co.** ... U-36
- **Utah Radio Products Co., Inc.** ... C-39 to 41
- **Utica Drop Forge & Tool Corp.** ... U-26, 27
- Utility Cabinets, Boxes, etc. ... J-39, 40, 83, 85, 91, 93, 98; U-28, 35, 108

— V —

Section & Page

- **Vaco Products Company** U-17
- *Vacuo Junctions* (Thermocouples) F-109
- Vacuum Pump, Switch Relays .... A-27; J-33 to 35
- Vacuum Tube-Type Capacitors, High Voltage .... A-27; J-33 to 35
- Vacuum Tube Voltmeters .... F-1, 6, 7, 11, 20, 28, 40, 42, 65, 81, 84 to 88, 96, 114, 116
- **Van Nostrand Co., Inc., D.** H-17
- Variable Frequency Oscillators J-25, 27, 67
- Variable Inductors J-58, 59, 76; N-45
- Variable Receiving and Tuning Capacitors .... J-12, 13, 42, 45 to 47, 51, 68, 70, 71
- Variable Reluctance Cartridges E-22
- Variable Resistors, Rheostats .... Section R
- Variable Transmitting Capacitors .... J-9, 10, 32, 41, 47, 51 to 54, 58, 69, 70, 71
- Variable Voltage Transformers M-28, 29, 46
- Varnished Tubing, Spaghetti S-12, 30, 52, 66; U-87, 107
- Varnishes, Lacquers, Paints, Enamels J-9; U-51, 95, 96, 97
- **Vasco Division Mitchell Industries, Inc.** U-12
- **Vector Electronic Co.** T-12, 13
- *Vee-D-X* Antennas .... S-75 to 79
- Velocity Microphones D-17, 22, 24, 29
- Vernier Dials J-2, 3, 79
- VHF Converters for Communication Receivers J-22, 23
- VHF Oscillator Kit J-54
- *Vibrapack* Power Supplies M-20
- Vibrating Reed Frequency Meters F-62, 63
- Vibration Pickups, Microphones D-17, 21, 29, 32
- Vibrator Analyzers, Testers M-15, 22
- Vibrator Buffer Capacitors, Auto P-5, 48, 132
- Vibrator Power Supplies, Packs .... M-15, 19, 20, 22, 26, 27, 34 to 37, 41
- Vibrator Transformers, Power and Auto Radio N-11, 24, 25, 31, 58, 71, 91
- Vibrators .... M-18, 20, 24, 25, 30 to 32, 38 to 40
- **Vibroplex Co., Inc.** L-36
- *Videocoupler* L-5
- *Viking* Loudspeakers C-9
- **V-M Corporation** E-27
- Voice Coil Dust Felts U-43, 115
- Voice Coil Lead Wire S-15
- *Volometer* Meters F-89
- Voltage Adapters, Foreign, Export N-53
- Voltage Breakdown Testers F-111
- Voltage Dividers, Resistors .... Section R
- Voltage Reducer Cord Sets S-47
- Voltage Regulator Transformers, Controls .... M-48 to 52; N-16, 26, 32, 46, 49, 53, 55, 59, 71
- Voltage Regulator Tubes (Ballasts) A-6, 7, 12, 15, 20, 31; R-7, 50; S-80
- Voltage Stabilizers and Regulators, Electronic .... M-48 to 52; N-16, 33
- Voltage Testers, Neon U-109
- Voltage Transformers, Constant .... M-48 to 52; N-33
- Voltage Transformers, Variable M-28, 29, 46, 47; N-64
- Voltmeters, Voltohmmeters .... Section F
- Volt-Ohm-Milliameters F-1, 6, 18, 19, 26, 32, 33, 50, 96, 97, 113, 118
- *Voltohmysts* F-3
- Volume and Tone Controls .... Section R; also C-10
- Volume Control Hardware R-13, 21, 29; S-35; U-71
- Volume Control Wrenches R-13; U-77
- Volume Level Indicators B-6; F-24, 37, 48, 54

— W —

- Wafer Sockets J-4, 75; T-2, 32, 33; U-70, 83, 105
- **Walco Products, Inc.** (Electrovox Co.) .... E-43 to 45
- **Waldom Electronics, Inc.** (Cronament Products) U-118
- Wall Plates, Receptacles .... K-14, 19; T-16 to 21
- Wall Racks for Hardware, Chemicals, etc. U-48
- *Walsco* Service Aids, Antennas, etc. .... S-66 to 71; U-40 to 63
- **Waltham Horological Corporation** T-41
- **Ward Leonard Electric Co.** R-34, 35
- **Ward Products Corporation** .... S-55 to 59
- Washers, Nuts, Bolts, Screws .... S-35, 36, 39; U-43 to 48, 63, 70, 90 to 92, 108, 114, 115
- **Waterman Products Co., Inc.** F-106, 107
- Wattmeters F-21, 24, 34, 37, 39, 97, 100
- Wave Meters J-25, 26, 62, 66
- Wave Traps J-49, 61, 62, 66; N-92; S-80
- Wax, Floor U-97
- **Webster-Chicago Corporation** (Webcor) E-28
- **Webster Electric Company** B-29; E-19

Section & Page

- **Weller Electric Corporation** U-11
- **Westinghouse Electric Corporation** .... A-28 to 31
- **Weston Electrical Instrument Corp.** .... F-48 to 50
- Wet Electrolytic Capacitor Replacements P-3, 16, 39
- *Wharfedale* Speakers C-34, 35
- Wheatstone Bridges F-110; R-39
- Wheel & Hood Static Eliminators, Auto U-110
- Window Antennas S-55, 81, 88, 91, 102; U-93
- Wing Nuts S-35; U-48, 63, 114
- Wire and Cable .... Section S
  - Aircraft Cable S-5, 6, 7, 15, 52
  - Antenna Wire and Cable J-73; S-11, 15, 23, 29, 30, 38, 47, 50, 70, 80; U-71
  - Antenna Wire for AC-DC Sets S-11, 38
  - Army-Navy, JAN-Spec., etc. S-6, 7, 24, 25
  - Auto Radio Wire and Cable S-1, 4, 5, 15, 26, 28, 49
  - Battery Cable S-22, 49
  - Broadcast Audio Cable S-18, 19, 44
  - Bus-Bar Wire (Solid Tinned Copper) S-9, 15, 26, 29
  - Cathode Ray Tube Cable S-20, 25
  - Coaxial Cable S-10, 14, 26, 44; T-8
  - Copper Aerial Wire, Bare S-11, 15, 23, 29, 45
  - Dial Cable, Cords S-12, 30; U-41, 62, 99, 100
  - Diathermy Cable S-9, 27
  - Electrical Extension Cords, Sets A-38; S-20, 28; U-73, 105
  - Fixture Wire, Lamp Cords S-4, 10, 20, 23, 26, 28
  - Guy Wire K-33; S-10, 30, 50, 70
  - Headphone Cords D-35; S-38; U-89
  - Hookup, Pushback Wire .... S-6 to 8, 19 to 28, 45, 48
  - Ignition Cable, Shielded S-5, 15, 28
  - Indoor Aerial Wire S-11, 15, 23
  - Intercom System Cable S-2, 3, 18, 19, 23, 28, 47, 49
  - Lead-in and Ground Wire .... S-8, 11, 15, 19 to 28, 70
  - Litz Wire S-15
  - Magnet Wire S-18, 29, 45, 46
  - Microphone Cable S-1, 15, 16, 22, 27, 48
  - Multiple-Conductor Cable S-1, 3, 4, 16, 17, 27, 44, 49
  - Phono Pickup and Grid Wire, Shielded S-1, 5, 20, 26, 28, 47; U-113
  - Phosphor Bronze Aerial Wire and Dial Cable S-11, 12, 29, 30; U-99
  - Photo Electric Cell Cable S-1, 20, 27
  - Recording Wire, Stainless Steel E-42, 59; U-110
  - Remote Control S-4, 27; T-9
  - Resistance Cords, AC-DC S-38, 47; U-89
  - Rotator TV-FM Cable S-10, 22, 28, 44, 46
  - Shielding—Copper, Braid S-5, 15, 22, 28
  - Sound System Cable .... S-1 to 5, 19, 22, 28, 49
  - Speaker Cable S-2, 4, 27, 28, 47, 49
  - Speaker Cords, Extension S-38
  - Test Prod Wire S-9, 20, 23, 26, 49; U-81, 104
  - Transmission Line, Cable K-33; S-2, 9, 17, 28; T-9
  - Tubing, Spaghetti, etc. S-12, 30, 52, 66; U-87, 107
  - Twin-Lead, for TV and FM S-10, 14, 17, 22, 41, 44, 46; T-9
  - Varnished Cambric, Shielded S-26, 28
  - Voice Coil Lead Wire S-15
- Wire Measuring and Winding Outfits S-40, 80
- Wire Recording Heads D-12
- Wire Recording Wire E-42, 59; U-110
- Wire Spring Clips (Fahnestock) S-36; U-45, 71, 91, 106, 115
- Wire Stripping Tools and Pliers K-33; U-103, 111, 115
- Wire Wound Resistors .... Section R; also L-17
- Wiring Nails, Insulated, Twin Lead S-40, 66; U-63, 108
- Wiring Systems, Packaged—for Work Benches S-51
- **Wirt Company** .... R-1 to 3
- Wood Glue U-49, 94
- **Worner Electronic Devices** L-34, 35
- Wrenches
  - Hexagon Key, Spline, Socket U-41, 63, 72, 77, 111
  - Neutralizing, Alignment U-40, 68, 78, 79, 100, 101, 102
  - Nut U-17, 19
  - Steel U-21, 27, 29, 103
  - Volume Control R-13, U-77
- **Wright, Inc.** C-7
- Wrinkle Varnish U-51, 96

— X —

- **XceLite, Inc.** (formerly Park Metalware Co.) .... U-18 to 21

— Y —

- *Yard-Ohm* Resistance Kits R-13

NOTES

NOTES

NOTES

NOTES

NOTES

NOTES

NOTES

NOTES

NOTES

NOTES

NOTES

NOTES

NOTES